PATLITE®

GA0007764_09

Network Signal Tower

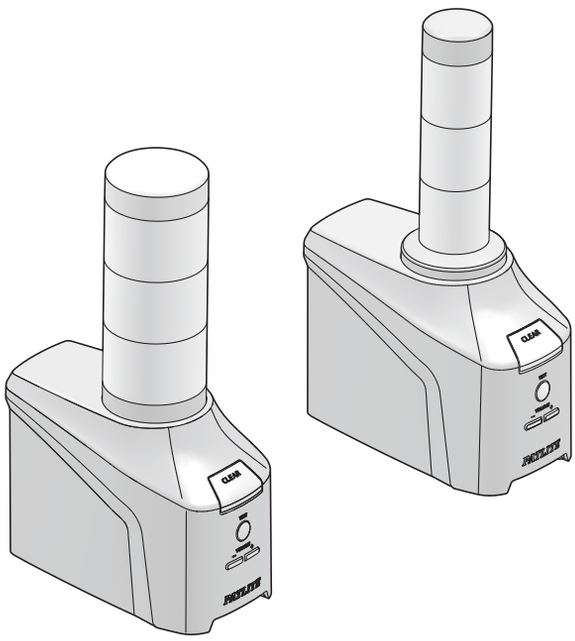
TYPE NHB Series

Network Signal Tower with Voice Annunciator

TYPE NHV Series

Instruction Manual

[Web Version]



Notice to Customer

Thank you very much for purchasing our PATLITE product.

- Request the installation and wiring be performed by a professional contractor if construction work is involved.
- Prior to installation, read this manual thoroughly before using this product to ensure correct use.
- Re-read this manual before conducting maintenance, inspections, repairs, and so on.

  If you have any questions about this product, please contact the service and repair desk listed on the website.
- Before using this product, update to the latest version of the firmware.

  You can download the latest version of the firmware by registering as a member from our website.
- This manual describes functions supported by the NHB Series and NHV Series.

  Depending on the product that you are using, some functions may not be available or the screen layout may differ from that shown in this manual.

To the Contractor

- Prior to installation, read this manual thoroughly to ensure it is installed correctly.
- Return this manual to the customer.

Table of Contents

1. Before You Begin

1.1. About Safety Symbols

To prevent injuries to the user and other personnel, as well as to prevent damage to assets, note the following:

● The following symbols classify warnings and cautions, and describe the level of harm and damage that will occur when the corresponding instructions are ignored.

WARNING	**This symbol indicates, "Failure to follow the instructions may lead to death or serious injury."**
CAUTION	**This symbol indicates, "Failure to follow the instructions may lead to injury or property damage."**

● The following symbols classify and describe the content of associated messages.

Prohibited	**This symbol identifies "Prohibited" operations that should never be carried out.**
Mandatory	**This symbol identifies "Mandatory" instructions that should always be carried out.**
	This symbol identifies general "Caution" related information.

1.2. Safety Precautions

WARNING	
Prohibited	● Do not modify or disassemble this product. Failure to follow this instruction could result in fire or electric shock. ● Do not use this product when there is condensation. Failure to follow this instruction could result in fire or electric shock. ● Do not use the product or leave the product with the LED unit either removed or cracked. Failure to follow this instruction could result in fire or electric shock. ● Do not touch the AC plug with wet hands. Failure to follow this instruction could result in electric shock. ● Do not apply voltage that exceeds the acceptable range. The rated voltage is 100 to 240 VAC (AC adapter input). If you apply more than the rated voltage, internal circuits will be damaged. Failure to follow this instruction could result in fire or electric shock. ● While power is still applied to the AC adapter, do not connect or disconnect the DC power plug. Failure to follow this instruction could result in electric shock or equipment damage. ● Do not use or install the product in locations where liquids such as water is present, oil will splatter, or locations that are humid or dusty. Failure to follow this instruction could result in fire, electric shock or equipment damage. ● Do not use or control this product in equipment or devices that, directly or indirectly, affect human life, or in equipment or devices where a high degree of reliability is required. If this product is used for these applications, we cannot be held responsible in the event of death, injury, or property damage. ● Do not allow liquids on the product, and do not allow it to have contact with metallic objects. Failure to follow this instruction could result in fire or electric shock. ● After installation, do not use this product to climb up onto equipment. Failure to follow this instruction will result in product damage and/or falling off the machinery.
Mandatory	● Request the installation and wiring be performed by a professional contractor if construction work is involved. Failure to follow this instruction could result in fire, electric shock, or falling of the product. ● Turn off the power before performing any electric wiring or product installation. Failure to follow this instruction could result in electric shock. ● If an unusual condition occurs while using this product, such as emitting smoke, heat, abnormal odor, or unusual sound, stop the application, disconnect the power, and contact your nearest PATLITE Sales Representative. ● When plugging the AC adapter into an outlet, confirm there is no dust, and connect all the way to the root of the power plug. Using the AC plug with dust on it could result in fire or equipment damage. ● Regularly clean dust off the AC plug and outlet. Due to the tracking phenomenon, using a power plug with dust on it could result in fire or equipment damage. ● To prevent injuries and property damage that could result from product failure or malfunction, ensure sufficient safety by using this product together with other equipment. ● To prevent accidents when operating or maintaining the product, in addition to the safety guidelines identified in the instructions of this manual, follow all general safety guidelines. We cannot foresee all circumstances concerning the handling and dangers associated with this product. Therefore, not every possible danger is indicated in this instruction manual. ● In case the product falls over or falls down, install in a location where it will not hit any people or other objects.

CAUTION	
Prohibited	● Do not use in locations near fire or environments with high temperature and humidity. Do not use this product where corrosive, flammable gas is present. ● Do not use this product if liquids (such as water or chemicals) or foreign metallic objects (such as copper wire) have entered this product. Failure to follow this instruction could result in product damage. ● Do not bend the power cable unnecessarily. Failure to follow this instruction could result in disconnection and malfunction or equipment damage. ● Do not use this product near equipment (such as a solenoid) or wires that generate strong electric or magnetic fields. Failure to follow this instruction could result in malfunction due to inductive noise. ● Do not use excessive force on this product. Failure to follow this instruction could result in deformed frame and product damage. ● Do not use sharp tipped objects with this product. Operation may become impossible as scratches develop on buttons and contacts are interfered with. ● Do not use this product near chemicals. This product could melt or become deformed if any chemicals adhere to it. ● Do not wipe dirt on this product with thinners, benzine, gasoline, oil, chemicals, and so on. Failure to follow this instruction could result in discoloration and deterioration. Wipe with a soft cloth, dampened with water and wrung tightly. ● When using a tripod with this product, do not move or transport while the tripod is attached. Failure to follow this instruction could result in equipment damage if the product falls over.
Mandatory	● Use only the specified replacement parts listed in this manual.

1.3. About laws and regulations in each country

● For Customers in U.S.A.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
(Responsible party in U.S.A.) 20130 S. Western Ave. Torrance, CA90501, U.S.A.

● For Customers in Europe

This product has been tested and found to comply with the limits for a Class A device.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This product must not be used in residential areas.

● For Customers in Korea

사용자안내문
이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다 .

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1.6. Network Security

The user is responsible for the network security of this product and its use.

Take appropriate network security measures to avoid security breaches.

- Use this unit in a network secured by a firewall, etc.
- Change the login password periodically.
- Save user authentication information(user names and passwords) in such a way that it is kept out of the hands of third parties

This product cannot connect directly to the Internet.

When connecting this product to the Internet, use a router or similar device.

2. Models

2.1. NHB Series

	Model	Signal Tower Type		Number of LED Tiers	AC Adapter Included or Not		LED Unit Color
Model Number	NHB	↓	-	↓	↓	-	RYGBC

- **6** LR6 (ϕ 60)
- **4** LR4 (ϕ 40)

Tier **0** - **5**

- (empty) AC adapter included
- **N** AC adapter not included

R…Red B…Blue
Y…Amber C…White
G…Green
(Display maximum 5 colors, in order from left to right for tiers top to bottom)

2.2. NHV Series

	Model	Signal Tower Type		Number of LED Tiers	External Contact Input/Output	Software Specification	AC Adapter Included or Not		LED Unit Color
Model Number	NHV	↓	-	↓	↓	↓	↓	-	RYGBC

- **6** LR6 (ϕ 60)
- **4** LR4 (ϕ 40)

Tier **0** - **5**

- (empty) Without contact inputs/outputs
- **D** With contact inputs/outputs

- (empty) Standard model (including email detection function)
- **M** Detect Email

- (empty) AC adapter included
- **N** AC adapter not included
- **P** AC adapter not included (PoE power supported)

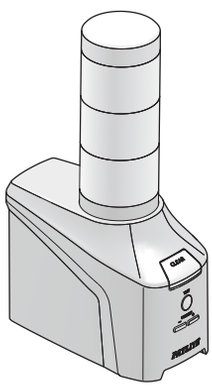
R…Red B…Blue C…White
Y…Amber G…Green
(Display maximum 5 colors, in order from left to right for tiers top to bottom)

2.3. Supported Additional Units

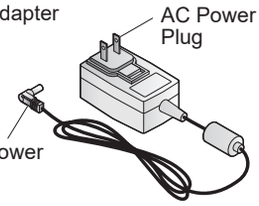
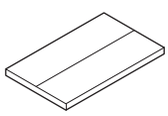
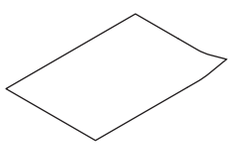
	NHB6, NHV6	NHB4, NHV4
LED Unit (Colored lens)	LR6-E- ☐ (☐ : R, Y, G, B, C)	LR4-E- ☐ (☐ : R, Y, G, B, C)
LED Unit (Clear lens)	LR6-E- ☐ Z (☐ : R, Y, G, B)	LR4-E- ☐ Z (☐ : R, Y, G, B)
LED Unit (Multi-color)	LR6-E-MZ	–
Transmitter unit	WDT-6LR-Z2	WDT-4LR-Z2

3. Package Contents

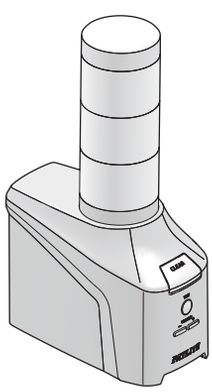
3.1. NHB Series



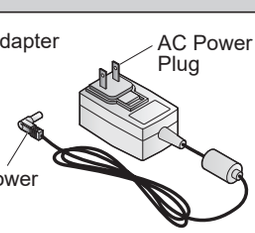
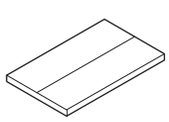
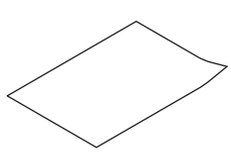
Main Unit: 1

Accessories		
AC Adapter  * Not included in [N] model x 1	Adhesive Sheet  2 Sheets (1 Set)	Installation Manual  x 1

3.2. NHV Series



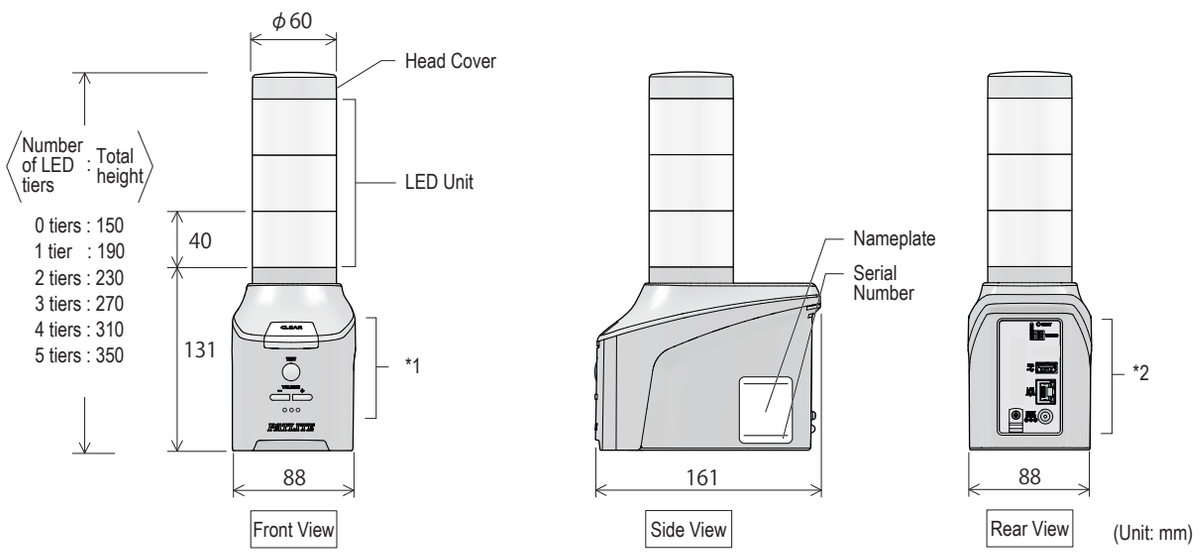
Main Unit: 1

Accessories		
AC Adapter  * Not included in [N]·[P] model x 1	Adhesive Sheet  2 Sheets (1 Set)	Installation Manual  x 1

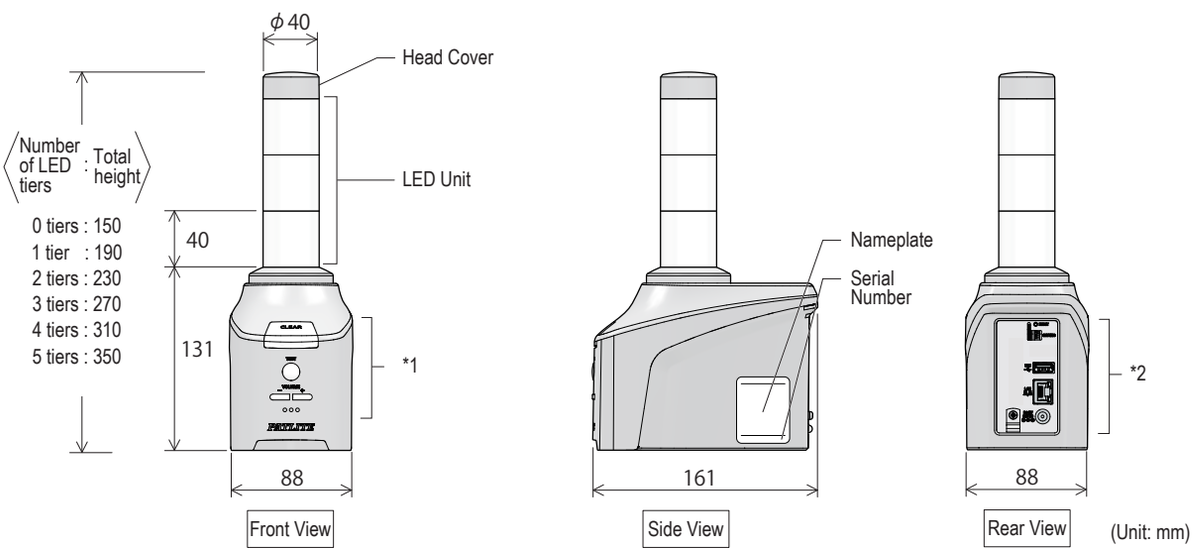
4. Part Names and Dimensions

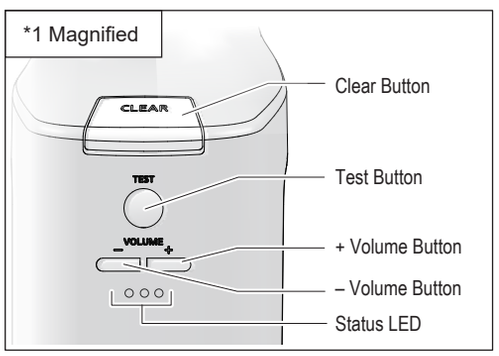
4.1. NHB Series

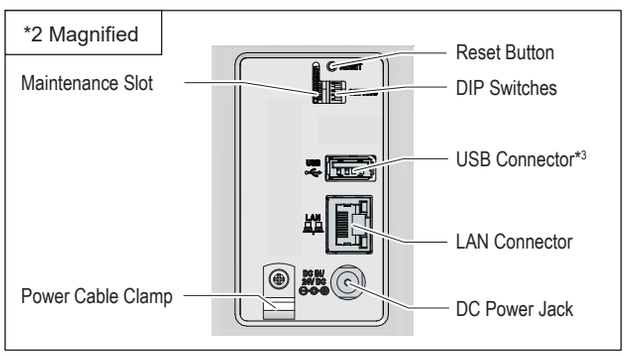
● NHB6



● NHB4



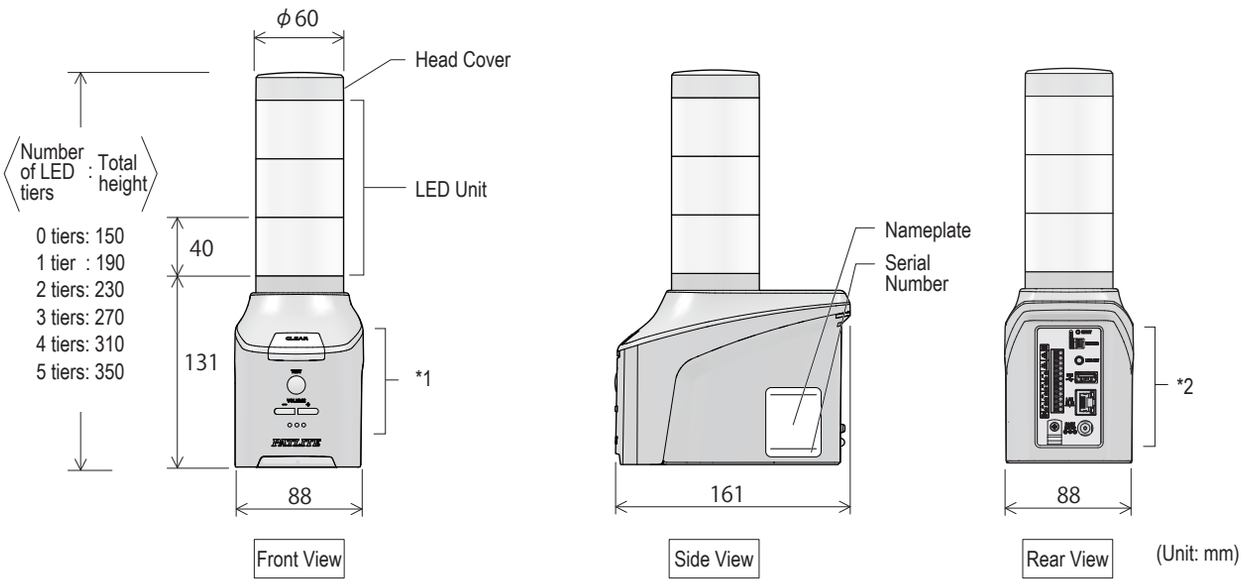




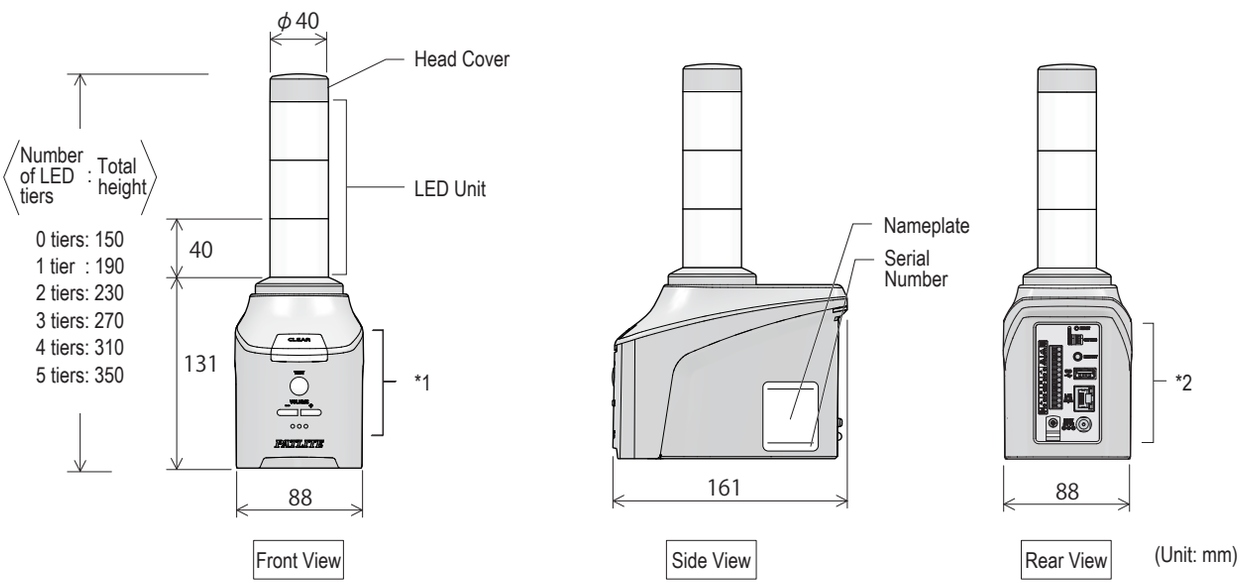
*3 Do not use the USB connector for purposes other than those specified.

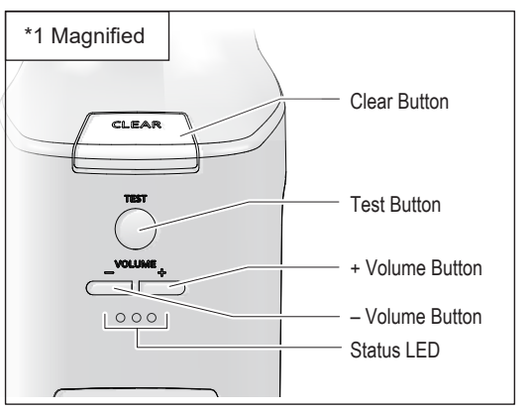
4.2. NHV Series

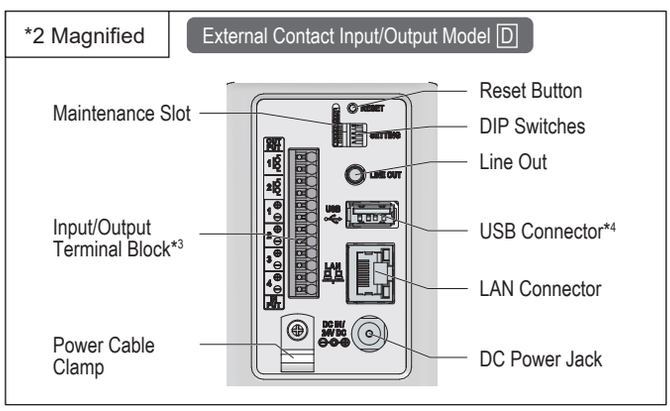
● NHV6



● NHV4







*3 For "For models without contact inputs/outputs", there is no input/output terminal block.
*4 Do not use the USB connector for purposes other than those specified.

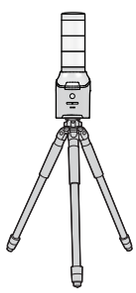
5. Product Features and Functions

5.1. Product Features

5.1.1. Installation

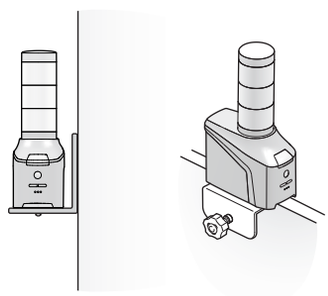
You can choose from various installation methods suitable for your environment.

Stationary



Mounting on a Tripod

(Tripod screw: 1/4"-20 UNC)

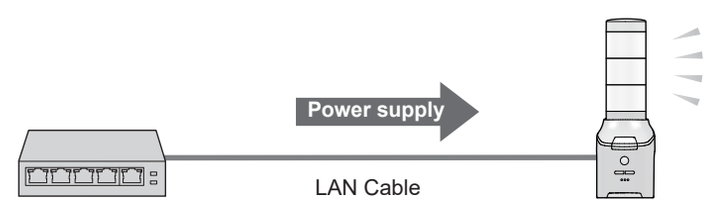


Installation with Wallmount Bracket / Partition Mounting Bracket (optional parts)

For supported options, refer to "13. Replacement and Optional Parts" (☞ page 386)

5.1.2. PoE Support NHV Series (P model)

PoE (Power over Ethernet) support allows for an easy power supply without requiring an AC adapter.



5.1.3. Multilingual Support

You can work with the Web Setup Screen in multiple supported languages.

Supported languages

Japanese, English, Traditional Chinese, Simplified Chinese, Korean, Thai, German, French, Italian, Spanish, Spanish (International), Spanish (Mexico)

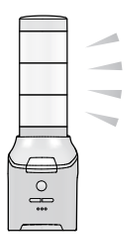
5.1.4. Operations When Connecting to a Cloud Environment

From the cloud, you can control your products and get their status.
You can also send the product status to the cloud.

5.2. Product Functions

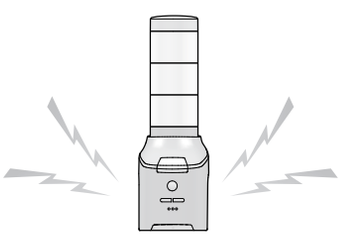
5.2.1. Signal Tower, Buzzer, Audio Playback NHB Series NHV Series

You can use various ways to notify people about what's going on.



Signal Tower

- Red, Amber, Green, Blue, White, Light off, Light on, 4 flashing patterns
- Adjust between 4 levels of brightness



Buzzer

5 buzzer patterns

NHB Series

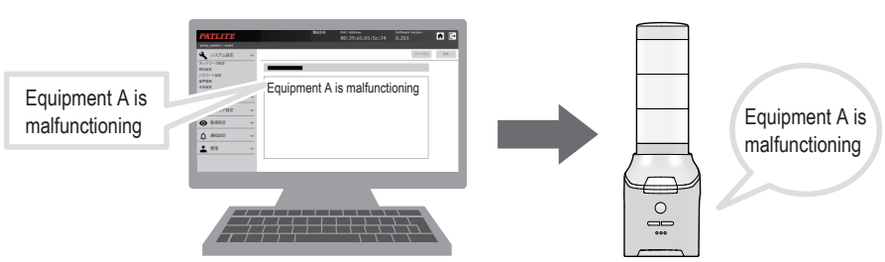
Audio Playback

- 71 types of message playback (11 preset types)
- 3 patterns of playback modes (one-shot playback, repeat playback, and endless playback)

NHV Series

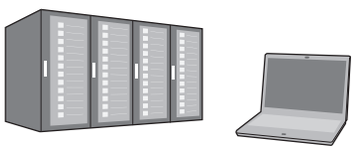
5.2.2. Voice Synthesizer NHV Series

You can generate and play audio from text information.



5.2.3. Monitoring the Status

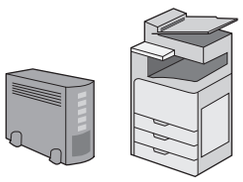
You can use various methods to monitor the status of network devices and devices with contact outputs.



PING monitoring

Alive monitoring of the network and devices.

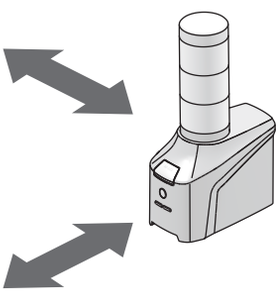
This product can perform alive monitoring of up to 24 nodes.
If there are any issues in the lines connected to nodes, or there is no response from monitored equipment, the product considers it a problem and performs predefined operations.



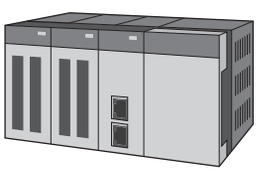
SNMP v1 v2c v3

Monitor the state of network equipment at a low cost.

This product, as an SNMP manager, receives SNMP TRAPs from equipment on the network (UPS, printers, routers, switches, and so on) and performs predefined operations. Also, the product sends SNMP commands to equipment on the network to monitor their state.



TRAP receive and SNMP monitor functions can also be set up with operations when there are variable-bindings.



PLC monitoring

Monitors information on PLC devices that support the SLMP (MC) protocol or the FINS protocol. The product can monitor information on up to 16 devices.
It performs predefined operations when the preset conditions are met or when error data is received.

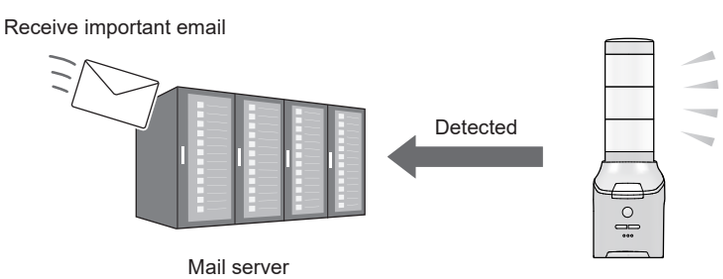
Digital input **NHV Series (D model)**

Monitors the state of equipment with contact outputs.

This product, with its four digital inputs, monitors signals from equipment with contact outputs. The product performs predefined operations in response to changes in the input state of equipment.

5.2.4. Email detection NHV Series

You can automatically detect incoming email and report important email only.



5.2.5. Commands for Control of Communication

- You can use various commands to control or notify the product, as well as check its status.
- You can control this product using the same commands as the NH-FB and NH-FV series.

RSH/SSH

Control Possible with the RSH/ SSH Generic Protocol

You can use the RSH/ SSH generic protocol to control Signal Light and channel playback. Use event information from integrated network management software or various monitoring tools as triggers to control signal lights.

Event Occurrence: Execute command
(turn on red signal light, turn off green, no operation for amber, blue, white and the buzzer.)
For RSH: rsh 192.168.10.1 -l root alert 190999
For SSH: ssh 192.168.10.1 -l root alert 190999

HTTP or HTTPS Commands

Control Using HTTP/HTTPS Commands

To turn on red and green signal lights, turn off amber, blue, and white, and emit buzzer pattern 2

http://192.168.10.1/api/control?alert=101002

SOCKET Communication

PNS commands supported (product compatibility commands)

You can use PNS commands to control signal lights and channel playback. You can control all notification patterns.

Event Occurrence: Execute command
(Command 1: Turn on red, amber, and white signal lights. Command 2: Play channel 35 eleven times [repeat ten times].)
For PNS commands:
Command 1:
58H,58H,53H,00H,00H,06H,01H,01H,09H,09H,01H,09H
Command 2:
58H,58H,56H,00H,00H,04H,01H,0AH,00H,35H

PHN commands supported (product compatibility commands)

You can use double-byte commands to control signal lights and the buzzer.

* Compatible with PHN-3FBE1, NHE / NHC / NHM series, and NH-FB / NH-FV series.
* There are restrictions on some functions.

Event Occurrence: Execute command
(turn on red signal light, flash amber, turn on green, and emit buzzer pattern 2.)
For PHN compatible commands: 57H, 55H

5.2.6. Status Notification

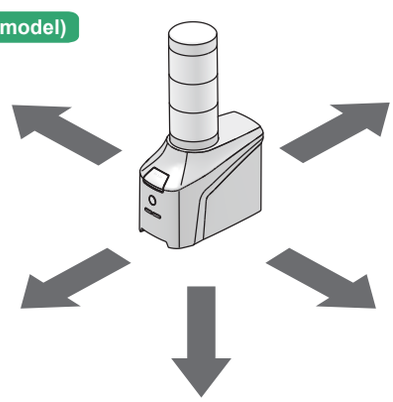
When an event occurs, notifications can be sent in various ways.

Digital Output **NHV Series (D model)**

With 2 digital outputs, you can control equipment configured with contact inputs.

Line Out **NHV Series**

With its single line out, you can output playback of the channel to an equipment's line input.



HTTP Command Transmission

Sent HTTP commands to up to 8 locations. You can send HTTP/HTTPS commands suitable for events.

Email Transmission

You can send (select) up to 8 emails. You can create titles and body text suitable for events. POP / SMTP authentication (OAuth2 passwords) is supported.

SNMP v1 v2c v3

Send SNMP Trap/Inform to up to 8 nodes. (For Trap transmission, SNMP versions supported are v1, v2c, and v3, and for Inform transmission, v2c and v3.) You can send SNMP Trap/Inform corresponding to events to up to 8 nodes.

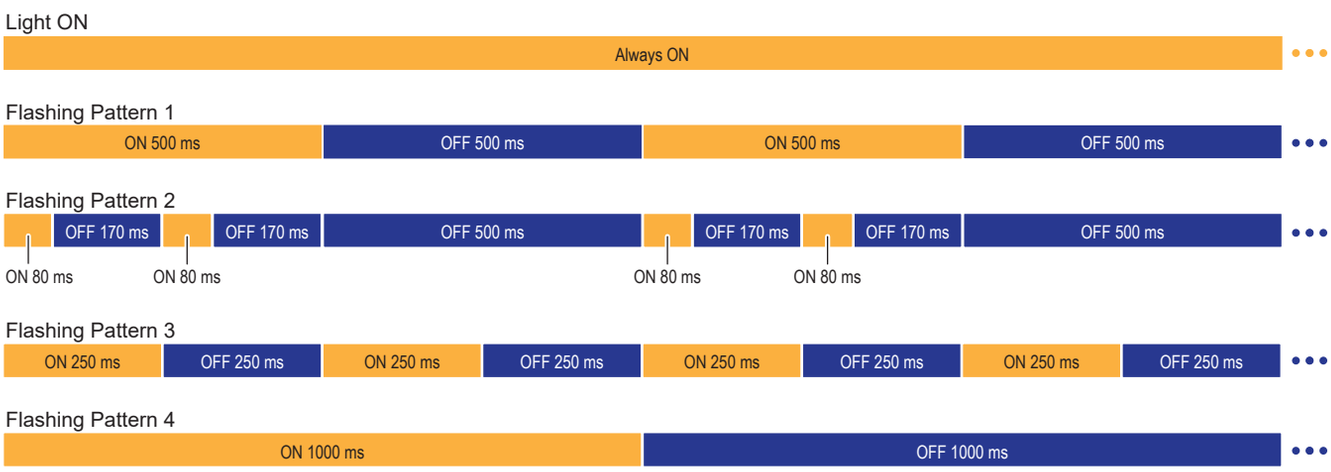
5.3. Function Descriptions

This section describes the functions of this product.

5.3.1. Signal Tower and Buzzer Notification Functions

• You can turn on, turn off or flash the Signal Tower, or emit a buzzer in response to events.
The following three operation patterns are available.

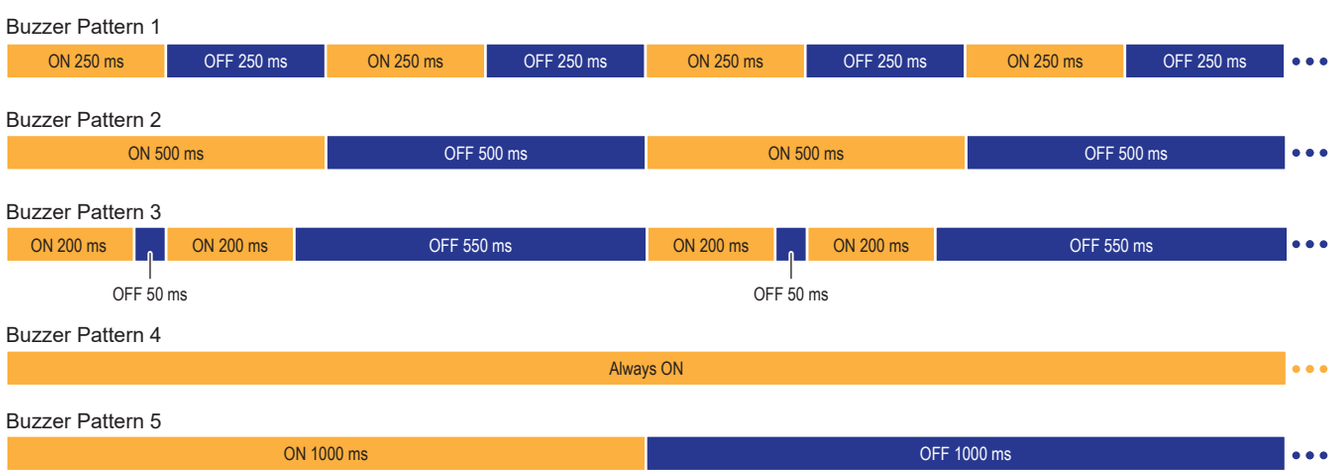
● Signal Tower operation pattern



● Signal Tower dimming pattern

You can adjust 4 levels of brightness.

● Buzzer operation pattern



5.3.2. Audio Playback Function NHV Series

- You can play back*1 audio messages (MP3 files) stored in internal memory in response to events.
- This product handles saved messages in "channel" units.

● Types of Channels

There are 71 channels, from 1 to 71, divided into two categories by channel number.

Channel Number	Name	Description
Channels 1 – 60	Registered Channels*2	Channels where users can register messages.
Channels 61 – 71	Preset Channels*3*4	Channels with fixed messages registered at time of shipment.

*1 You can set the volume for audio playback with the Web Setup Screen or the +/- volume buttons on the front of the product.
*2 Registration to channels is done from the Web Setup Screen.
*3 You cannot delete or edit preset channels.
*4 The line out function is not available for preset channels.

● Audio Playback Pattern for Each Channel

On a channel, you can set a playback pattern for each event. There are three playback patterns.

Playback Pattern	Description
One-shot playback	Playback the channel 1 time. Audio playback will not be repeated.
Repeat playback*5*6	After a channel is played once, repeats playback the set number of times.
Endless playback	Repeatedly playback the channel.

*5 If the number of times to repeat is set to 0, operates the same as One-shot playback.
*6 If the number of times to repeat is set to 255, playback will be endless.

● Notification Sound Registration

When registering channels 1 to 60, you can specify the notification sound that plays before and after the message.

Notification sound number	Description
No.1 ～ 5	Notification sounds that users can register
No.6 ～ 10	Notification sounds registered at time of shipment

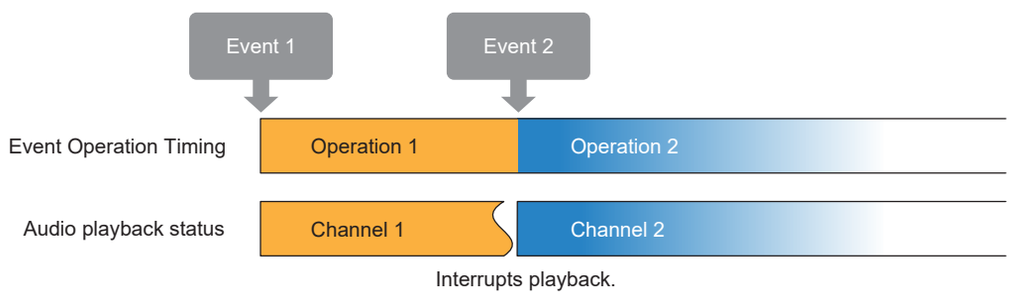
● Audio Playback Mode

For the audio playback mode, you can select either [Playback from latest input mode] or [Memory playback mode]. For features about each mode, refer to the following.

Point
● Playback mode also applies to methods that play audio directly from text, such as HTTP commands. However, due to the wait time required for the language analysis process, there may be a gap in playback timing.

• Playback from Latest Input Mode

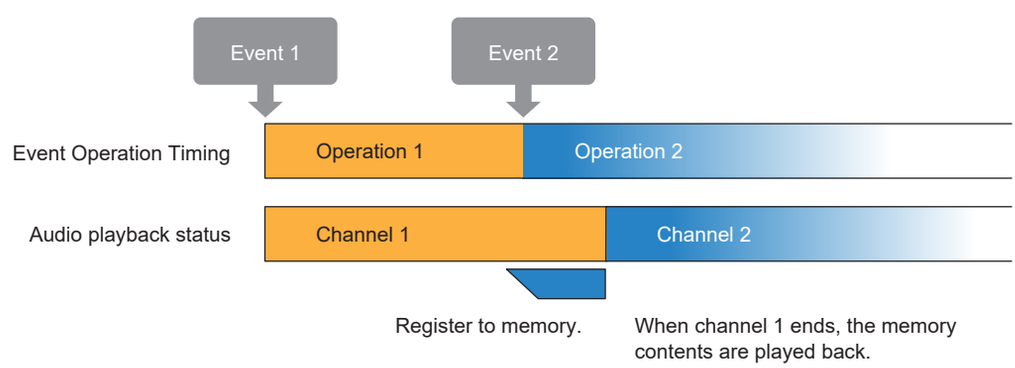
When a new playback event occurs, the audio currently playing is interrupted and a new audio begins playing.
To play the audio at the same time as the event occurs, use this function to synchronize the timing of event operation with playback audio.



• Memory Playback Mode (when channel 61 to 64 or 71 is not included)

When a new playback event occurs, the audio to play is registered in the memory.
When playback of a audio ends, plays audio in the order they were registered in the memory.
Use this option when you want to play audio until the end, or when you want to play audio a set number of times or in a set order.

While Playing	Playback Event
Other than Buzzer Pattern (channel 61 to 64 or 71)	Other than Buzzer Pattern (channel 61 to 64 or 71)



⚠ CAUTION
⚠ The maximum number of channels that can be registered in memory is 5. If you exceed 5 channels, additional channels or text for audio are not registered in the memory and are discarded. However, operations set for events (Signal Tower,send email , SNMP notification, and so on) will execute. ⚠ In Memory playback mode, there is a delay between the audio playback and execution of event operations.

- **Memory Playback Mode (when channel 61, 62, 63, 64 or 71 is included)**

In Memory playback mode, when executing operations that include a preset channel (61 to 64 or 71, buzzer pattern 1 to 5), the operation is different from other channels as shown below.

When a playback event occurs while playing channel 61 to 64 or 71 (buzzer pattern 1 to 5)

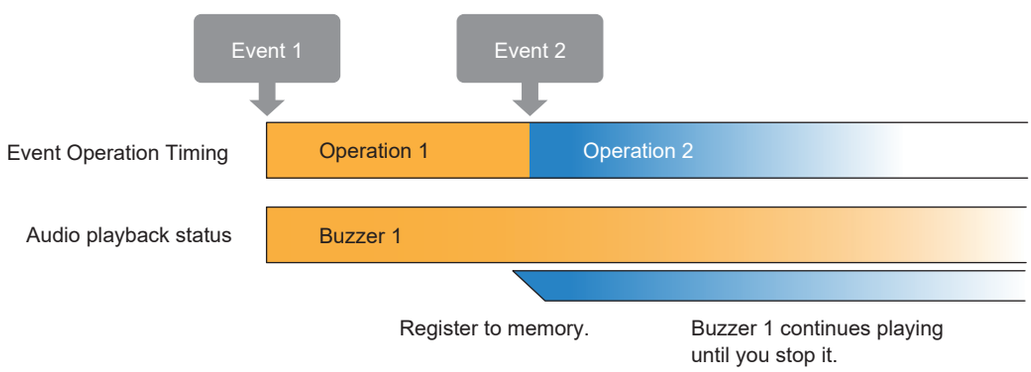
While a buzzer pattern is playing and a playback event (event 2) occurs, operations can be divided as follows.

Operation	While Playing	Playback Event
A	Buzzer Pattern (channel 61 to 64 or 71)	Other than Buzzer Pattern (channel 61 to 64 or 71)
B	Buzzer Pattern (channel 61 to 64 or 71)	Buzzer Pattern (channel 61 to 64 or 71)

Operation A: When the playback event does not use channel 61 to 64 or 71 (buzzer pattern 1 to 5)

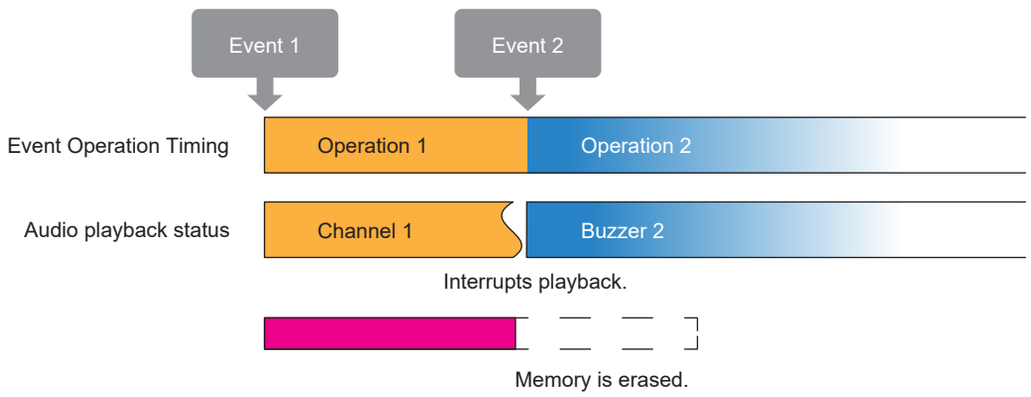
The current buzzer pattern continues to play, and event 2 is registered in the memory.
As the buzzer pattern's Repeat playback is set as endless playback, use one of the following methods to play Event 2 in the memory.

- In the Clear Operation Settings, set [Skip] and press the clear button.
- Execute the RSH/SSH Command [STOP Command].



Operation B: When the playback event that occurred is channel 61 to 64 or 71 (buzzer pattern 1 to 5)

Even if another audio is playing, instead of registering to memory, interrupts the currently playing audio and immediately plays buzzer 2 for event 2. At the start of playback, erases all channels or text for audio registered inl memory.



The following audio is registered in the preset channels.

Channel	Registered Content
Channel 61	Buzzer pattern 1
Channel 62	Buzzer pattern 2
Channel 63	Buzzer pattern 3
Channel 64	Buzzer pattern 4
Channel 65	Chime 1 (ET Doorbell)
Channel 66	Chime 2 (start of notification)

Channel	Registered Content
Channel 67	Chime 3 (end of notification)
Channel 68	Irregularrities were detected in the network*
Channel 69	Abnormalities had occurred*
Channel 70	Abnormalities were eradicated*
Channel 71	Buzzer pattern 5

* The language played differs depending on the language set on the login screen of the WEB settings screen.
Japanese : Play in Japanese English : Play in English Simplified Chinese : Play in Chinese
["7.4. Displaying the Web Setup Screen" (☞ page 111)]

The following sound is registered as preset notification sounds.

notification sound	registered content
notification sound 6	Chime 1（Ping Pong）
notification sound 7	Chime 2（Broadcast Start）
notification sound 8	Chime 3（End of Broadcast）
notification sound 9	Alarm 1（Pyrrillo）
notification sound 10	Alarm 2（Warning Sound）

5.3.3. Line Out Function NHV Series

Signals from line out can be output in conjunction with audio playback. You can [Enabled] or [Disabled] the line out for each channel.

⚠ CAUTION

- ⃠ Do not connect headphones, earphones, or passive speakers (speakers without a built-in amplifier) to line out.
- ⃠ Do not connect multi-pole mini plugs other than mono or stereo plugs.
- ⚠ When playing preset channels, no signal is output from line out.

Point

- Using the Busy output of the External Contact Output Function, you can set a delay time from when an event occurs until the signal is sent to the line out.
- You can set the signal volume of the line out on the Web Setup Screen.

5.3.4. Voice Synthesizer Function NHV Series

- This product can render speech from text and perform audio playback.
- Messages (MP3 files) registered in internal memory from the Web Setup Screen can be played back in response to received digital inputs or control commands. They can also be played directly using HTTP Commands.
- For audio playback using HTTP Commands, refer to "8.3.1.5. Play Any Text" (☞ page 187).
- When using the voice synthesizer, pay attention to the following items to create more natural messages.
- For information on how to register text, refer to "7.16. Setting Up Voice Registration" (☞ page 128).
- Specify a notification sound that plays before or after the message when registering text or executing HTTP commands.

●Precautions About Input When Performing Voice Synthesis

No.	Input	Description
1	About phonetic reading	On-yomi and Kun-yomi can be distinguished segment by segment, but not the context. Enter hiragana characters to suit your purpose.
2	About phrases	Words that are connected are considered a segment, and emphasis in a syllable or word is placed accordingly. Enter spaces between words if necessary.
3	For words that can be read in multiple ways	The context or name cannot be determined. Enter hiragana characters so it is read correctly.
4	About symbols (such as [~] and [*])	Read aloud using the original character reading. Enter hiragana characters to suit your purpose.
5	About units	Some units are not identified. Enter hiragana characters to suit your purpose.
6	Chinese reading	Traditional characters may not be read. Enter in simplified characters.

⚠ CAUTION

- ⚠ Although the specification allows entering 400 characters, if you enter a large number of characters, there is a long wait for the language analysis process to complete.
  (Approximate time for 400 characters: 60 seconds for command control, 1-2 minutes for Web setting.)
  To resolve long wait times, reduce text inputs to the length of a single, short sentence.
- ⚠ You cannot stop the language analysis process by executing a clear operation.

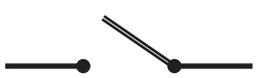
5.3.5. External Contact Output Function NHV Series (D model)

This product has two external contact output ports. By connecting equipment with a contact input, you can perform contact control.

For the output mode, you can select [Digital Output Mode] or [Busy Output Mode].

● Digital Output Mode

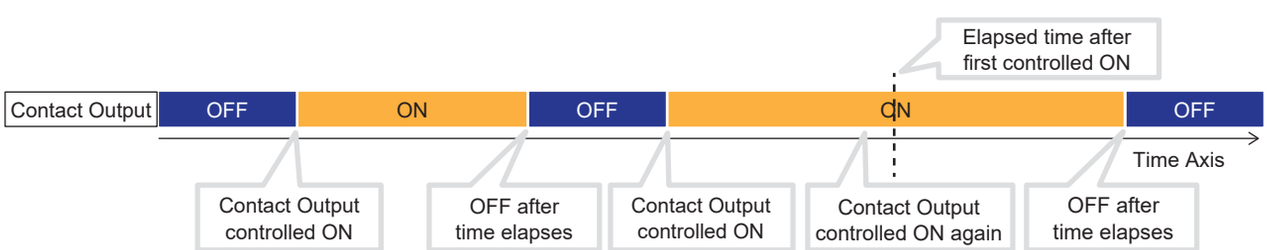
- In response to events, you can control external contact output as a digital output port.
- Contact A (normally open) or Contact B (normally closed).
- The following defines ON and OFF for digital output.
- The contact output can be automatically turned OFF after a period of time from the initial contact control.

Operation Status		ON	OFF	Description
Digital Boolean Value		1 01H	0 00H	
Contact Status	Contact A (make contact) (normally open)	 Closed circuit	 Open circuit	OFF opens the contact. ON closes the contact and allows power to flow.
	Contact B (break contact) (normally closed)	 Open circuit	 Closed circuit	OFF closes the contact and allows power to flow. ON opens the contact.

⚠ CAUTION

⚠ When you set the automatic contact output OFF time, after contact output is controlled ON, the contact output automatically turns OFF after the set time elapses.

⚠ If the contact output is controlled ON again before the set time has elapsed, the elapsed time up to that point is cleared.



● Busy Output Mode

- You can link the signal output from line out with the contact output.
- While signal is output from line out, the contact output is closed, and is opened when the output is stopped.
- In consideration of the rise time of equipment connected to the line out output, you can delay the signal output timing from line out by using the output delay time.

⚠ CAUTION

⚠ The logic setting is fixed to Contact A (normally open). Contact B (normally closed) cannot be selected.

⚠ You cannot use control commands to control contact output.

⚠ For playback of preset channels, as line out output does not take place, Busy output does not work.

⚠ For Playback from latest Input mode, if a new event occurs while the output delay time has not fully elapsed, the output delay time is canceled and the next event operation is executed.

⚠ If an event occurs within 1 second after the line out output is stopped, the Busy output remains closed. In this case, the output delay is disabled and the line out output occurs without delay.

5.3.6. Send Email Function

- In response to an event, you can send email to registered email addresses (up to 8).
- Supported Authentication methods are SMTP authentication (password, OAuth2), POP authentication, and no authentication.
- Supported encryption methods are SSL/TLS, STARTTLS, and None.
- The structure of the contents of the email that is sent is as follows.

①
Installation location : ② Equipment name : ③ Contact : ④ Event that occurred : ⑤ Information : ⑥
⑦

No.	Function	Description
①	Subject*	Displays the subject specified by the event notification.
②	Installation location	Displays the set installation location.
③	Equipment name	Displays the set name of equipment.
④	Contact	Displays the set contact information.
⑤	Event that occurred	Displays the name of the event that took place.
⑥	Information	Displays information about the event.
⑦	Body text*	Includes the body text specified in the event notification.

* You can select the subject and body text from among a total of 17, 16 that you can register for events and 1 that is fixed.

* When using the fixed subject (17th item), the subject of the sent email is in the following format.

<Installation location>:<YY/MM/DD hh:mm>:<Event details>:<Name>

Year Month Date Hours Minutes

* When using the fixed text (17th item), the information of Installation location, Equipment name, Contact, Event that occurred, Information, and Body text are not sent.

● List of Event Content and Names

In response to the event that occurred, event content and name are listed with the following information.

Event that occurred	Event Content	Name
TRAP received	<none>	Group name as registered in the TRAP monitoring settings
Cleared using push-button switch	": CLEAR-Button"	<none>
Cleared using SNMP	": CLEAR-Snmp"	<none>
Cleared using RSH/SSH	": CLEAR-Rsh/Ssh"	<none>
Ping monitoring error detected	": PING-Error"	Unit name as registered in the Ping Monitoring Settings
Ping monitoring recovery detected	": PING-Recover"	Unit name as registered in the Ping Monitoring Settings
Ping group monitoring error detected	″: PING_Group-Error″	<none>
Ping group monitoring recovery detected	″: PING_Group-Recover″	<none>
RSH/SSH Command executed	": RSH/SSH-Executes"	<none>
Test button pressed	": TEST-Button"	<none>
Digital input contact changed to ON state	": DINPUT-On"	Number of the digital input that turned on, DI1 to DI4
Digital input contact changed to OFF state	": DINPUT-Off"	Number of the digital input that turned off, DI1 to DI4
Condition matched for SNMP Device Monitoring	": SNMPGET-Match"	Equipment name registered in SNMP Device Monitoring Settings - Match Detection Settings
Condition released for SNMP Device Monitoring	": SNMPGET-Release"	Equipment name registered in SNMP Device Monitoring Settings - Release condition settings
Change detected for SNMP Device Monitoring	": SNMPGET-Change"	<none>
Match digital input condition	": DINPUT-Condition"	Number of the digital input (1 to 4) whose condition matched the condition setting
Detect email	″: MAILFILTER-Match″	Number registered in Mail detection setting - Filter rule settings
PLC information reading function activated	″: PLC-Action″	Number of the registered device (1 to 16) whose condition matched
PLC information reading function error response	″: PLC-Error″	Number of the registered device (1 to 16) that caused the error

● List of Additional Information

In response to the event that occurred, additional information is listed with the following content.

Event Listed	Additional Information Listed
TRAP was received.	Group name: Registered address
The "Clear" Button was pushed.	None
A "Clear" was made by the SNMP.	None
A "Clear" was made by the RSH/SSH.	IP address
Ping Monitor Abnormality detected.	Unit name: Registered address
Ping Monitor Recovery detected.	Unit name: Registered address
Ping Group Monitor Abnormality detected.	Unit name: Registered address : Group
Ping Group Monitor Recovery detected.	Unit name: Registered address : Group
RSH/SSH Command was executed.	IP address
Test Button was pressed.	None
Digital input was set to ON.	Port number (1 to 4)
Digital input was set to OFF.	Port number (1 to 4)
Conditions agreed with the SNMP supported equipment.	Equipment Name: Monitored address
Conditions agreed with the SNMP supported equipment were cancelled.	Equipment Name: Monitored address
SNMP supported equipment changes were detected.	Equipment Name: Monitored address
Digital Input conditions agree.	Input condition (1 to 4)
Conditions agreed with the Mail detection.	Matched Filter: Registered filter number[*1]
	Control Success: Registered filter number[*2] Control Failure: Registered filter number[*2]
Conditions agreed with the PLC information reading function.	Device name: Registered address
An error in the PLC information reading function was received.	Device name: Registered address

*1 Not listed when using the email control function.
*2 This is only listed when using the email control function.

5.3.7. SNMP TRAP/Inform Transmission Function

- In response to events, you can send SNMP Trap/Inform to 8 SNMP-enabled equipment.
- For Trap transmission, SNMP versions supported are v1, v2c, and v3, and for Inform transmission, v2c and v3.
- For the notification method, you can choose either TRAP or Inform transmission.
- For information on Trap transmission, refer to "10. MIB List" (☞ page 367).
- For the procedure on using SNMP TRAP transmissions, refer to "8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134).

● Communication Protocols

Protocol	Port Number
UDP	162

5.3.8. Send HTTP Command Function

- In response to events, you can send HTTP/HTTPS Commands to 8 equipment on the network.
- For the protocol, select either [HTTP] or [HTTPS].
- For the procedure on sending HTTP Commands, refer to "8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141).

● Communication Port

Protocol	Port Number
HTTP	80
HTTPS	443

5.3.9. Send HTTP Command Function

- In response to changing Signal Tower, you can transmit the change information of Signal Tower and buzzer via HTTP/HTTPS to 8 equipment on the network.
- For the protocol, select either [HTTP] or [HTTPS].
- Change information is transmitted using HTTP command with "alert" parameter.

"● Parameters You Can Execute" on page 55

● Communication Port

Protocol	Port Number
HTTP	80
HTTPS	443

5.3.10. RSH/SSH Command Function

You can use this product with RSH (Remote Shell) or SSH (Secure Shell) to execute shell commands from another computer.

By executing commands, you can get and control the status of the Signal Tower.

Shell commands format is as below. For information on each command, refer to explanations on the commands.

RSH

- rsh␣ <IP address> [␣-l ␣<login name>] ␣<command> [␣<option>]
  (Space) (Space) (Space) (Space) (Space)
- rsh␣ <IP address> ␣-l ␣<common login name> ␣<command> [␣<option>]
  (Space) (Space) (Space) (Space) (Space)

SSH

- Using Password Authentication

ssh ␣<IP address> [␣-l ␣<login name>] ␣<command> [␣<option>]
(Space) (Space) (Space) (Space) (Space)

- Using Key Authentication

ssh ␣<IP address> ␣-i ␣<private key file> [␣-l ␣<login name>] ␣<command> [␣<option>]
(Space) (Space) (Space) (Space) (Space) (Space) (Space)

Point

- You can omit [ ].
- For the IP address, specify [IPv4 address], [IPv6 address], or [Host name].
- When executing without the login name, make sure you set the source IP address and login name in the command reception settings.
- Do not forget a space between each element in the command.
- In the RSH Command Reception Settings, when the send-from address restriction is [Disabled], execute the command using a common login name.

● Commands You Can Execute

Command	Description
alert	Controls the Signal Tower and buzzer.
alert do	Controls digital output.
color	Controls the Signal Tower and buzzer.
sound	Controls the Signal Tower and audio playback.
stop	Stops playing audio.
clear	Executes the clear operation and returns to the normal operation status.
doclear	
status	Gets the state of the Signal Tower, buzzer, audio playback channel, and digital I/O.
test	Runs a self-test.
dotest	

● Descriptions of Each Command

• alert Command

Overview	Control Signal Tower (rygbc) and buzzer (bz)
Format	alert <r><y><g><b><c><bz> [<sec>]
Return Value	<r><y><g><b><c><bz> (state of Signal Tower after command is executed)

Type		Value
r	Red unit	Light pattern 0: Light off 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4 9: No control
y	Amber unit	
g	Green unit	
b	Blue unit	
c	White unit	
bz	Buzzer	Buzzer pattern 0: Buzzer off 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5 9: No control
sec	Control time	Control time (seconds) 0: Do not specify the control time (can be omitted) 1 to 99: Specified amount of control time

⚠ CAUTION

⚠ If you execute an alert command while another alert command is running, the control time is overwritten. However, in the RSH/SSH Command Reception Settings, if restore timer is set individually, you can also individually specify the control time.

Point

- Items in brackets [ ] are optional. Can be omitted.
- When the set time elapses, returns to the Signal Tower state and operation of channels 61 to 64 or 71 (buzzer pattern 1 to 5) before the alert command was executed.
- When the control time is omitted, the control state is continuous.

- **alert do Command** NHV Series (D model)

Overview	Control digital output <do1><do2>
Format	alert do <do1><do2>
Return Value	<do1><do2> (digital output state after command is executed)

Type		Value
do1	Digital Output 1	Digital Output State 0: OFF 1: ON 9: No control
do2	Digital Output 2	

⚠ CAUTION

- ⚠ In the External Contact Output settings, ports set to Busy output cannot be controlled.
- ⚠ When set to Busy output, the digital output status is OFF regardless of the actual output state.
- ⚠ ON and OFF indicate the digital boolean value of each port.
- ⚠ You can omit do2, but you cannot omit do1.

- **color Command**

Overview	Control a Signal Tower's LED unit (multi-color) and buzzer
Format	color <col> [<c-pat>] [-b <b-pat>]
Return Value	<col> [<c-pat>] [-b <b-pat>] (state of Signal Tower after command is executed)

Type		Value
col	LED Unit Color	Color of light for LED unit (multi-color) Red Amber Green Blue White Purple Light blue OFF: Light off NONE: No control
c-pat	Light on, flashing pattern	Light on, flashing pattern 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4
b-pat	Buzzer	Buzzer pattern 0: Buzzer off 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5 9: No control

⚠ CAUTION

- The color command should only be used when a Multi-color unit is installed.

Point

- Items in brackets [ ] are optional. Can be omitted.

• sound Command NHV Series

Overview	Control Signal Tower (rygbc) and audio playback (ch)
Format	sound [-r <repeat>] [-c <r><y><g><b><c>] <ch>
Return Value	<ch> (audio playback channel for after command is executed)

Type		Value
repeat	Number of times to repeat	Number of times to repeat 0: One-shot playback (can be omitted) 1 to 254: Number of times to repeat 255: Endless playback
r	Red unit	Light pattern 0: Light off 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4 9: No control
y	Amber unit	
g	Green unit	
b	Blue unit	
c	White unit	
ch	Audio channel	Audio playback channel 1 to 71: Audio channel

⚠ CAUTION

⚠ If you omit the number of times to repeat, plays one time.

⚠ Channels 61 to 64 and 71 are always played back in [Playback from latest input mode].

Point

● Items in brackets [ ] are optional. Can be omitted.

• stop Command NHV Series

Overview	・Stop audio playback (ch) (when using [Playback from latest input mode]) ・Skip Track (in Memory playback mode)
Format	stop
Return Value	<ch> (audio playback channel before command is executed)

Type		Value
ch	Audio channel	Audio playback channel 0: Stop 1 to 71: Audio channel

- **clear Command, doclear Command**

Overview	Execute the clear operation and return to normal operating status
Format	clear [-p] [-z]
	doclear [-p] [-z]
Return Value	<r><y><g><b><c><bz> (state of Signal Tower after command is executed)

Type		Value
r	Red unit	Light pattern 0: Light off 1: Light on 9: Uncontrolled
y	Amber unit	
g	Green unit	
b	Blue unit	
c	White unit	
bz	Buzzer	Buzzer pattern 0: Buzzer off 9: Uncontrolled

⚠ CAUTION

⚠ When the option "-p" is added, buzzer and audio playback are not controlled.
⚠ When the option "-z" is added, Signal Tower units (Red, Amber, Green, Blue, and White) are not controlled.

Point

- Items in brackets [ ] are optional. Can be omitted.
- For information about the clear operation, refer to "5.3.21. Clear Operation Function" (☞ page 77).

- **status Command**

Overview	Get the digital I/O state of Signal Tower, buzzer, and audio playback channels	
Format	status [-s] [di] [do]	
Return Value	No option	<r><y><g><b><c><bz> (state of Signal Tower when command is executed)
	Option -s	<ch> (audio playback channel when command is executed)
	Option di	DI: <di1><di2><di3><di4> (state of digital input when command is executed)
	Option do	DO: <do1><do2> (state of digital output when command is executed)

Type		Value
r	Red unit	Light pattern 0: Light off 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4
y	Amber unit	
g	Green unit	
b	Blue unit	
c	White unit	
bz	Buzzer	Buzzer pattern 0: Buzzer off 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5
ch	Audio channel	Audio playback channel 0: Stopped 1 to 71: Audio channel 200 or 201:Text-to-speech playback by command.
di1	Digital Input 1	Digital Input State 0: OFF 1: ON
di2	Digital Input 2	
di3	Digital Input 3	
di4	Digital Input 4	
do1	Digital Output 1	Digital Output State 0: OFF 1: ON
do2	Digital Output 2	

⚠ CAUTION

⚠ When set to Busy output, the digital output status is OFF regardless of the actual output state.

⚠ Options "-s", "di", and "do" cannot be specified at the same time.

Point

● Items in brackets [ ] are optional. Can be omitted.

- **test Command, dotest Command**

For information about self-test, refer to "5.3.22. Self-test Function" (☞ page 79).

Overview	Runs a self-test
Format	test
	dotest
Return Value	None

⚠ CAUTION

- The monitoring function continues operating while self-test is running. Be careful when checking the operation.
- ⚠ If PNS and PHN Commands are executed during or after execution of self-test, an error response is returned. The RSH or SSH Command returns a Busy response.

Point

- For information on the clear process during self-test, refer to "5.3.21. Clear Operation Function" (☞ page 77).

5.3.11. PNS Command Function (product compatibility commands)

By entering NH series commands, this product can get the state of the Signal Tower, as well as control the Signal Tower.

● Communication Protocols

Protocol	Port Number
TCP	5000 to 65535
UDP	

● Commands You Can Execute

Command	ID	Description
Signal Tower and Buzzer control Commands	S	Controls the Signal Tower and buzzer.
Audio Playback control Commands	V	Controls audio playback.
Digital output control Commands	D	Controls digital output.
Signal Tower and Audio Playback control Commands	W	Controls Signal Tower and audio playback.
Get status Command	G	Gets the state of the Signal Tower and buzzer.
Clear Command	C	Executes the clear operation and returns to the normal operation status.
Multi-color unit control Commands	M	Controls Multi-color units and audio playback.

● Descriptions of Each Command

• Signal Tower and Buzzer control Commands

Request Command

Product Category		ID	Unused	Data Size		Data					
X	X	S	–	–	–	Signal Tower					Buzzer
58H	58H	53H	00H	00H	06H	Red	Amber	Green	Blue	White	
1 byte	1 byte	1 byte	1 byte	2 bytes		1 byte	1 byte	1 byte	1 byte	1 byte	1 byte

Type		Value
Signal Tower	Red	Light pattern 00H: Light off 01H: Light on 02H: Flashing pattern 1 03H: Flashing pattern 2 04H: Flashing pattern 3 05H: Flashing pattern 4 09H: No control
	Amber	
	Green	
	Blue	
	White	
Buzzer		Buzzer pattern 00H: Buzzer off 01H: Buzzer pattern 1 02H: Buzzer pattern 2 03H: Buzzer pattern 3 04H: Buzzer pattern 4 05H: Buzzer pattern 5 09H: No control

Response Command

Normal response
ACK
06H
1 byte

Error response
NAK
15H
1 byte

• Audio Playback Control Commands

Request Command

Product Category		ID	Unused	Data Size		Data			
X	X	V	–	–	–	Playback Pattern	Number of times to repeat	(unused)	Audio Channel
58H	58H	56H	00H	00H	04H			00H	
1 byte	1 byte	1 byte	1 byte	2 bytes		1 byte	1 byte	1 byte	1 byte

Type	Value
Playback Pattern	Playback Pattern 00H: Stop playback (skip track) 01H: Repeat playback
Number of times to repeat	Number of times to repeat 00H: One-shot playback 01H to FEH: Number of times to repeat FFH: Endless playback
Audio Channel	Audio playback channel 01H to 71H: Audio channel *Specify using BCD format.

Response Command

Normal response
ACK
06H
1 byte

Error response
NAK
15H
1 byte

• Digital Output Control Commands

Request Command

Product Category		ID	Unused	Data Size		Data	Data
X	X	D	–	–	–	Digital Output 1	Digital Output 2
58H	58H	44H	00H	00H	02H		
1 byte	1 byte	1 byte	1 byte	2 bytes		1 byte	1 byte

Type	Value
Digital Output 1	Digital Output State 00H: OFF 01H: ON 09H: No control
Digital Output 2	

Response Command

Normal response
ACK
06H
1 byte

Error response
NAK
15H
1 byte

⚠ CAUTION

⚠ In the External Contact Output settings, ports set to Busy output cannot be used for control.

• Signal Tower and Audio Playback Control Commands

Request Command

Product Category		ID	Unused	Data Size	
X	X	W	–	–	–
58H	58H	57H	00H	00H	0AH
1 byte	1 byte	1 byte	1 byte	2 bytes	

Data									
Signal Tower					(unused)	Playback Pattern	Number of times to repeat	(unused)	Audio Channel
Red	Amber	Green	Blue	White	00H			00H	
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte

Type		Value
Signal Tower	Red Amber Green Blue White	Light Pattern 00H: Light off 01H: Light on 02H: Flashing pattern 1 03H: Flashing pattern 2 04H: Flashing pattern 3 05H: Flashing pattern 4 09H: No control
Playback Pattern		Playback Pattern 00H: Stop playback (skip track) 01H: Repeat playback
Number of times to repeat		Number of times to repeat 00H: One-shot playback 01H to FEH: Number of times to repeat FFH: Endless playback
Audio Channel		Audio Playback Channel 01H to 71H: Audio channel *Specify in BCD format.

Response Command

Normal response
ACK
06H
1 byte

Error response
NAK
15H
1 byte

• Get Status Command

Request Command

Product Category		ID	Unused	Data Size	
X	X	G	–	–	–
58H	58H	47H	00H	00H	00H
1 byte	1 byte	1 byte	1 byte	2 bytes	

Response Command

Response Data					
Signal Tower					
Red	Amber	Green	Blue	White	Buzzer
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte

Type		Value
Signal Tower	Red	Light Pattern 00H: Light off 01H: Light on 02H: Flashing pattern 1 03H: Flashing pattern 2 04H: Flashing pattern 3 05H: Flashing pattern 4
	Amber	
	Green	
	Blue	
	White	
Buzzer		Buzzer pattern 00H: Buzzer off 01H: Buzzer pattern 1 02H: Buzzer pattern 2 03H: Buzzer pattern 3 04H: Buzzer pattern 4 05H: Buzzer pattern 5

- **Clear Command**

Request Command

Product Category		ID	Unused	Data Size	
X	X	C	–	–	–
58H	58H	43H	00H	00H	00H
1 byte	1 byte	1 byte	1 byte	2 bytes	

Response Command

Normal response
ACK
06H
1 byte

Error response
NAK
15H
1 byte

• Multi-color unit control Commands

Request Command

Product Category		ID	Unused	Data Size	
X	X	M	–	–	–
58H	58H	4DH	00H	00H	07H
1 byte	1 byte	1 byte	1 byte	2 bytes	

Data						
Multi-color unit		Buzzer	Audio Playback			
			Playback Pattern	Number of times to repeat	(unused)	Audio Channel
Color	Lighting pattern				00H	
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte	1 byte

Type	Value
Color	Color of the Multi-color unit 01H: Red 02H: Amber 03H: Green 04H: Blue 05H: White 06H: Purple 07H: Light blue
Lighting pattern	Lighting pattern 00H: Light off 01H: Light on 02H: Flashing pattern 1 03H: Flashing pattern 2 04H: Flashing pattern 3 05H: Flashing pattern 4
Buzzer	Buzzer pattern 00H: Buzzer off 01H: Buzzer pattern 1 02H: Buzzer pattern 2 03H: Buzzer pattern 3 04H: Buzzer pattern 4 05H: Buzzer pattern 5 09H: No control

Type	Value
Playback Pattern	Playback Pattern 00H: Stop playback (skip track) 01H: Repeat playback
Number of times to repeat	Number of times to repeat 00H: One-shot playback 01H to FEH: Number of times to repeat FFH: Endless playback
Audio Channel	Audio playback channel 01H to 71H: Audio channel *Specify using BCD format.

Response Command

Normal response
ACK
06H
1 byte

Error response
NAK
15H
1 byte

⚠ CAUTION

- The Multi-color unit control Commands should only be used when a Multi-color unit is installed.
- ⚠ When playing audio playback, do not control the buzzer.
- ⚠ You can omit audio playback.
- ⚠ When you play audio playback in NHB series, it is ignored.

5.3.12. PHN Command Function (product compatibility commands)

By entering PHN series commands, this product can get the state of the Signal Tower, as well as control the Signal Tower.

● Communication Protocols

Protocol	Port Number
TCP	5000 to 65535
UDP	

● Commands You Can Execute

Command	Description
W	Write Command
R	Read Command

● Descriptions of Each Command

• Write Command

Request Command

Request Command	Operation Data							
W	Signal Tower / Flashing pattern 1			Buzzer pattern (Audio Channel)		Signal Tower / Flashing pattern		
57H	Green	Amber	Red	Buzzer pattern 2 (62)	Buzzer pattern 1 (61)	Green	Amber	Red
1 byte	1 byte							

Item		Value
Signal Tower / Flashing pattern 1	Green	0b0: Do not flash 0b1: Flash
	Amber	
	Red	
Buzzer	Buzzer pattern 2	0b0: Buzzer off 0b1: Buzzer on
	Buzzer pattern 1	
Signal Tower / Flashing pattern	Green	0b0: Light off 0b1: Light on
	Amber	
	Red	

⚠ CAUTION

⚠ Can control the Signal Tower's Red, Amber, and Green lights and buzzer patterns 1 and 2 only.

Response Command

Normal response		
A	C	K
41H	43H	4BH
1 byte	1 byte	1 byte

Error response		
N	A	K
4EH	41H	4BH
1 byte	1 byte	1 byte

- **Read Command**

Request Command

Request Command
R
52H
1 byte

Response Command

Response Command	Operation Data							
R	Signal Tower / Flashing pattern 1			Buzzer pattern(Audio Channel)		Signal Tower / Flashing pattern		
52H	Green	Amber	Red	Buzzer pattern 2 (62)	Buzzer pattern 1 (61)	Green	Amber	Red
1 byte	1 byte							

Item		Value
Signal Tower / Flashing pattern 1	Green	0b0: Do not flash 0b1: Flash
	Amber	
	Red	
Buzzer	Buzzer pattern 2	0b0: Buzzer off 0b1: Buzzer on
	Buzzer pattern 1	
Signal Tower / Flashing pattern	Green	0b0: Light off 0b1: Light on
	Amber	
	Red	

5.3.13. HTTP Command Reception Function

This product can use HTTP/HTTPS commands to get the state of the Signal Tower, as well as control the Signal Tower.

● Protocol

Protocol	Port Number
HTTP	80
HTTPS	443

● Request Method

GET

● Format

The format for executing HTTP Commands is as follows.

HTTP

http://<address of this product>/api/<command>?<parameter>=<value>[&<parameter>=<value>][&<parameter>=<value>]

HTTPS

https://<address of this product>/api/<command>?<parameter>=<value>[&<parameter>=<value>][&<parameter>=<value>]

Point

- Square brackets [ ] can be specified for specific commands and parameters only.
- You can specify the address using [IPv4 Address], [IPv6 Address], or [Host Name].

● Commands You Can Execute

Command	Description
control	Control the Signal Tower in accordance with the request specified by the parameter.
status	Return Signal Tower information in accordance with the request specified by the parameter.

HTTP command input example 1 **To turn on the LED unit's red light and play audio channel 1**

http://192.168.10.1/api/control?led=10000&sound=1

HTTP command input example 2 **To turn on the LED unit's green light, play notification sound 6 (Ping Pong), and read the text "Equipment A completed processing" in a female voice**

http://192.168.10.1/api/control?led=00100&speech=Equipment A completed processing&voice=female&notify=6

● Parameters You Can Execute

For command control

Parameter	Value		Description
alert	<r><y><g><b><c><bz>	r: Signal Tower Red y: Signal Tower Amber g: Signal Tower Green b: Signal Tower Blue c: Signal Tower White bz: Buzzer	Controls the Signal Tower and buzzer. Light Pattern 0: Light off 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4 9: No control Buzzer pattern 0: Buzzer off 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5 9: No control
output	<do1><do2>	do1: digital output 1 do2: digital output 2	Controls digital output. 0: OFF 1: ON 9: No control
led	<r><y><g><b><c>	r: Signal Tower Red y: Signal Tower Amber g: Signal Tower Green b: Signal Tower Blue c: Signal Tower White	Controls the Signal Tower. Light Pattern 0: Light off 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4 9: No control
color	<color>		Controls the multi-color. Red: Red Amber: Amber Green: Green Blue: Blue White: White Purple: Purple Cyan: Cyan NONE: No control

Parameter	Value	Description
c-pat	<c-pat>	Controls the multi-color pattern. This parameter is used as an additional parameter for the "color" command. 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4
b-pat	<b-pat>	Controls the buzzer This parameter is used as an additional parameter for the "color" command. 0: Buzzer off 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5 9: No control
sound	<ch>	Controls audio playback. 1 to 71: Audio channel
repeat	<repeat>	Specifies the number of times to repeat audio playback. This parameter is used as an additional parameter for the "sound" and speech command. 0: One-shot playback 1 to 254: Number of times to repeat 255: Endless playback
restore	<restore>	Specifies the control time (seconds). 0: Do not specify the control time (can be omitted) 1 to 99: Specified amount of control time
stop	1	The following operations are performed in accordance with product settings. ・Stop audio playback (Playback from latest input mode) ・Skip track (Memory playback mode)
clear	1	Executes the clear operation and returns to the normal operation status.
speech	<text>	Plays back audio of any text that was entered. Maximum 400 characters (Will playback up to 400 characters when enter more than 400 characters.)
lang	<lang>	Selects the language for audio playback. This parameter is used as an additional parameter for the "speech" command. jp Japanese en English cn Chinese*1
voice	<voice>	Selects the language for audio. This parameter is used as an additional parameter for the "speech" command. male / female
speed	-5 to 5	Specifies the speed of audio playback. This parameter is used as an additional parameter for the "speech" command.
tone	-5 to 5	Specifies the pitch of the voice for audio playback. This parameter is used as an additional parameter for the "speech" command.

*1 If you select "cn" on a product that does not have the Voice Synthesizer of Chinese, the same behavior as if you selected "jp"(Japanese) will occur. refer to ["9.7.1. Voice Registration" (☞ page 356)] for how to check the languages supported by the Voice Synthesizer.

Parameter	Value	Description
notify	0 to 10	Select the notification sound that plays before text sound playback.This parameter is used as an additional command for "speech". 0: Do not play 1-10: Notification sound number to play
notifyTail	0 to 10	Select the notification sound to play after text sound playback.This parameter is used as an additional command for "speech". 0: Do not play 1-10: Notification sound number to play
lineout	0, 1	Control line-out output. 0: OFF 1: ON

⚠ CAUTION

❗ Specify "restore" at the same time as you specify "alert". It will not operate when you specify other parameters.

⚠ Environment-dependent characters such as "©" and " ♠ " and some symbols such as "¥" and "~" may not be synthesized correctly.

Point

- You can specify "led" at the same time as "sound" or "speech" at the same time.
- When lang, voice, speed, tone are not specified or the value is invalid, it works with the following values.

Parameter	Specified value
lang	jp
voice	male
speed	0
tone	0

For command status

Parameter	Value	Description
format	<format>	Returns the state of the Signal Tower in the specified format. xml: Data in XML format json: Data in JSON format

● Responses When Executing HTTP Commands

For command control

When successful	Success.
When failed	Error.<error code>

Error Code	Description
002	Invalid command.
003	The command is not specified.
004	The value is not specified.
005	Invalid value.

For command status

When successful	Data of response in the specified format
When failed	Error.

● List of Data You Can Get

XML

Data			Description
color	color name	Name of Signal Tower Color	LED1: Red LED2: Amber LED3: Green LED4: Blue LED5: White MULTI_COL: Multi-color MULTI_PAT: Multi-color pattern
	value	State of Signal Tower	・LED 1 to 5, MULTI_PAT 0: Light off / Unsupported pattern 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4 ・MULTI_COL 0: Light off / Unsupported color 1: Red 2: Amber 3: Green 4: Blue 5: White 6: Purple 7: Light blue
buzzer	buzzer name	Buzzer Name	BUZZER Sounds
	value	Buzzer pattern	0: Stop 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5
sound	sound name	Name of Audio Playback	SOUND Audio Playback
	value	Audio Playback Channel	0: Stop audio 1 to 71: Audio channel
port	port name	Name of Digital Input/Output	DO-1: Digital Output 1 DO-2: Digital Output 2 DIN-1: Digital Input 1 DIN-2: Digital Input 2 DIN-3: Digital Input 3 DIN-4: Digital Input 4
	value	State of Digital Input/Output	0: OFF 1: ON

json

Command		Type	Description
Unit_Status	Status of Signal Tower Color	number	Indicate the pattern in order, R (Red) → Y (Amber) → G (Green) → B (Blue) → C (White) 0: Light off 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4
Multi_Color	Multi-color		0: Light off / Unsupported color 1: Red 2: Amber 3: Green 4: Blue 5: White 6: Purple 7: Light blue
Multi_Pattern	Multi-color pattern		0: Light off / Unsupported pattern 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4
Buzzer_Pattern	Buzzer pattern		0: Stop 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5
Sound_CH	Audio Playback Channel		0: Stop audio 1 to 71: Audio channel
Digital_Output	Digital output		0: OFF 1: ON
Digital_Input	Digital input		0: OFF 1: ON
Software_Version	Software version	string	The software version on this product
MAC_Address	MAC address		The MAC address on this product

5.3.14. SNMP Command Functions

- This product can use the SNMP function to get the state of the Signal Tower, as well as control the Signal Tower.
- SNMP versions v1, v2c, and v3 are supported.
- For information on OID for getting and controlling, refer to "10. MIB List" (☞ page 367).
- For the procedure on using SNMP Commands, refer to "8.3.1. Checking and Controlling the Status of This Product with Commands" (☞ page 172).

● Communication Protocols

Protocol	Port Number
UDP	161

● Commands You Can Execute

SNMP Command
SNMP GET
SNMP SET

● OID List

OID	Object ID	Description
1.3.6.1.2.1.1.3	sysUptime	Time that has elapsed since the SNMP management system was restarted (in hundredths of a second)
1.3.6.1.2.1.1.4	sysContact	Main unit settings - Basic Settings Contact Information
1.3.6.1.2.1.1.5	sysName	Main unit settings - Network Settings Host Name Information
1.3.6.1.2.1.1.6	sysLocation	Main unit settings - Basic Settings Installation Location Information
1.3.6.1.4.1.20440.4.1.1.1	identSwInitVersion	Operating System Version Information
1.3.6.1.4.1.20440.4.1.1.2	identSwAgentVersion	Application Version Information
1.3.6.1.4.1.20440.4.1.1.3	identHwVersion	Hardware Version Information
1.3.6.1.4.1.20440.4.1.4.1.1	pingServerNumEntries	Number of Ping Monitoring
1.3.6.1.4.1.20440.4.1.4.1.2.1.1	pingServerTableIndex	Setting Number for Ping Monitoring
1.3.6.1.4.1.20440.4.1.4.1.2.1.2	pingServerName	Unit name for Ping Monitoring
1.3.6.1.4.1.20440.4.1.4.1.2.1.3	pingServerAlertValue	Ping Monitoring Status
1.3.6.1.4.1.20440.4.1.4.1.2.1.4	pingServerIpAddress	IP Address for Ping Monitoring
1.3.6.1.4.1.20440.4.1.4.4.1	diEntry1	State of Digital Input 1
1.3.6.1.4.1.20440.4.1.4.4.2	diEntry2	State of Digital Input 2
1.3.6.1.4.1.20440.4.1.4.4.3	diEntry3	State of Digital Input 3
1.3.6.1.4.1.20440.4.1.4.4.4	diEntry4	State of Digital Input 4
1.3.6.1.4.1.20440.4.1.4.5.1	doEntry1	State of Digital Output 1
1.3.6.1.4.1.20440.4.1.4.5.2	doEntry2	State of Digital Output 2
1.3.6.1.4.1.20440.4.1.5.1.1	controlLightNumEntries	Number of Signal Tower to Control
1.3.6.1.4.1.20440.4.1.5.1.2.1.1	controlLightDeviceColor	Values of Signal Tower Color Information
1.3.6.1.4.1.20440.4.1.5.1.2.1.2	controlLightControlState	State of the Signal Tower to Control
1.3.6.1.4.1.20440.4.1.5.1.2.1.3	controlLightControlTimer	Number of Seconds Until Control State is Reflected
1.3.6.1.4.1.20440.4.1.5.1.2.1.4	controlLightCurrentState	Current State of the Signal Tower
1.3.6.1.4.1.20440.4.1.5.1.3	controlLightSnmpClear	Clear Control Status
1.3.6.1.4.1.20440.4.1.5.2.1	controlSoundChannel	Control and Current State of Audio Channel
1.3.6.1.4.1.20440.4.1.5.2.2	controlSoundLight	Control State of the Signal Tower with a 12-digit Number
1.3.6.1.4.1.20440.4.1.5.3.1	controlMultiColorUnit	Control State of the Multi-color unit with a 2-digit Number

5.3.15. Ping Monitoring Function

- Using ping communication, you can monitor equipment on the network to detect error and recovery states.
- You can monitor up to 24 nodes.
- Ping monitoring starts after ping monitoring setup is complete.

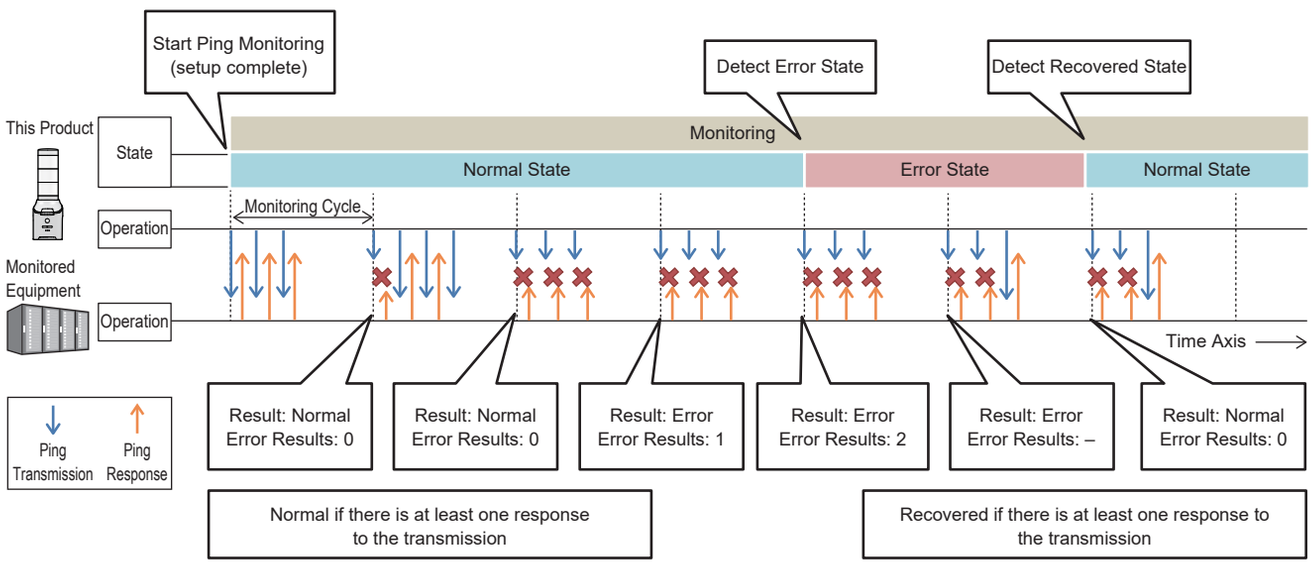
⚠ CAUTION

⚠ Detecting the recovery state occurs when recovering from a monitoring error state.

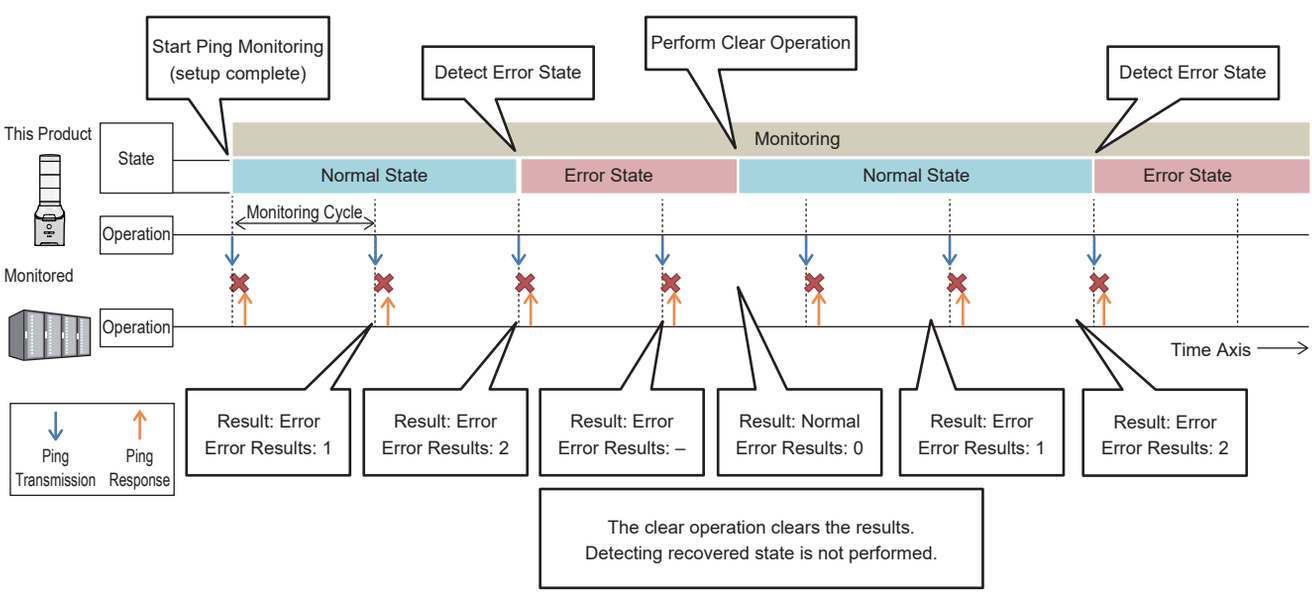
⚠ When monitoring error states, performing a clear operation restores monitoring to a normal state, but the recovered state is not detected.

- The following example describes timing details of error states and when they are detected.

Example 1 **When number of transmissions is 2, and number of items to send is 3**



Example 2 **If clear operation is performed while monitoring for error states (set the number of transmissions to 2, and number of items to send to 3)**



5.3.16. SNMP TRAP Reception Function

- You can receive TRAP that contain the specified IP address of equipment or the specified OID.
- SNMP versions V1, V2c, and V3 are supported.
- You can have a maximum 16 group settings, and in each group you can register 4 TRAP.
- For the procedure on using SNMP Commands, refer to "8.4.2. SNMP TRAP Monitoring" (☞ page 206).

● Communication Protocols

Protocol	Port Number
UDP	162

⚠ CAUTION

- If the [GenericTrap type] of the TRAP received is 6 (enterprisespecific), at the end of the received TRAP append "0. (specific-trap value)".
- ⚠ The number of variable-bindings that can be identified is limited to 64 per TRAP. When a TRAP is received with more than 64 variable-bindings, the 65th and subsequent variable-bindings will not be identified.
- ⚠ The types of values that can be identified are integer, OCTET STRING (string), and OCTET STRING (Binary).

  Value in OCTET STRING (string) is treated as a string.

  Example When value is A, Judgment is "A"

  Value in OCTET STRING (Binary) is treated as binary data.

  Example When value is A, Judgment is 0000 1010

5.3.17. SNMP Device Monitoring Function

- Using SNMP Commands, you can monitor SNMP-enabled equipment on the network and notify changes in state.
- You can set up match detection if the monitored data exceeds or falls below a threshold value, or to detect changes in monitored data.
- There are 20 types of match detection and 5 types of change patterns that can be detected.

● Communication Protocols

Protocol	Port Number
UDP	161

● Description of Detection

- **Match Detection**
  - When you get the state of SNMP-enabled equipment and the state matches the set condition, the operation for when the condition matches is performed.
  - When the state no longer matches the set condition, the release condition operation is performed.

⚠ CAUTION

⚠ The release condition operation is performed when the condition match is released after condition match status.

⚠ Even if a clear operation is performed while in a match status, the monitoring status will not be recovered. The match status will continue.

⚠ If you need to return the match status to the monitoring status, reconfigure the SNMP Device Monitoring Settings.

⚠ If the [Operation during communication timeout] is set to [Enabled], and a timeout is identified, the release condition operation is performed.

⚠ If re-evaluation of match is specified as the release condition operation, the status of the specified setting becomes monitoring status.

⚠ The types of values that can be identified are [integer], [OCTET STRING (string)], and [OCTET STRING (Binary)].

Value in OCTET STRING (string) is treated as a string.

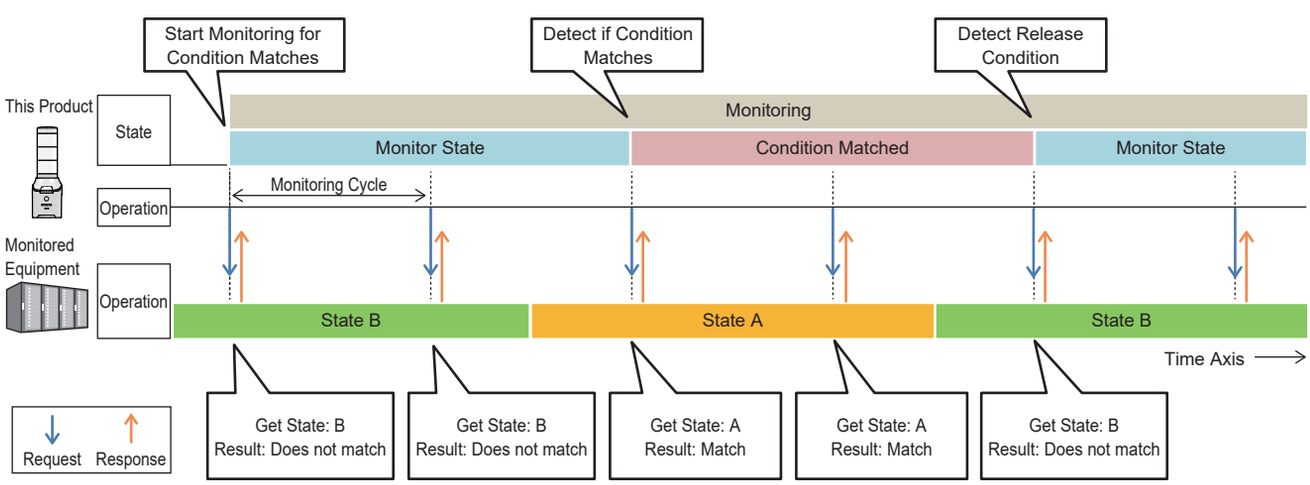
Example When value is A, Judgment is "A"

Value in OCTET STRING (Binary) is treated as binary data.

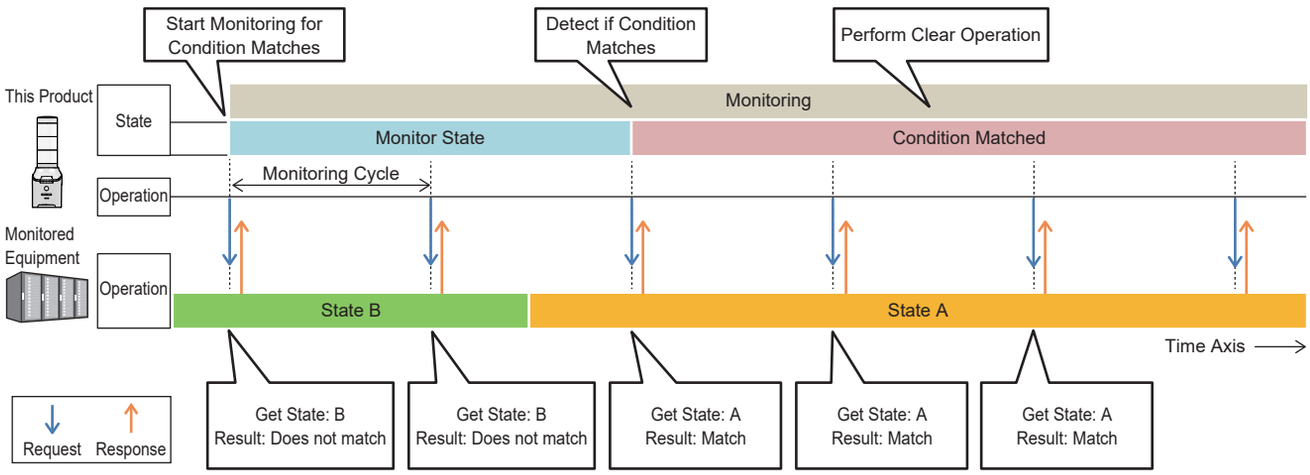
Example When value is A, Judgment is 0000 1010

- The following example describes timing details when condition matches and release condition are detected.

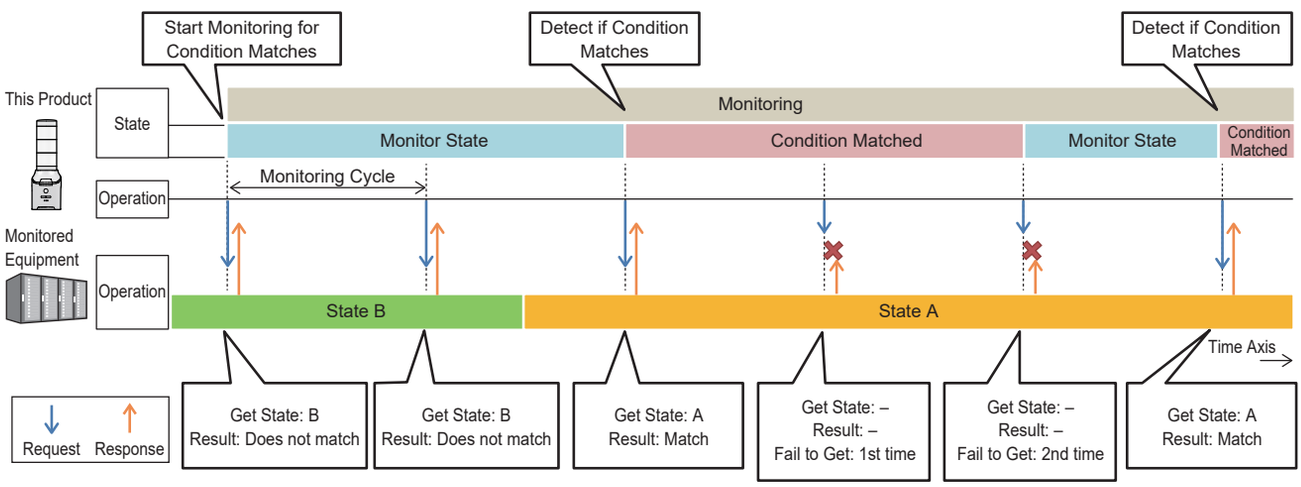
Example 1 **Match and release condition operations when match condition is A**



Example 2 Clear operation when match condition is A

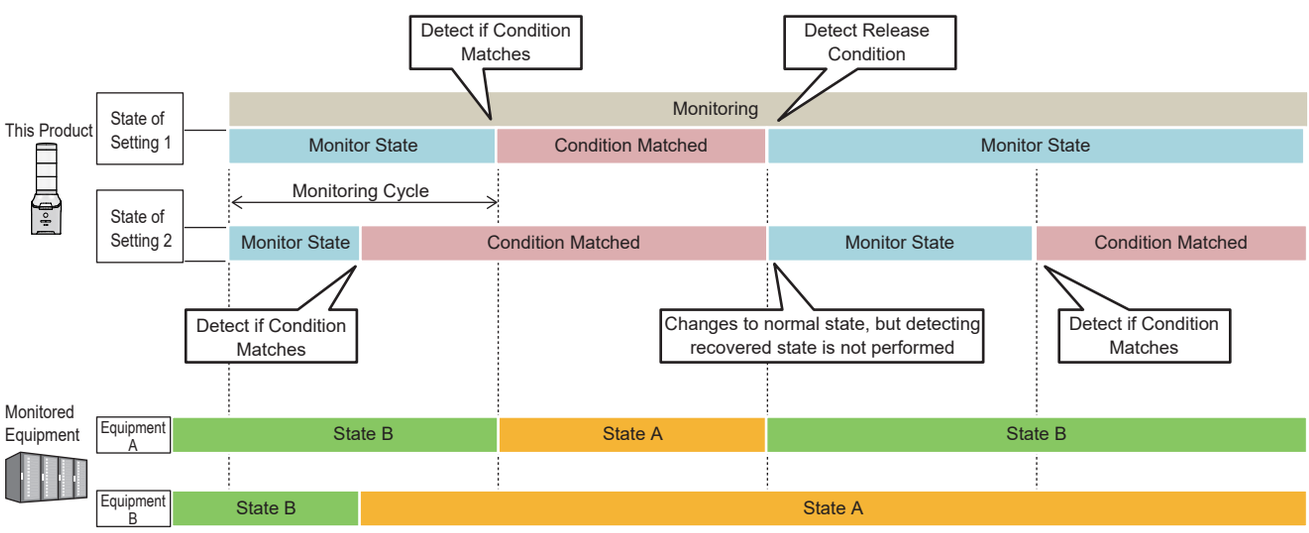


Example 3 When match condition is A, operation during communication timeout (Number of retries set to 2) is enabled



Example 4 When match condition is A and monitor setting 2 is specified for re-evaluation of match of monitor setting 1

In this example, the flow of communication with the monitored equipment has been omitted because it is the same as previous examples.



- **Detect Change**
  - Gets the state of SNMP enabled equipment, and when there is a state change, performs the operation for when a change is detected.

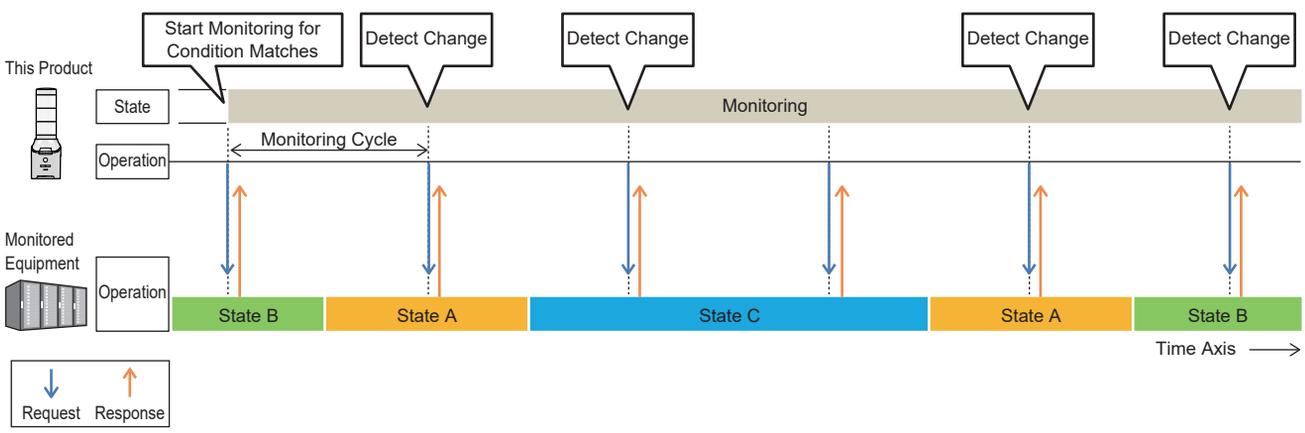
⚠ CAUTION

⚠ Changes in state that occur during a communication timeout are not detected.

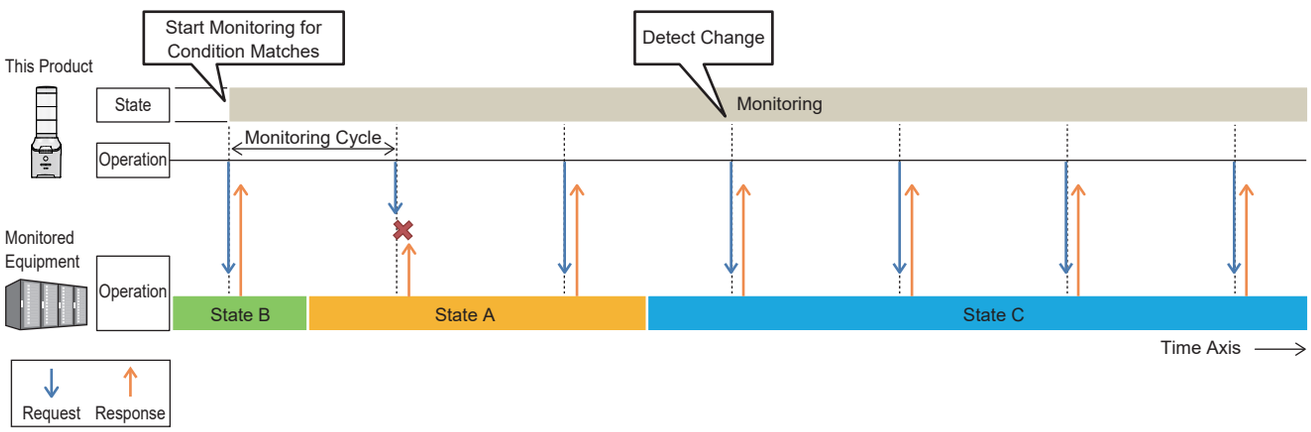
⚠ Integer is the only type of value that can be identified.

- The following example describes timing details when condition matches and release condition are detected.

Example 1 **Normal Detect Change Operation**



Example 2 **Detect Change Operation When Timeout Occurs**



5.3.18. Detect Change in State of Contact Input NHV Series (D model)

- By monitoring the state of external contact inputs, this function detects any changes in the state.
- Digital signals to four external contact inputs are used to monitor the state of digital input.
- Digital input can refer to digital logic settings (Contact A [normally open] or Contact B [normally closed]).

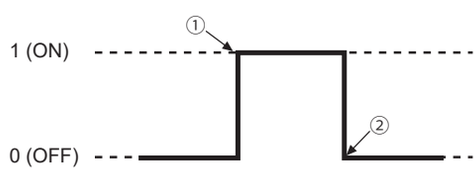
● Definition of ON and OFF for Digital Input

Operation Status		ON	OFF	Description
Digital Boolean value		1 01H	0 00H	
Contact Status	Contact A (make contact) (normally open)	 Closed circuit	 Open circuit	OFF opens the contact. ON closes the contact and allows power to flow.
	Contact B (break contact) (normally closed)	 Open circuit	 Closed circuit	OFF closes the contact and allows power to flow. ON opens the contact.

- This product detects the state under the following conditions.

● Conditions When the Product can Detect

Status	Description
ON Status Change	Detect state when digital input turns ON (①).
OFF Status Change	Detect state when digital input turns OFF (②).
Status change	Detect a change in state from ON to OFF, or OFF to ON.



⚠ CAUTION

- The monitoring cycle for the digital input is 110 ms. Maintain the input signal for 110 ms or longer.
- If the state of digital input is continually changing, there may be delays in operations and detecting changes may be missed.

5.3.19. Contact Input Match Detection NHV Series (D model)

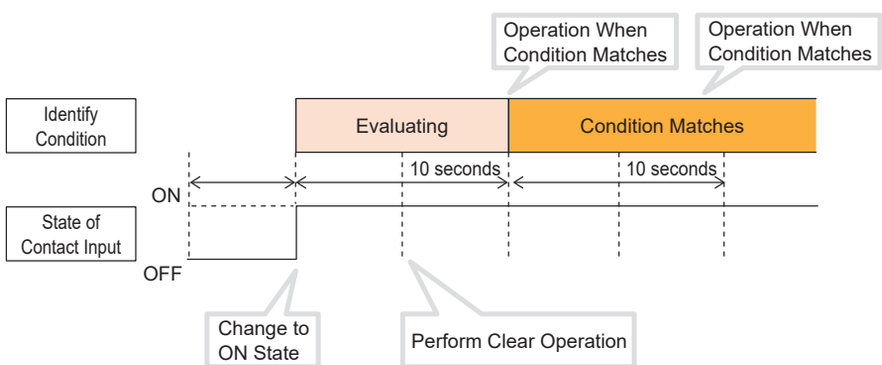
- You can detect changes in the contact input state based on set conditions.
- Determining the condition is executed in order, Condition 1 → Condition 2 → Condition 3 → Condition 4.
- If a condition matches, the operation when condition matches is performed.
- You can detect when there is continuous input for a specified period of time (detect continuous).
- The maximum length of time for detecting continuous input is 3600 seconds.
- You can use the Clear button to reset the measured time, or after conditions match run the detect operation again.

⚠ CAUTION

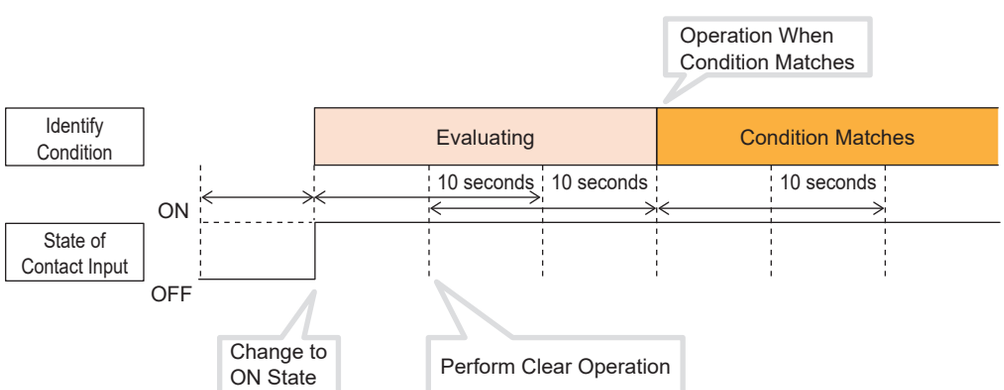
⚠ The condition can be set for ON status change only.

- The following example describes operation details.

Example 1 **Operation condition is set as Continuous On Time: 10 seconds, clear operation condition disabled, and re-evaluation is enabled**



Example 2 **Operation condition is set as Continuous ON Time: 10 seconds, clear operation condition enabled, and re-evaluation disabled**



5.3.20. Detect Email Function NHV Series

- Connect to the mail server and periodically check for new email.
- Following registered filter rules, notify when receiving email by sender, subject, and body text.
- Register up to 20 patterns of filter rules for detecting email.
- Set up each filter rule with up to five conditions.
- You can set any matching conditions "Meets all of following", "Meets one of the following", and "None" when registering multiple rules.
- Apply the filter "Matches with", "Beginning with", "Include", "Be free of" to the sender, subject, and body text.

⚠ CAUTION

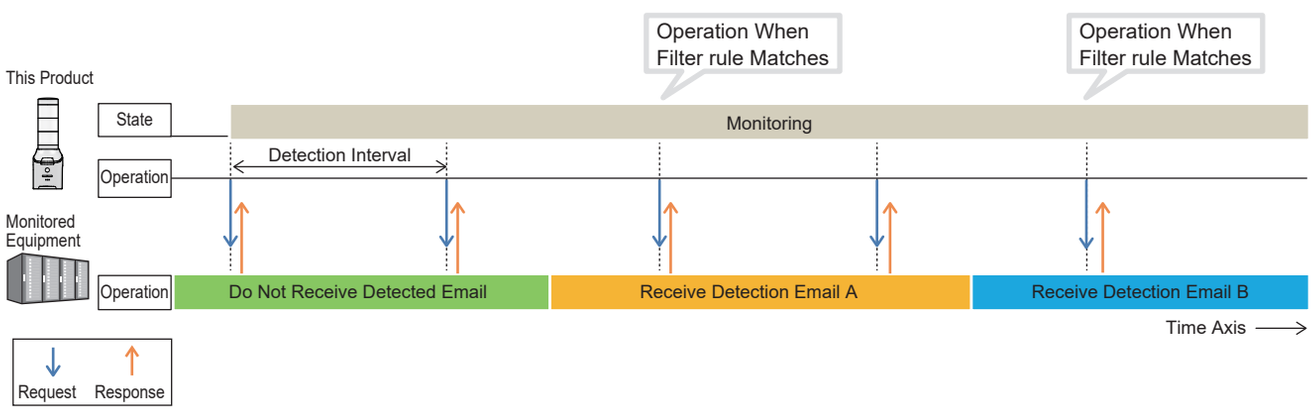
⚠ The maximum size of email is 5MB (both POP / IMAP), and emails that exceed the maximum size may not be detected.

⚠ Attachments are ignored (text information in attachments is not subject to filter detection)

⚠ When "Delete the mail in the server after receiving" is enabled in POP authentication, emails older than the latest 200 will be deleted without filter detection.

⚠ If you receive a large number of emails during the first reception or during the period from the previous email check to this time, it may take some time to receive the emails.

⚠ If multiple emails are received at the same time, the order of detection may vary depending on the mail server.



- The following example describes registering filter rules.

Example 1 **If you want this product to detect email receiving from specified email address (patlite@example.com)**

Matching conditions	Meets all of following / Meets one of the following	
rule 1	Filtering target	Sender
	Filtering content	patlite@example.com
	Condition	Matches with"

Example 1 **If you want this product to detect email receiving from specified email address (patlite@example.com) and including the word "important" in subject**

Matching conditions	Meets all of following	
rule 1	Filtering target	Sender
	Filtering content	patlite@example.com
	Condition	Matches with
rule 2	Filtering target	Subject
	Filtering content	"important"
	Condition	Include

Example 1 **If you want this product to detect all received email**

Matching conditions	None
rule 1 to 5	-

5.3.20.1. Reading Aloud Email Contents

- You can use the Voice Synthesizer to make the product read aloud the contents of emails that match the filter rules.

  For more information, see "5.3.4. Voice Synthesizer Function" (☞ page 28).
- The range of a detected email to be read aloud can be set to include "Sender," "Subject," and "Body text."

  "Sender," "Subject," and "Body text" can be read aloud in that order along with the following.
  - » Sender: "Email received from" followed by the sender's name
  - » Subject: "Subject" followed by the subject line
  - » Body text: "Body text" followed by the body of the email
- The product will say "Email received" in the following cases:
  - » When you have not set an email reading range (Sender, Subject, Body text)
  - » When there is nothing to be read aloud (e.g., when all is blank)
  - » When speech synthesis of the content to be read aloud fails (e.g., the content contains characters that cannot be parsed)
- You can choose either "Read full text" or "Auto extract text to be read aloud."

  When text to be read aloud is automatically extracted, the content will be extracted and read aloud according to the following rules depending on your language setting.

Language setting for reading aloud	Priority	Content
Japanese	1	Lines containing a URL (http://, https://, etc.) and the line preceding them are **skipped.**
	2	Lines beginning with any of the following characters are **skipped.** ・* (asterisk) (single-byte) ・※ (rice symbol) (double-byte) ・- (hyphen) (single-byte) ・~ (tilde) (single-byte) ・> (unequal sign) (single-byte/double-byte)
	3	Lines ending with any of the following characters are **read aloud.** ・、(comma) (double-byte) ・。 (period) (double-byte) ・? (question mark) (single-byte/double-byte) ・! (exclamation mark) (single-byte/double-byte)
English	1	Lines containing a URL (http://, https://, etc.) and the line preceding them are **skipped.**
	2	Lines beginning with any of the following characters are **skipped.** ・* (asterisk) (single-byte) ・- (hyphen) (single-byte) ・~ (tilde) (single-byte) ・> (unequal sign) (single-byte)
	3	Lines ending with any of the following characters are **read aloud.** ・. (period) (single-byte) ・, (comma) (single-byte) ・? (question mark) (single-byte) ・! (exclamation mark) (single-byte)

Language setting for reading aloud	Priority	Content
Chinese (Mandarin)	1	Lines containing a URL (http://, https://, etc.) and the line preceding them are **skipped.**
	2	Lines beginning with any of the following characters are **skipped.** ・* (asterisk) (single-byte) ・※ (rice symbol) (double-byte) ・- (hyphen) (single-byte) ・~ (tilde) (single-byte) ・> (unequal sign) (single-byte/double-byte)
	3	Lines ending with any of the following characters are **read aloud.** ・, (comma) (single-byte/double-byte) ・、(comma) (double-byte) ・。 (period) (double-byte) ・? (question mark) (single-byte/double-byte) ・! (exclamation mark) (single-byte/double-byte)

Example 1 **When reading an email containing the following body text with "Auto extract text to be read aloud" enabled and the language setting being Japanese**

Skipped	〇月×日△時□分 ◇◇ 発表
Read aloud	「熱中症警戒アラート」が発表されています。 〇〇県では、熱中症の危険性が極めて高い気象状況になることが予測されます。 外出はなるべく避け、室内をエアコン等で涼しい環境にして過ごしてください。
Skipped	詳しくはこちら https://www.patlite.co.jp
Skipped	登録内容の変更・配信解除は次のリンク先にアクセスしてください。 https://www.patlite.co.jp
Skipped	※返信メールは受け付けておりません。 〇〇市

Example 2 **When reading an email containing the following body text with "Auto extract text to be read aloud" enabled and the language setting being English**

Read aloud	This is an announcement from Fire department. The Other accidents has occurred near the ** bus stop.
Skipped	To change your details or cancel your subscription, please use the following link. https://www/patlite.com

⚠ CAUTION

- ⚠ If the "sender name (sender)" is not set for the detected email, the "sender" will not be read aloud.
- ⚠ Some emails may not be read aloud, such as when multiple emails are detected at the same time or when an email contains characters that cannot be read aloud.
  Due to automatic extraction of reading parts, depending on the content of the email, all or part of the text may not be read out.
  If you absolutely need to read important messages, don't use automatic extraction.
- ⚠ The product can read aloud up to 400 characters per email (including the number of characters contained in "Sender" and "Subject" to be read aloud). If an email contains more than 400 characters, only 400 characters are read aloud. In such a case, you can set the product not to read aloud "Sender" and "Subject" or delete line breaks and symbols to reduce the number of characters to be read aloud.
- ⚠ You cannot set "Read aloud email contents" and "Control by email contents" simultaneously in one filter rule setting.
- ⚠ Depending on the mail server or email software to be used, text may be automatically broken into two lines if it contains too many characters per line. In this case, some of the email contents may not be read aloud if "Auto extract text to be read aloud" is enabled.
- ⚠ Even if you set to "Automatically extract parts to read out", sentences that should not be read aloud may be read out depending on the email server or email software.
- ⚠ Because speech is synthesized from text, there is a time lag between when an email is detected and when it is played. (Estimated time for 400 characters: approximately 60 seconds)

5.3.20.2. Control by Email Contents

- You can include a control tag in the body of the email to be detected to control the Signal Tower or play back audio.
- To use a control tag, include <[Control Tag] = [Value]> in the email body text.
- There are two types of control tags: simple control tag and detailed control tag. You can include multiple simple control tags in the body of an email while the detailed control tag allows you to specify multiple controls, but only one can be used per email.

Point

- Use one control tag per line.
- Place a control tag at the beginning of the line.
- Place a control tag in the body text. A control tag placed in the sender or subject line will not work.
- Only single-byte alphanumeric characters can be used for a control tag.
- Do not include a simple control tag and a detailed control tag in the same email.

⚠ CAUTION

- ⚠ When using this function, take measures such as periodically deleting emails from the mail server. If you receive a large number of emails during the first reception or during the period from the previous email check to this time, control may be performed continuously.

・The control tags that can be used are shown in the table below.

● Simple control tag

Control tag	Value	Content
red yellow green blue white	Lighting pattern off: Light off on: Light on flash1: Flashing pattern 1 flash2: Flashing pattern 2 flash3: Flashing pattern 3 flash4: Flashing pattern 4	Controls the Signal Tower. red: Signal Tower Red yellow: Signal Tower Yellow green: Signal Tower Green blue: Signal Tower Blue white: Signal Tower White
output1 output2	off: Contact output OFF on: Contact output ON	Controls digital output. output1: Contact output 1 output2: Contact output 2
sound	1 to 71: Audio channel	Controls audio playback.
speech	Specify in the following format, and enter values. <speech=[Language], voice=[Voice]>[Text content] *1 </speech>[Language]: jp(Japanese), en(English), cn *2(Chinese(Mandarin))[Voice]:male(Male), female(Female)	Plays back audio of any text that was entered. The maximum number of characters that can be played is 400 characters. (Will playback up to 400 characters when enter more than 400 characters.)
stop	(None)	The following operations are performed in accordance with product settings. ・Stop audio playback (Playback from latest input mode) ・Skip track (Memory playback mode)
clear	(None)	Executes the clear operation and returns to the normal operation status.

*1 If [Language] is not specified, playback is in jp (Japanese); if [Voice] is not specified, playback is in male (male).

*2 If you select "cn" on a product that does not have the Voice Synthesizer of Chinese, the same behavior as if you selected "jp" (Jap-anese) will occur. Refer to ["9.7.1. Voice Registration" (☞ page 356)] for how to check the languages supported by the Voice Synthesiz-er.

Point

- "clear" and "stop" override other control tags. If "clear" and "stop" are listed in the same email, "clear" takes precedence.
- If "sound" and "speech" are listed in the same e-mail, "sound" takes precedence.
- If the same control tag is listed in the email, the operation of the control tag listed later takes precedence. (Example: If they are listed in the order <red=off>, <red=on> then <red=on> will work)

● Detailed control tag

・You can use multiple parameters using the control tag [command].

・The format of the detailed control tag is as follows.

<command>[Parameter]=[Value]{&[Parameter]=[Value]}{&[Parameter]=[Value]}</command>

Parameter	Value		Description
alert	<r><y><g><b><c><bz>	r: Signal Tower Red y: Signal Tower Amber g: Signal Tower Green b: Signal Tower Blue c: Signal Tower White bz: Buzzer	Controls the Signal Tower and buzzer. Light Pattern 0: Light off 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4 9: No control Buzzer pattern 0: Buzzer off 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5 9: No control
output	<do1><do2>	do1: digital output 1 do2: digital output 2	Controls digital output. 0: OFF 1: ON 9: No control
led	<r><y><g><b><c>	r: Signal Tower Red y: Signal Tower Amber g: Signal Tower Green b: Signal Tower Blue c: Signal Tower White	Controls the Signal Tower. Light Pattern 0: Light off 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4 9: No control
color	<color>		Controls the multi-color. Red: Red Amber: Amber Green: Green Blue: Blue White: White Purple: Purple Cyan: Cyan NONE: No control

Parameter	Value	Description
c-pat	<c-pat>	Controls the multi-color pattern. This parameter is used as an additional parameter for the color command. 1: Light on 2: Flashing pattern 1 3: Flashing pattern 2 4: Flashing pattern 3 5: Flashing pattern 4
b-pat	<b-pat>	Controls the buzzer This parameter is used as an additional parameter for the color command. 0: Buzzer off 1: Buzzer pattern 1 2: Buzzer pattern 2 3: Buzzer pattern 3 4: Buzzer pattern 4 5: Buzzer pattern 5 9: No control
sound	<ch>	Controls audio playback. 1 to 71: Audio channel
repeat	<repeat>	Specifies the number of times to repeat audio playback. This parameter is used as an additional parameter for the sound and speech command. 0: One-shot playback 1 to 254: Number of times to repeat 255: Endless playback
restore	<restore>	Specifies the control time (seconds). 0: Do not specify the control time (can be omitted) 1 to 99: Specified amount of control time
stop	1	The following operations are performed in accordance with product settings. ・Stop audio playback (Playback from latest input mode) ・Skip track (Memory playback mode)
clear	1	Executes the clear operation and returns to the normal operation status.
speech	<text>	Plays back audio of any text that was entered. Maximum 400 characters (Will playback up to 400 characters when enter more than 400 characters.)
lang	<lang>	Selects the language for audio playback. This parameter is used as an additional parameter for the speech command. jp Japanese en English cn Chinese*1
voice	<voice>	Selects the language for audio. This parameter is used as an additional parameter for the speech command. male / female
speed	-5 to 5	Specifies the speed of audio playback. This parameter is used as an additional parameter for the speech command.
tone	-5 to 5	Specifies the pitch of the voice for audio playback. This parameter is used as an additional parameter for the speech command.

*1 If you select "cn" on a product that does not have the Voice Synthesizer of Chinese, the same behavior as if you selected "jp"(Japanese) will occur. refer to ["9.7.1. Voice Registration" (☞ page 356)] for how to check the languages supported by the Voice Synthesizer.

Parameter	Value	Description
notify	0 to 10	Select the notification sound that plays before text sound playback.This parameter is used as an additional command for "speech". 0: Do not play 1-10: Notification sound number to play
notifyTail	0 to 10	Select the notification sound to play after text sound playback.This parameter is used as an additional command for "speech". 0: Do not play 1-10: Notification sound number to play
lineout	0, 1	Control line-out output. 0: OFF 1: ON

⚠ CAUTION

- Specify "restore" at the same time as you specify "alert". It will not operate when you specify other parameters.
- ⚠ Environment-dependent characters such as "©" and " ♠ " and some symbols such as "¥" and "~" may not be synthesized correctly.
- ⚠ When using this function, take measures such as periodically deleting emails from the mail server. If you receive a large number of emails during the first reception or during the period from the previous email check to this time, control may be performed continuously.
- ⚠ If two or more detailed control tags are listed in a single email, the operation of the control tag listed earlier takes precedence.

Point

- You can specify "led" at the same time as "sound" or "speech" at the same time.
- When lang, voice, speed, tone are not specified or the value is invalid, it works with the following values.

Parameter	Specified value
lang	jp
voice	male
speed	0
tone	0

Example of Email Body Text 1 **To turn on the LED unit's red light and play audio channel 1**

<When using simple control tag>

・<red=on>
・<sound=1>

<When using detailed control tag>

<command>led=10000&sound=1</command>

Example of Email Body Text 2 **To turn on the LED unit's green light and read the text "Equipment A completed processing" in a female voice**

<When using simple control tag>

・<green=on>
・<speech, voice=female> Equipment A completed processing </speech>

<When using detailed control tag>

<command>led=00100&speech= Equipment A completed processing &voice=female</command>

5.3.21. Clear Operation Function

By executing a clear operation, you can clear operations of various functions on the product.

● Details of Clear Operation

The clear operation varies depending on how it is executed.

Function	Clear Operation Execution Method		
	RSH/SSH Commands SNMP Command	PNS Command HTTP Command Signal Tower Control Screen Control by the contents of the email	Clear Button
Signal Tower	Result in normal operation state		Result in the state as set in the Clear Button Setup screen
Buzzer	Stop		
Digital Output	Turn OFF		
Busy Output	Turn OFF		Play Audio: ON Stop Audio: OFF
Audio Playback	Stop		Result in the state as set in the Clear Button Setup screen
Self-test Operation	Result in normal operation state		
Send Email	Transmission Possible	Transmission Not Possible	Transmission Possible
TRAP Transmission	Transmission Possible	Transmission Not Possible	Transmission Possible
Ping Monitoring	Return to Monitoring Status		
SNMP Device Monitoring	Continue Current State		
Digital Input Condition	Continuous ON Time is reset		Depends on the operation setting when the Clear button is pressed
PLC Information Read Command Condition-matched State	Data acquisition state	Data acquisition state	Data acquisition state
PLC Information Writing	Transmission Possible	Transmission Not Possible	Transmission Possible

⚠ CAUTION

⚠ The following action plays audio playback even after the clear operation.
- When synthesizing the voice of the text entered on the WEB Setup Screen
- When text received by command or cloud is being synthesized by voice

Point

● The Signal Tower state can be set off individually for each color only by pressing the clear button.

● Operation when Clear button is pressed

By pressing the Clear button, you can execute operations such as those below.

- **For [Clear stages], you can specify clear all or two-stage clear.**

Clear All	Simultaneously clear the Signal Tower, digital output, and buzzer/audio playback.
Depress twice to Clear all	The first press of the button stops the buzzer/audio playback and contact output, and the second press clears the Signal Tower.

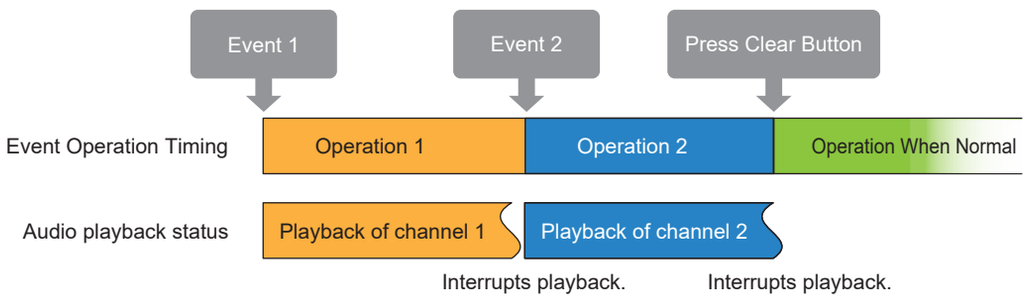
- **You can send email, TRAP, HTTP Commands, and MQTT.**
- **You can stop audio playback or skip tracks.** NHV Series

Stop	Stops playing audio. Also clears audio stored in the memory.
Skip	Stops audio playback and starts playback of audio registered in the memory. Stops when memory is empty.

● Detailed Timing Example

Example 1 When playback mode is [Playback from latest input mode]

Pressing the Clear button interrupts playback of audio and turns OFF Busy output.

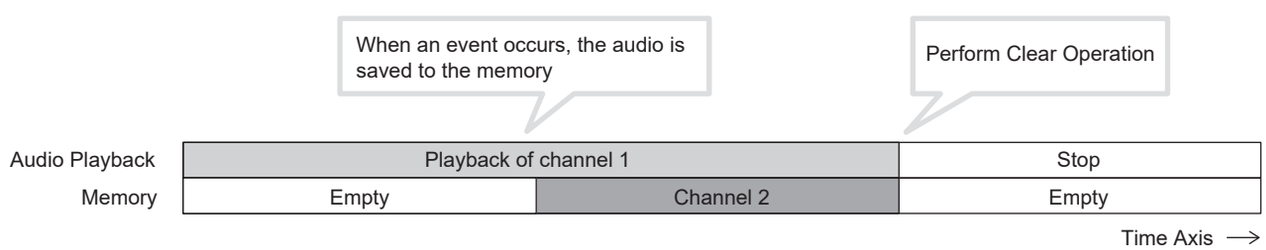


Example 2 When playback mode is [Memory playback mode]

In Memory playback mode, [Memory] is handled differently depending on the [Clear Operation] setting.

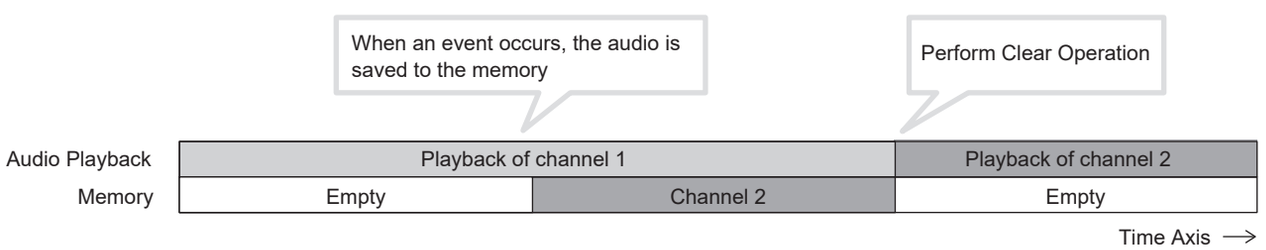
・Stop

Pressing the Clear button interrupts audio playback and stops Busy output.
Also clears audio stored in the memory.



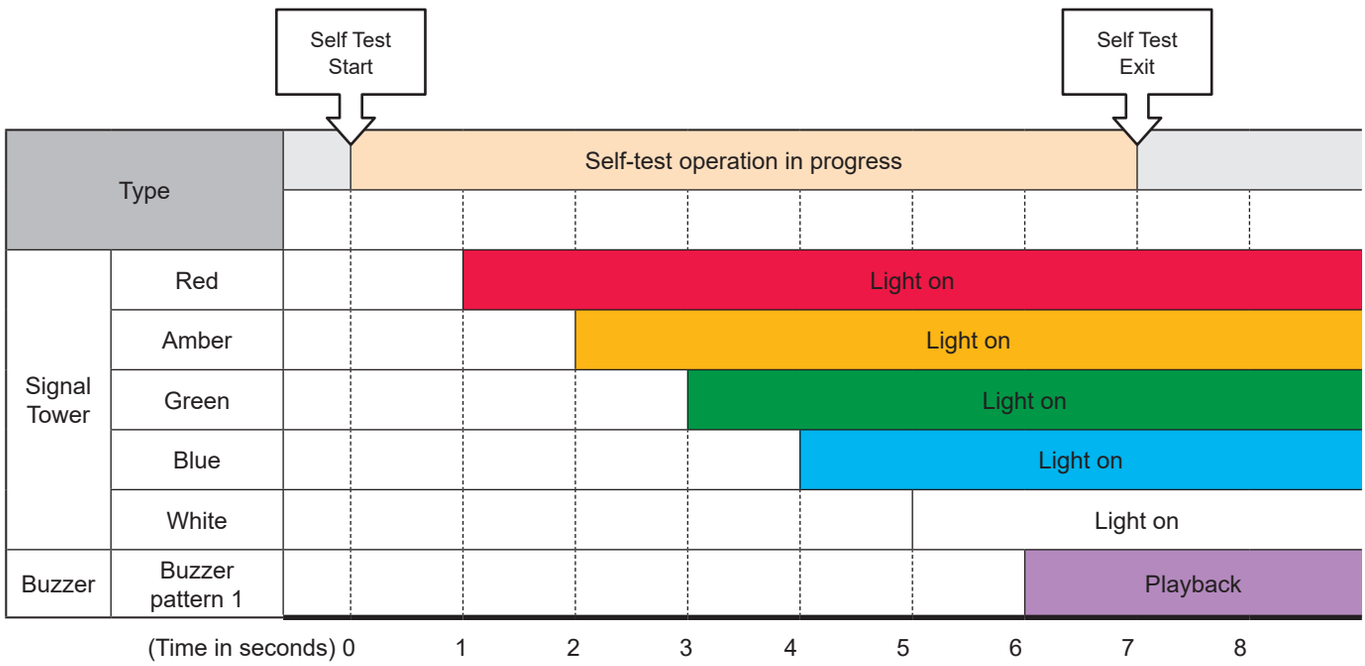
・Skip Track

Pressing the Clear button interrupts playback of the current channel and plays the channel registered in channel memory. Busy continues to output while the channel is still playing.



5.3.22. Self-test Function

- Execute the self-test operation function to check the Signal Tower operation.
- When self-test is executed, the following operations are performed.



⚠ CAUTION

- Self-test operation automatically activates the Signal Tower and audio playback. Thoroughly check the surrounding area before executing.
- ⚠ When volume is 0 or mute, the audio does not play.
- ⚠ You cannot stop the self-test operation midway.
- ⚠ While the self-test operation is executing, the clear operation is not accepted.
- ⚠ The monitoring function continues running while self-test is executed. Be careful when running self-test.
- ⚠ During and after execution of self-test, PNS and PHN Commands return an error response. RSH/SSH Commands return a Busy response.
- ⚠ When self-test operation is executed, channel memory is cleared.

Point

- After self-test is completed, you can return to normal operation state by pressing the clear button.
- When clear button function is disabled, you can return to normal operation state by pressing the test button.

5.3.23. Cloud Function

You can use the Cloud function to link to a compatible cloud platform and control the main unit, get the status of the main unit, and send the status of the main unit.

● Supported Cloud Platforms and Features

Supported Cloud Platforms		Microsoft Azure
		Amazon AWS
Supported Connection Methods	Microsoft Azure	Azure IoT Central/DPS (IoT Plug and Play)
		Azure IoT Hub (IoT Plug and Play)
	Amazon AWS	AWS IoT Core
Supported Platform Functions	Microsoft Azure	Device Twin
		Direct Method
		Device-to-cloud Message
		Cloud-to-device Message
	Amazon AWS	Device Shadow
		MQTT Client
Function	Main Unit Control	Signal Tower and buzzer control
		Audio playback
		Digital output control
		Voice synthesizer
	Get status of Main Unit	State of the Signal Tower and buzzer
		Audio playback function
		Digital output state
	Send status of Main Unit	When there is a change in state for the Signal Tower and buzzer
		When there is a change in state for audio playback
		When Clear button is pressed or clear operation is executed
		When there is a change in state for external input
		When there is a change in state for digital output

Function	Send status of Main Unit	When ping monitoring error occurs
		When ping monitoring recovery performs
		When ping group monitoring error occurs
		When ping group monitoring recovery performs
		When TRAP is received
		When condition of SNMP device monitoring is matched
		When condition of SNMP device monitoring is released
		When condition of SNMP device monitoring is changed
		When condition of contact input is matched
		When Test button is pressed
		When e-mail is received

5.3.24. USB Memory Function

By connecting a USB memory to the USB connector in the back of this product, firmware updates, log storage, configuration data uploads and downloads can be done.

⚠ CAUTION

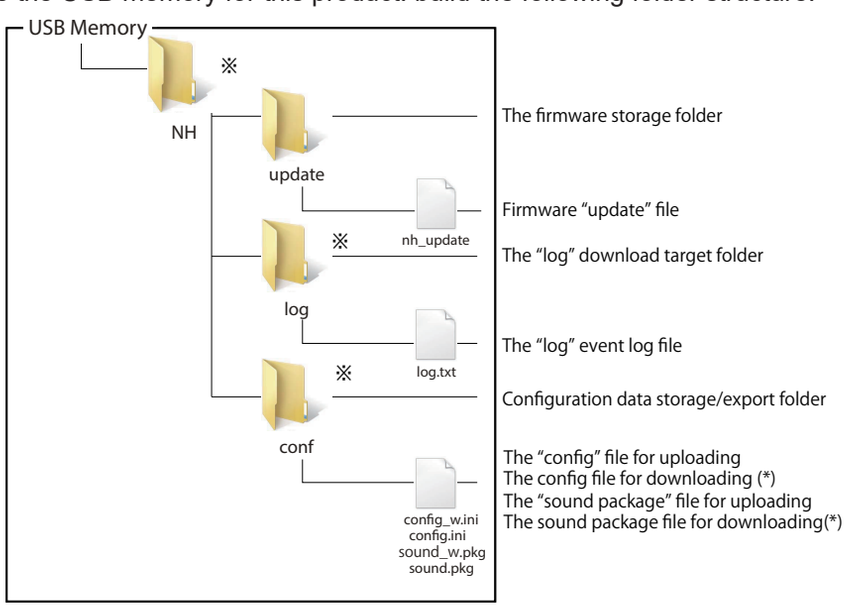
- ⚠ It is necessary to format a USB memory in FAT or FAT32 and to have the appointed folder structure made in advance.The USB memory cannot be partitioned.
- ⚠ It may not function properly if connected to a USB-HUB.
- ⚠ It takes about 10 seconds after connecting a USB memory to this product until it is recognized. The time until it is recognized depends on the type of USB memory which is being connected, so it may take longer.

<< USB Memory Operation Functions >>

Function	Details
Firmware Update Function	Firmware updates can be done from the USB memory. Be sure to change the firmware update file name to “nh_update” before executing the update.
Event Log Function	An event log can download from this product onto USB memory. The file name to download is “log.txt.”
Configuration Setting Function	Configuration data can be uploaded from the USB memory to the Main Unit. The configuration file name to upload is “config_w.ini”. Configuration data can be downloaded from the Main Unit to the USB memory. The configuration file name to download is “config.ini”.
Sound Package Function (NHV series only)	Sound package data can be uploaded from the USB memory to the Main Unit. The sound package file name to upload is “sound_w.pkg”. Sound package data can be downloaded from the Main Unit to the USB memory. The sound package file name to download is “sound.pkg”.

<< USB Memory Folder Structure >>

In order to use the USB memory for this product. build the following folder structure.



* The folder and files marked with an asterisks are automatically generated, when each data file is downloaded.

⚠ CAUTION

- ⚠ Enter the USB memory folder name and file name, using half-width alphanumeric characters.
- ⚠ Since it is case sensitive, refer to Figure when entering folder and file names.

5.3.25. PLC Linkage Function

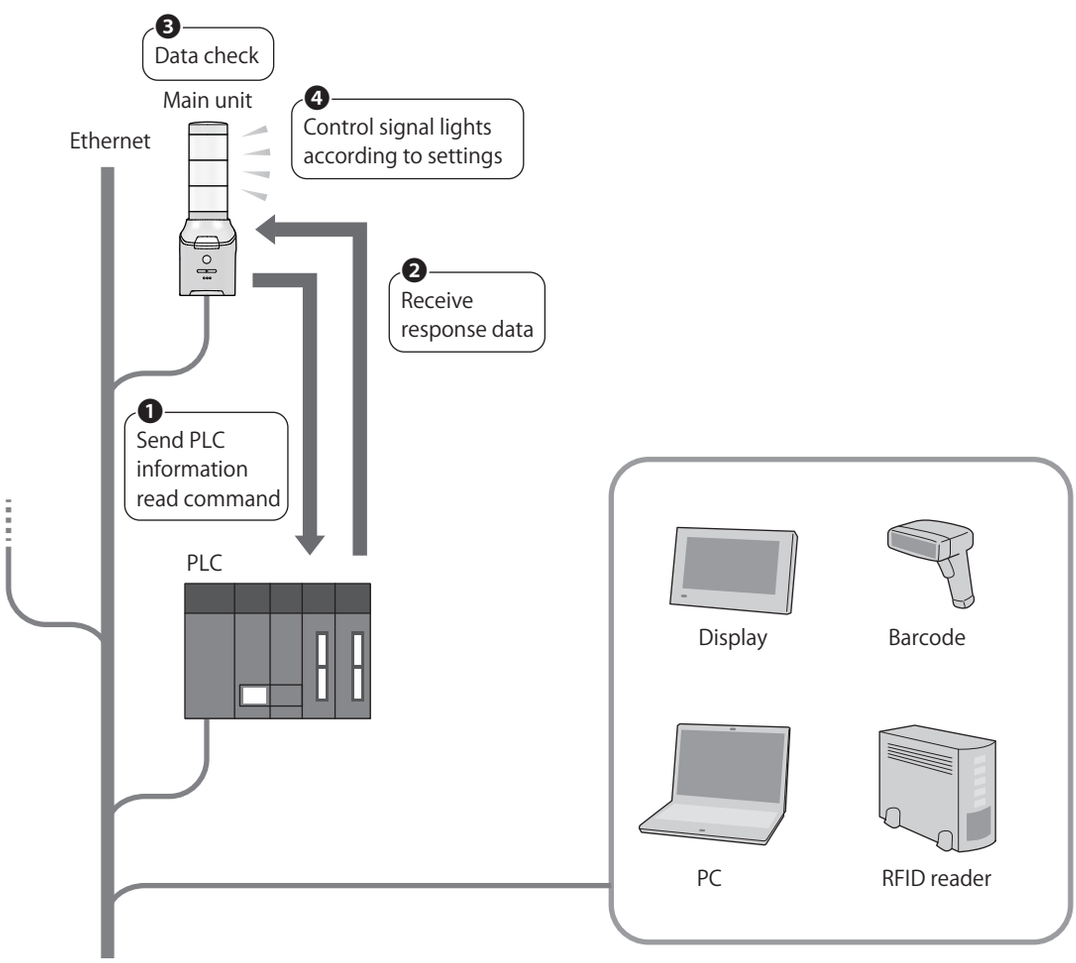
5.3.25.1. PLC Information Read Command Transmission/Reception Function

- Acquire device information from the PLC by periodically sending commands to acquire specified device information of PLC and compatible devices that support the SLMP (MC) protocol or FINS protocol.
  The acquired information is checked against the set condition matching conditions, and if the conditions match, the operation when condition matches is performed.
  Also, if an error data is received, perform operation during error.
- Operation when condition matches can be set for each device from which data is acquired.
- Operation during error can be set commonly for each device.
- The number of devices to be acquired can be selected from one or two.
  You can get 1-bit / 2-bit device information for bit devices and 1-word / 2-word device information for word devices.

⚠ CAUTION

⚠ When using the product, read the instruction manuals for the PLC, each unit device, and compatible devices to be connected, and make appropriate settings.

⚠ If you reset or restart the PLC or connected device, restart this product as well.
Otherwise, communication with this product may be lost.

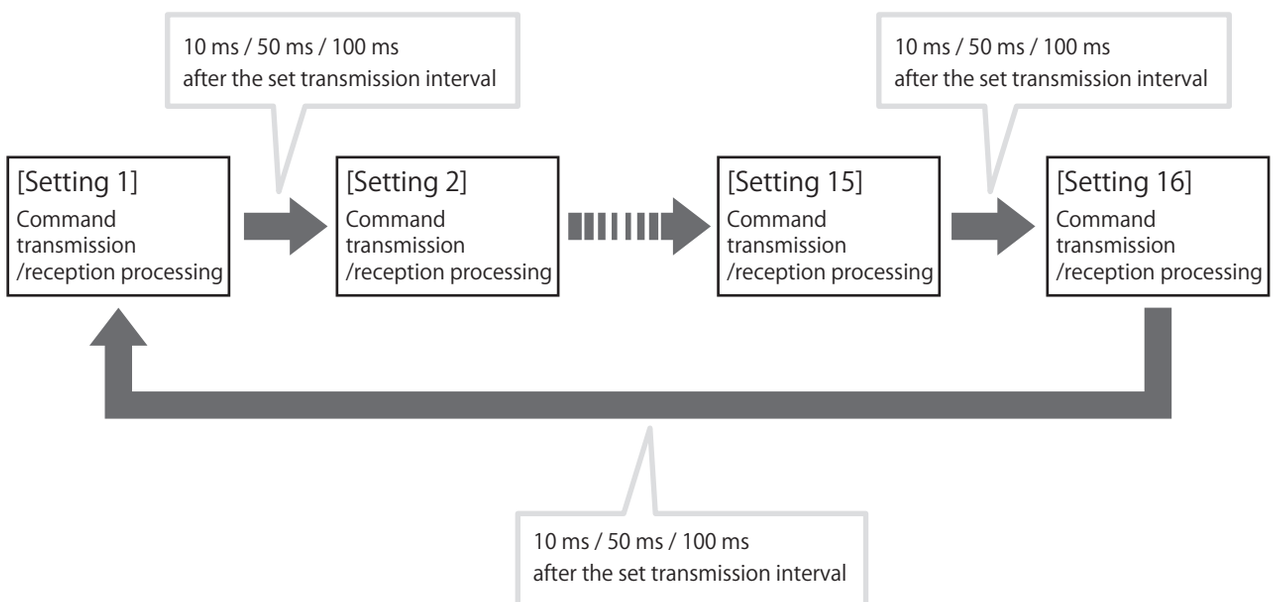


● PLC Information Read Command Transmission/Reception Procedure

・Perform command transmission/reception processing in order from setting number 1 to 16.
・If the protocol is set to TCP, create one port for each setting number. Also, connection processing is performed when the first command is sent, and thereafter only command transmission/reception processing is performed.
・When setting the Designated Transmission Port,please set a different port number for each setting number.
・If any of the following conditions occurs, the command transmission/reception processing for the next number is performed at the set transmission interval.
・Received the response data for the sent command
» Could NOT receive the response data within the set timeout period
» Command destination is not set
» After the command transmission/reception processing for setting number 16, the command transmission/reception
processing for setting number 1 is performed.
・When a timeout occurs, disconnection processing is performed, and reconnection processing is performed at the next transmission timing.
・You can select the transmission interval from 10 ms, 50 ms, and 100 ms.

⚠ CAUTION

⚠ If the destination address and connection destination port are not set, the command will not be sent.
⚠ The number of seconds for the transmission interval that can be set is the minimum value. Depending on the internal processing status of this product, the transmission interval may be longer than the set interval.



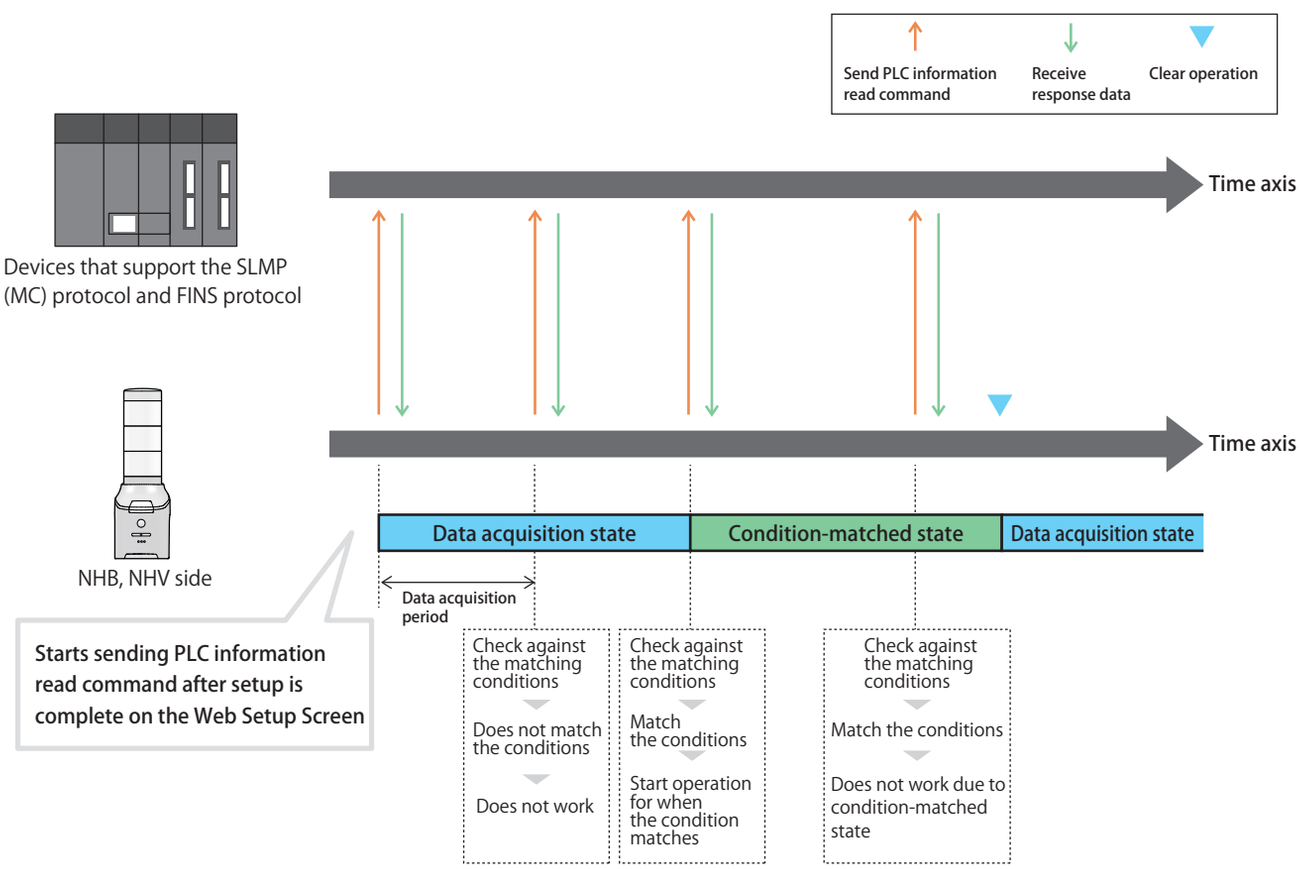
● PLC Information Read Command Transmission/Reception Function Operation Details (when data matching the conditions is acquired)

This section describes how the acquired information is checked against the set matching conditions and how the signal lights operate when the conditions are matched.

- Device information can be acquired from PLC and compatible devices that support the SLMP (MC) protocol or FINS protocol.
- Once the set condition matches, the condition is recognized as condition-matched state.
- The main unit will not operate even if data that matches the condition is acquired again during condition-matched state.
- Condition-matched state is cleared by performing clear operation.

Example **When device information is acquired from a compatible device and the condition is matched**

- If the data acquired from the compatible device matches the conditions set for this product, the main unit will perform the operation when the conditions match.
- The main unit will not operate even if data that matches the condition is acquired during condition-matched state.
- If a clear operation is received while match the condition, the condition will return to the data acquisition state.



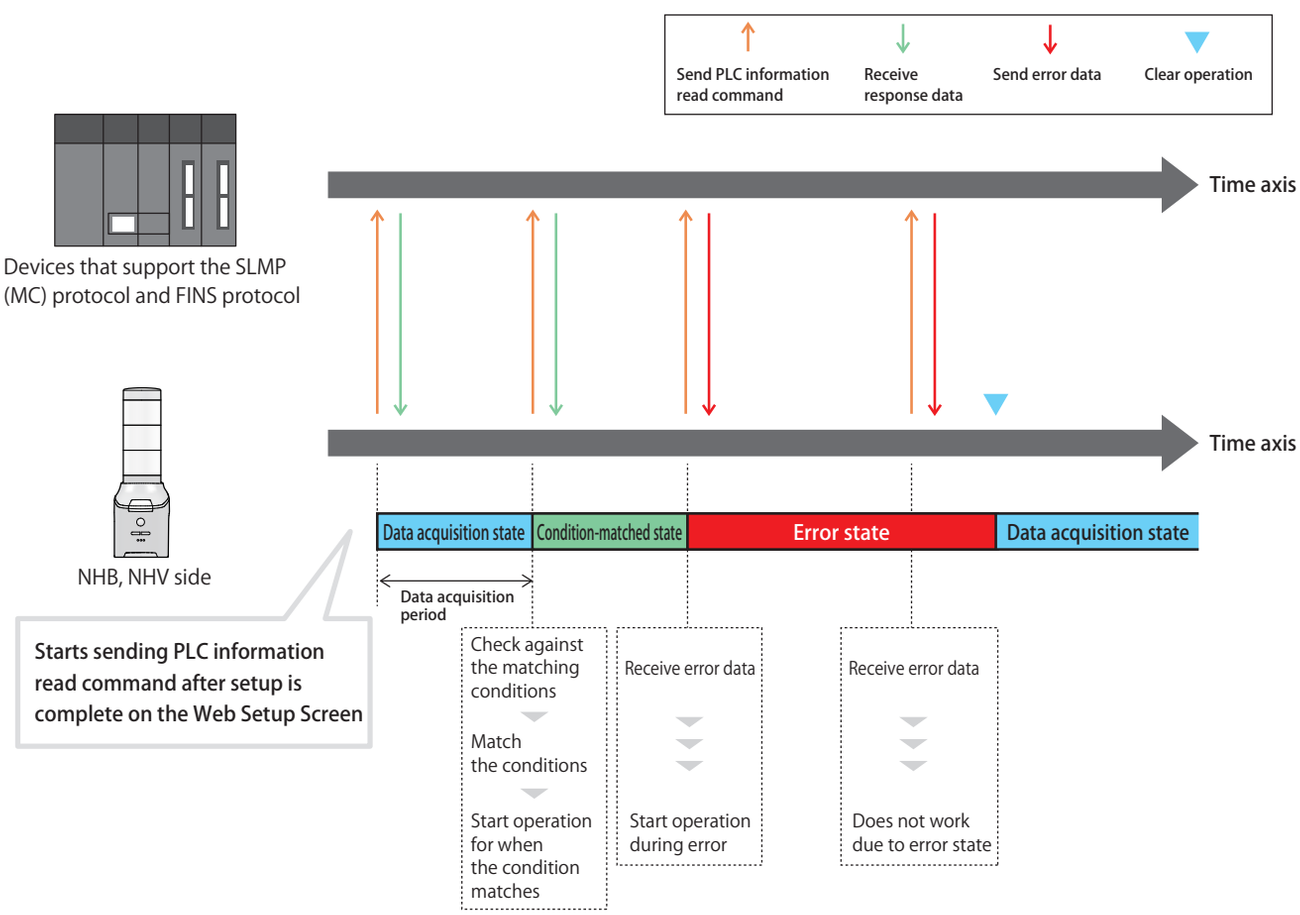
● PLC Information Read Command Transmission/Reception Function Operation Details (when error data is acquired)

This section describes the operation when error data is received from PLC and compatible devices that support the SLMP (MC) protocol or FINS protocol.

- If the acquired information is error data, you can make the main unit operate when receiving error data.
- Once error data is received, it is recognized as an error state.
- If error data is acquired again during the error data state, the main unit will not operate.
- The error state is cleared by performing clear operation.

Example **When error data is obtained from a compatible device**

- If the data acquired from a compatible device is an error data, the main unit performs the operations when receiving error data.
- If error data is acquired again during the error data state, the main unit will not operate.
- If a clear operation is received while error state, the condition will return to the data acquisition state.

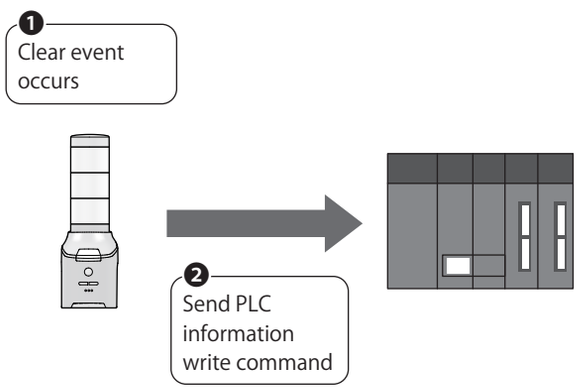


5.3.25.2. PLC Information Write Command Transmission Function

・You can send a write command using the SLMP (MC) protocol or FINS protocol when a clear event occurs.
・Up to four destinations can be registered, and individual commands can be sent to each destination.
・The number of devices you can send can be selected from one or two, and if the device to be written is a bit device, it can transmit 1 bit / 2 bits, and if it is a word device, it can transmit 1 word / 2 words.

⚠ CAUTION

⚠ If multiple destinations are set, the command is sent to each destination one at a time, starting with the destination with the smallest setting number.

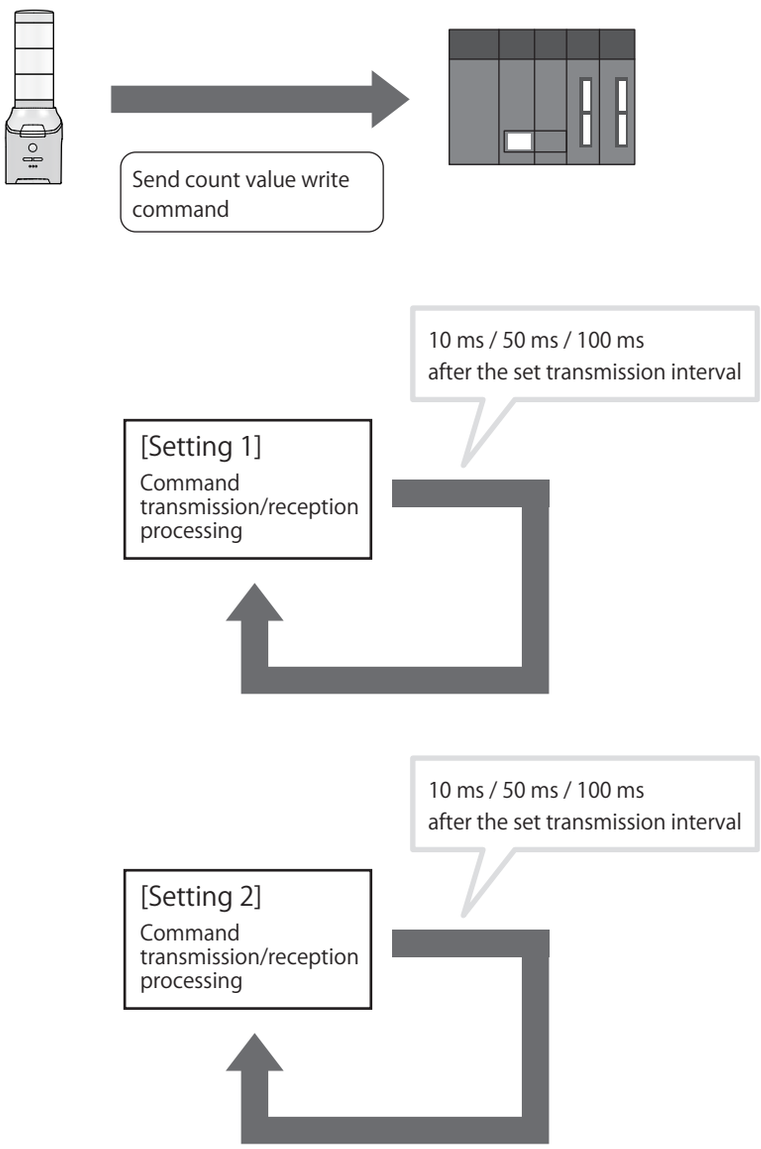


●Transmission Trigger of the PLC Information Write Command

Clear event that triggers transmission
・When the CLEAR switch is pushed
・If "Clear" is made by the SNMP
・If "Clear" is made by the RSH/SSH

5.3.25.3. PLC Count Value Write Function

- You can periodically write the count value held by this product to the PLC and compatible devices that support the SLMP (MC) protocol or FINS protocol while incrementing the value by one.
- By monitoring the count value on the PLC side, you can check whether communication with this product is possible.
- The count value is incremented by one in the range of "0000" to "FFFF" (hexadecimal), and returns to "0000" when adding to "FFFF."
- Up to 4 destinations can be registered.
- The transmission interval can be set between one and ten seconds for each destination.



5.3.26.Internet Connection Check Function

- You can check to see if the product is connected to the Internet.
- Check if you can connect to the specified address.
- For details on how to use the internet connection check, refer to "8.5.1.3. How to Check the Internet Connection" (☞ page 248).

6. Mounting, Installation, Wiring, and Powering on

⚠ WARNING

- Before performing any work, disconnect the product's power supply.
- In case the product falls over or falls down, install in a location where it will not hit any people or other objects.

⚠ CAUTION

- This product is for indoors only. Do not use outdoors.
- Do not apply excessive force to the units or this product. Failure to follow this instruction could result in equipment damage.
- Do not install this product with its adhesive sheet on material that includes a large amount of plasticizer.
- Avoid using this product in the following locations. Failure to follow this instruction could result in malfunction or equipment damage.
  - Places exposed to direct sunlight
  - Places near fire or environments with high temperatures and humidity
  - Environments where temperature changes are severe, and where there is condensation
  - Environments with poor breathability and ventilation
  - Places where external vibrations are directly transmitted to this product
  - Environments where corrosive gas is present
  - Locations exposed to salty sea air
  - Environments where there is dust or iron powder
  - Environments where chemicals and oil mist are present
  - Places subject to rain and water
  - Near equipment that generate strong electrical or strong magnetic fields
  - Locations where the product may fall and break
- The adhesive sheet used for this product may be difficult to remove depending on the environment in which it is used. Check the installation location for this product beforehand. Failure to follow this instruction could result in damage to the coating.
- Install this product in a stable and level location.

6.1. Attaching and Detaching Additional Units

Always follow the instructions below when attaching or detaching additional units (such as LED unit, transmitter) to and from this product.

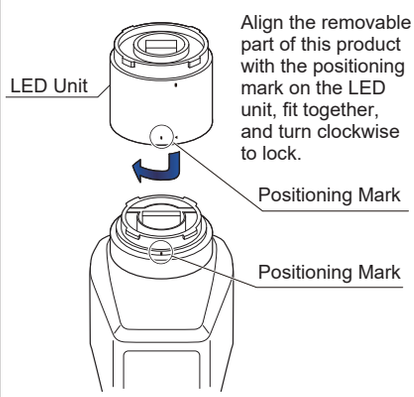
⚠ CAUTION

- Do not touch the connectors on the unit or this product, or parts inside the additional unit. Failure to follow this instruction could result in equipment damage.
- Do not connect incompatible additional units. Failure to follow this instruction could result in decreased performance or equipment failure for the product or unit.
- Limitations on mounting additional units to this product depend on the type of unit itself. Do not mount beyond this limit. Failure to follow this instruction could result in decreased performance and equipment damage.
  - Do not install multiple LED units of the same color.
  - The maximum number of colored lenses and clear lenses you can assemble is 5. The total for multi-color is one.
  - You cannot assemble LED units with a colored lens or clear lens and an LED unit that is multi-color at the same time.
  - The maximum number of transmitter units you can assemble is 1. However, this number does not include LED units.
- Use the following method when attaching and detaching LED units. Failure to follow these instructions could result in equipment damage.
  - Attaching Units: Attach units to this product one at a time.
  - Detaching Units: Detach units from this product one at a time.

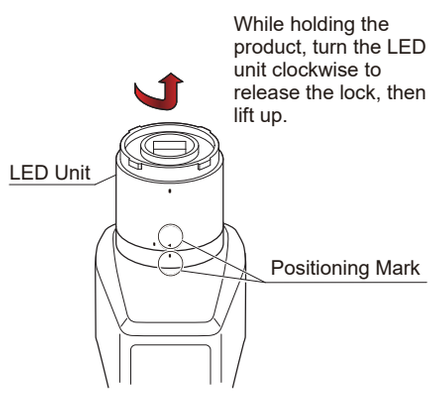
6.1.1. NHB Series, NHV Series

For NHB6 and NHV6

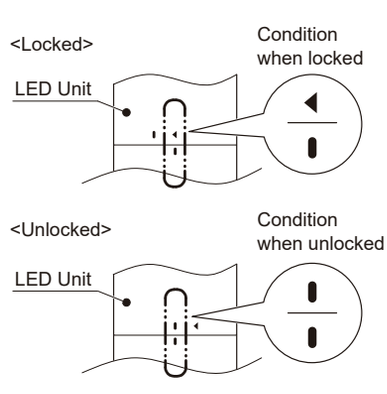
■ Attach



■ Detach

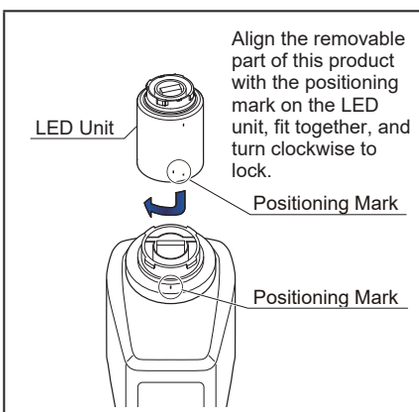


■ Positioning Mark

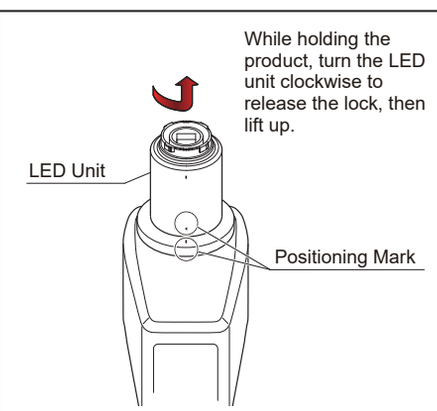


For NHB4 and NHV4

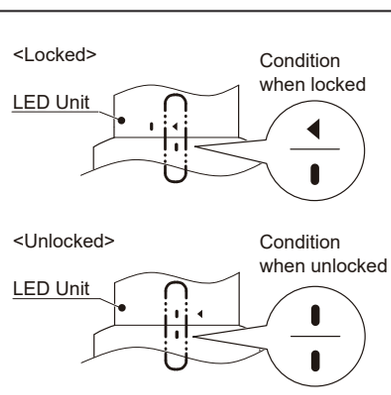
■ Attach



■ Detach

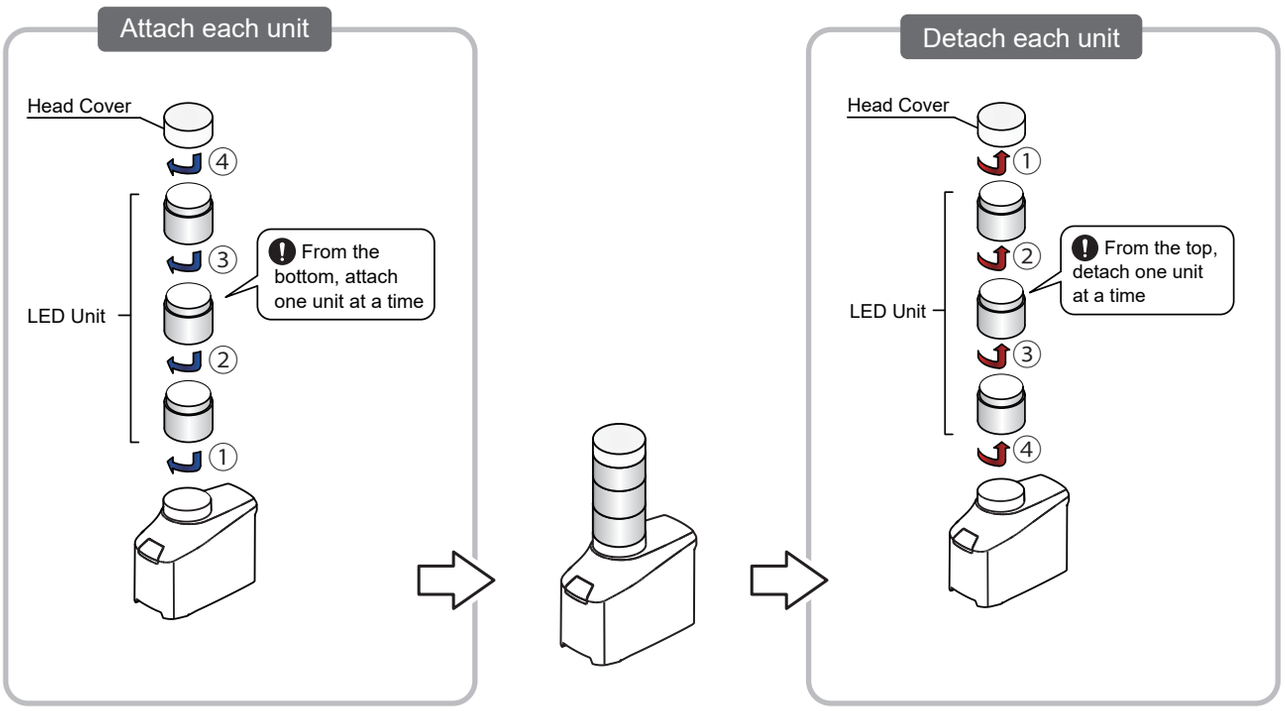


■ Positioning Mark



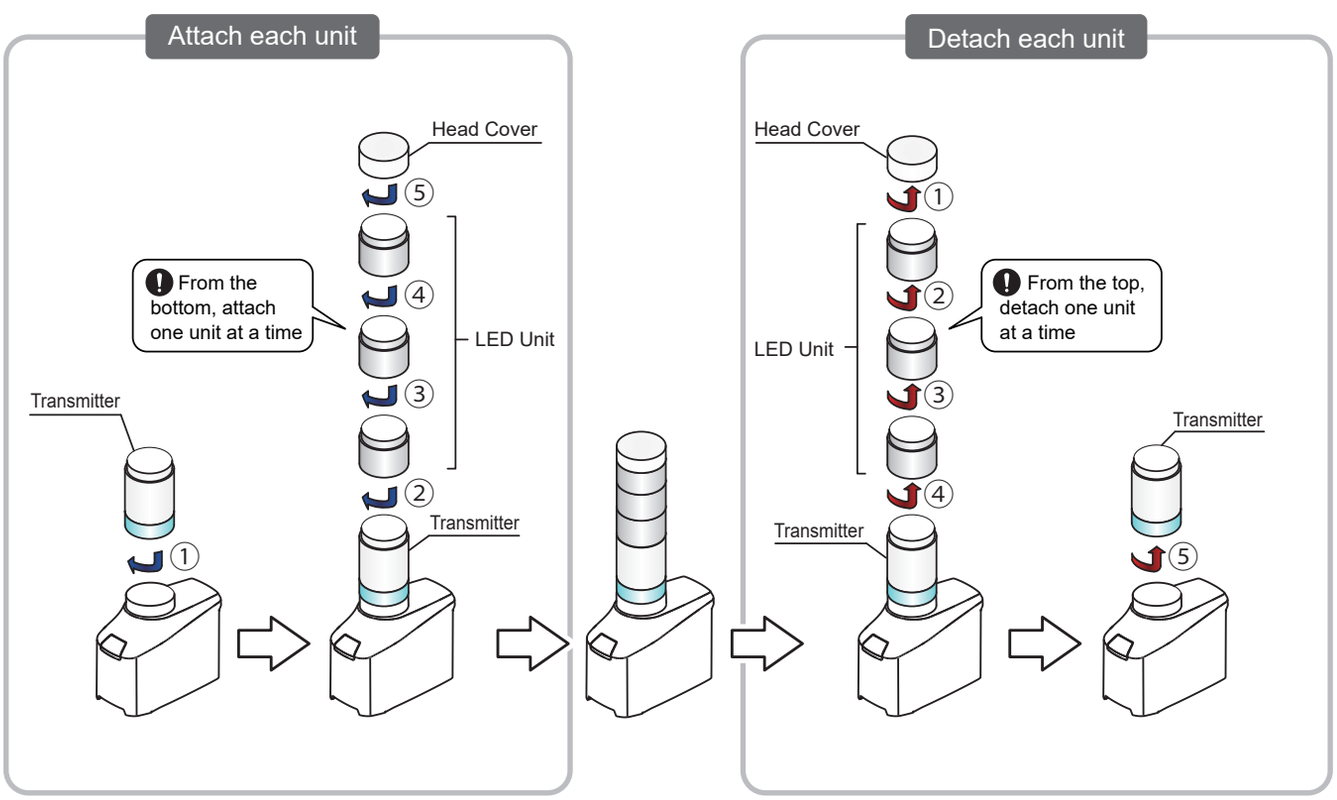
6.1.2. Procedure for Attaching/Detaching LED Units

- Attach or detach LED units in the prescribed order ① to ④.
- Attach or detach LED units one at a time.



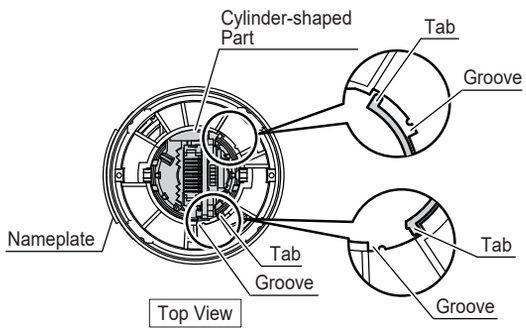
6.1.3. Procedure for Attaching/Detaching LED Units and Transmitter

- Attach or detach the transmitter and LED units in the prescribed order ① to ⑤.
- Attach or detach LED units one at a time.
- Attach the transmitter on the bottom tier. If you attach the transmitter on top of an LED unit, it is difficult to assess the status shown by the lamp on this product.



⚠ CAUTION

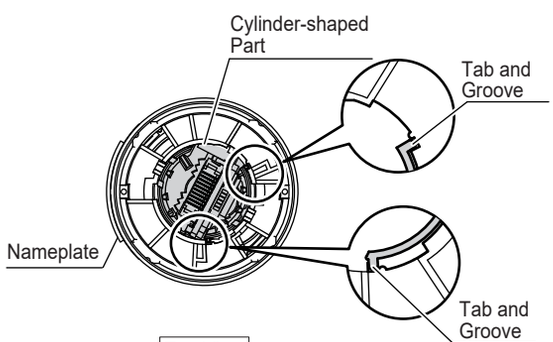
⚠ If an additional unit does not attach properly to this product, confirm that the tab of the cylinder-shaped part at the top of the unit is fitted correctly into the groove. Depending on how additional units are detached, the tab may come out of the groove when detaching additional units from this product. If the product is attached again while the tab is still in this state, it may become damaged.



Cannot attach in this state

⚠ If a unit does not attach properly to this product, follow the steps below.

- In the center of the underside of the product, turn the cylinder-shaped part counter-clockwise.
- Turn the cylinder-shaped part until it snaps into place, then attach it to this product.



Attach in this state

6.2. Product Installation and Mounting Method

This section describes how to install and mount this product. Adjust to fit your requirement and perform the work.

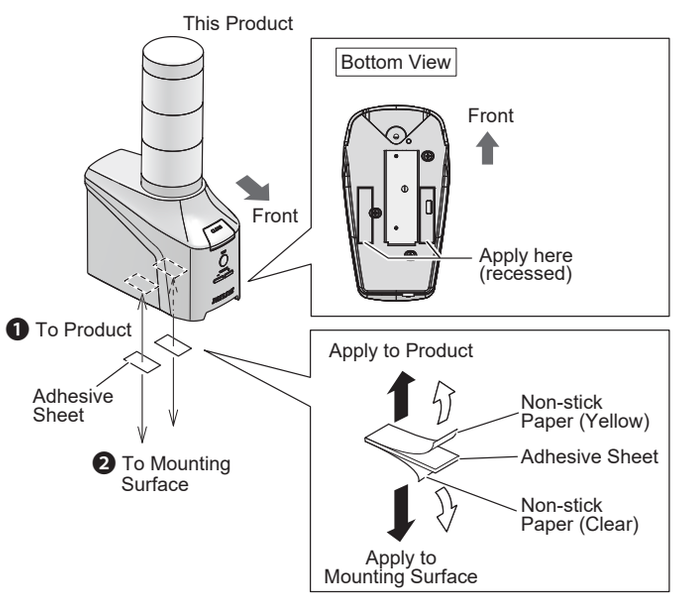
⚠ CAUTION

- Before attaching the adhesive sheet to the product, wipe away any dust, water, oil and other unwanted material from the main unit and installation location.
- When removing the adhesive sheet, firmly hold the outer edge of the product near the bottom and peel away slowly.
- Use the recommended torque when attaching parts for installation.
- After installation, check again if there is a risk of the product falling.
- The following requirements are necessary for a proper mounting location.
  - Low vibration
  - Sufficient strength
  - Flat location

6.2.1. When Stationary

❶ Peel away the yellow non-stick paper from the adhesive sheet and attach it to the recess of the attachment location on the bottom of this product.

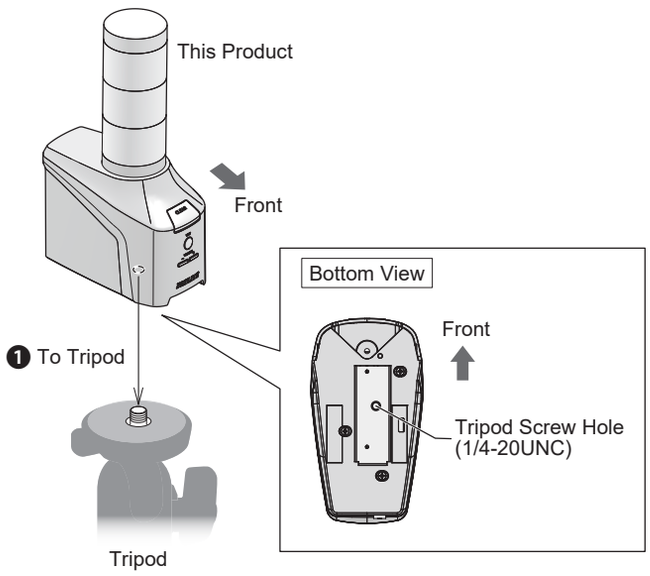
❷ After attaching it to the product, peel off the clear non-stick paper and affix to the mounting surface.



6.2.2. Mounting on a Tripod

❶ Attach the product to a tripod.

For information on mounting methods, refer to the instruction manual of the tripod.



⚠ CAUTION

- When using a tripod, its screw should be shorter than 5.5 mm. When the screw is 5.5 mm or longer, the product cannot be affixed firmly to the tripod, which could lead to product damage.
- Use a tripod with a load capacity of 6 kg or more.
- When using a tripod with this product, do not move or transport while the tripod is attached. Failure to follow this instruction could result in equipment damage if the product falls over.

6.2.3. When Using Mounting Brackets (optional part)

- By using mounting brackets (optional part), you can install this product on a wall, VESA compliant device, or partition. Please provide your own screws for mounting.
- There are two types of mounting brackets: Wall Mounting Bracket (for mounting on a wall or VESA compliant device), and Partition Mounting Bracket (for mounting on partitions).
- For information on mounting methods, refer to the instruction manual of the corresponding mounting bracket.

⚠ CAUTION

- Mount only in the directions described in this manual. Failure to follow this instruction could result in the product falling or equipment damage.
- When using this product, do not use the adhesive sheet included with the product you are mounting. Depending on the thickness of the adhesive sheet, you may not be able to tighten the screws firmly when mounting the bracket, or they may loosen over time.
- The following requirements are necessary for a proper mounting location.
  - Low vibration
  - Sufficient strength
  - Flat location
- Turn off the power before attaching this product to the mounting bracket. Failure to follow this instruction could result in fire or electric shock.
- Use the recommended torque when attaching parts for installation.
- After installation, check again if there is risk of the product falling. Additionally, periodically check for damage or loosening of the mounting parts.

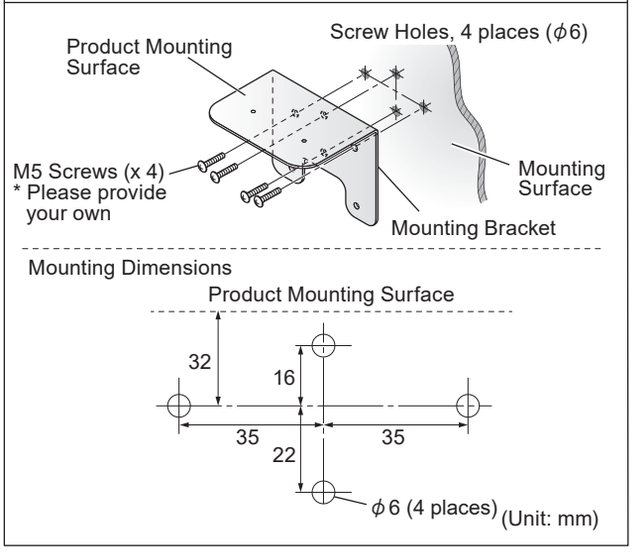
● Mounting on a Wall

- To mount on a wall, use the Wall Mounting bracket. Provide your own screws for mounting to the wall.
- Using Wall Mounting brackets, you can mount this product on the wall in one of two different ways. The pitch of mounting holes is different depending on the mounting direction. When mounting, refer to the mounting dimensions shown below.
- Tighten to match the torque recommended for the material of the wall surface.

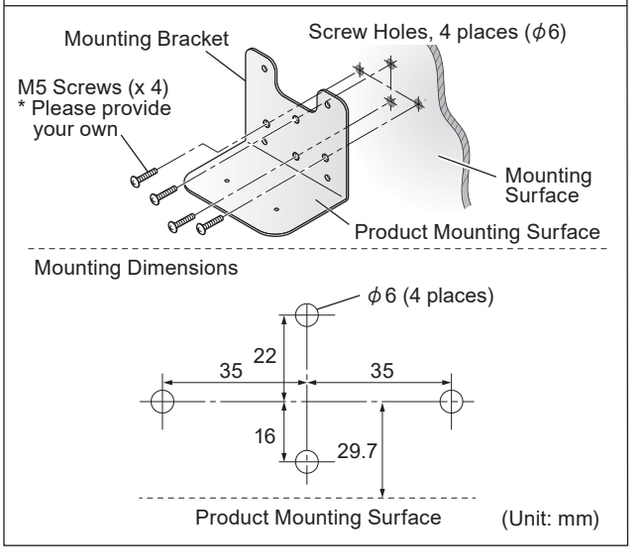
1 Attach the mounting bracket to the wall.

- Select the mounting pattern that best suits your use.

Mounting Pattern 1



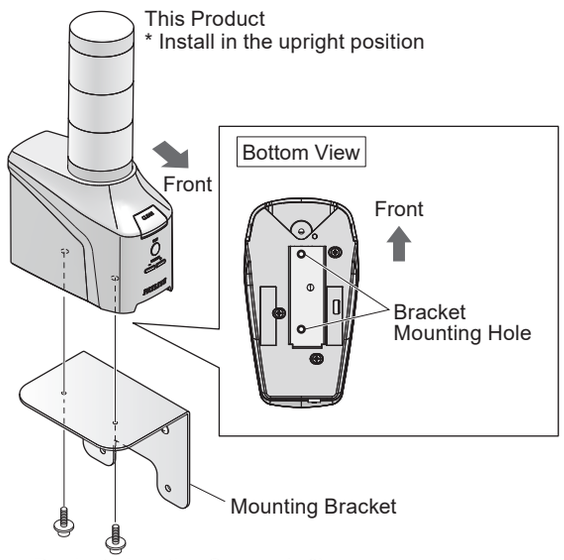
Mounting Pattern 2



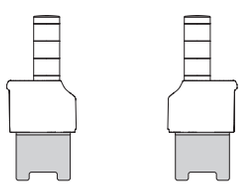
2 Attach the product to the mounting bracket.

Recommended Torque
0.6 N･m (approximate)

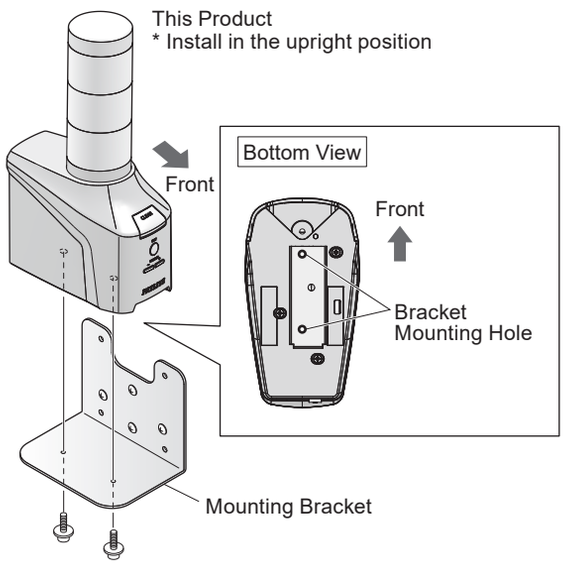
Mounting Pattern 1



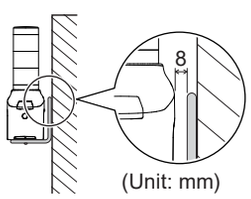
You can attach this product to the mounting bracket in either the left or right directions.



Mounting Pattern 2

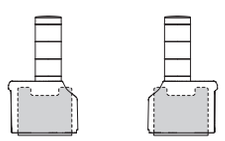


Clearance



Mounting Pattern 2

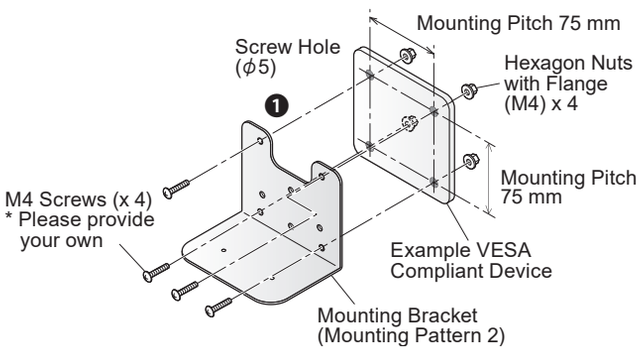
You can attach this product to the mounting bracket in either the left or right directions.



● Attaching to a VESA Compliant Device

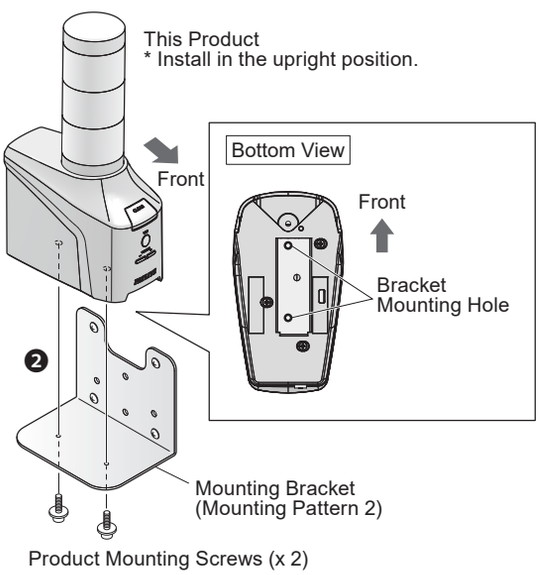
- To mount on a VESA compliant device, use the Wall Mounting bracket. Provide your own screws for mounting to the VESA compliant device.
- For information on mounting methods, refer to the instruction manual of your equipment.
- Use VESA compliant equipment with a load capacity of 6 kg or more.
- For VESA compliant devices, use only Mounting Pattern 2.

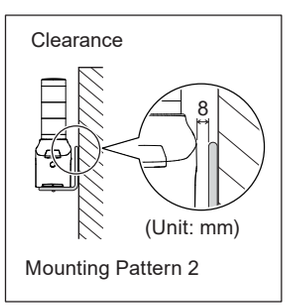
1 Attach mounting bracket to the VESA compliant device.

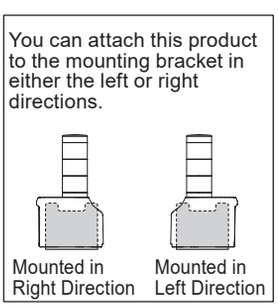


2 Attach the product to the mounting bracket.

Recommended Torque
0.6 N･m (approximate)





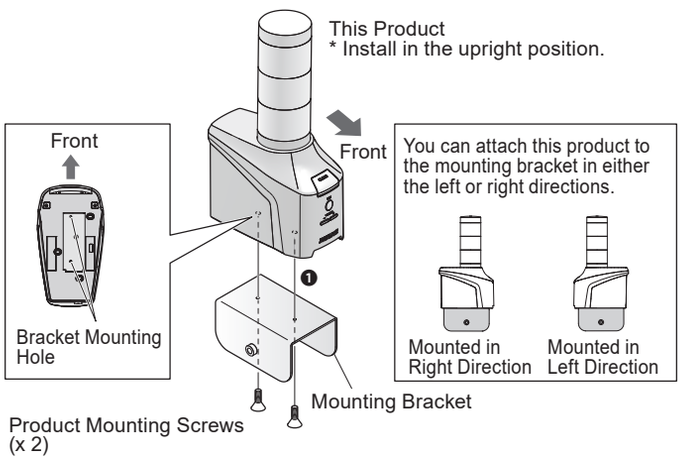


● When Mounting on a Partition

- To install on a partition, use the partition mounting bracket.
- By using a partition mounting bracket (optional part), you can install this product on the top part of a partition. (A partition is a barrier that separates space and line of sight)

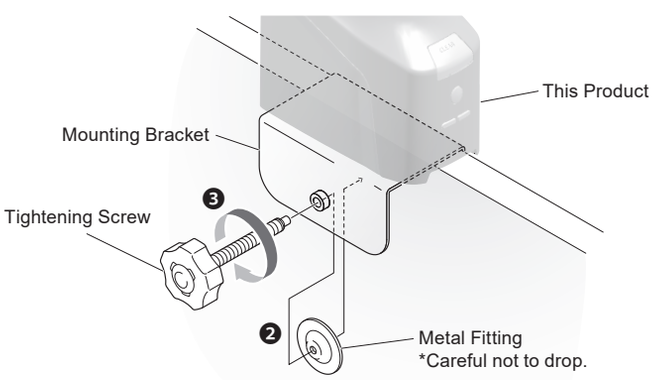
1 Secure this product and the mounting bracket with the product mounting screws.

Recommended Torque
0.6 N・m (approximate)



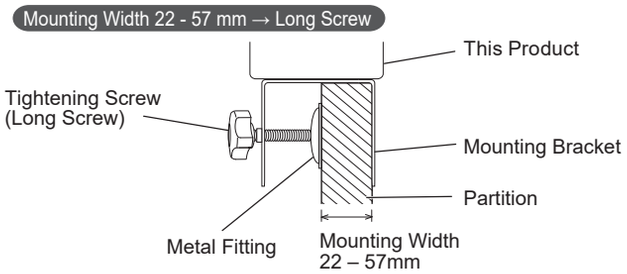
2 After passing the tightening screw through the mounting bracket, attach the metal fitting.

3 Secure to the partition by turning the tightening screw clockwise.

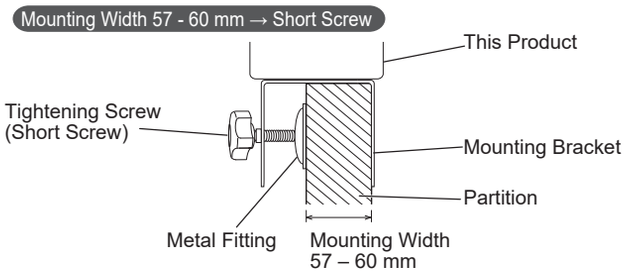


Selecting a Tightening Screw

Mounting Width 22 - 57 mm → Long Screw



Mounting Width 57 - 60 mm → Short Screw



6.3. Line Out Connection Method NHV Series

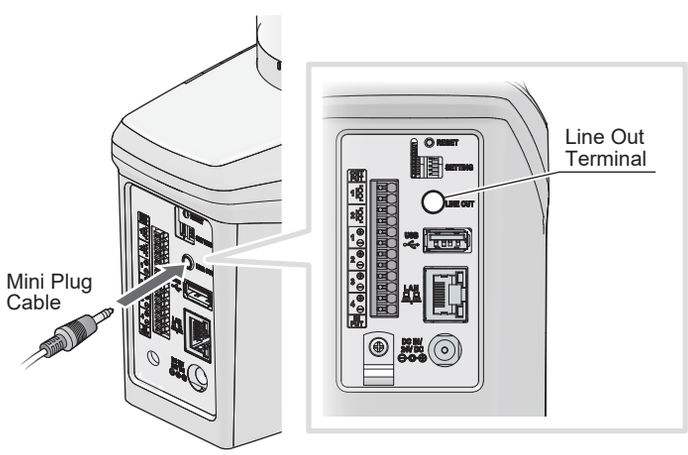
- This product can output audio externally.
- To output audio, connect equipment with a line input.
- Mini-plug cable is not included with this product. Please provide your own.

⚠ CAUTION

- ⃠ Do not use equipment that does not conform to the Line Out terminal (600 Ω 0 dBV). Connecting headphones or passive speakers (speakers with no built-in amplifier, 32 Ω or less) could result in product failure.
- ⃠ Do not connect multi-pole mini plugs other than mono or stereo plugs. Failure to follow this instruction could result in product damage.

1 Connect the mini plug cable to the Line Out terminal on the back of the product.

- Confirm the other end of the cable is connected to line input on the target device.
- You can use a mono mini-plug cable.
  If you use a stereo mini-plug cable, only the left channel signal is output.



■ Line Out Signal Specifications

Signal level	0 dBv (600 Ω connection, sine wave playback)
Audio Channel Type	1 ch (mono)
Connector Shape	Mini Jack

6.4. Digital Input/Output Wiring Method NHV Series (D model)

- When monitoring signal inputs from equipment with contact outputs, use digital inputs. To control equipment with contact inputs, use digital outputs.
- Follow the instructions below to wire the input terminal block and output terminal block.

⚠ CAUTION

- Be sure the wiring is done properly. Any mistake in wiring may result in damage or fire.
- Wire so that the core of the lead wire is not exposed. Failure to follow this instruction could cause a short circuit leading to fire or equipment damage.
- After completing the wiring, check for any loose wires. Failure to follow this instruction could result in malfunction or electric shock.
- Current and voltage of equipment connected to the output terminal block should not exceed the following rated values.
  Port 1 – 2: 30 VDC, 3 A inrush current 5 A or less / minimum current 5 VDC, 1 mA (reference value)
- Equipment connected to the input terminal block should meet the following ratings.
  Port 1 – 4 (NPN transistor): Output ON current 6 mA or less / when port is OFF terminal voltage of 24 V, leakage current 0.1 mA or less

6.4.1. Wiring procedures

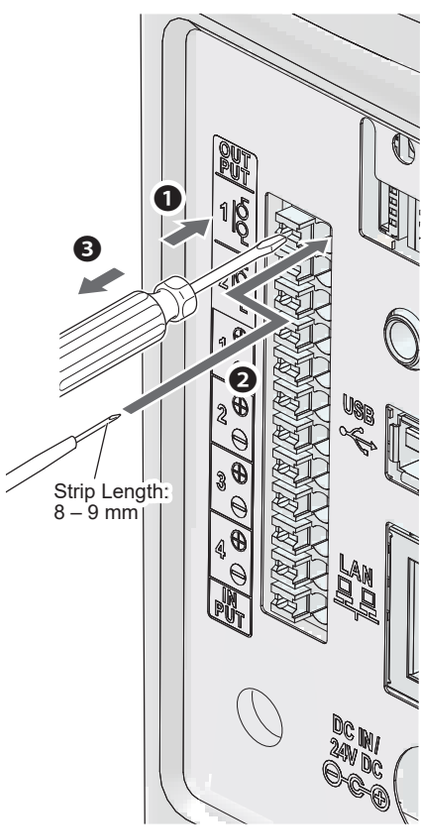
1 Use a flat-blade screwdriver to push in the lever on the terminal block.

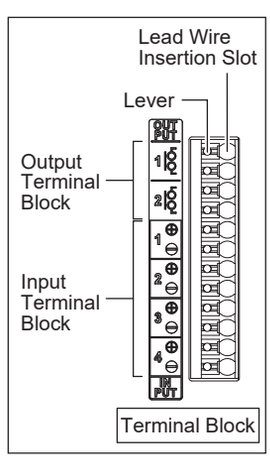
- We recommend a flat-blade screwdriver with a blade-edge width of 2 mm or less and thickness of 0.5 mm or less (or equivalent).

2 Insert the lead wire into the insertion slot. (Keep the lever pressed down)

3 With the lead wire inserted, release the lever to lock.

- Check if the lead wire is locked into place.
- Do not push the lever harder than necessary with the screwdriver.
  Failure to follow this instruction could result in equipment damage.
- When removing the lead wire, do not simply pull the wire to remove it. (Make sure you work the lever to release the lock)



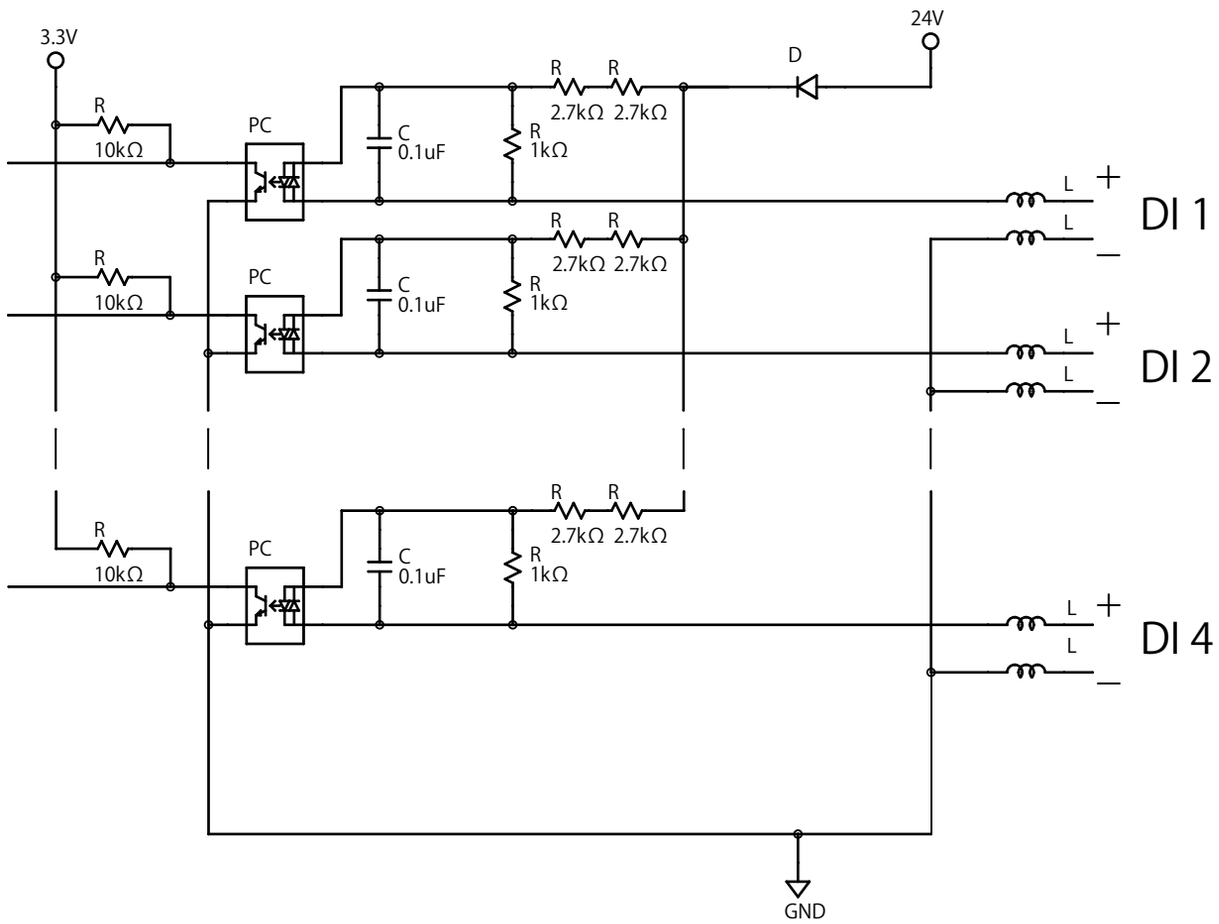


■ Supported Wire Diameter

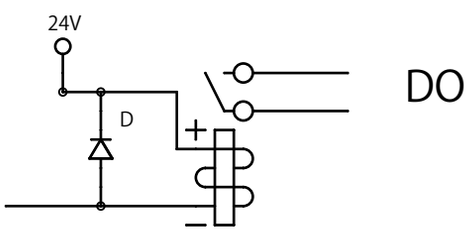
Single Wire	ϕ 0.4 to 0.8 mm (AWG26-20)
Stranded Wire	0.13 to 0.52 mm^2 (AWG26-20)

6.4.2. Circuit Diagram

● Digital input circuit diagram



● Digital output circuit diagram



6.5. LAN Cable Wiring Method

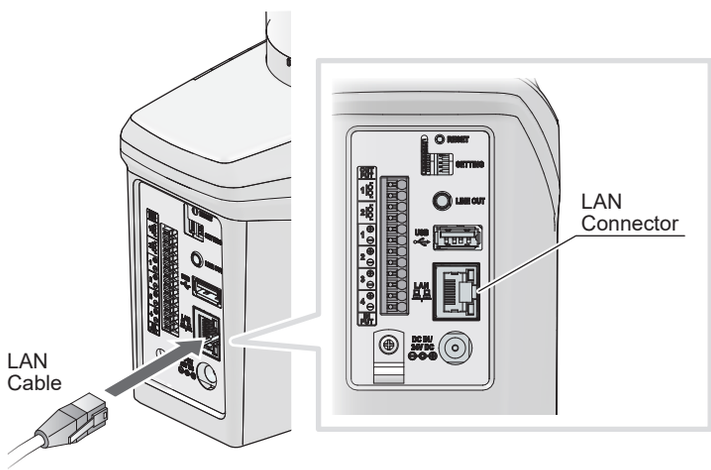
LAN cable is not included with this product. Please provide your own.
The LAN cable can either be a straight or cross cable.

⚠ CAUTION

- The LAN cable should have an RJ-45 connector and be rated for Category 5e or higher (Category 6 or higher recommended).

1 Connect the LAN cable to the LAN connector on the back of the product.

Note: Push in the LAN cable until it clicks.



6.6. Power Supply Method

There are two different power supplies for this product: AC adapter and PoE power supply.

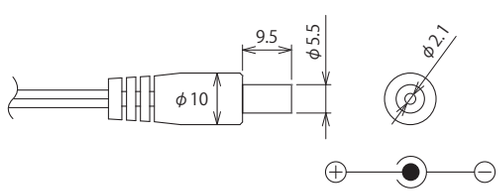
6.6.1. When Using AC Adapter Power Supply

⚠ WARNING

- ⃠ While power is still applied to the AC adapter, do not connect or disconnect the DC power plug. Failure to follow this instruction could result in electric shock or equipment damage.
- ⃠ Do not touch the power outlet with wet hands. Failure to follow this instruction could result in electric shock.
- ❗ When using an AC adapter other than the one provided (ADP-001), use an AC adapter that meets the recommended specifications. Using an AC adapter that does not meet the recommended specifications could result in fire or equipment damage.
- ❗ Use an AC adapter equipped with overcurrent protection. Using an AC adapter without overcurrent protection could result in fire or equipment damage.

⚠ CAUTION

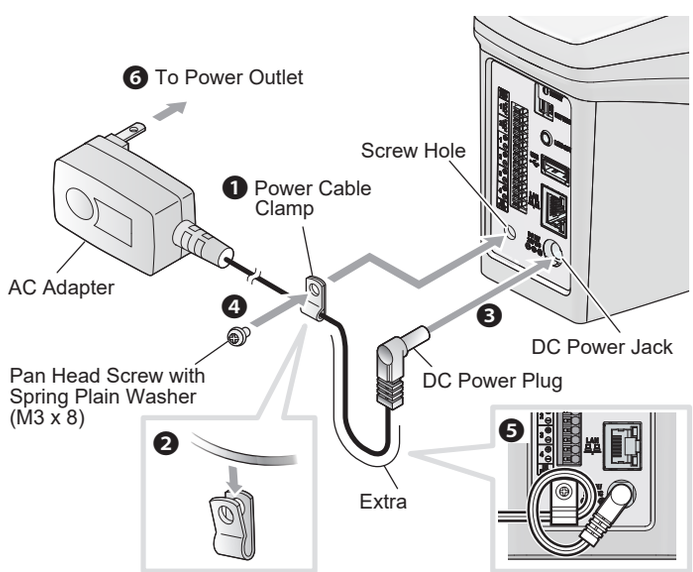
- ⚠ Use the AC adapter supplied with this product. If you need to order the AC adapter separately, order our AC adapter (ADP-001).
- ⚠ If you use an AC adapter other than ADP-001, use an AC adapter that meets the specifications below.
  Recommended AC Adapter Specifications
  - Secondary voltage (DC)
  - Voltage: 24 VDC ± 5%
  - Current: 0.75 A or more, 1 A or less (with overcurrent protection)
  - Plug Length: 9.5 mm or longer
  - Housing: ϕ 10 mm or shorter
  - Outer Diameter of Plug: ϕ 5.5 mm
  - Inner Diameter of Plug: ϕ 2.1 mm



1. Loosen the screw with a Phillips screwdriver and detach the power cable clamp.
2. Pass the AC adapter power cable through the power cable clamp.
3. Insert the DC plug into the product body with some extra in the power cable.
4. Secure the power cable clamp with the screw without applying excessive force on the cable.

Recommended Torque	0.3 N·m (approximate)

5. Process the extra portion of cord.
6. Plug the AC adapter into the power outlet.



* Illustration is of a D model.

6.6.2. When Using PoE to Supply Power NHV Series (P model)

⚠ CAUTION

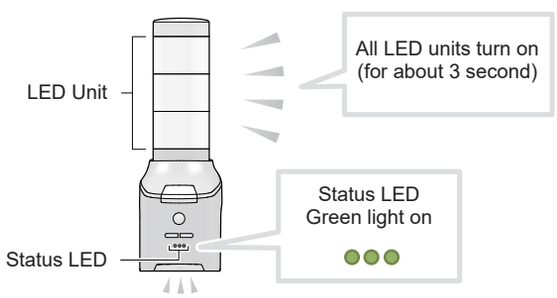
- Make sure the PoE network is indoors and that none of the LAN cable is run outdoors. Failure to follow this instruction could result in equipment damage due to transient voltage from lightning.
- ⚠ When using a PoE power supply, IEEE802.3at compliant PoE+ power supply devices (HUB, injector) are required. When using a PoE power supply device compliant with IEEE802.3af, USB power cannot be supplied from the main unit's USB connector.
  When using IEEE802.3af, USB memory and USB LTE dongles cannot be used.
- ⚠ When power is supplied from a PoE device, power is not required from an AC adapter. If both PoE and AC adapter supply power at the same time, priority is given to the PoE power supply.

6.6.3. Checking at Startup

After power is turned on, it takes approximately 60 seconds to complete startup.The startup time may be longer depending on the settings.

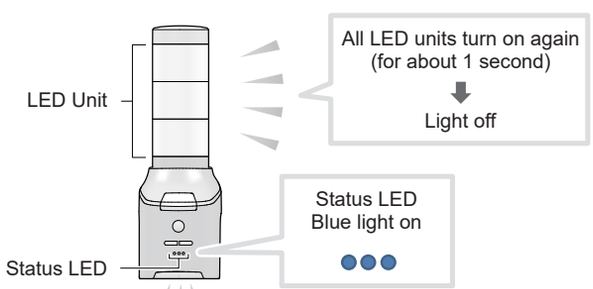
1 Immediately after turning on the power, check the states of the LED unit and status LED.

- LED Unit: All lights turn on (for about 3 seconds) *Except 0-tier models
- Status LED: Green light on



2 After dozens of seconds, check the states of the LED unit and status LED.(The startup time may be longer depending on the settings.)

- LED Unit: All lights turn on again (for about 1 seconds) *Except 0-tier models ➡ Light off
- Status LED: Blue light on



7. Before Use

This section describes the setup procedure required to use this product. Follow the steps below for setup.

STEP 1 As per your application, determine how the IP address is allocated

Constant Address

STEP 2 Add network settings

This manual

"7.2. Setting Up Network Settings on the PC" (☞ page 107)

Automatic Address

STEP 2 Set DHCP function to [Enabled]

This manual

"7.1. Enabling DHCP Function" (☞ page 106)

STEP 3 Set up user authentication

This manual

"7.3. Setting Up User Authentication (User Name and Password)" (☞ page 110)

Must be done at the time of purchase or initialization of settings. After setup, the login screen will display.

STEP 4 Display the Web Setup Screen

This manual

"7.4. Displaying the Web Setup Screen" (☞ page 111)

STEP 5 Set up this product's Basic Settings

This manual

- Network Settings "7.5. Setting Up Product Network Settings" (☞ page 114)
- Clock Settings "7.6. Setting Up the Clock" (☞ page 116)
- Security Settings "7.7. Setting Up Security" (☞ page 118)
- Product name and installation location settings "7.8. Setting Up the Product Name, Installation Location, and Contact" (☞ page 120)
- LED unit (multi-color) and transmitter unit settings "7.13. Setting Up LED Unit (Multi-color) and Transmitter Unit Settings" (☞ page 125)
- Adjusting brightness of the LED unit "7.14. Setting Up LED Unit Brightness Adjustment" (☞ page 126)
- Normal State Settings "7.15. Setting Up Normal Status" (☞ page 127)

NHB Series

- Buzzer settings "7.9. Setting Up the Buzzer" (☞ page 121)

NHV Series

- Speaker volume settings "7.10. Setting Up the Speaker Volume" (☞ page 122)
- Line Out volume settings "7.11. Setting Up the Line Out Volume" (☞ page 123)
- Audio Playback Mode Settings "7.12. Setting Up Audio Playback Mode" (☞ page 124)
- Voice Registration "7.16. Setting Up Voice Registration" (☞ page 128)

After completing the desired setup configuration, reboot this product by pressing the "reset" button, or removing the power for a few seconds and reapplying it for the changes to take effect.

STEP 6 Use this product

This manual

"8. Operation" (☞ page 134)

7.1. Enabling DHCP Function

- By enabling the DHCP function, this product can access the DHCP server and automatically get network information.
- To enable the DHCP function, you can operate buttons on the main unit or use the Web Setup Screen. When using the Web Setup Screen, refer to "7.5. Setting Up Product Network Settings" (☞ page 114).

⚠ CAUTION

⚠ If access to the DHCP server is unavailable, product starts up using the factory default network information.

⚠ If you enable the DHCP function, DHCP will also be enabled in subsequent startups. To disable the DHCP function, in the Web Setup Screen′s network settings, change the setup method to [Manual Settings].

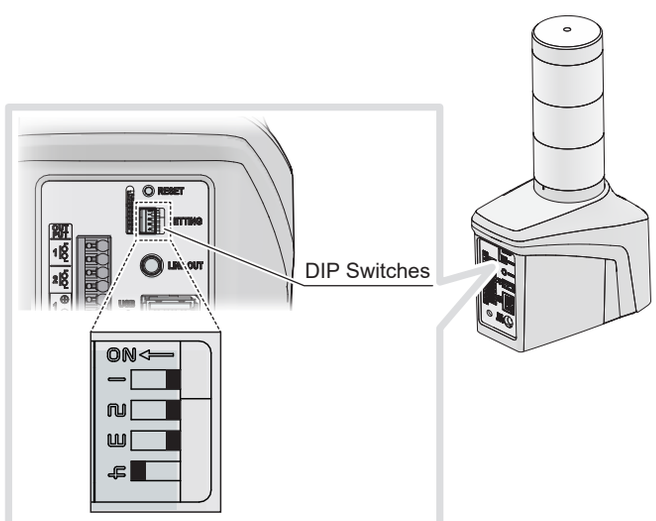
⃠ When using DIP Switches, do not use excessive force.

❗ After completing setup, to use this product, set all DIP switches OFF.

When Using DIP Switches to Enable DHCP Function

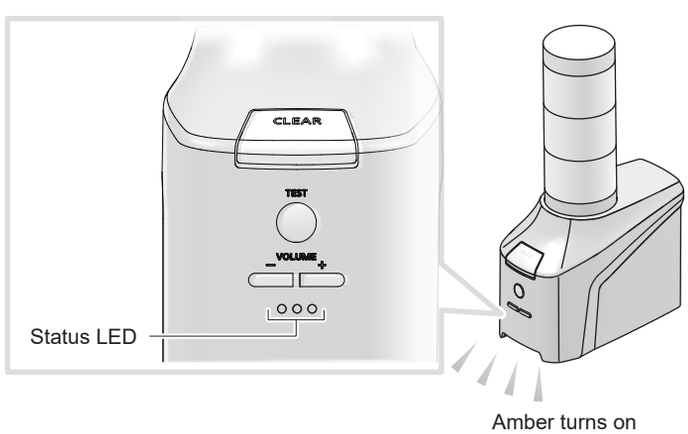
1 At the back of the product, turn ON DIP switch 4.

2 Power up the product.



3 The DHCP function is [Enabled].

- When the DHCP function is [Enabled], the Status LED turns Amber.
- For the NHV series, the message "DHCP client function was enabled. Return the setting switch and restart the main unit." is played.



4 After enabling the DHCP function, turn off the power.

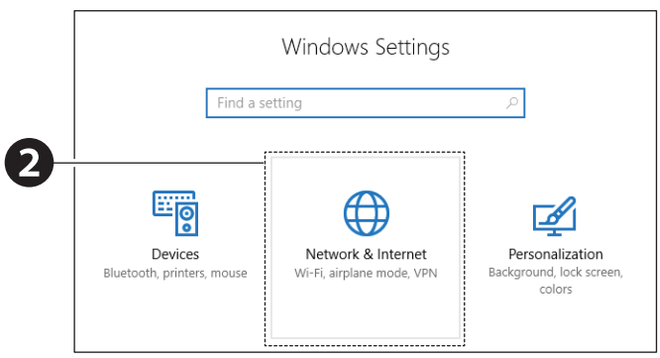
5 Turn all the DIP switches OFF.

- As required, start up and set up the product.

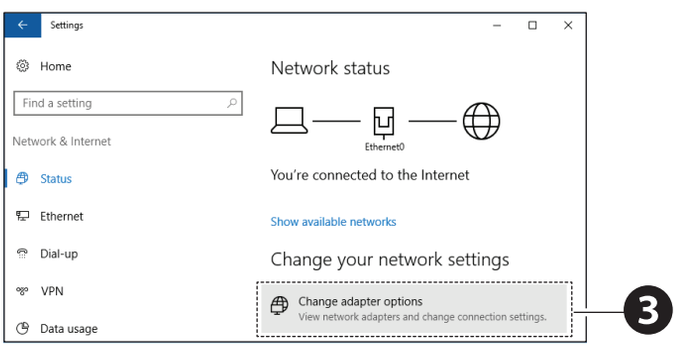
7.2. Setting Up Network Settings on the PC

- To display the product's Web Setup Screen, set up is required on a personal computer. The following procedure is based on factory default settings.
- When enabling the DHCP function on the Web Setup Screen, configure the settings to match your environment.

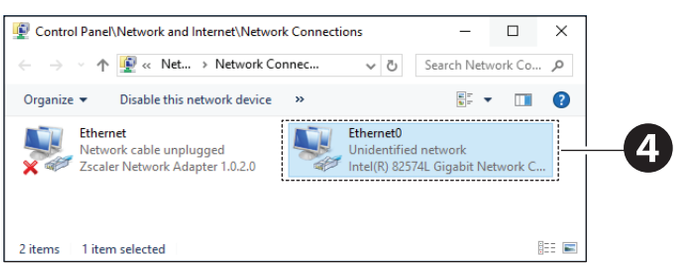
1. From the taskbar's [Windows Start menu], click [Settings] to enter the [Settings] screen.
2. Click [Network & Internet] to enter the [View network status and tasks] screen.



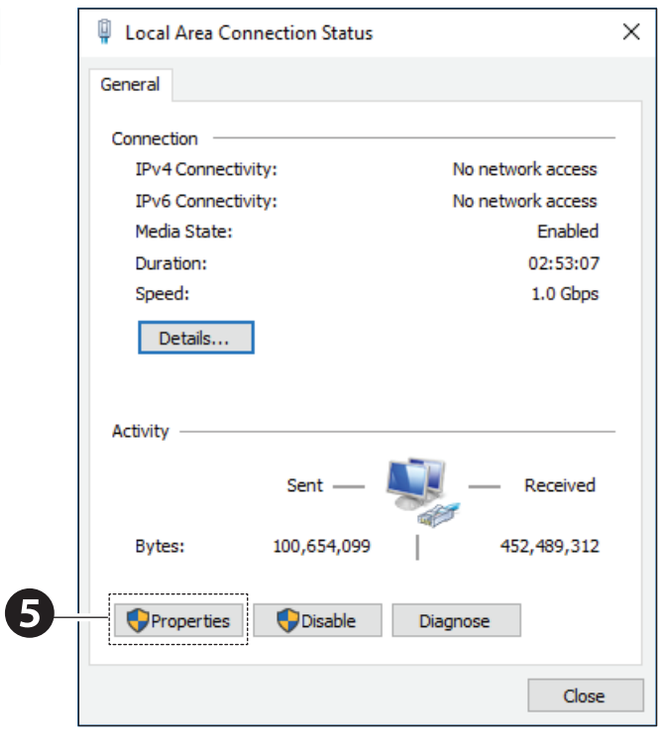
3. From [View network status and tasks], click [Change adapter options] to display the [Network Connections] screen.



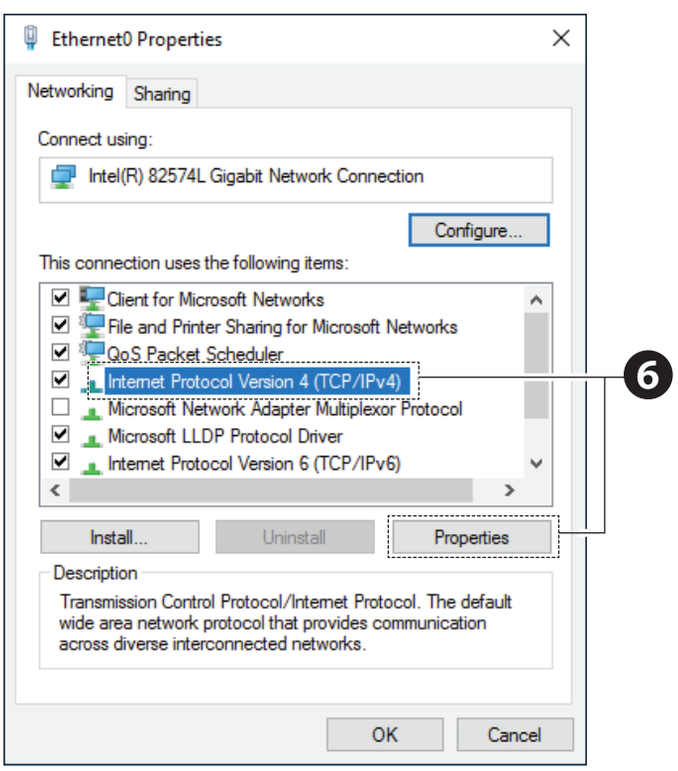
4. Double-click either [Ethernet] or [Local Area Connection], used to connect the product.



5 Click [Properties].



6 Select [Internet Protocol Version 4 (TCP/IPv4)] and click [Properties].

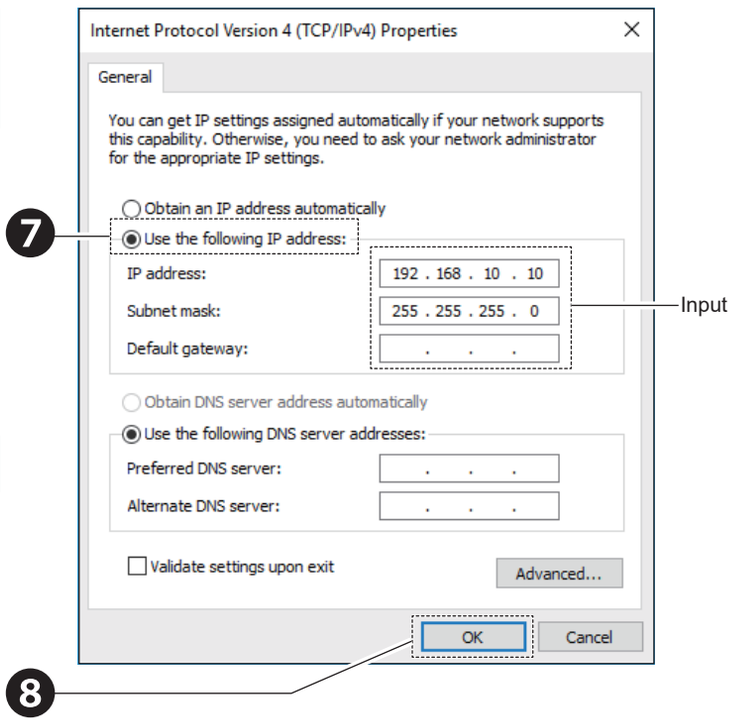


7 In the [General] tab, select the [Use the following IP address:] check box and set the items.

- IP address: 192.168.10.2 to 254
- Subnet mask: 255.255.255.0
- Default gateway: No setting is required for a direct connection. When connecting to a network, check with the network administrator.

* Determine beforehand the settings you plan to use at run time.

8 After the entries are complete, click [OK].



7.3. Setting Up User Authentication (User Name and Password)

- The supported web browsers for this product are Google Chrome (verified version: 115) and Microsoft Edge (verified version: 115).
- To specify various settings on this product, a user name and password are required.
- After purchase, either the first time you use a browser to open the Web Setup Screen, or after initializing you use a browser to open the Web Setup Screen, instead of the login screen the User authentication settings screen will appear.

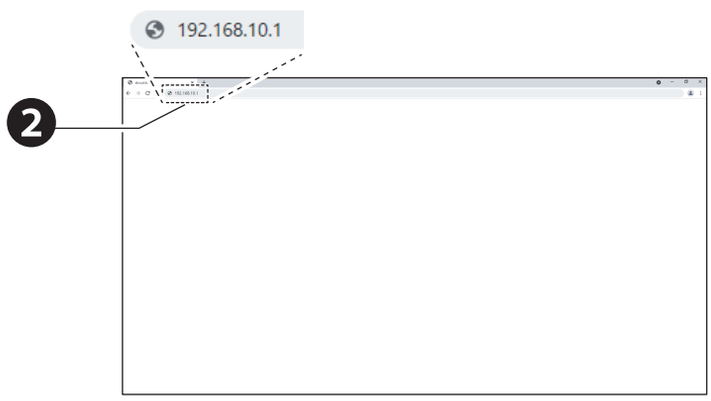
⚠ CAUTION

⚠ Do not forget the user name and password. If you cannot remember either one, login will not be possible.
In the unlikely event you cannot remember the user name and password, run initialization and set up the user name and password again.

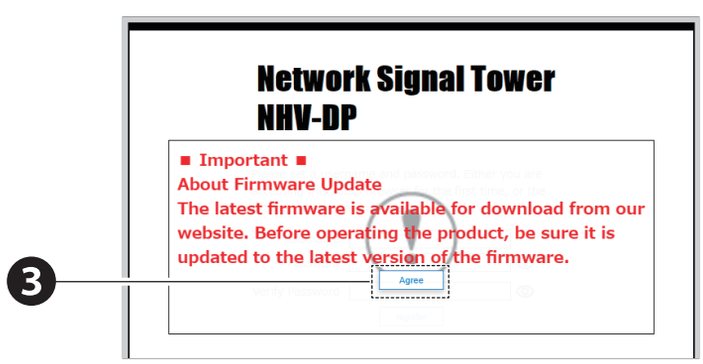
1 Start a Web browser.

2 In the Web browser address bar, enter the IP address* set for this product.

* The default IP address for this product is "192.168.10.1".
* If the User authentication settings screen does not appear, confirm your computer's network settings are set up correctly.
"7.2. Setting Up Network Settings on the PC" (☞ page 107)



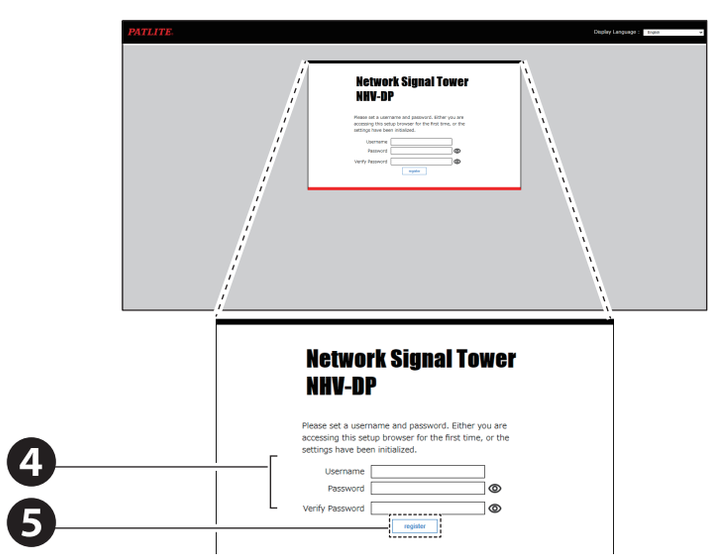
3 Review the important statements about the product and press [Agree].



4 Configure settings for each item.

- [Username]: Set the user name you want to use
- [Password]: Set the password you want to use
- [Verify Password]: Enter the password again for confirmation

5 Click [register] to apply the defined settings.



7.4. Displaying the Web Setup Screen

⚠ CAUTION

⚠ While logged in, after a specified period of inactivity you are automatically logged out.

⚠ You can set the amount of time before you are automatically logged out from the Security Settings screen's Auto Logout Time property.

"9.8.7. Security Settings" (☞ page 366)

⚠ If the screen does not display correctly due to corrupted characters, change the character encoding to Unicode (UTF-8).

⚠ To prevent set up from multiple locations at the same time, duplicate logins are not allowed.

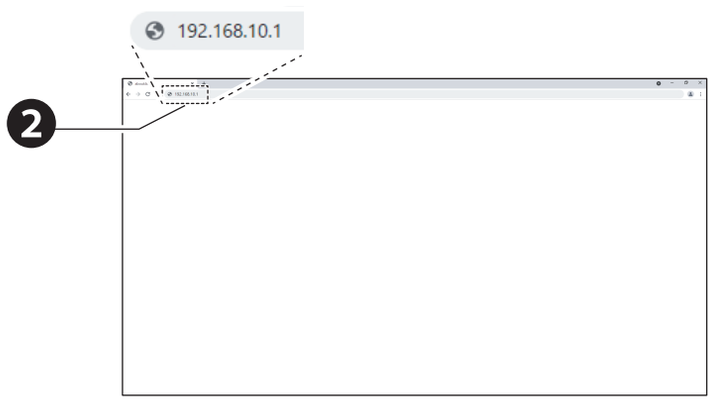
1 Start a Web browser.

2 In the Web browser address bar, enter the IP address* set for this product.

* The default IP address for this product is "192.168.10.1".

* If the User authentication settings screen does not appear, confirm your computer's network settings are set up correctly.

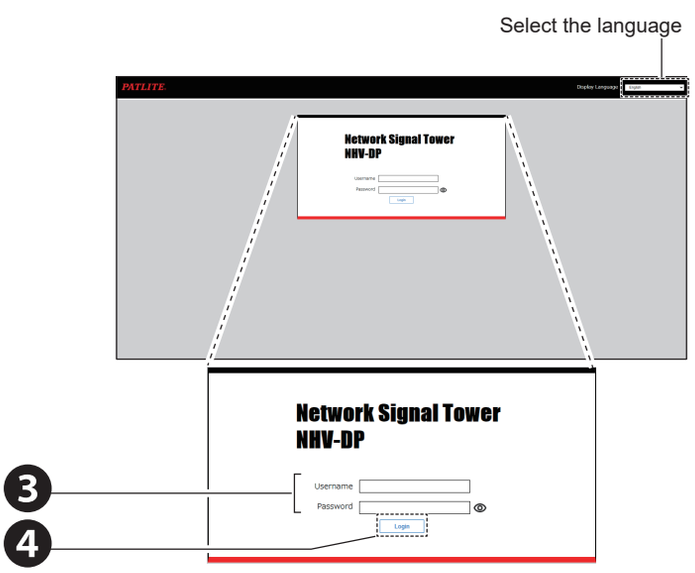
"7.2. Setting Up Network Settings on the PC" (☞ page 107)



3 Select a language and configure settings for each item.

- [Username]: Configured user name
- [Password]: Configured password

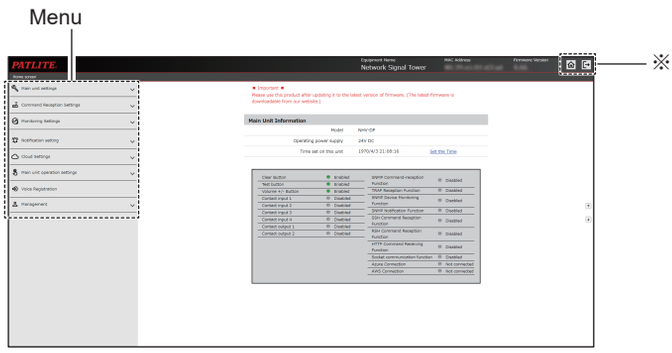
4 Click the [Login] button to log in.



5 On a successful log in, the Web Setup Screen (home screen) is displayed.

* Click to return to the login screen.

* Click to return to the home screen.



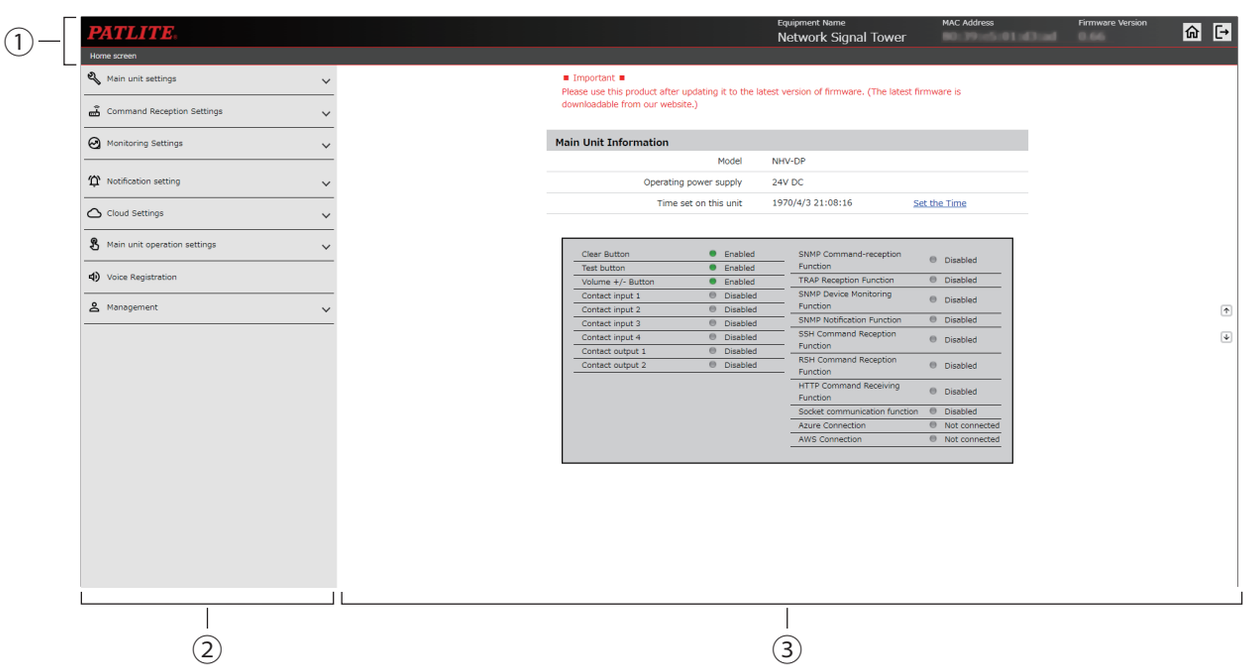
Point

- To configure a setting, from the menu on the left-hand side click the item you want to set. The selected set up screen is displayed.
- After entering settings on each setup screen, click [Set] to apply.

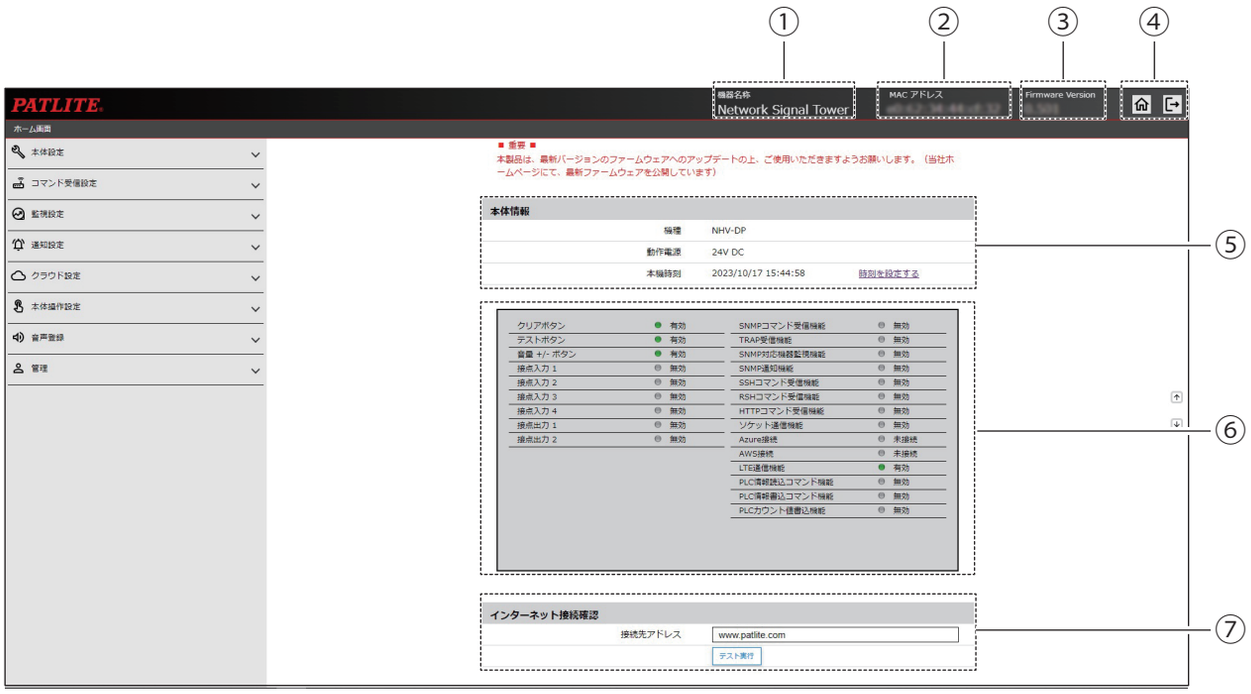
  Setup is now complete : Settings are successfully applied.

  Check the contents of the settings : There are errors in the settings.

How to Read the Home Screen



No.	Name	Description
①	Header	There are product information, home button, and logout button.
②	Menu	Enter the setting screen of each function.
③	Setting Screen	Set each function.



No.	Name	Description
①	Equipment Name	Indicate the equipment name registered in Basic Settings - Main unit settings.
②	MAC Address	Check the MAC Address on the product.
③	Firmware Version	Check the firmware version that the product is currently using.
④	Button	There are the home button and the logout button in the home screen.
⑤	Main Unit Information	Check the product model name, operating power supply, and clock.
⑥	Product Function List	Check the setup status of each function.
⑦	Internet connection check	You can check whether the product is connected to the Internet. For information, refer to "8.5.1.3. How to Check the Internet Connection" (☞ page 248).

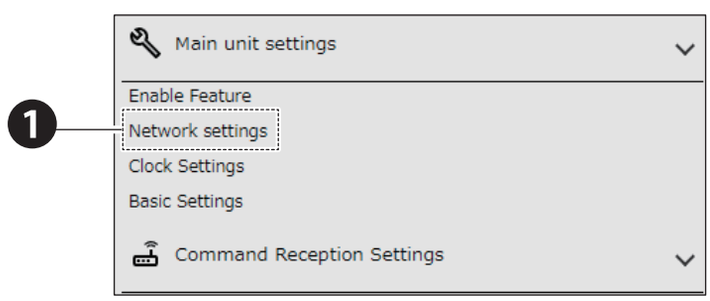
7.5. Setting Up Product Network Settings

- To use this product, the network settings must be configured.
- There are two ways to configure settings: When using in an IPv4 network and when using in an IPv6 network. Set according to how the product will be used.
- For information on each item, refer to "9.1.2. Network Settings" (☞ page 273).

⚠ CAUTION

- ⚠ When IP address configuration is set to [Automatic Settings], and access to the DHCP server is unavailable, the product starts up with the factory default network settings.
- ⚠ With the [Automatic Settings] option, the product restarts with the DHCP function enabled.
- ⚠ After changing the IP address, to reconnect to the product change the network settings on your computer as required.
- ⚠ When set to "Automatic Settings", IPv4 is given priority to the DNS address obtained from the DHCP server.

1 From the [Main unit settings] tab, click [Network settings] to enter the network settings screen.



When Using in an IPv4 Network

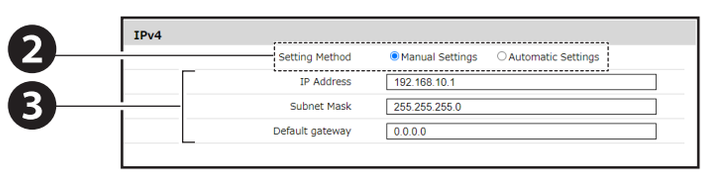
2 Select the [Setting Method].

- To specify a constant IP address, select [Manual Settings].
- To get an IP address automatically from the DHCP server, select [Automatic Settings].

3 Enter the [IP Address], [Subnet Mask], and [Default gateway].

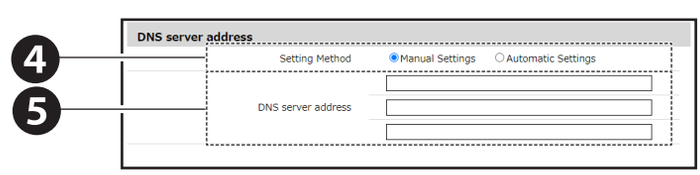
- Enter the settings in accordance with the network environment in which this product is used.

* If the [Setting Method] is [Automatic Settings], input is disabled.



4 Select the [Setting Method].Select how the DNS server is configured for this product.

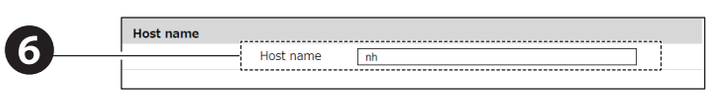
- To specify a fixed server address, select "Manual Settings".
- If you want the server address to be obtained automatically from the DHCP server, select "Automatic Settings".



5 Enter the [DNS server address].

- If a DNS server is not used, enter "0.0.0.0".

6 Enter the product's host name.



7 Click [Set] to apply the defined settings.

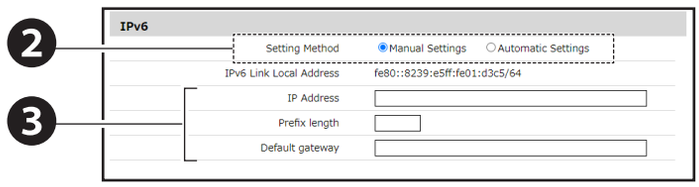
* After the settings are applied, the product is automatically restarted.

* Restarting the product takes approximately 60 seconds.The startup time may be longer depending on the settings.

When Using in an IPv6 Network

2 Select the [Setting Method].

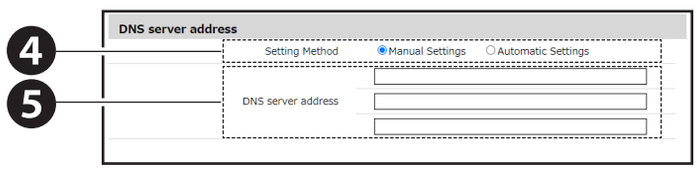
- To specify a constant IP address, select [Manual Settings].
- To get an IP address automatically from the DHCP server, select [Automatic Settings].



3 Enter the [IP Address], [Prefix length], and [Default gateway].

- Enter the settings in accordance with the network environment in which this product is used.

* If the [Setting Method] is [Automatic Settings], input is disabled.

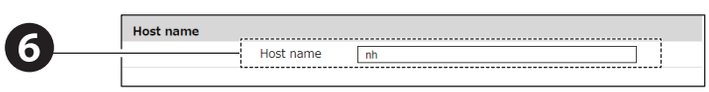


4 Select the [Setting Method].Select how the DNS server is configured for this product.

- To specify a fixed server address, select "Manual Settings".
- If you want the server address to be obtained automatically from the DHCP server, select "Automatic Settings".

4 Enter the [DNS server address].

- If a DNS server is not used, leave the [DNS server address] blank.



5 Enter the product's host name.

6 Click [Set] to apply the defined settings.

* After the settings are applied, the product is automatically restarted.

* Restarting the product takes approximately 60 seconds.The startup time may be longer depending on the settings.

7.6. Setting Up the Clock

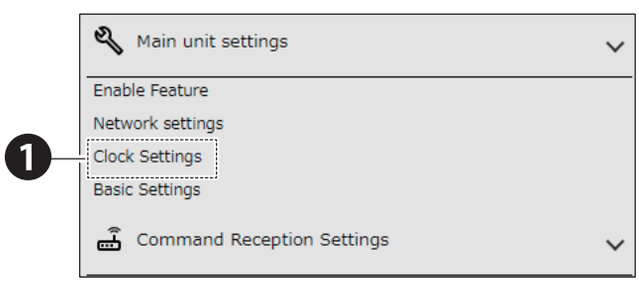
- Configure the clock on this product. There are two ways to set up the clock.
- For information on each item, refer to "9.1.4. Clock Settings" (☞ page 276).

⚠ CAUTION

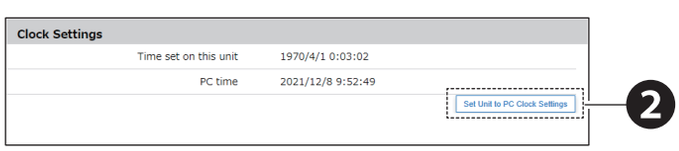
- Regardless of the Time zone setting, do not use this product outside of supported countries and regions.
- ⚠ This product uses a capacitor to back up time information. If there is no power for about half a day, the defined time may shift or it may be reset depending on the charge on the capacitor.
- ⚠ If the backup expires and the clock is reset, it will show January 1, 1970.
- ⚠ When aligning the time with the PC clock, the time may be off by several seconds from the actual PC clock.
- ⚠ If you do not use a NTP server, periodically check and correct the time on the product.

Matching the Clock with the Computer You are Logged in to

1. From the [Main unit settings] tab, click [Clock Settings] to display the [Clock Settings] screen.

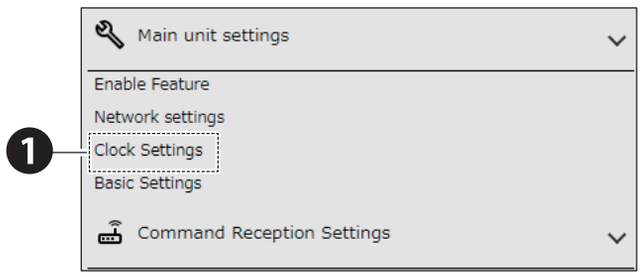


2. Click the [Set] button.



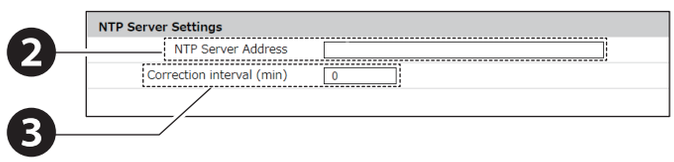
Communicate with NTP Server and Adjust Automatically

1 From the [Main unit settings] tab, click [Clock Settings] to display the [Clock Settings] screen.



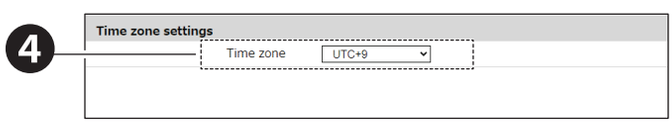
2 In the [NTP Server Address] field, enter either the NTP server address or its host name.

- To use a host name for the [NTP server address], set the DNS server address.
- To communicate with an NTP server on an external network, set a default gateway.



3 In the [Correction interval (min)] field, enter the interval of NTP server communications.

4 Set the [Time zone].



* The relationship between the Time zone setting and representative cities is as follows. Refer to the table for settings.

Setting	Name of representative city
UTC-12	Baker Island
UTC-11	Midway Island
UTC-10	Honolulu
UTC-9	Anchorage
UTC-8	Los Angeles
UTC-7	Denver
UTC-6	Chicago / Mexico City
UTC-5	New York / Ottawa
UTC-3	Rio de Janeiro
UTC-2	Fernando de Noronha
UTC-1	Azores
UTC	London

Setting	Name of representative city
UTC+1	Paris / Berlin
UTC+2	Cairo
UTC+3	Jeddah
UTC+4	Dubai
UTC+5	Karachi
UTC+6	Dhaka
UTC+7	Bangkok / Jakarta / Hanoi
UTC+8	Beijing / Taipei / Singapore / Manila / Kuala Lumpur
UTC+9	Tokyo / Seoul
UTC+10	Sydney
UTC+11	Nouméa
UTC+12	Wellington

5 Click [Set] to apply the defined settings.

7.7. Setting Up Security

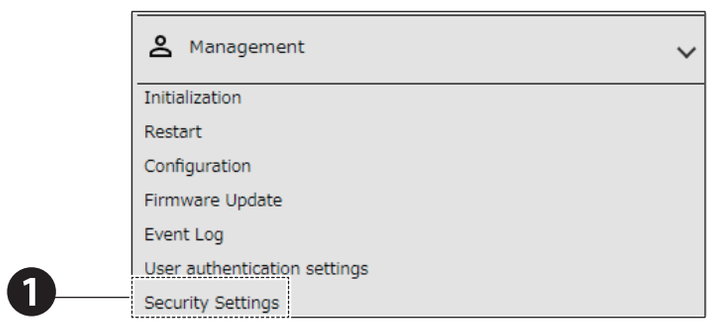
- Set the Web Setup Screen communication protocol and amount of time before you are automatically logged out.
- For information on each item, refer to "9.8.7. Security Settings" (☞ page 366).

⚠ CAUTION

⚠ If you select https communication without registering certificate and private key, when you access the Web Setup Screen or display a pop-up, sometimes an error screen with a message such as "This site is not secure" or "This connection does not protect privacy" will appear.

In the browser, click the [Details] link then click [Go to Web page] to access the Web Setup Screen.
(The displayed text differs depending on your browser and browser version.)

1 From the [Management] tab, click [Security Settings] to display the [Security Settings] window.

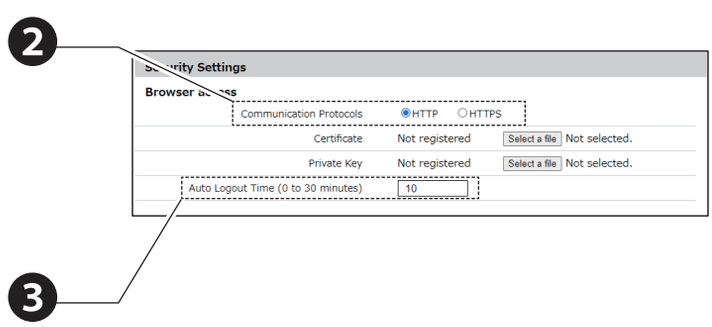


2 Select the [Communication Protocols].

Communicate via HTTP

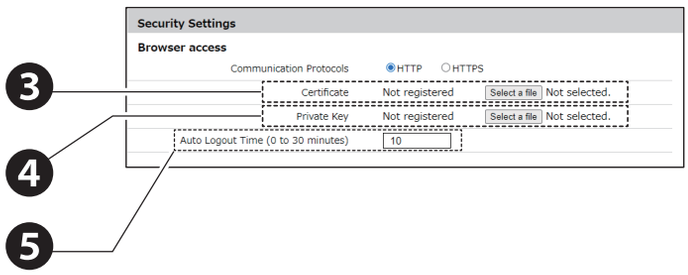
3 Enter the [Auto Logout Time].

* When the time you entered has elapsed, you are automatically logged out.
* When "0" is specified, you are not automatically logged out.
* In units of a minute.



4 Click [Set] to apply the defined settings.

Communicate via HTTPS



3 Register [Certificate].

4 Register [Certificate].

5 Enter the [Auto Logout Time].

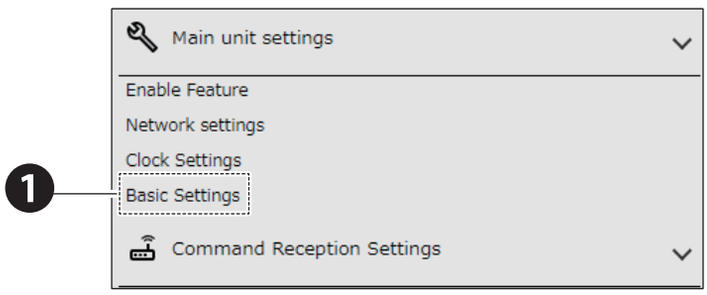
* When the time you entered has elapsed, you are automatically logged out.
* When "0" is specified, you are not automatically logged out.
* In units of a minute.

4 Click [Set] to apply the defined settings.

7.8. Setting Up the Equipment Name, Installation Location, and Contact

- Configure the naming information for this product.
- For information on each item, refer to "9.1.5. Basic Settings" (☞ page 277).

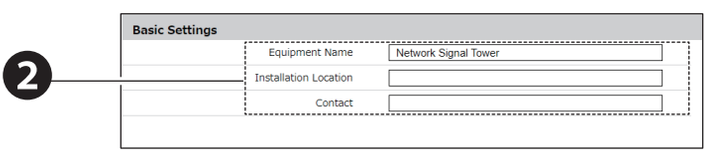
1 From the [Main unit settings] tab, click [Basic Settings] to display the [Basic Settings] screen.



2 Enter the [Equipment Name] and [Installation Location].

Enter and edit as required.
The following are the states for the factory default.
- Equipment Name "Network Signal Tower"
- Installation Location "(blank)"
- Contact "(blank)"

The [Equipment Name] is used in the email body text, or as device information when using the PNS Manager.
The [Installation Location] is used in the email body text.
The [Contact] is used in the email body text.

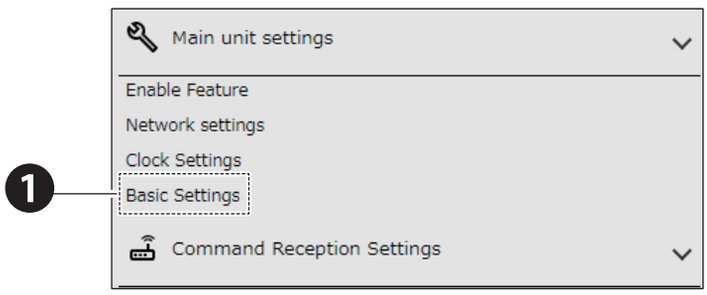


3 Click [Set] to apply the defined settings.

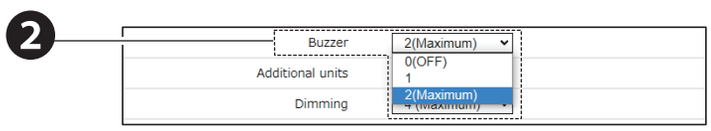
7.9. Setting Up the Buzzer NHB Series

- Configure the buzzer setting on this product.
- For information on each item, refer to "9.1.5. Basic Settings" (☞ page 277).

1. From the [Main unit settings] tab, click [Basic Settings] to display the [Basic Settings] screen.



2. Select the volume from pull-down menu of [Buzzer], and adjust the buzzer volume of this product.

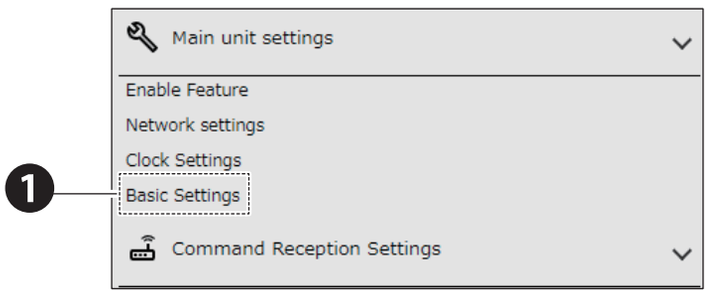


3. Click [Set] to apply the defined settings.

7.10. Setting Up the Speaker Volume NHV Series

- Configure the speaker volume setting on this product.
- For information on each item, refer to "9.1.5. Basic Settings" (☞ page 277).

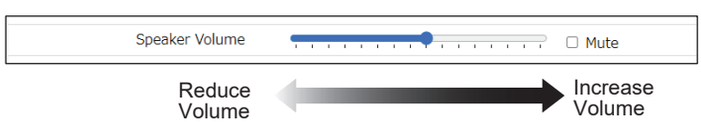
1. From the [Main unit settings] tab, click [Basic Settings] to display the [Basic Settings] screen.



2. On the [Speaker Volume] property, use the volume slide to adjust the volume of playback on the main unit's speaker.

- The volume decreases as you slide to the left, and increases as you slide to the right.

Note: The playback volume from the main unit's speaker is reduced in accordance with the [Speaker Volume] position, with the actual volume on the MP3 file as the maximum volume.

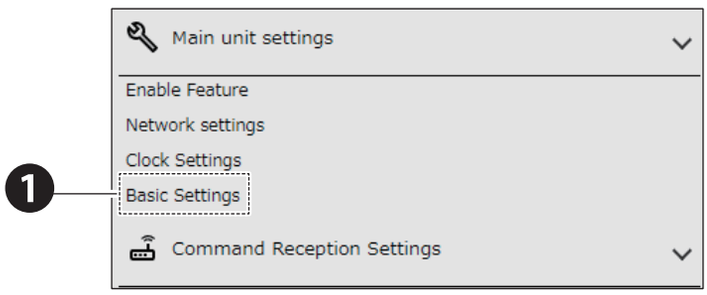


3. Click [Set] to apply the defined settings.

7.11. Setting Up the Line Out Volume NHV Series

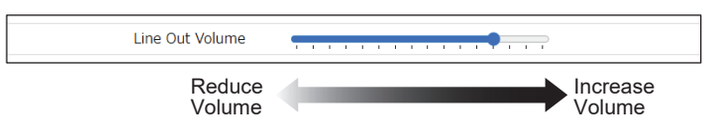
- Configure the Line Out volume setting on this product.
- For information on each item, refer to "9.1.5. Basic Settings" (☞ page 277).

1. From the [Main unit settings] tab, click [Basic Settings] to display the [Basic Settings] screen.



2. On the [Line Out Volume] property, use the volume slide to adjust the audio output volume on line out.

The volume decreases as you slide to the left, and increases as you slide to the right.

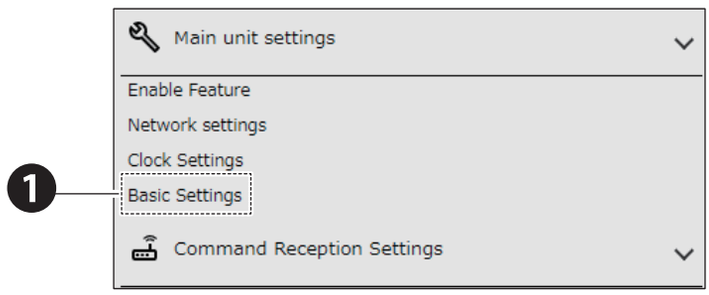


3. Click [Set] to apply the defined settings.

7.12. Setting Up Audio Playback Mode NHV Series

- Configure the audio playback mode settings on this product.
- For information on each item, refer to "9.1.5. Basic Settings" (☞ page 277).

1 From the [Main unit settings] tab, click [Basic Settings] to display the [Basic Settings] screen.



2 Select [Audio Playback Mode].

- Post-priority Playback Mode: When a playback event occurs, the current audio is interrupted and the event audio is played.
- Memory playback mode: When a playback event occurs, it is registered in the memory and the event audio is played after the current audio ends.

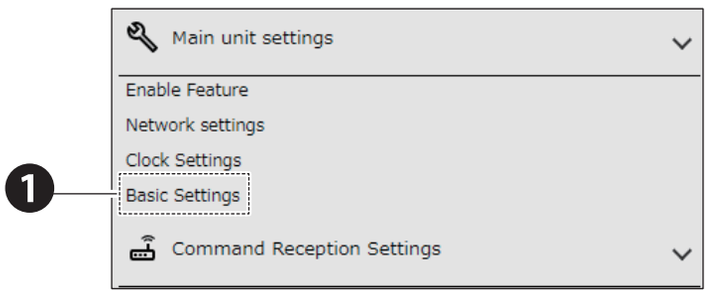
Note: Behavior differs depending on the audio playback mode. For information, refer to "5.3.2. Audio Playback Function" (☞ page 24).

3 Click [Set] to apply the defined settings.

7.13. Setting Up LED Unit (Multi-color) and Transmitter Unit Settings

- Configure additional unit settings when installing the LED unit (multi-color) or transmitter unit.
- For information on each item, refer to "9.1.5. Basic Settings" (☞ page 277).

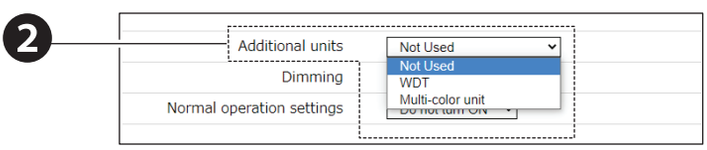
1 From the [Main unit settings] tab, click [Basic Settings] to display the [Basic Settings] screen.



2 Select [Additional units] from the pull-down menu and specify in accordance with its usage.

- If an LED unit (multi-color) is installed, specify [Multi-color unit].
- If a transmitter unit is installed, specify [WDT].
- If none of the above units are installed, specify [Not Used].

Note: If one of the units listed above is installed, make sure you specify the correct additional unit. Do not attach an LED unit (multi-color) together with a transmitter unit to this product.

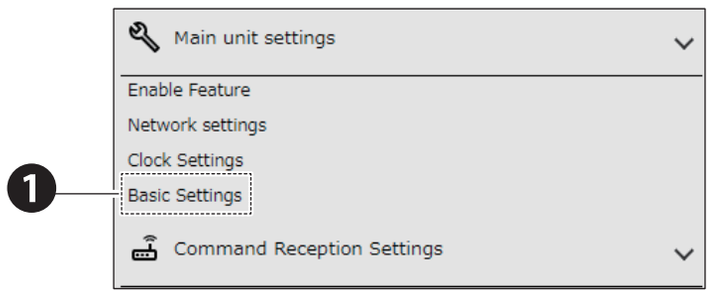


3 Click [Set] to apply the defined settings.

7.14. Setting Up LED Unit Brightness Adjustment

- Set a dimmer setting for a LED unit (colored lens, clear lens) that is installed.
- For information on each item, refer to "9.1.5. Basic Settings" (☞ page 277).

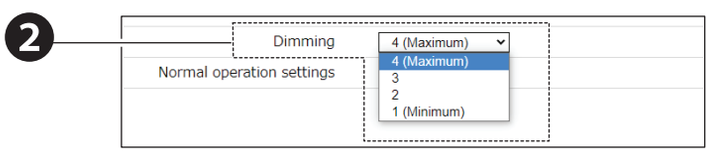
1 From the [Main unit settings] tab, click [Basic Settings] to display the [Basic Settings] screen.



2 Adjust the [Dimming] brightness level.

- 1 is the minimum brightness, and 4 is the maximum brightness.

Note: When LED Unit (Multi-color) or WDT is specified as the additional unit, the setting is fixed at level 4.

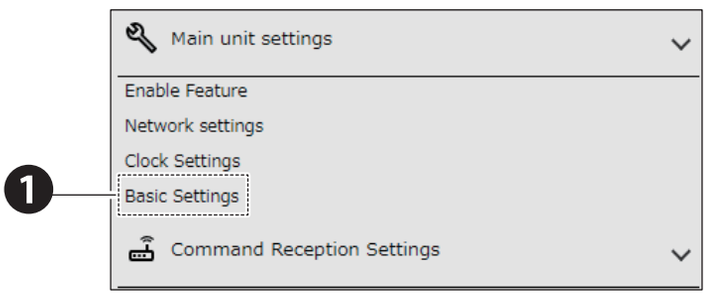


3 Click [Set] to apply the defined settings.

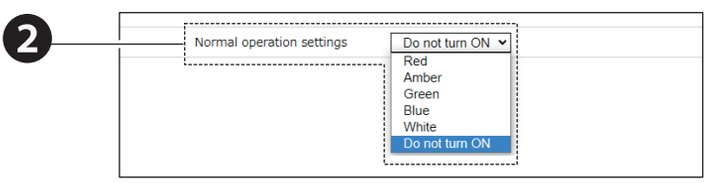
7.15. Setting Up Normal Status

- Set the Signal Tower operation status for normal operation. If you execute the clear operation after setup is complete, the product runs in the set normal status.
- For information on each item, refer to "9.1.5. Basic Settings" (☞ page 277).

1. From the [Main unit settings] tab, click [Basic Settings] to display the [Basic Settings] screen.



2. Specify the operation state for the [Normal operation settings].
   - Any color other than the set light color is turned off.



3. Click [Set] to apply the defined settings.

7.16. Setting Up Voice Registration NHV Series

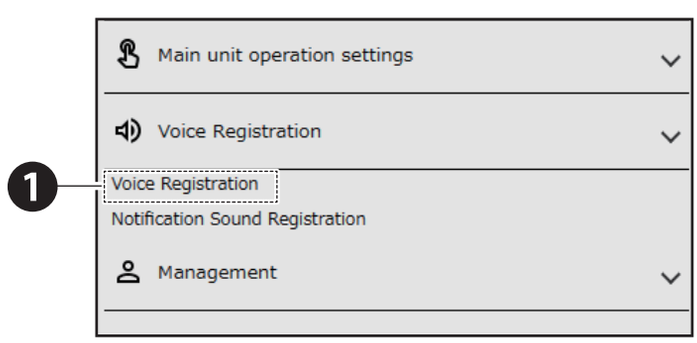
- You can register audio that is played on this product.
- In addition to registering MP3 files, you can also use this product to create audio from text messages and register them.
- You can add and register notification sounds for before and after the sound.
- For information on each item, refer to "9.7. Voice Registration" (☞ page 356).

⚠ CAUTION

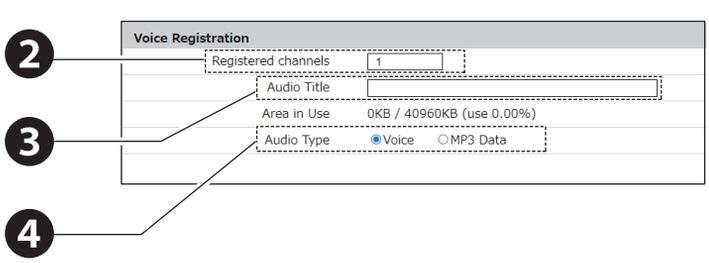
- ⚠ The total size of files you can register is 40 MB.
- ⚠ Playback may not be possible for MP3 files that are not encoded at a fixed bit rate.
- ⚠ When line out and Busy outputs are enabled, it operates in accordance with the audio preview settings. Confirm the device you are connecting to is in an environment where it is safe to operate before doing so.
- ⚠ Previewing the audio interrupts playback of the current channel.
- ⚠ In memory playback mode, if there is an event in the middle of a preview playback, playback by the event is executed after preview playback is complete.
- ⚠ If you leave the title blank and register as an MP3 file, the file name of the MP3 file is automatically set as the title.
- ⚠ In preset channels, you cannot register audio, change titles, or delete audio.
- ⚠ Preset channels cannot use the line out output.
- ⚠ Environment-dependent characters such as "©" and " ♠ " and some symbols such as "¥" and "~" may not be synthesized correctly.
- ⚠ If you register an MP3 file as a notification sound, the file size will be larger than it actually is.

7.16.1. Audio Registration

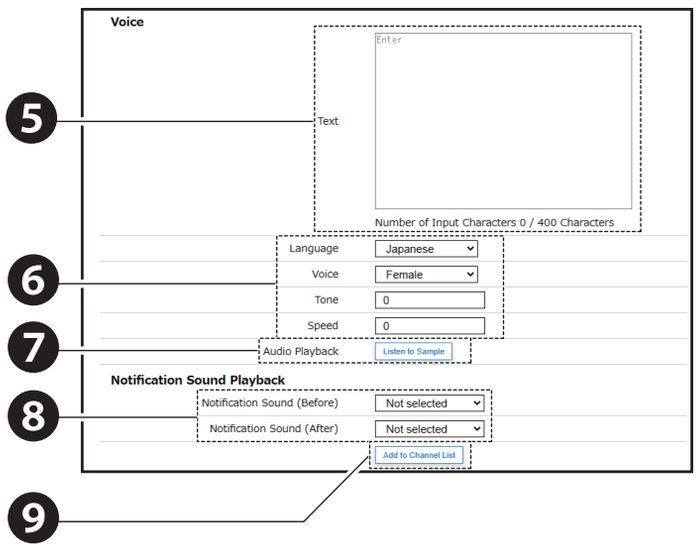
1. Click [Voice Registration] to display the [Voice Registration] screen.



2. Enter the registration channel to set.
3. Enter the title of the audio to register.
4. Select the audio to register from [Voice / MP3 Data].



When Registering Voice Data



5 In the [Text] field, enter the text that is read by the Voice.

- If there are many line feeds and symbols, it may not be possible to register even if it is within the maximum number of characters that can be entered.
  If you cannot register, please reduce the number of line breaks and symbols.

6 Set the [Language], [Speed], [Voice], and [Tone] values.

- With the [Language] setting, read aloud text in Japanese or English or Chinese.
- With the [Voice] setting, read aloud text in a male or female voice.
- By increasing the [Tone] value, read aloud text in a clearer voice. By decreasing the value, read aloud text in a calmer voice.
- With the [Speed] setting, read aloud text faster by increasing the value. By decreasing the value, slow down the reading of text.

7 Use [Audio Playback] to listen to audio with the specified settings.

- To adjust the audio, set the items in 6 and listen again.

8 Set the values for "Notification Sound (Before)" and "Notification Sound (After)".

- If you do not want to set a notification sound, set it to "Unselected".

9 Press the [Add to Channel List] button to register the audio data to the channel.

- When there is no audio title, the text content is registered as the audio title in the channel.

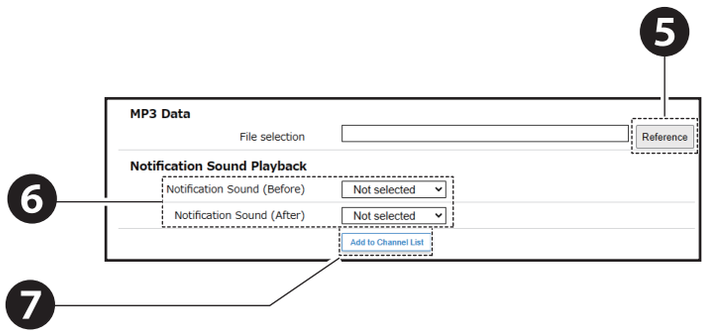
10 Click [Set] to apply the defined settings.

When Registering MP3 Data

5 Click the [Reference] button and select the MP3 Data to register.

Supported MP3 File Formats

Format	MPEG1-Audio Layer III (MP3)
Bit Rate	Fixed Bit Rate (CBR only) 32 kbps, 64 kbps, or 128 kbps
Sampling Frequency	44.1KHz
Audio Channel Type	1 ch (mono)
File Size You Can Register	Total up to 40 MB



6 Set the values for "Notification Sound (Before)" and "Notification Sound (After)".

- If you do not want to set a notification sound, set it to "Unselected".

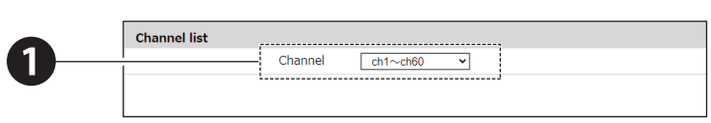
7 Press the [Add to Channel List] button to register the audio data to the channel.

- When there is no audio title, the MP3 data name is registered as the audio title in the channel.

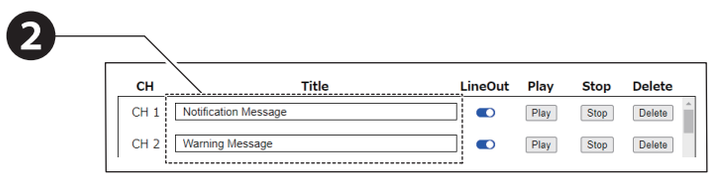
8 Click [Set] to apply the defined settings.

7.16.2. Changing the Audio Title

1 From [Channel] select [ch1 to ch60].



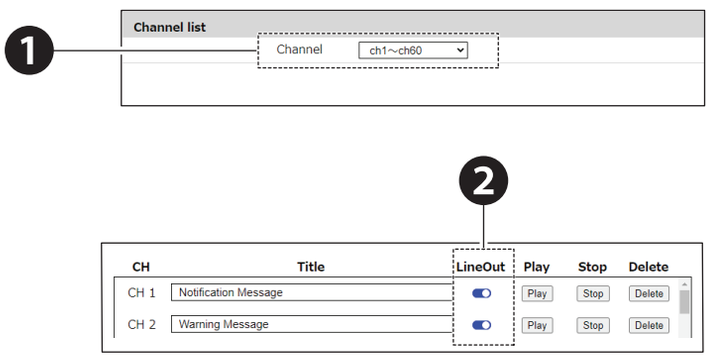
2 In the channel where you want to change the title, change to the desired title.



3 Click [Set] to apply the defined settings.

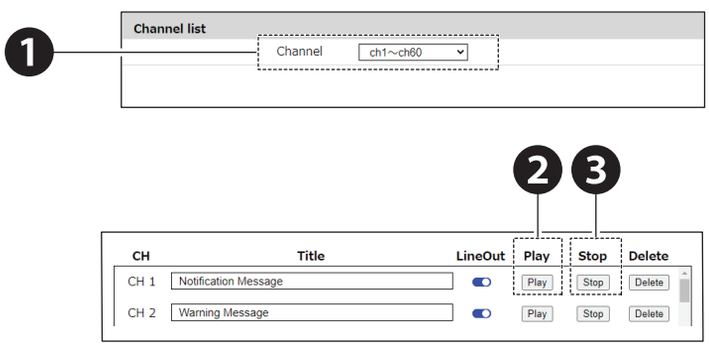
7.16.3. Audio Line Out Output

1. Select the channel for line out output.
2. For the line out of the channel to play, select [Enable/Disable].
3. Click [Set] to apply the defined settings.



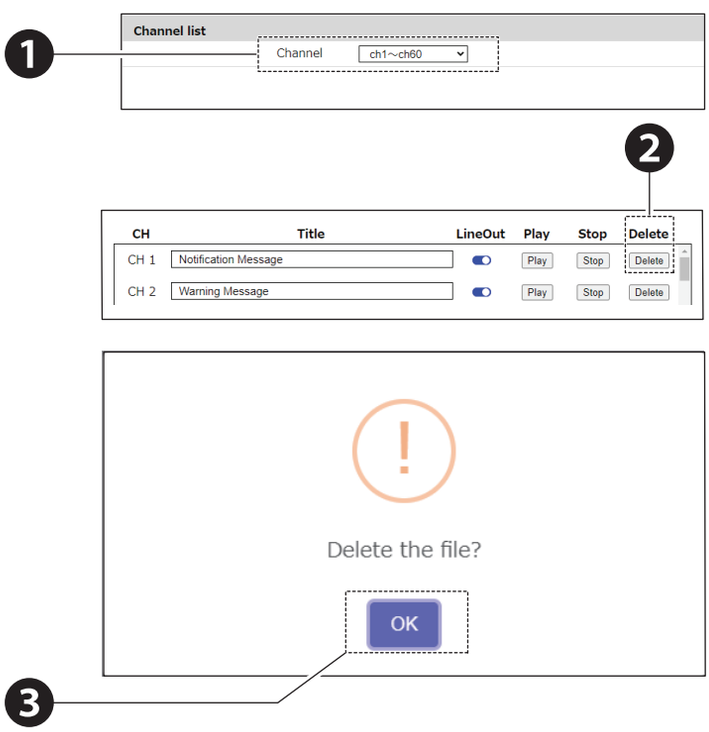
7.16.4. Playing and Stopping Audio Playback

1. Select the channel to play.
2. Click the [Play] button for the channel to play.
3. Click the [Stop] button to stop the playback of the channel.



7.16.5. Deleting Audio

1. From [Channel] select [ch1 to ch60].
2. Click the [Delete] button for the channel to delete.
3. From the pop-up dialog box that appears, click [OK].

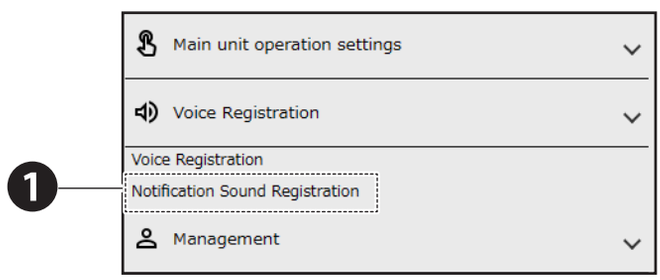


7.17. Register Notification Sound

- You can register the notification sound to be played by this product.
- For information on each item, refer to "9.7. Voice Registration" (☞ page 356).

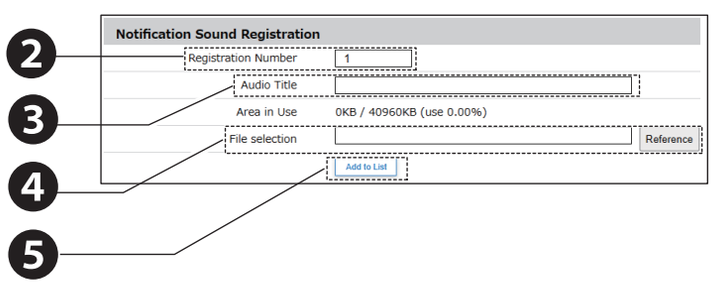
7.17.1. Notification Sound Registration

1. Click "Notification Sound Registration" to display the "Notification Sound Registration" screen.



2. Enter the registration number.

3. Enter the title of the sound to register.



4. Use "Browse "to select the sound.

Supported MP3 File Formats

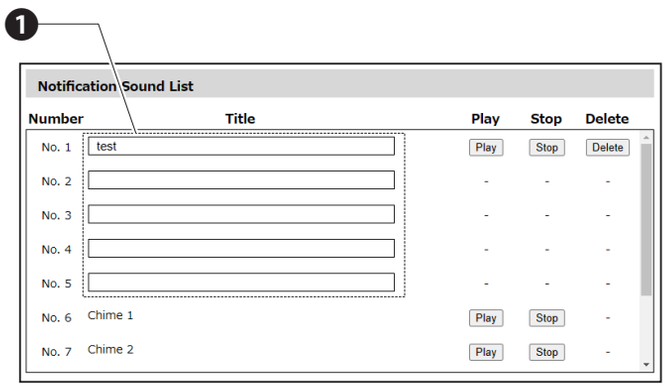
Format	MPEG1-Audio Layer III (MP3)
Bit Rate	Fixed Bit Rate (CBR only) 32 kbps, 64 kbps(recommended), or 128 kbps
Sampling Frequency	44.1KHz
Audio Channel Type	1 ch (mono)
File Size You Can Register	Total up to 40MB

5. Press the "Add to List" button to register the sound data as the notification sound.

6. Click [Set] to apply the defined settings.

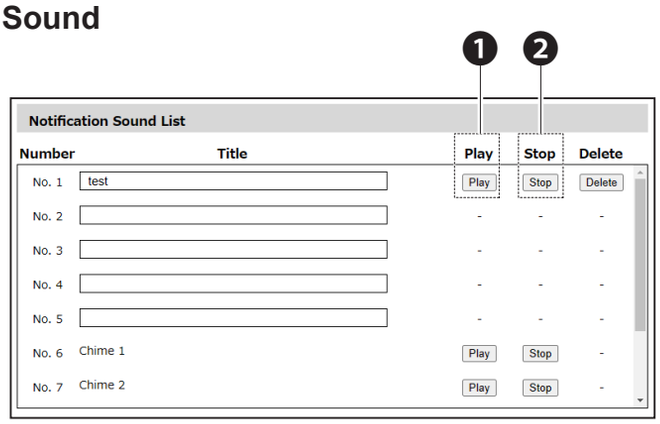
7.17.2. Changing the Title of the Notification Sound

1. For the notification sound whose title you want to change, edit to the desired title.
2. Click "Confirm" to apply the defined settings.



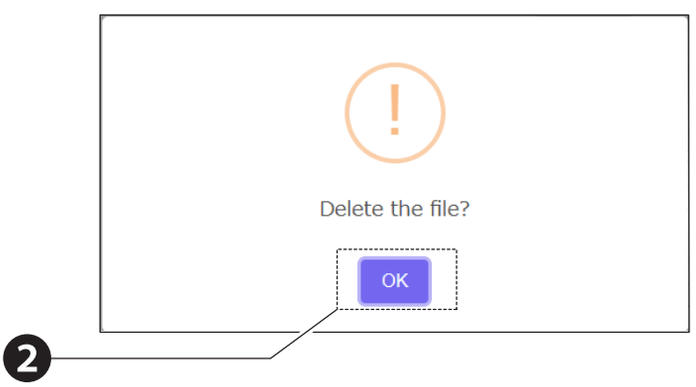
7.17.3. Playing and Stopping the Notification Sound

1. Click the "Play" button for the notification sound to play.
2. Click the "Stop" button to stop the playback of the notification sound.



7.17.4. Deleting the Notification Sound

1. Click the "Delete" button to delete the Notification Sound.
2. From the pop-up dialog box that appears, click "OK".



8. Operation

This section describes processes on how to set up and use this product. Reference in accordance with how you will use the product.

8.1. Notifying Equipment

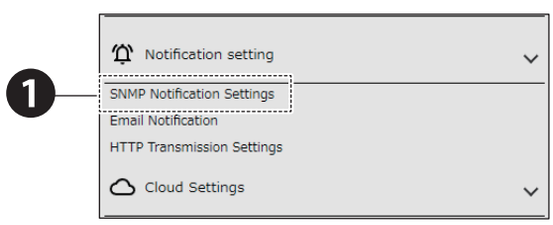
8.1.1. Setting Up SNMP (Trap Inform) Notification Settings

- Set to send a SNMP notification when an event occurs.
- Using SNMP you can set the community name used by SNMP SET/GET to reference items on the product, and set Send TRAP to notify external entities about events that occurred on this product.
- For information on each item, refer to "9.4.1. SNMP Notification Settings" (☞ page 334).

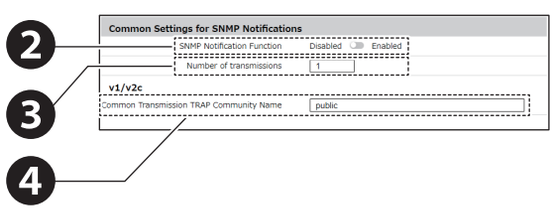
8.1.1.1. Setup Procedure

● Enable SNMP Notification Function

1. From the [Notification setting] tab, click [SNMP Notification Settings] to enter the [Common Settings for SNMP Notifications] screen.

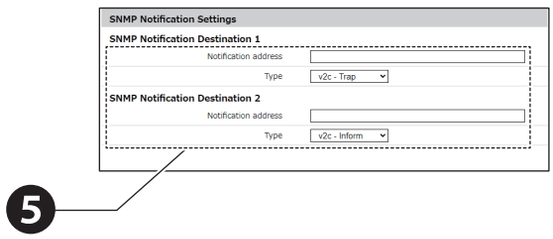


2. Set the SNMP Notification function to [Enabled].
3. Enter the number of transmissions.
4. Enter the v1/v2c Common Transmission TRAP Community Name.



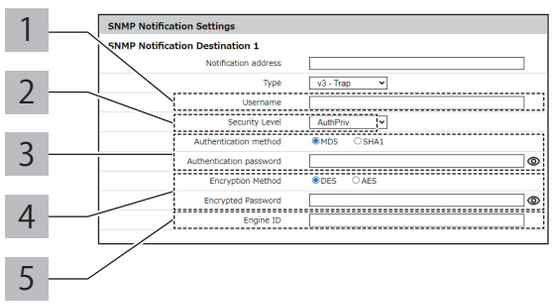
5 For the SNMP notification recipient, specify the [Notification address] and [Type].

You can set up to 8 SNMP notification recipients.



■ When Using [v3 - Trap] and [v3 - Inform]

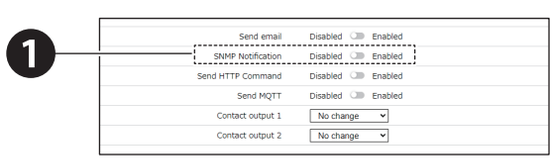
1	Set the [Username].
2	Select the security level, [NoAuthNoPriv], [AuthNoPriv], or [AuthPriv]. • NoAuthNoPriv: Communication authentication and encryption are not performed. • AuthNoPriv: Performs communication authentication only. • AuthPriv: Performs communication authentication and encryption.
3	When either [AuthNoPriv] or [AuthPriv] is selected for the security level, set the [Authentication method] and [Authentication password]. • For the Authentication method, select either [MD5] or [SHA1]. Select to match settings on supported equipment.
4	When you set the [Security Level] to [AuthPriv], set the [Encryption Method] and [Encrypted Password]. • For the Encryption Method, select either [DES] or [AES]. Select to match settings on supported equipment.
5	Specify the Engine ID to connect.



6 Click [Set] to apply the defined settings.

● Setting Triggers for SNMP Notifications

1 Set SNMP notification to [Enabled] in each setting screen such as Monitoring Settings and Main unit operation settings.



2 Click [Set] to apply the defined settings.

● List of OID Notified by This Product

For information on OID, refer to "10. MIB List" (☞ page 367).

TRAP Number	variable-bindings	Description
OID / Item Name	OID / Item Name	
1.3.6.1.4.1.20440.4.1.6.1 trapPatliteAlarmAdded	1.3.6.1.4.1.20440.4.1.7.2 pingPatternNum	Indicates a problem with the monitoring target specified by the ping monitoring setting number (1 to 24).
1.3.6.1.4.1.20440.4.1.6.2 trapPatliteAlarmRemoved	1.3.6.1.4.1.20440.4.1.7.2 pingPatternNum	Indicates the monitoring target specified by the ping monitoring setting number (1 to 24) has recovered from the problem.
1.3.6.1.4.1.20440.4.1.6.3 trapPatliteTrapReceived	1.3.6.1.4.1.20440.4.1.7.3 trapReceivedPatternNum	Indicates the TRAP specified in the receive TRAP group (1 to 16) has been received.
1.3.6.1.4.1.20440.4.1.6.4 trapPatliteClearExecuted	-	Indicates the Clear button has been pressed.
1.3.6.1.4.1.20440.4.1.6.5 trapPatliteRshExecuted	-	Indicates the RSH/SSH Command has been received.
1.3.6.1.4.1.20440.4.1.6.8 trapPatliteTestSwExecuted	-	Indicates the Test button has been pressed.
1.3.6.1.4.1.20440.4.1.6.11 trapPatliteDiStateChangeOn	1.3.6.1.4.1.20440.4.1.4.4.1 diEntry1	Indicates digital input 1 has been turned on.
	1.3.6.1.4.1.20440.4.1.4.4.2 diEntry2	Indicates digital input 2 has been turned on.
	1.3.6.1.4.1.20440.4.1.4.4.3 diEntry3	Indicates digital input 3 has been turned on.
	1.3.6.1.4.1.20440.4.1.4.4.4 diEntry4	Indicates digital input 4 has been turned on.
1.3.6.1.4.1.20440.4.1.6.12 trapPatliteDiStateChangeOff	1.3.6.1.4.1.20440.4.1.4.4.1 diEntry1	Indicates digital input 1 has been turned off.
	1.3.6.1.4.1.20440.4.1.4.4.2 diEntry2	Indicates digital input 2 has been turned off.
	1.3.6.1.4.1.20440.4.1.4.4.3 diEntry3	Indicates digital input 3 has been turned off.
	1.3.6.1.4.1.20440.4.1.4.4.4 diEntry4	Indicates digital input 4 has been turned off.
1.3.6.1.4.1.20440.4.1.6.13 trapPatliteSNMPGetMatched	1.3.6.1.4.1.20440.4.1.7.4 snmpGetMatchPatternNum	Indicates the condition specified in the SNMP monitoring condition settings (1 to 20) has been met.
1.3.6.1.4.1.20440.4.1.6.14 trapPatliteSNMPGetReleased	1.3.6.1.4.1.20440.4.1.7.4 snmpGetMatchPatternNum	Indicates the condition specified in the SNMP monitoring condition settings (1 to 20) has been released.
1.3.6.1.4.1.20440.4.1.6.15.1 diConditionMatch1	-	Indicates the condition specified in Digital Input Condition Setting 1 has been met.
1.3.6.1.4.1.20440.4.1.6.15.2 diConditionMatch2	-	Indicates the condition specified in Digital Input Condition Setting 2 has been met.
1.3.6.1.4.1.20440.4.1.6.15.3 diConditionMatch3	-	Indicates the condition specified in Digital Input Condition Setting 3 has been met.
1.3.6.1.4.1.20440.4.1.6.15.4 diConditionMatch4	-	Indicates the condition specified in Digital Input Condition Setting 4 has been met.
1.3.6.1.4.1.20440.4.1.6.16 trapPatliteSNMPGetChange	1.3.6.1.4.1.20440.4.1.7.5 snmpGetChangePatternNum	Indicates the change specified in the SNMP monitoring condition settings (1 to 4) has been detected.
1.3.6.1.4.1.20440.4.1.6.17 trapPatliteGroupAlarmAdded	1.3.6.1.4.1.20440.4.1.7.6 pingGroupPatternNum	Indicates a problem with the monitoring target group (1 to 3) specified by the ping monitoring group setting number.
1.3.6.1.4.1.20440.4.1.6.18 trapPatliteGroupAlarmRemoved	1.3.6.1.4.1.20440.4.1.7.6 pingGroupPatternNum	Indicates the monitoring target group (1 to 3) specified by the ping monitoring setting number has recovered from the problem.

TRAP Number	variable-bindings	Description
OID / Item Name	OID / Item Name	
1.3.6.1.4.1.20440.4.1.6.19 trapPatliteMailFilterMatch	1.3.6.1.4.1.20440.4.1.7.7 mailFilterNum	Indicates that mail with the conditions specified by the filter rule setting number (1 to 20) has been detected.
1.3.6.1.6.3.1.1.5.1 coldStart	-	Indicates this product has been restarted.
1.3.6.1.4.1.20440.4.1.6.9 trapPatliteSlmpMonitoringAction	1.3.6.1.4.1.20440.4.1.7.1 slmpPatternNum	Indicates the data that matches the condition settings (1 to 16) specified in the PLC information read command is acquired.
1.3.6.1.4.1.20440.4.1.6.10 trapPatliteSlmpMonitoringError	-	Indicates an error data is acquired by the PLC information read command.

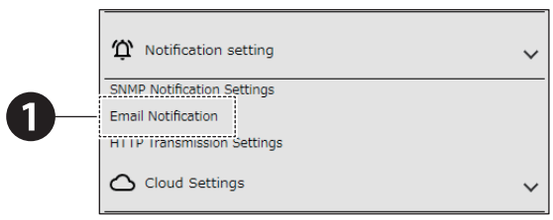
8.1.2. Setting Up Email Notification Settings

- Set to send an email notification when an event occurs.
- For information on each item, refer to "9.4.2. Email Notification Settings" (☞ page 338).

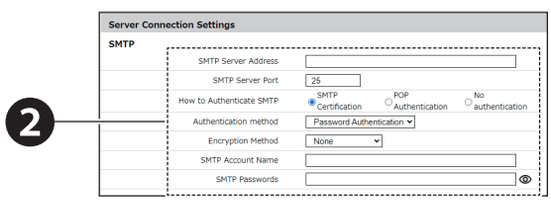
8.1.2.1. Setup Procedure

● Set up the Mail Server and Transmission Content

1 From the [Notification setting] tab, click [Email Notification] to enter the [Server Connection Settings] screen.



2 Set the [SMTP Server Address], [SMTP Server Port], [How to Authenticate SMTP], [Authentication method], [Encryption Method], [SMTP Account Name], and [SMTP Password].



■ When Using SMTP Certification

Select either [OAuth2] or [Password Authentication] for the Authentication method and set the [Encryption Method], [SMTP Account Name], and [SMTP Password]. Authentication methods [OAuth2] and [Password Authentication] are available only when the following address is specified as the SMTP Server Address. When any other server is specified, authentication is fixed as [Password Authentication].

- Gmail server: smtp.gmail.com
- Outlook server: smtp.office365.com

■ When Connecting to Gmail*1 *2

Register the credential file in the [Credential] section. For information, refer to " ● Preparation" (☞ page 140).

■ When Connecting to Outlook*1 *2

Register the [Client ID], [Authorization Endpoint URL], and [Token Endpoint URL]. For information, refer to " ● Preparation" (☞ page 140).

*1 As required, set [State] to [Enabled].

*2 Click the [Acquisition of authorization code] button, and from the authentication screen that pops up, get the authentication code. In the [Authorization code entry] field, enter the authentication code that you retrieved.

If the encryption method is set to "None" when "Password Authentication" is selected.you can select the authenticationmethod as ather "LOGIN Authentication" or "PLAIN Authentication".

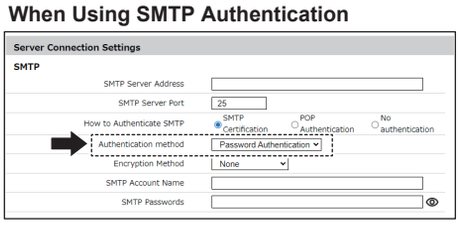
■ When Using POP Authentication

Enter the [POP Server Address], [POP Server Port], [POP Account Name], and [POP Password].

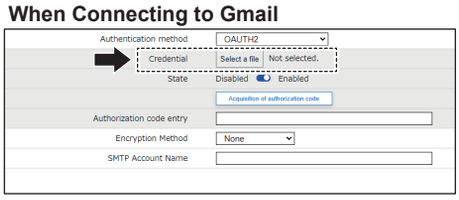
■ When Using No Authentication

Select [No authentication].

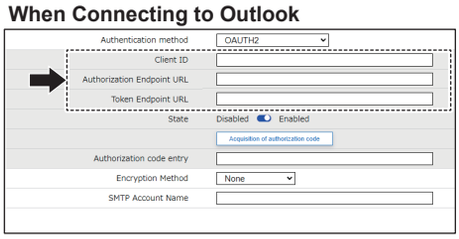
When Using SMTP Authentication



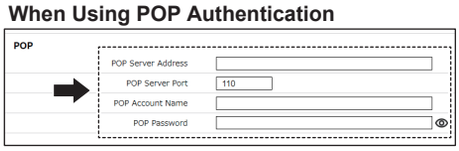
When Connecting to Gmail



When Connecting to Outlook



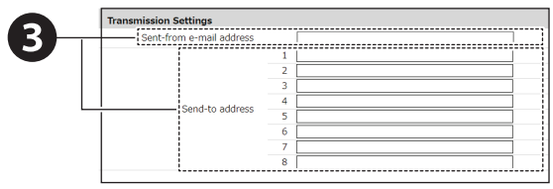
When Using POP Authentication



When Using No Authentication

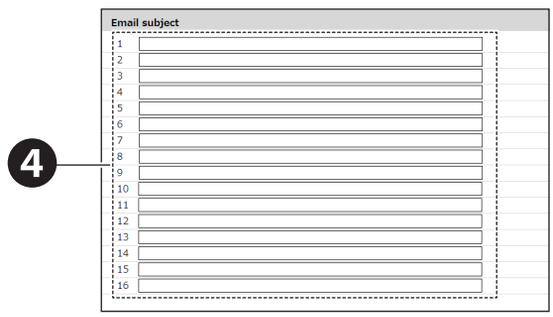
3 In the [Transmission Settings] screen, register the [Sent-from e-mail address] and [Send-to address].

- Sent-from e-mail address: Sender email address
- Send-to address: Recipient email address



4 In the [Email subject] screen, register the subject for the email.

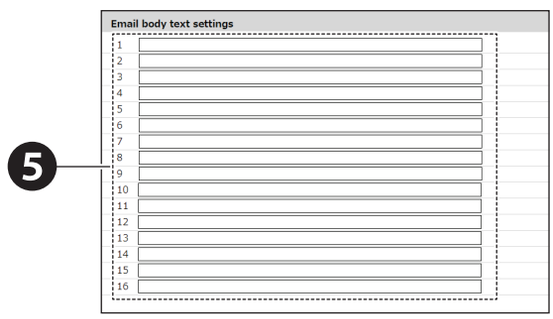
- You can register up to 16 subjects.



5 In the [Email body text settings], register the body text of the message.

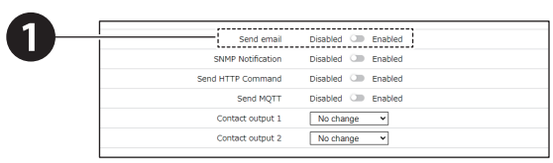
- You can register up to 16 body text messages.

6 Click [Set] to apply the defined settings.



● Setting Up Triggers for Email Notifications

1 Set [Send email] to [Enabled] in each operation setting screen such as Monitoring Settings and Main unit operation settings.



2 Click [Set] to apply the defined settings.

● Preparation

- To use OAuth2 as the Authentication method for sent email, some preparations need to be made.
- The product must be connected to the Internet for proper OAuth2 configuration.
- This product supports Gmail and Outlook OAuth2.

Gmail

For setup instructions, refer to the documentation provided by Google.

1. Access the Google Cloud Platform.
2. Create a project for this product.
3. Activate the Gmail API in the project you created.
4. Set up the OAuth consent screen.

   Specify the scope as [https://mail.google.com/ (Read, compose, send, and permanently delete all your email from Gmail)].
5. Create authentication information.

   - For authentication information, create an [OAuth client ID].
   - For application, create a [Desktop app].
6. Download the credentials file (JSON file).

Outlook

For setup instructions, refer to the documentation provided by Microsoft.

1. From the [Microsoft Azure] website, access [Microsoft Entra ID].
2. Register the application on this product.

   - For the redirect URI, set the application type to [Public client/native (mobile & desktop)] and the URL to https://login.microsoftonline.com/common/oauth2/nativeclient.
3. Add access permissions to the application you created.

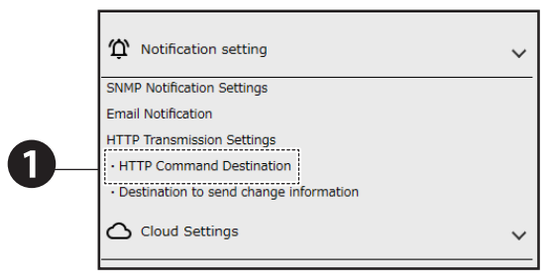
   For access permissions specify [IMAP.AccessAsUser.ALL], [POP.AccessAsUser.All], [SMTP.Send], [offline_acccess], and [User.Read].
4. Refrain from using [Application (client) ID], [Authorization endpoint], and [Token endpoint on the registered application].

8.1.3. Setting Up HTTP Command Sending Settings

- Use this setting to send HTTP Commands when an event occurs.
- For information on each item, refer to "9.4.3. HTTP Transmission Settings" (☞ page 344).

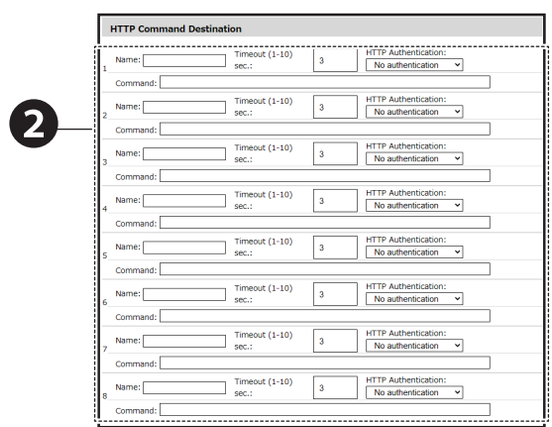
8.1.3.1. Setting Up Content of Send HTTP Command

1. From the [Notification setting] tab, click [HTTP Command Destination] to enter the [HTTP Command Destination] screen.



2. In the [HTTP Command Destination] screen, register the HTTP name, command, and timeout you want to send in fields 1 to 8.

- Name: Name of HTTP Command
- Command: HTTP Command to send
- Timeout: Timeout period for the HTTP Command
- HTTP Authentication: Authentication method for HTTP commands
- User Name: User name for authentication of HTTP commands
- Password: Password for authentication of HTTP commands

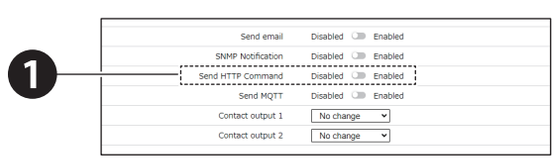


3. Click [Set] to apply the defined settings.

* If you send the HTTP command to either NHB or NHV series, HTTP Command Receiving Function must be configured. Refer to " ● Using HTTP Commands" (☞ page 176).

8.1.3.2. Setting Up Triggers for Send HTTP Command

1. Set [Send HTTP Command] to [Enabled] in each operation setting screen such as Monitoring Settings and Main unit operation settings.

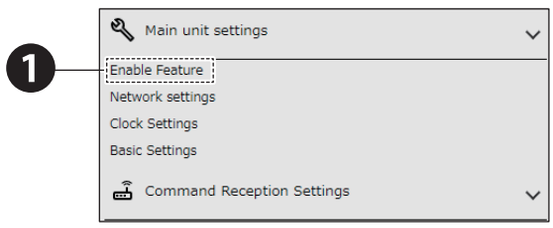


2. Click [Set] to apply the defined settings.

8.1.3.3. Setting Up State Change Transmissions

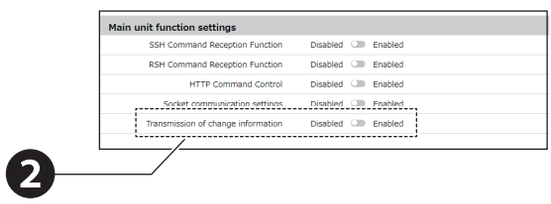
Follow the steps below to set up transmissions on changes in state.

1. From the [Main unit settings] tab, click [Enable Feature] to enter the [Main unit function settings] screen.

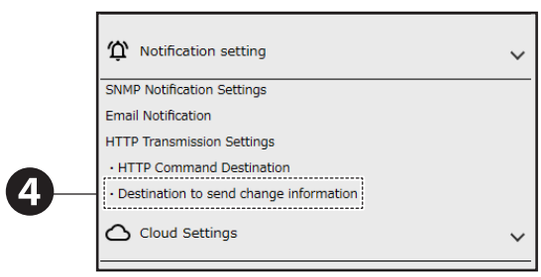


2. In the [Main unit function settings] screen, set [Transmission of change information] to [Enabled].

3. Click [Set] to apply the defined settings.

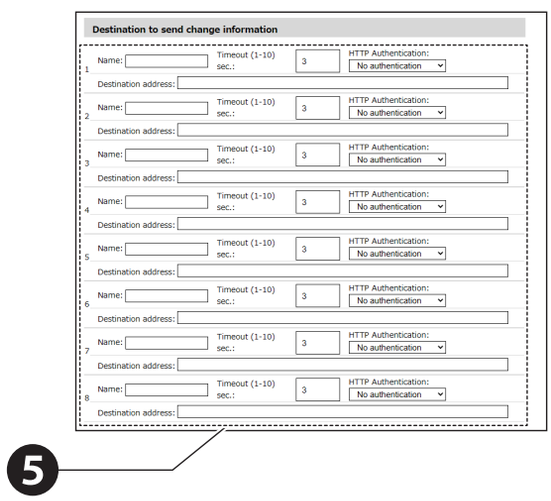


4. From the [Notification setting] tab, click [Destination to send change information] to enter the [Destination to send change information] screen.



5. In [Destination to send change information], register the name, destination address, and timeout where change information is sent.

- Name: Name of destination
- Destination address: Address to send
  Specify the protocol such as "http://" or "https://" in Destination address.
- Timeout: Timeout period for the change information
- HTTP Authentication: Authentication method for HTTP commands
- User Name: User name for authentication of HTTP commands
- Password: Password for authentication of HTTP commands



6. Click [Set] to apply the defined settings.

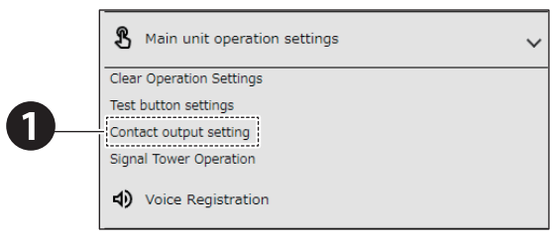
* If you send the HTTP command to either NHB or NHV series, HTTP Command Receiving Function must be configured. Refer to " ● Using HTTP Commands" (☞ page 176).

8.1.4. Setting Up Contact Output Settings NHV Series (D model)

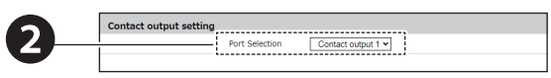
- Set to emit a contact output when an event occurs.
- For information on each item, refer to "9.6.3. Contact Output Setting" (☞ page 352).

8.1.4.1. Setting Up Contact Output

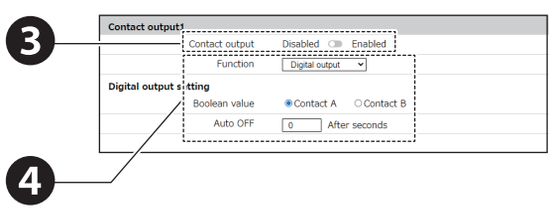
1. From the [Main unit operation settings] tab, click [Contact output setting] to enter the [Contact output setting] screen.



2. In the [Contact output setting] screen, from [Port Selection] select the [Contact output].

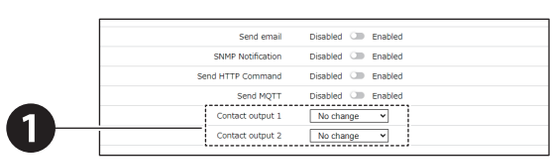


3. [Enabled] the selected contact output.
4. In accordance with the environment in which the product will be used, set the [Function], [Boolean Value], and [Auto OFF] settings.
5. Click [Set] to apply the defined settings.



8.1.4.2. Setting Up Triggers for Contact Output

1. Set contact output to [ON], [OFF], or [No change] in each operation setting screen such as Monitoring Settings and Main unit operation settings.
2. Click [Set] to apply the defined settings.



8.2. Using the Cloud

- Use this setting when you want to connect the product to the cloud.
- For information on each item, refer to "9.5.1. Azure Connection Settings" (☞ page 346) and "9.5.2. AWS Connection Settings" (☞ page 348).

8.2.1. Using Microsoft Azure

To use Microsoft Azure, set the Microsoft Azure connection settings.

8.2.1.1. Setting Up Azure

This product can connect to Azure IoT Central or Azure IoT Hub. To connect to one of these services, complete the procedure below.

● Connecting to Azure IoT Central

For setup instructions, refer to the documentation provided by Microsoft.

1. From the Microsoft Azure website, access Azure IoT Central.
2. In Azure IoT Central, create an application.
3. In the management screen of the application created, get the [Scope ID], [Device ID], and [SAS Token (Primary Key)].

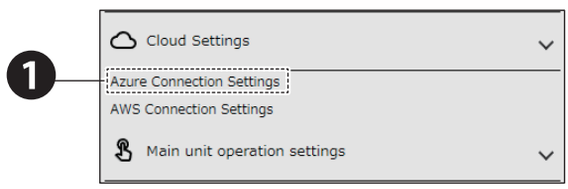
● Connecting to Azure IoT Hub

For setup instructions, refer to the documentation provided by Microsoft.

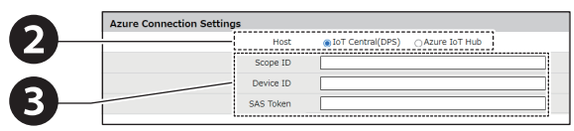
1. From the Microsoft Azure website, access IoT Hub.
2. In IoT Hub, create an IoT Hub for connecting this product.
3. In the management screen of the IoT Hub created, create a device for this product.
4. From the management screen of the created device, get the connection string (primary connection string).

8.2.1.2. Setting Up Microsoft Azure Connection Settings

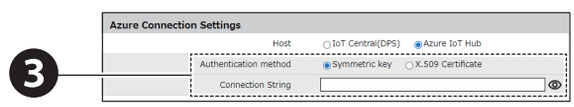
1 In the Cloud Settings, click [Azure Connection Settings] to display the [Azure Connection Settings] screen.

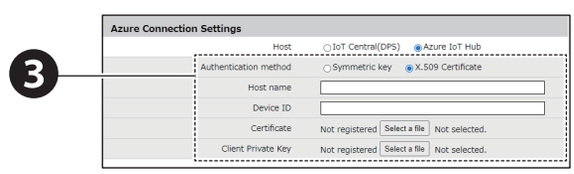


2 Select the [Host], either [IoT Central] or [Azure IoT Hub].



3 Match the [Scope ID], [Device ID], [SAS Token], [Authentication method], [Connection String], [Host name], [Certificate], and [Client Private Key] with the connection destination.





■ IoT Central

1	Enter the [Scope ID] and [Device ID].
2	If the Authentication method is [Symmetric key], in [SAS Token] enter the Primary key.
3	If the Authentication method is [X.509 Certificate], register the certificate. • Provide your own X.509 certificate.

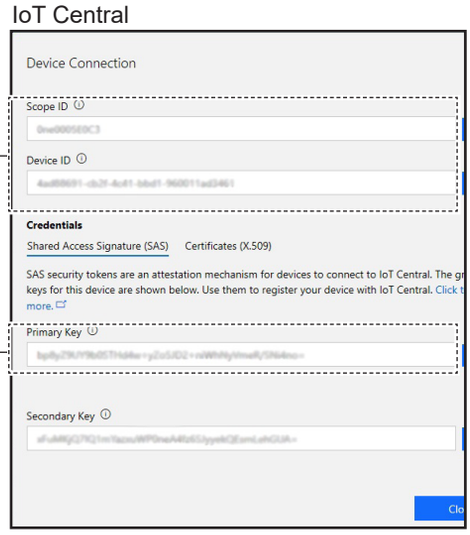
* Get the [Scope ID], [Device ID], and [SAS Token (Primary Key)] values from the device connection on the Microsoft Azure IoT Central site.

■ Azure IoT Hub

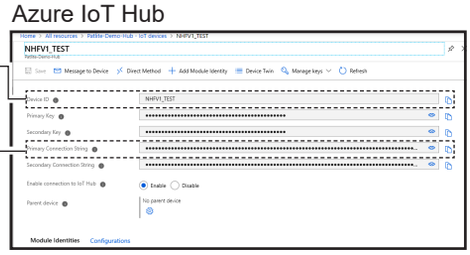
1	Enter the connection string.

* Get the Device ID, Connection String, and Host name value from the Microsoft Azure IoT Hub site, Device ID, Primary Connection String, and Host name.

IoT Central



Azure IoT Hub



4 Click [Set] to apply the defined settings.

8.2.1.3. Using Device Twin

- Using the Device Twin function, you can get the control and current status of this product. The information is shown in the table below.
- Do not control the buzzer output and audio channel playback at the same time.

Item		Field Name*				Setting (● : Yes –: No)			
		Azure IoT Hub		Azure IoT Central		NHB Series	NHV Series		
		Get Status	Control	Get Status	Control		(empty)	Ⓜ Model	Ⓓ Model
LED Unit (Red)		led_red			led_red_c	●	●	●	●
LED Unit (Amber)		led_yellow			led_yellow_c	●	●	●	●
LED Unit (Green)		led_green			led_green_c	●	●	●	●
LED Unit (Blue)		led_blue			led_blue_c	●	●	●	●
LED Unit (White)		led_white			led_white_c	●	●	●	●
Buzzer Output		buz_pattern			buz_pattern_c	●	●	●	●
Audio Channel		sound_pattern			sound_pattern_c	–	●	●	●
Digital Output 1		digital_output_1			digital_output_1_c	–	–	–	●
Digital Output 2		digital_output_2			digital_output_2_c	–	–	–	●
LED Unit (Multi color)	Colors	multi_led_color			multi_led_color_c	●	●	●	●
	Pattern	multi_led_pattern			multi_led_pattern_c	●	●	●	●

* For information on the content of each field name, refer to " ● Device Twin Field Name List" (☞ page 147).

Example of Control

- Turn on the LED unit (Red) → { "led_red":1}
- Turn off the LED unit (Red) and emit buzzer pattern 2 → {"led_red":0, "buz_pattern":2}

● Device Twin Field Name List

No.	Field Name*	Value		Description
1	led_red / led_red_c	0 / 1 / 2 / 3 / 4 / 5 / 9	[0]: Light off [1]: Light on [2]: Flashing 1 [3]: Flashing 2 [4]: Flashing 3 [5]: Flashing 4 [9]: No change	Red LED Unit
2	led_yellow / led_yellow_c			Amber LED Unit
3	led_green / led_green_c			Green LED Unit
4	led_blue / led_blue_c			Blue LED Unit
5	led_white / led_white_c			While LED Unit
6	multi_led_color / multi_led_color_c	1 / 2 / 3 / 4 / 5 / 6 / 7	[1]: Red [2]: Amber [3]: Green [4]: Blue [5]: White [6]: Purple [7]: Light blue	[Color] of Multi-color unit
7	multi_led_pattern / multi_led_pattern_c	0 / 1 / 2 / 3 / 4 / 5 / 9	[0]: Light off [1]: Light on [2]: Flashing 1 [3]: Flashing 2 [4]: Flashing 3 [5]: Flashing 4 [9]: No change	[Pattern] of Multi-color unit
8	buz_pattern / buz_pattern_c	0 / 1 / 2 / 3 / 4 / 5 / 9	[0]: Stop [1]: Pattern 1 [2]: Pattern 2 [3]: Pattern 3 [4]: Pattern 4 [5]: Pattern 5 [9]: No change	Buzzer Control
9	sound_pattern / sound_pattern_c	0 to 71 / 200 / 201	[0]: Stop Channel 1 to 71: Channel number [200], [201]:Text-to-speech playback by command.	Audio Channel
10	digital_output_1 / digital_output_1_c	0 / 1	[0]: OFF [1]: ON	Digital Output 1
11	digital_output_2 / digital_output_2_c			Digital Output 2

Point

● Will not operate when invalid values are specified.

8.2.1.4. Using Direct Method

⚠ CAUTION

- ⃠ Do not specify alert, sound, and speech at the same time.
- ⚠ If the same instruction is executed multiple times, the instruction will not execute.
- ⚠ Environment-dependent characters such as "©" and " ♠ " and some symbols such as "¥" and "~" may not be synthesized correctly.

- You can control this product using the Direct Method.
- When performing control, enter method name "Method_Control □ " (□ : represents any character). Control instructions are shown in the table below.
- For multiple instructions, separate them with a comma (,). Instructions are executed in the order of priority (smallest value first), not in the order in which they are entered.
- To repeat, specify either "sound" or "speech" and "repeat".

Instruction	Field Name*	Priority	Setting (● : Yes –: No)			
			NHB Series	NHV Series		
				(empty)	M Model	D Model
Control LED unit and buzzer output	alert	1	●	●	●	●
Control LED unit	led	2	●	●	●	●
Control Multi-color unit	color	2	●	●	●	●
Control digital output	alert_do	2	–	–	–	●
Playback specified audio channel	sound	2	–	●	●	●
Play any text	speech	2	–	●	●	●
Repeat playback the specified number of times (sound / speech)	repeat	3	–	●	●	●
Turn off all LED units, stop buzzer	clear	4	●	●	●	●

* For information on the content of each field name, refer to " ● Direct Method Field Name List" (☞ page 149).

Example of Control 1

- Control to turn on Red and Green LED units, to turn off Amber, Blue, and White LED units, and to emit buzzer pattern 2 → { "alert":"101002"}

Example of Control 2

- Endlessly play audio channel 1 → { "sound":1,"repeat":255}

Example of Control 3

- Play voice "Problem identified" twice → { "speech":[{ "text":"Problem identified","lang":"en","voice":"female","-speed":"0","tone":"0"}], "repeat":1}

● Direct Method Field Name List

No.	Field Name	Value	Description
1	alert	6 digits	Controls Signal Tower lights and buzzer. ・Specify the pattern, in order of R (Red) → Y (Amber) → G (Green) → B (Blue) → C (White) → Z (buzzer). ・[RYGBC]: Light off [0], Light on [1], Flashing 1 [2], Flashing 2 [3], Flashing 3 [4], Flashing 4 [5], No change [9] ・[Z]: Mute [0], Buzzer pattern 1 [1], Buzzer pattern 2 [2], Buzzer pattern 3 [3], Buzzer pattern 4 [4], Buzzer pattern 5 [5], No change [9]
2	led	5 digits	Controls Signal Tower lights. ・Specify the pattern, in order of R (Red) → Y (Amber) → G (Green) → B (Blue) → C (White). ・[RYGBC]: Light off [0], Light on [1], Flashing 1 [2], Flashing 2 [3], Flashing 3 [4], Flashing 4 [5], No change [9]
3	color	2 digits	Controls Multi-color unit. ・Specify the pattern, in order of col (color) → pat (pattern). ・[col]: Red [1], Amber [2], Green [3], Blue [4], White [5], Purple [6], Light blue [7] ・[pat]: Light off [0], Light on [1], Flashing pattern 1 [2], Flashing pattern 2 [3], Flashing pattern 3 [4], Flashing pattern 4 [5], No change [9]
4	alert_do	2 digits	Controls digital output. Specify the pattern in order of digital output 1 → digital output 2. ・OFF [0] ・ON [1] ・No operation [9]
5	sound	1 to 71	Plays the specified audio channel.
6	speech	–	Plays back any text. By specifying additional parameters, you can adjust the audio that is played. ・text: Text to play, 1-400 characters ・lang: Japanese [jp] or English [en] or Chinese[cn]*1 ・voice: "male" or "female" ・speed: Voice speed, -5 to 5 ・tone: Voice pitch, -5 to 5 ・notify: Notification Sound (Before), 1 to 10 ・notify_tail: Notification Sound (After), 1 to 10 ・lineout: Line-out output, OFF [0] or ON [1] Will playback up to 400 characters when specified more than 400 characters.
7	repeat*2	0 to 255	Repeats playback of the audio channel specified in the sound command, the defined number of times.
8	clear	1	Turns off all the Signal Tower lights and stops playing the channel.

*1 If you select "cn" on a product that does not have the Voice Synthesizer of Chinese, the same behavior as if you selected "jp"(Japanese) will occur. refer to ["9.7.1. Voice Registration" (☞ page 356)] for how to check the languages supported by the Voice Synthesizer.

*2 If the value is set to 255, playback is endless.

Point

● Will not operate when invalid values are specified.

● When lang, voice, speed, tone are not specified or the value is invalid, it works with the following values.

Parameter	Specified value
lang	jp
voice	female
speed	0
tone	0

8.2.1.5. Using Device-to-cloud message

Use the device-to-cloud Message to notify changes in the state of this product.

No.	Field Name*	Description	Setting (● : Yes –: No)			
			NHB Series	NHV Series		
				(empty)	Ⓜ Model	Ⓓ Model
1	clear_button	Notification that clear button was pressed.	●	●	●	●
2	clear	Notification that clear operation was executed.	●	●	●	●
3	input_state_1	Notification that digital input 1 changed.	–	–	–	●
4	input_state_2	Notification that digital input 2 changed.	–	–	–	●
5	input_state_3	Notification that digital input 3 changed.	–	–	–	●
6	input_state_4	Notification that digital input 4 changed.	–	–	–	●
7	red_state	Notification that the Red LED changed.	●	●	●	●
8	yellow_state	Notification that the Amber LED changed.	●	●	●	●
9	green_state	Notification that the Green LED changed.	●	●	●	●
10	blue_state	Notification that the Blue LED changed.	●	●	●	●
11	white_state	Notification that the White LED changed.	●	●	●	●
12	multi_color _ state	Notification that the multi-color has changed.	●	●	●	●
13	multi_pattern_ state	Notification that the multi-color pattern changed.	●	●	●	●
14	buzzer_state	Notification that the buzzer changed.	●	●	●	●
15	sound_state	Notification that the audio channel changed.	–	●	●	●
16	output_state_1	Notification that digital output 1 changed.	–	–	–	●
17	output_state_2	Notification that digital output 2 changed.	–	–	–	●
18	alarm_Added	Notification that error is detected in ping monitoring.	●	●	●	●
19	alarm_ Removed	Notification that recovery is detected in ping monitoring.	●	●	●	●
20	alarmgroup_ Added	Notification that error is detected in ping group monitoring.	●	●	●	●
21	alarmgroup_ Removed	Notification that recovery is detected in ping group monitoring.	●	●	●	●
22	trapreceive	Notification that TRAP is received.	●	●	●	●
23	snmpget_ Added	Notification that condition is matched in SNMP device monitoring.	●	●	●	●
24	snmpget_ Removed	Notification that condition is released in SNMP device monitoring.	●	●	●	●
25	snmpget_ Change	Notification that condition is changed in SNMP device monitoring.	●	●	●	●

No.	Field Name*	Description	Setting (● : Yes –: No)			
			NHB Series	NHV Series		
				(empty)	Ⓜ Model	Ⓓ Model
26	input_cond_ Change	Notification that condition is matched in digital input condition.	–	–	–	●
27	test	Notification that test button was pressed.	●	●	●	●
28	mail_Received	Notification that e-mail was received.	–	●	●	●
29	plc_Matched	Notification that the PLC information read function is activated.	●	●	●	●
30	plc_RecvErr	Notification that an error response is received by the PLC information read function.	●	●	●	●

* For information on the content of each field name, refer to " ● Device-to-cloud message Field Name List" (☞ page 152).

● Device-to-cloud message Field Name List

No.	Field Name*	Value	Description
1	clear_button	on	Notification that clear button was pressed.
2	clear	1	Notification that clear operation was executed.
3	input_state_1	on	Notification that digital input 1 turned ON.
		off	Notification that digital input 1 turned OFF.
4	input_state_2	on	Notification that digital input 2 turned ON.
		off	Notification that digital input 2 turned OFF.
5	input_state_3	on	Notification that digital input 3 turned ON.
		off	Notification that digital input 3 turned OFF.
6	input_state_4	on	Notification that digital input 4 turned ON.
		off	Notification that digital input 4 turned OFF.
7	red_state	0	Notification that the Red LED unit turned off.
		1	Notification that the Red LED unit turned on.
		2	Notification that the Red LED unit used flashing pattern 1.
		3	Notification that the Red LED unit used flashing pattern 2.
		4	Notification that the Red LED unit used flashing pattern 3.
		5	Notification that the Red LED unit used flashing pattern 4.
8	yellow_state	0, 1, 2, 3, 4, 5	Notification that the Amber LED unit changed. The value is the same as No.7 red_state.
9	green_state	0, 1, 2, 3, 4, 5	Notification that the Green LED unit changed. The value is the same as No.7 red_state.
10	blue_state	0, 1, 2, 3, 4, 5	Notification that the Blue LED unit changed. The value is the same as No.7 red_state.
11	white_state	0, 1, 2, 3, 4, 5	Notification that the White LED unit changed. The value is the same as No.7 red_state.
12	multi_color _ state	0	Notification when the multi-color light turned off.
		1	Notification when Red on the multi-color light is in operation.
		2	Notification when Amber on the multi-color light is in operation.
		3	Notification when Green on the multi-color light is in operation.
		4	Notification when Blue on the multi-color light is in operation.
		5	Notification when White on the multi-color light is in operation.
		6	Notification when Purple on the multi-color light is in operation.
		7	Notification when Light blue on the multi-color light is in operation.

No.	Field Name*	Value	Description
13	multi_pattern_ state	0	Notification when the multi-color light turned off.
		1	Notification when the multi-color light turned on.
		2	Notification when flashing pattern 1 on the multi-color light is in operation.
		3	Notification when flashing pattern 2 on the multi-color light is in operation.
		4	Notification when flashing pattern 3 on the multi-color light is in operation.
		5	Notification when flashing pattern 4 on the multi-color light is in operation.
14	buzzer_state	0	Notification that the buzzer stopped.
		1	Notification that buzzer used pattern 1.
		2	Notification that buzzer used pattern 2.
		3	Notification that buzzer used pattern 3.
		4	Notification that buzzer used pattern 4.
		5	Notification that the Red LED unit used flashing pattern 5.
15	sound_state	0 to 71 and 200, 201	Notification that the audio channel changed. [200], [201]: Text-to-speech playback by command.
16	output_ state_1	on	Notification that digital output 1 turned ON.
		off	Notification that digital output 1 turned OFF.
17	output_ state_2	on	Notification that digital output 2 turned ON.
		off	Notification that digital output 2 turned OFF.
18	alarm_Added	1 to 24	Notification that error is detected in ping monitoring.
19	alarm_ Removed	1 to 24	Notification that recovery is detected in ping monitoring.
20	alarmgroup_ Added	1 to 3	Notification that error is detected in ping group monitoring.
21	alarmgroup_ Removed	1 to 3	Notification that recovery is detected in ping group monitoring.
22	trapreceive	1 to 16	Notification that TRAP is received.
23	snmpget_ Added	1 to 20	Notification that condition is matched in SNMP device monitoring.
24	snmpget_ Removed	1 to 20	Notification that condition is released in SNMP device monitoring.
25	snmpget_ Change	1 to 5	Notification that condition is changed in SNMP device monitoring.
26	input_cond_ Change	1 to 4	Notification that condition is matched in digital input condition.
27	test	1	Notification that test button was pressed.
28	mail_Received	1 to 20	Notification that e-mail was received.
29	plc_Matched	1 to 16	Notification that the PLC information read function is activated.
30	plc_RecvErr	1 to 16	Notification that an error response is received by the PLC information read function.

8.2.1.6. Using Cloud-to-device message

- Using Cloud-to-device Message, you can control the product. Control instructions are shown in the table below.
- To repeat, specify both "sound" and "repeat" or both "text" and "repeat". When doing so, separate the commands with a comma (,).

Instruction	Field Name*	Setting (● : Yes –: No)			
		NHB Series	NHV Series		
			(empty)	Ⓜ Model	Ⓓ Model
Control LED unit and buzzer output	alert	●	●	●	●
Control LED unit	led	●	●	●	●
Control Multi-color unit	color	●	●	●	●
Control digital output	alert_do	–	–	–	●
Turn off all LED units, stop buzzer	clear	●	●	●	●
Playback specified audio channel	sound	–	●	●	●
Set text playing in the voice synthesizer	text	–	●	●	●
Specify language playing in voice synthesizer	lang	–	●	●	●
Specify voice playing in voice synthesizer	voice	–	●	●	●
Specify speed playing in voice synthesizer	speed	–	●	●	●
Specify tone playing in voice synthesizer	tone	–	●	●	●
Repeat playback the specified number of times (Audio Channel)	repeat	–	●	●	●
Specify a notification sound to play before the voice synthesizer	notify	–	●	●	●
Specify a notification sound to play after the voice synthesizer	notify_tail	–	●	●	●
Control line-out output	lineout	–	●	●	●

* For information on the content of each field name, refer to " ● Cloud-to-device message Field Name List" (☞ page 155).

Example of Control 1

- Control to turn Red LED unit on, to set Amber LED unit with flashing pattern 1, no change for Green, Blue, and White LED units, and to emit buzzer pattern 3 → alert=129993

Example of Control 2

- Play audio channel 2 twice → sound=2,repeat=1

Example of Control 3

- Play "Problem identified" in voice synthesizer → text=Problem identified,lang=en,voice=female,speed=0,tone=0

● Cloud-to-device message Field Name List

No.	Field Name	Value	Description
1	alert	6 digits	Controls Signal Tower lights and buzzer. ・Specify the pattern, in order of R (Red) → Y (Amber) → G (Green) → B (Blue) → C (White) → Z (buzzer). ・[RYGBC]: Light off [0], Light on [1], Flashing 1 [2], Flashing 2 [3], Flashing 3 [4], Flashing 4 [5], No change [9] ・[Z]: Mute [0], Buzzer pattern 1 [1], Buzzer pattern 2 [2], Buzzer pattern 3 [3], Buzzer pattern 4 [4], Buzzer pattern 5 [5], No change [9]
2	led	5 digits	Controls Signal Tower lights. ・Specify the pattern, in order of R (Red) → Y (Amber) → G (Green) → B (Blue) → C (White). ・[RYGBC]: Light off [0], Light on [1], Flashing 1 [2], Flashing 2 [3], Flashing 3 [4], Flashing 4 [5], No change [9]
3	color	2 digits	Controls Multi-color unit. ・Specify the pattern, in order of col (color) → pat (pattern). ・[col]: Red [1], Amber [2], Green [3], Blue [4], White [5], Purple [6], Light blue [7] ・[pat]: Light off [0], Light on [1], Flashing pattern 1 [2], Flashing pattern 2 [3], Flashing pattern 3 [4], Flashing pattern 4 [5], No change [9]
4	alert_do	2 digits	Controls digital output. Specify the pattern in order of digital output 1 → digital output 2. ・OFF [0], ON [1], No operation [9]
5	clear	1	Turns off all the Signal Tower lights and stops playing the channel.
6	sound	1 to 71	Plays the specified audio channel.
7	text	-	Set text playing in the voice synthesizer. Text can be set 400 characters. Will playback up to 400 characters when specified more than 400 characters.
8	lang	jp, en, cn*1	Specify language playing in voice synthesizer. This field is used as an additional field for the text field.
9	voice	male, female	Specify voice playing in voice synthesizer. This field is used as an additional field for the text field.
10	speed	-5 to 5	Specify speed playing in voice synthesizer. This field is used as an additional field for the text field.
11	tone	-5 to 5	Specify tone playing in voice synthesizer. This field is used as an additional field for the text field.
12	repeat*2	0 to 255	Repeats playback of the audio channel specified in the sound command, the defined number of times.
13	notify	1 to 10	Specify a notification sound to play before the voice synthesizer. This field is used as an additional field for the text field.
14	notify_tail	1 to 10	Specify a notification sound to play after the voice synthesizer. This field is used as an additional field for the text field.
15	lineout	0 , 1	Control line-out output. This field is used as an additional field for the text field.

*1 If you select "cn" on a product that does not have the Voice Synthesizer of Chinese, the same behavior as if you selected "jp"(Japanese) will occur. refer to ["9.7.1. Voice Registration" (☞ page 356)] for how to check the languages supported by the Voice Synthesizer.

*2 If the value is set to 255, playback is endless.

Point

- Will not operate when invalid values are specified.
- Environment-dependent characters such as "©" and " ♠ " and some symbols such as "¥" and "~" may not be synthesized correctly.

Point

- Will not operate when invalid values are specified.
- Environment-dependent characters such as "©" and " ♠ " and some symbols such as "¥" and "~" may not be synthesized correctly.
- When lang, voice, speed, tone are not specified or the value is invalid, it works with the following values.

Parameter	Specified value
lang	jp
voice	female
speed	0
tone	0

8.2.2. Using AWS

To use AWS, AWS settings and AWS connection settings must be configured.

8.2.2.1. Setting Up AWS

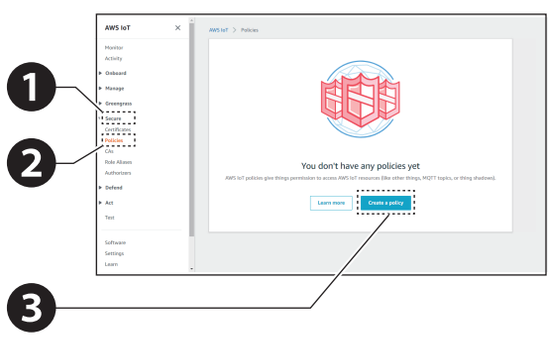
⚠ CAUTION

- Refer to the following document and set up an AWS account.
  https://docs.aws.amazon.com/iot/latest/developerguide/setting-up.html
- ⚠ This instruction manual assumes that the following are configured.
  - Sign up for an AWS account
  - Create a user and grant access permissions
  - Open the AWS IoT console

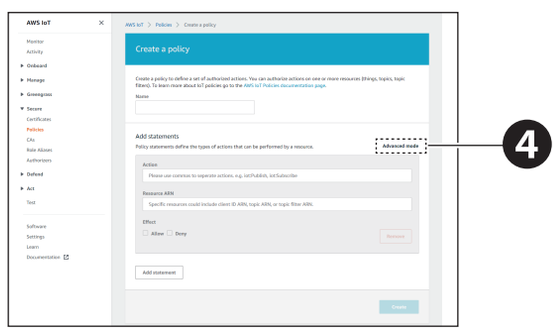
● Create a Policy

Create a policy for NHB/NHV to connect to AWS IoT Core.

1. In the AWS IoT console, from the navigation panel click [Secure].
2. Click [Policies].
3. Click [Create a policy].



4. Click [Advanced mode].

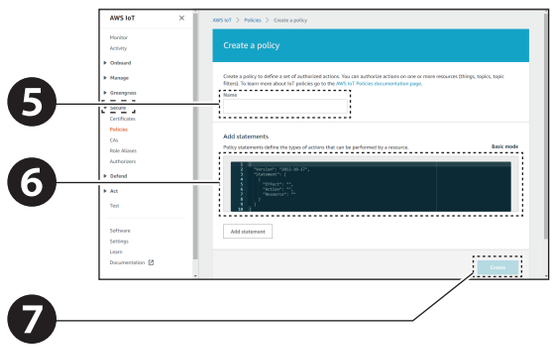


5 Enter a name.

6 Enter the policy.

Example Policy Entry

```
{
"Version": "2012-10-17",
"Statement": [
{
"Effect": "Allow",
"Action": "iot:*",
"Resource": "*"
}
]
}
```



- All devices in the fleet must have credentials that allow them to authorize only intended actions. This includes AWS IoT MQTT actions such as publishing messages, subscribing to topics, and so on. As permission policies vary depending on your environment, create a policy that best fits your business and security requirements.

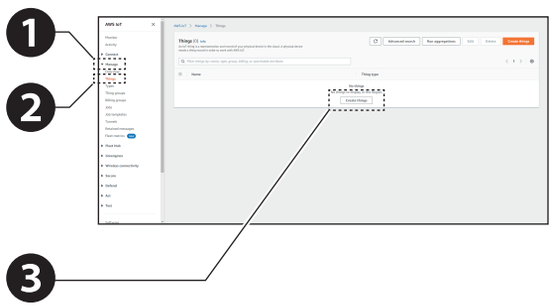
  - https://docs.aws.amazon.com/iot/latest/developerguide/example-iot-policies.html
  - https://docs.aws.amazon.com/iot/latest/developerguide/security-bestpractices.html

7 Click [Create a policy].

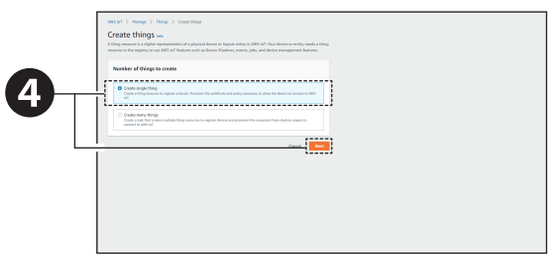
● Create Things and Certificates

When creating a thing in the AWS IoT console, follow the steps below to save the [Device certificate], [Private key], and [Root CA certificate].

1. In the AWS IoT console, from the navigation panel click [Manage].
2. Click [Things].
3. Click [Create things].

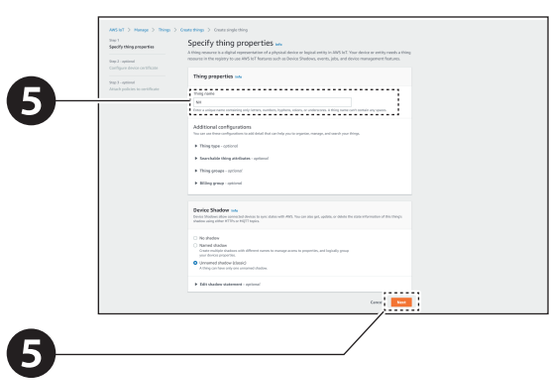


4. From the [Create things] screen, click [Create single thing] - [Next].

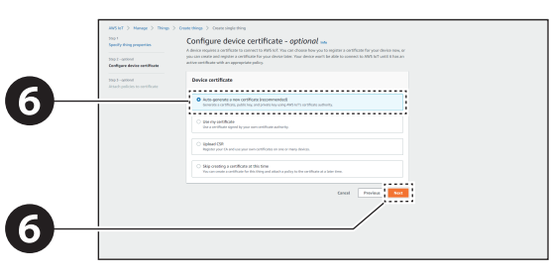


5. In the [Specify thing properties] screen, enter the thing's name and click [Next].

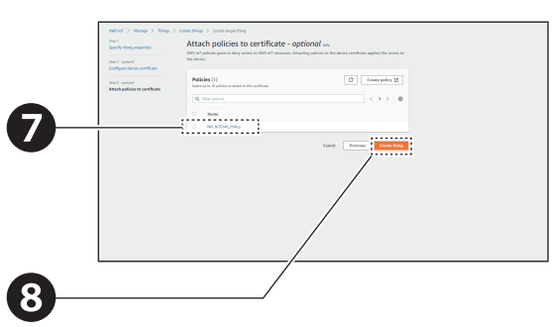
* The thing name entered here is used as the client ID. The client ID is used by the Device Shadow function.
"9.5.2. AWS Connection Settings" (☞ page 348)
* When using Device Shadow, select the [Unnamed shadow].



6. In the [Configure device certificate] screen, select [Auto-generate a new certificate] and click [Next].



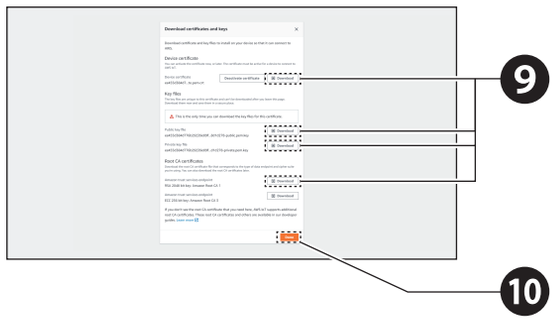
7. Select the policy to attach to the certificate.
8. Click [Create thing].



9 For each item click [Download] to download a [Device certificate], [Public key], [Private key], and [Root CA certificate].

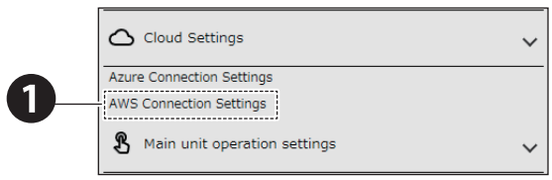
- For [Root CA certificate], download [RSA 2048-bit Key: Amazon Root CA 1].
- Save [Public key] if required.

10 Click [Done].



8.2.2.2. Setting Up the AWS Connection

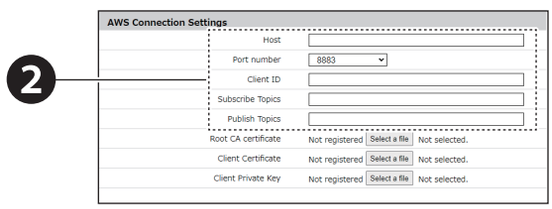
1 From [Cloud Settings], click [AWS Connection Settings] to display the [AWS Connection Settings] screen.

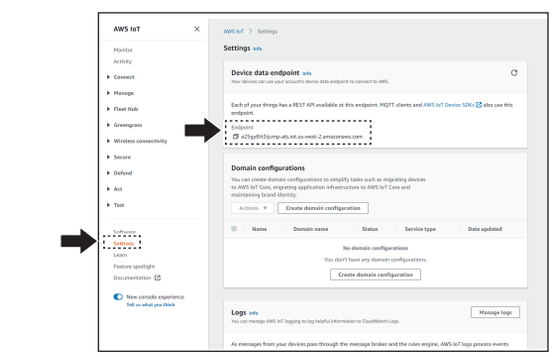


2 Enter the [Host], [Port number], [Client ID], [Subscribe Topics], and [Publish Topics].

* Enter values to each item as follows.

Item	Value to enter
Host	Device data endpoint value obtained from the AWS IoT Console
Client ID	" ● Create Things and Certificates" (☞ page 159) for instructions on creating thing name
Subscribe Topics	Topic subscribed by this product. For example, "NHV/SUBSCRIBE"
Publish Topics	Topic published by this product. For example, "NHV/PUBLISH"



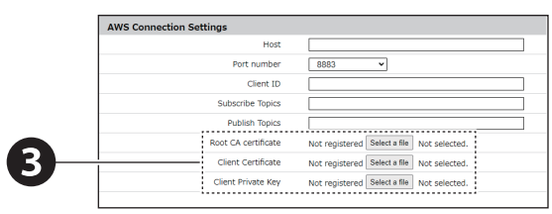


* Access the AWS IoT console. In the console.aws.amazon.com/iot navigation panel, click [Settings]. In the [Host] field, enter the value of the [Endpoint] shown at the bottom of [Device data endpoint] area.

3 Click [Select a file] and select the certificate to register.

* Certificate that was downloaded in "8.2.2.1. Setting Up AWS" (☞ page 157). For each of the following items, select and upload a certificate.

Item	Value to enter
Root CA certificate	Root CA certificate
Client Certificate	Device certificate
Client Private Key	Private Key



* If the certificate has been uploaded, "Registration" is displayed in the field.

4 Click [Set] to apply the defined settings.

8.2.2.3. Checking Connection with AWS IoT Core

Use the test function to verify NHV is connected to the AWS IoT Core. Follow the steps below to verify control on the LED unit.

1. In the AWS IoT console's navigation panel, click [Test] - [MQTT test client].

2. The [MQTT test client] screen is displayed.

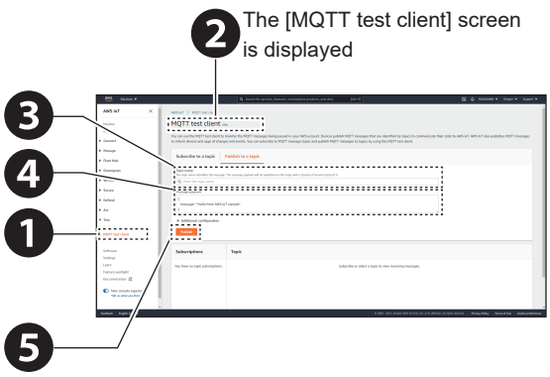
3. Enter the subscribe topic set in "8.2.2.2. Setting Up the AWS Connection" (☞ page 161).

4. Enter control command.

Example Control Command Input

```
{
"alert": "123094"
}
```

5. Click [Publish] to publish the message.

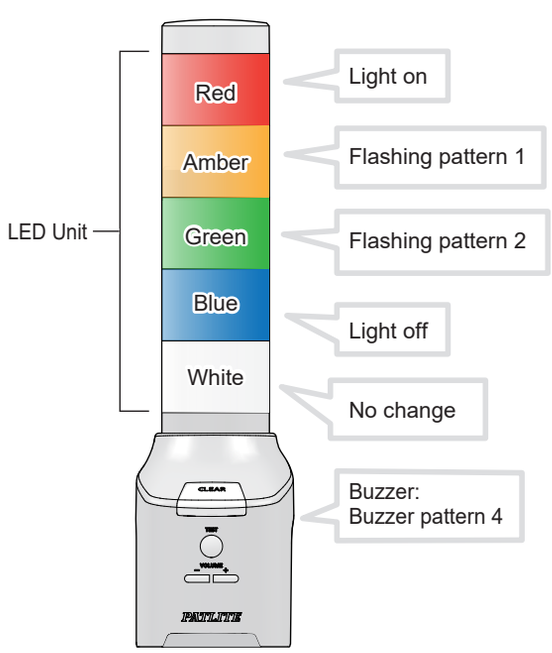


6. Check the status of the NHB/NHV.

If the above example control command is issued and the NHB/NHV status changes as shown below, the connection is successfully established.

NHB/NHV Status

- Red LED unit: Light on
- Amber LED unit: Flashing pattern 1
- Green LED unit: Flashing pattern 2
- Blue LED unit: Light off
- White LED unit: No change
- Buzzer: Buzzer pattern 4



8.2.2.4. Using MQTT Subscribe Function

- You can control this product by issuing messages to topics subscribed (Subscribe topic) by the product. Information you can control is shown in the table below.
- For multiple instructions, separate them with a comma (,). Instructions are executed in the order of priority (smallest value first), not in the order in which they are entered.

Input Example **Turn Red LED unit on and play audio channel 30 one time**

```
{
  "led_red": "1",
  "sound_pattern": "30",
  "repeat": "1"
}
```

Item	Field Name*	Priority	Setting (● : Yes –: No)			
			NHB Series	NHV Series		
				(empty)	M Model	D Model
LED Unit and Buzzer	alert	1	●	●	●	●
LED Unit	led	2	●	●	●	●
LED Unit (Red)	led_red	2	●	●	●	●
LED Unit (Amber)	led_yellow	2	●	●	●	●
LED Unit (Green)	led_green	2	●	●	●	●
LED Unit (Blue)	led_blue	2	●	●	●	●
LED Unit (White)	led_white	2	●	●	●	●
Multi-color unit	color	2	●	●	●	●
Buzzer Output	buz_pattern	2	●	●	●	●
Audio Channel Playback	sound_pattern	2	–	●	●	●
Digital Output 1	digital_output1	2	–	–	–	●
Digital Output 2	digital_output2	2	–	–	–	●
Play any text	speech	2	–	●	●	●
Repeat	repeat	3	–	●	●	●
Clear	clear	4	●	●	●	●

* For information on the content of each field, refer to " ● MQTT Subscribe Function - Field Name List" (☞ page 164).

Point

- To repeat, specify either the audio channel playback or play any text and specify repeat.
- Do not control the buzzer, speech, and audio channel playback at the same time.
- If the same instruction is executed multiple times, the instruction will not execute.
- Set the subscribe topic for this product, with "9.5.2. AWS Connection Settings" (☞ page 348) as a reference.
- When Subscribe topics are not set up, this function does not operate.

● MQTT Subscribe Function - Field Name List

No.	Field Name	Data Type	Value	Description
1	alert	string	Specify pattern in order R (Red) → Y (Amber) → G (Green) → B (Blue) → C (White) → Z (buzzer). 【RYGBC】 [0]: Light off, [1]: Light on, [2]: Flashing 1, [3]: Flashing 2, [4]: Flashing 3, [5]: Flashing 4, [9]: No change 【Z】 [0]: Mute, [1]: Buzzer pattern 1, [2]: Buzzer pattern 2, [3]: Buzzer pattern 3, [4]: Buzzer pattern 4, [5]: Buzzer pattern 5, [9]: No change	Controls Signal Tower lights and buzzer with a 6-digit string. Example, "alert": "123094" Red LED unit on, Amber LED unit flashing pattern 1, Green LED unit flashing pattern 2, Blue LED unit off, White LED unit no change, Buzzer pattern 4
2	led		Specify the pattern, in order of R (Red) → Y (Amber) → G (Green) → B (Blue) → C (White). 【RYGBC】 [0]: Light off, [1]: Light on, [2]: Flashing 1, [3]: Flashing 2, [4]: Flashing 3, [5]: Flashing 4, [9]: No change	Signal Tower is controlled using a 5 character string. Example, "led": "10013" Red LED unit on, Amber LED unit off, Green LED unit off, Blue LED unit on, White LED unit flashing pattern 2
3	led_red		[0]: Light off, [1]: Light on, [2]: Flashing 1, [3]: Flashing 2, [4]: Flashing 3, [5]: Flashing 4, [9]: No change	Controls the Red LED unit.
4	led_yellow			Controls the Amber LED unit.
5	led_green			Controls the Green LED unit.
6	led_blue			Controls the Blue LED unit.
7	led_white			Controls the White LED unit.
8	color		2 digits	Controls Multi-color unit. • Control the pattern, in order of col (color) → pat (pattern). • [col]: Red [1], Amber [2], Green [3], Blue [4], White [5], Purple [6], Light blue [7] • [pat]: Light off [0], Light on [1], Flashing pattern 1 [2], Flashing pattern 2 [3], Flashing pattern 3 [4], Flashing pattern 4 [5], No change [9]
9	buz_pattern		[0]: Stop, [1]: Pattern 1, [2]: Pattern 2, [3]: Pattern 3, [4]: Pattern 4, [5]: Pattern 5, [9]: No change	Controls the buzzer.
10	sound_pattern		[0]: Stop [1] to [71]: Channel number	Plays the specified audio channel.
11	repeat*1		[0] to [255]: Number of times to repeat	Specifies the number of times to repeat the audio.
12	digital_output1		[0]: OFF [1]: ON [9]: No change	Controls digital output 1.
13	digital_output2			Controls digital output 2.
14	clear		[1]: Execute clear	Turns off all the Signal Tower lights and stops playing the channel.

No.	Field Name	Data Type	Value	Description
15	speech	array / string	–	Plays back any text. By specifying additional parameters, you can adjust the audio that is played. text: Text to play, 0 to 400 characters lang: Japanese [jp], English [en], Chinese[cn]*2 voice: "male" or "female" speed: Voice speed, -5 to 5 tone: Voice pitch, -5 to 5 notify: Notification Sound (Before), 1 to 10 notify_tail: Notification Sound (After), 1 to 10 lineout: line-out output, OFF[0] or ON[1] Will playback up to 400 characters when specified more than 400 characters.

*1 If the value is set to "255", playback is endless.

*2 If you select "cn" on a product that does not have the Voice Synthesizer of Chinese, the same behavior as if you selected "jp"(Japanese) will occur. refer to ["9.7.1. Voice Registration" (☞ page 356)] for how to check the languages supported by the Voice Synthesizer.

Point

- Will not operate when invalid values are specified.
- Do not control the buzzer, audio channel playback, and text playback (speech) at the same time.
- Environment-dependent characters such as "©" and " ♠ " and some symbols such as "¥" and "~" may not be synthesized correctly.
- When lang, voice, speed, tone are not specified or the value is invalid, it works with the following values.

Parameter	Specified value
lang	jp
voice	female
speed	-1
tone	-1

Input Example **When the Red LED unit is on and the voice synthesizer plays "Problem identified"**

```
{
  "led_red":"1",
  "speech":[
    {
      "text":"Problem identified",
      "lang":"en",
      "voice":"female",
      "speed":"0",
      "tone":"0"
    }
  ]
}
```

8.2.2.5. Using MQTT Publish Function

The change information for this product is sent to the defined topic (Publish topic).

The change information you can send is as shown in the table below.

Item	Field Name*	Setting (● : Yes –: No)			
		NHB Series	NHV Series		
			(empty)	Ⓜ Model	Ⓓ Model
LED Unit (Red)	led_red	●	●	●	●
LED Unit (Amber)	led_yellow	●	●	●	●
LED Unit (Green)	led_green	●	●	●	●
LED Unit (Blue)	led_blue	●	●	●	●
LED Unit (White)	led_white	●	●	●	●
Multi-color unit	multi_led_color	●	●	●	●
	multi_led_pattern	●	●	●	●
Buzzer Output	buz_pattern	●	●	●	●
Audio Channel Playback	sound_pattern	–	●	●	●
Digital Output	digital_output1 - 2	–	–	–	●
Pressing Clear Button / Executing Clear Operation	clear	●	●	●	●
Digital Input	digital_input1 - 4	–	–	–	●
Ping Monitoring Error	alarm_Added	●	●	●	●
Ping Monitoring Recovery	alarm_Removed	●	●	●	●
Ping Group Monitoring Error	alarmgroup_Added	●	●	●	●
Ping Group Monitoring Recovery	alarmgroup_Removed	●	●	●	●
TRAP Receiving	trapreceive	●	●	●	●
SNMP Device Monitoring - Match Detection	snmpget_Added	●	●	●	●
SNMP Device Monitoring - Release Detection	snmpget_Removed	●	●	●	●
SNMP Device Monitoring - Change Detection	snmpget_Change	●	●	●	●
Digital Input Condition	input_cond_Change	–	–	–	●
Pressing Test Button	test	●	●	●	●
E-mail Receiving	mail_Received	–	●	●	●

Item	Field Name*	Setting (● : Yes –: No)			
		NHB Series	NHV Series		
			(empty)	M Model	D Model
Client ID	client_id	●	●	●	●
Publish Topic	topic_name	●	●	●	●
PLC information read function Condition Matched	plc_Matched	●	●	●	●
PLC information read function Error Response	plc_RecvErr	●	●	●	●

* For information on the content of each field, refer to " ● MQTT Publish Function - Field Name List" (☞ page 168).

Point

- Set the publish topic for this product, with "9.5.2. AWS Connection Settings" (☞ page 348) as a reference.
- When Publish topics are not set up, this function does not operate.
- Sends the current status of changed items only.

● MQTT Publish Function - Field Name List

No.	Field Name	Data Type	Value	Description
1	client_id*	string	Setup Value	• Notification of client ID value. • Notification of the value as set in the Amazon Web Services (AWS) Connection Settings Screen.
2	topic_name*		Setup Value	• Notification of Publish topic value. • Notification of the value as set in the Amazon Web Services (AWS) Connection Settings Screen.
3	led_red		[0]: Light off [1]: Light on [2]: Flashing 1 [3]: Flashing 2 [4]: Flashing 3 [5]: Flashing 4	Notification of the Red LED unit status.
4	led_yellow			Notification of the Amber LED unit status.
5	led_green			Notification of the Green LED unit status.
6	led_blue			Notification of the Blue LED unit status.
7	led_white			Notification of the White LED unit status.
8	multi_led_ color		[1]: Red, [2]: Amber, [3]: Green, [4]: Blue, [5]: White, [6]: Purple, [7]: Light blue	Notification of the Multi-color unit's color state.
9	multi_led_ pattern		[0]: Light off, [1]: Light on, [2]: Flashing pattern 1, [3]: Flashing pattern 2, [4]: Flashing pattern 3, [5]: Flashing pattern 4	Notification of the Multi-color unit's pattern state.
10	buz_pattern		[0]: Stop, [1]: Pattern 1, [2]: Pattern 2, [3]: Pattern 3 [4]: Pattern 4, [5]: Pattern 5	Notification of the buzzer status.
11	sound_pattern		[0]: Stop [1] to [71]: Channel number [200, [201]: Text-to-speech playback by command.	Notification of the audio channel status.
12	digital_output1		[0]: OFF [1]: ON	Notification of the digital output 1 status.
13	digital_output2			Notification of the digital output 2 status.
14	digital_input1			Notification of the digital input status.
15	digital_input2			
16	digital_input3			
17	digital_input4			
18	clear		[1]: Press clear button / Execute clear operation	Notification that clear button was pressed or clear operation was executed.
19	alarm_Added		[1] to [24]: Ping monitoring setting number	Notification that error is detected in ping monitoring.
20	alarm_ Removed			Notification that recovery is detected in ping monitoring.

No.	Field Name	Data Type	Value	Description
21	alarmgroup_ Added	string	[1] to [3]: Ping group monitoring setting number	Notification that error is detected in ping group monitoring.
22	alarmgroup_ Removed			Notification that recovery is detected in ping group monitoring.
23	trapreceive		[1] to [16]: TRAP receiving setting number	Notification that TRAP is received.
24	snmpget_ Added		[1] to [20]: Match detection setting number of SNMP device monitoring	Notification that condition is matched in SNMP device monitoring.
25	snmpget_ Removed		[1] to [20]: Match detection setting number of SNMP device monitoring	Notification that condition is released in SNMP device monitoring.
26	snmpget_ Change		[1] to [5]: Change detection setting number of SNMP device monitoring	Notification that condition is changed in SNMP device monitoring.
27	input_cond_ Change		[1] to [20]: Match detection setting number of Digital Input Condition	Notification that condition is matched in digital input condition.
28	test		[1]: Press test button	Notification that test button was pressed.
29	mail_Received		[1] to [20]: Mail detection setting number	Notification that e-mail was received.
30	plc_Matched		[1] to [16]: PLC information read function condition matching number	Condition matched is notified by the PLC information read function.
31	plc_RecvErr		[1] to [16]: PLC information read function error response number	The reception of an error response is notified by the PLC information read function.

* "client_id" and "topic_name" are always included at the start of the message.

Input Example **When turn on Amber LED unit, emit buzzer pattern 1**

```
{
"client_id": "NH",
"topic_name": "NH/Publish",
"led_yellow": "1",
"buzzer_pattern": "1"
}
```

8.2.2.6. Using Device Shadow Function

Using the Device Shadow function, you can get the control and current status information for this product.

The control and status information you can get is shown in the table below.

Item	Field Name*	Setting (● : Yes –: No)			
		NHB Series	NHV Series		
			(empty)	M Model	D Model
LED Unit (Red)	led_red	●	●	●	●
LED Unit (Amber)	led_yellow	●	●	●	●
LED Unit (Green)	led_green	●	●	●	●
LED Unit (Blue)	led_blue	●	●	●	●
LED Unit (White)	led_white	●	●	●	●
Multi-color unit	multi_led_color	●	●	●	●
	multi_led_pattern	●	●	●	●
Buzzer Output	buz_pattern	●	●	●	●
Audio Channel Playback	sound_pattern	–	●	●	●
Digital Output	digital_output1 - 2	–	–	–	●

* For information on the content of each field, refer to " ● Device Shadow Function - Field Name List" (☞ page 171).

Point

- Do not control the buzzer, audio channel playback, and voice synthesizer at the same time.
- If the same instruction is executed multiple times, the instruction will not execute.
- When client ID is not set up, this function does not operate.

● Device Shadow Function - Field Name List

No.	Field Name	Data Type	Value	Description
1	led_red	integer	[0]: Light off [1]: Light on [2]: Flashing 1 [3]: Flashing 2 [4]: Flashing 3 [5]: Flashing 4 [9]: No change	Red LED Unit
2	led_yellow			Amber LED Unit
3	led_green			Green LED Unit
4	led_blue			Blue LED Unit
5	led_white			While LED Unit
6	multi_led_color		[1]: Red, [2]: Amber, [3]: Green, [4]: Blue, [5]: White, [6]: Purple, [7]: Light blue	[Color] of Multi-color unit
7	multi_led_pattern		[0]: Light off, [1]: Light on, [2]: Flashing pattern 1, [3]: Flashing pattern 2, [4]: Flashing pattern 3, [5]: Flashing pattern 4	[Pattern] of Multi-color unit
8	buz_pattern		[0]: Stop, [1]: Pattern 1 [2]: Pattern 2, [3]: Pattern 3, [4]: Pattern 4, [5]: Pattern 5, [9]: No change	Buzzer Control
9	sound_pattern		[0]: Stop [1] to [71]: Channel number [200], [201]: Text-to-speech playback by command.	Audio Channel
10	digital_output1 - 2		[0]: OFF [1]: ON [9]: No change	Digital Output

Point

● Will not operate when invalid values are specified.

Input Example 1 **When notifying Green LED unit is on and audio channel 50 is playing**

```
"state": {
  "reported": {
    "led_red": 0,
    "led_yellow": 0,
    "led_green": 1,
    "led_blue": 0,
    "led_white": 0,
    "multi_led_color": 0,
    "multi_led_pattern": 0,
    "buz_pattern": 0,
    "sound_pattern": 50,
    "digital_output1": 0
    "digital_output2": 0
  }
}
```

Input Example 2 **When controlling audio channel to stop playing and digital output 1 to turn ON**

```
"state": {
  "desired": {
    "sound_pattern": 0,
    "digital_output1": 1
  }
}
```

8.3. Checking and Controlling the Status of This Product

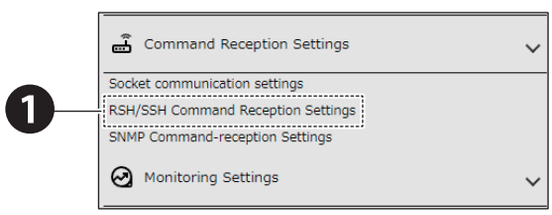
8.3.1. Checking and Controlling the Status of This Product with Commands

- You can check and control the status of this product using "RSH Command", "SSH Command", "SNMP Command", "HTTP Command", "PNS Command", and "PHN Command".
- [Command Function Enable Setting] and [Main Unit Operation Settings] must be set. Make sure you set these up before use.
- For information on each item, refer to "9.2.1. Socket Communication Settings" (☞ page 279), "9.2.2. RSH/SSH Command Reception Settings" (☞ page 280) and "9.2.3. SNMP Command Reception Settings" (☞ page 284).

8.3.1.1. Setting Up the Command Main Unit Operation Settings

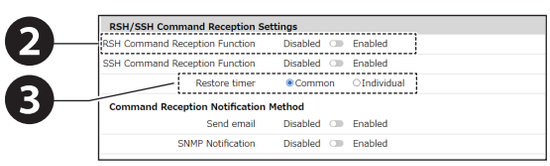
● Set up RSH Command

1. From the [Command Reception Settings] tab, click [RSH/SSH Command Reception Settings] to display the [RSH/SSH Command Reception Settings] screen.



2. Set the [RSH Command Reception Function] to [Enabled].

3. From [Common] or [Individual], select [Restore timer].



Common: Control each color of the Signal Tower and buzzer with a common timer.
Individual: Control each color of the Signal Tower and buzzer with individual timers.

4 For receiving commands, from the Notification Method screen set [Send email] or [SNMP Notification].

When a command is received, notifications set to [Enabled] are executed.

Note: To execute notifications, notification settings must be configured beforehand based on the notification method.
"8.1. Notifying Equipment" (☞ page 134)

■ Using Send Email

To send email, setting up email notifications and email content is required.
Set up as required.
For information, refer to "8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

- Before using SNMP notification, the SNMP Notification Function must be [Enabled].
  For information, refer to "8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

5 For the RSH Command Reception Settings, set [Sent-from address settings].

■ To specify addresses, enable [Sent-from address settings], and set the [Source IP address] and [Login name].

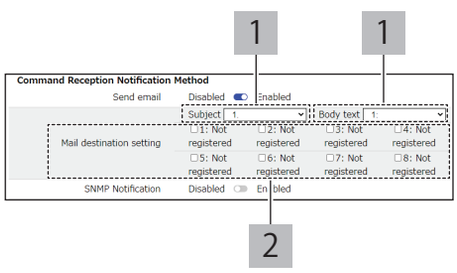
- When [Sent-from address settings] is enabled, restricted to receiving commands from IP address and login names registered in the [Source IP address] and [Login name] fields.
- Cannot use "root", "lp", and "nobody" as the login name.
- Enter the IP address in Ipv6 or Ipv4 format.

■ To remove restrictions, disable [Sent-from address settings] and set a [Common Login Name].

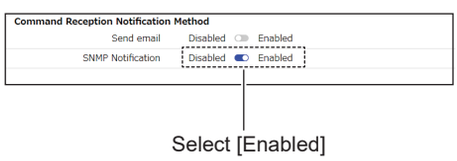
- Cannot use "root", "lp", and "nobody" as the login name.

6 Click [Set] to apply the defined settings.

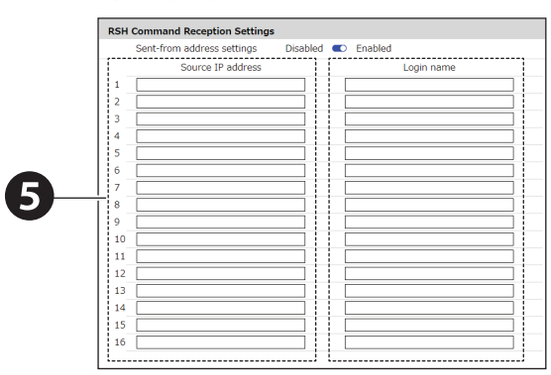
Using Send Email



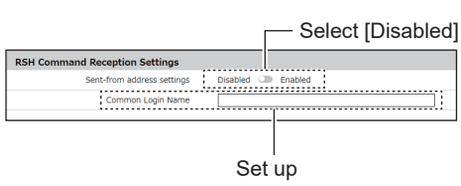
Using SNMP Notification



Specifying an Address

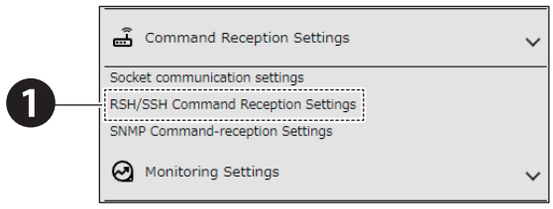


No Restrictions



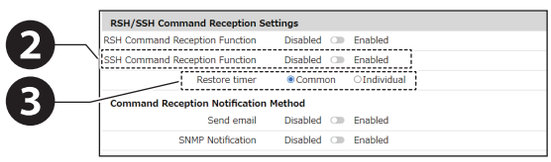
● Using SSH Commands

1 From the [Command Reception Settings] tab, click [RSH/SSH Command Reception Settings] to display the [RSH/SSH Command Reception Settings] screen.



2 Set the [SSH Command Reception Function] to [Enabled].

3 From [Restore timer], select either [Common] or [Individual].



Common: Control each color of the Signal Tower and buzzer with a common timer.
Individual: Control each color of the Signal Tower and buzzer with individual timers.

4 For receiving commands, from the Notification Method screen set [Send email] or [SNMP Notification].

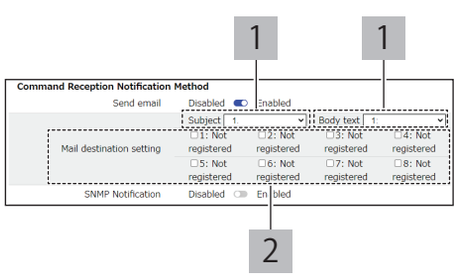
When a command is received, notifications set to [Enabled] are executed.
Note: To execute notifications, notification settings must be configured beforehand based on the notification method.
"8.1. Notifying Equipment" (☞ page 134)

■ Using Send Email

To send email, setting up email notifications and email content is required.
For information, refer to "8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

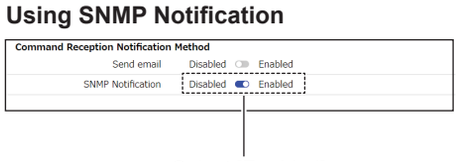
Using Send Email



■ Using SNMP Notification

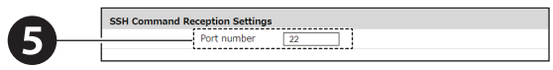
- Before using SNMP notification, the SNMP Notification Function must be [Enabled].
  For information, refer to "8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

Using SNMP Notification



Select [Enabled]

5 In the [SSH Command Reception Settings] screen, set the [Port number].



6 In the [SSH Command Reception Settings] screen, for the [Authentication method] select either [Password Authentication] or [Key Authentication].

- You can register up to 16 receive settings.
- For the [Authentication Method], you cannot individually specify [Password Authentication] and [Key Authentication]. Select either one as a common setting.

■ Using Password Authentication

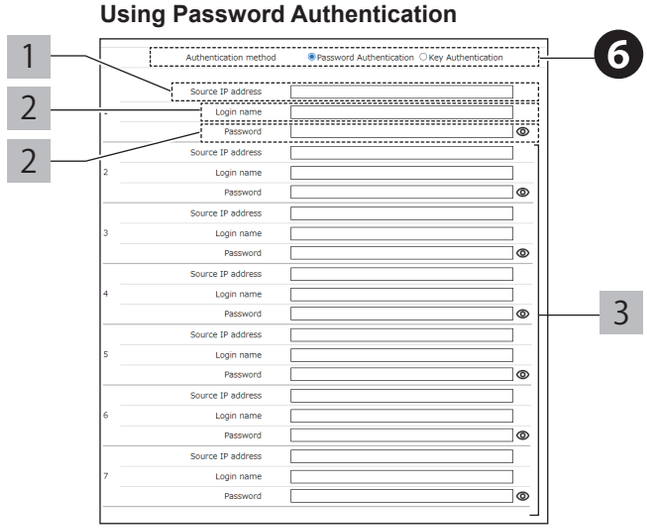
1	Set the [Source IP address]. • Enter the IP address in Ipv6 or Ipv4 format.
2	Set the [Login Name] and [Password]. • Cannot use "root", "lp", and "nobody" as the login name.
3	Configure for up to 16 instances, if necessary.

■ Using Key Authentication

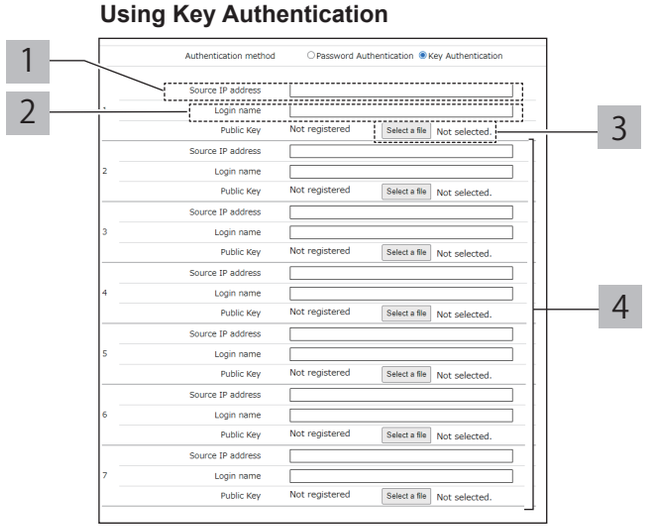
1	Set the [Source IP address]. • Enter the IP address in Ipv6 or Ipv4 format.
2	Set the [Login Name]. • Cannot use "root", "lp", and "nobody" as the login name.
3	Click the [Select a file] button and register the key file. • You need to generate keys (private and public keys) on your computer. • Register on this product the public key that was created. • Execute the SSH Command with your private key and login name.
4	Configure for up to 16 instances, if necessary.

7 Click [Set] to apply the defined settings.

Using Password Authentication

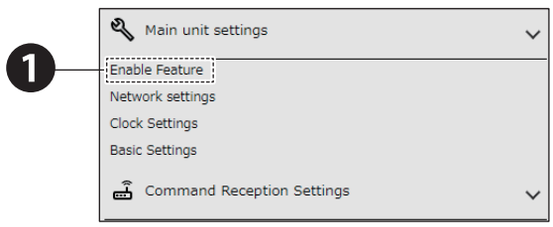


Using Key Authentication

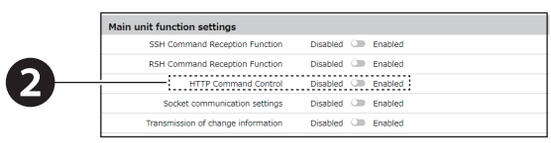


● Using HTTP Commands

1. From the [Main unit settings] tab, click [Enable Feature] to enter the [Main unit function settings] screen.



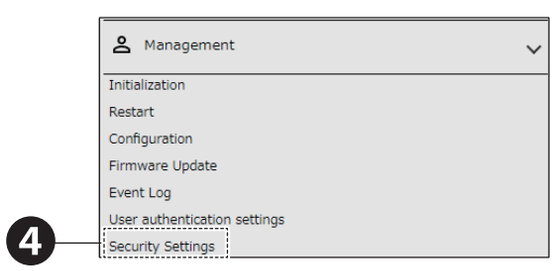
2. In the [Main unit function settings] screen, set [HTTP Command Control] to [Enabled].



3. Click [Set] to apply the defined settings.

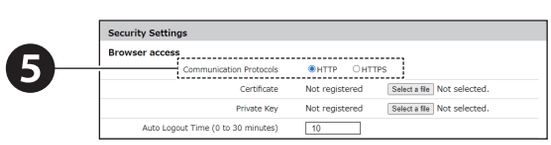
To change the communication protocol, follow the steps below.

4. From the [Management] tab, click [Security Settings] to enter the [Security Settings] screen.



5. Select the [Communication Protocols] as either [HTTP] or [HTTPS].

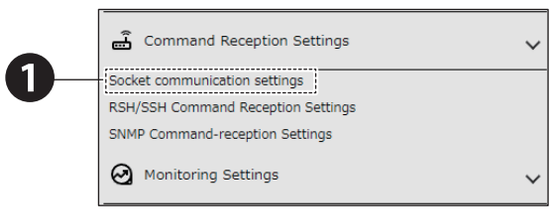
- As required, register the certificate and private key.



6. Click [Set] to apply the defined settings.

● Using PNS and PHN Commands

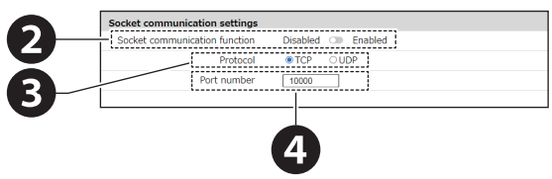
1. From the [Command Reception Settings] tab, click [Socket communication settings] to view the [Socket communication settings] screen.



2. In the [Socket communication settings] screen, set [Socket communication function] to [Enabled].

3. For [Protocol], select [TCP] or [UDP].

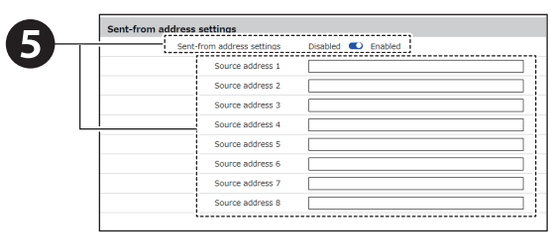
4. Enter the Port number.



5. Set [Sent-from address settings].

To specify addresses for communication, set [Enabled] and enter the permitted addresses in [Source address 1 to 8].

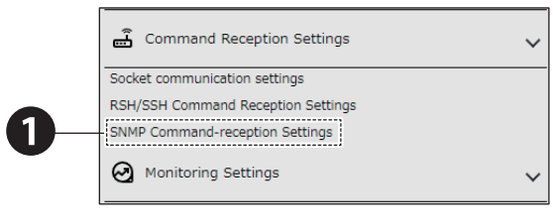
- When [Sent-from address settings] is enabled, commands from only IP addresses registered in the [Source address] field are received.
- Enter the IP address in Ipv6 or Ipv4 format.



6. Click [Set] to apply the defined settings.

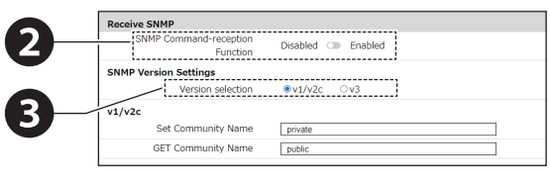
● Using SNMP Commands

1 From the [Command Reception Settings] tab, click [SNMP Command-reception Settings] to display the [SNMP Command-reception Settings] screen.



2 In the [Receive SNMP] screen, set [SNMP Command-reception Function] to [Enabled].

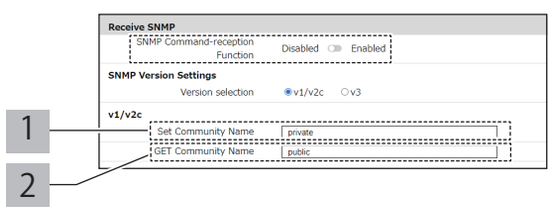
3 In the [SNMP Version Settings], from [Version selection] select [v1/v2c] or [v3].



4 In accordance with the SNMP version, set the [Receive SNMP] settings.

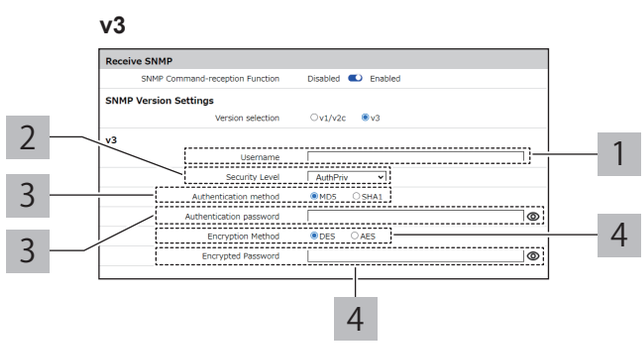
■ v1/v2c

1	Set up SET Community Name.
2	Set up GET Community Name.



■ v3

1	Set an user name.
2	Select the security level, [NoAuthNoPriv], [AuthNoPriv], or [AuthPriv]. • NoAuthNoPriv: Communication authentication and encryption are not performed. • AuthNoPriv: Performs communication authentication only. • AuthPriv: Performs communication authentication and encryption.
3	When either [AuthNoPriv] or [AuthPriv] is selected for the security level, set the Authentication method and authentication password. • For the Authentication method, select either [MD5] or [SHA]. Match settings on supported equipment.
4	When you set the [Security Level] to [AuthPriv], set the Encryption Method and Encrypted Password. • For the Encryption Method, select either [DES] or [AES]. Match settings on supported equipment.



5 Click [Set] to apply the defined settings.

8.3.1.2. Checking the Signal Tower State

- This section describes the procedure to use various commands to check the state of the Signal Tower.
- Before executing this operation, enable the command function and set the command main unit operation settings.
- "8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)

● Using RSH/SSH Commands

For information on RSH/SSH Commands, refer to "5.3.10. RSH/SSH Command Function" (☞ page 35).

Example 1

When getting the operation state of a main unit whose product IP address is "192.168.10.10", account is "patlite", state is Red flashing pattern 1, Green light on, channel 63 (buzzer pattern 3), digital inputs 1 and 4 are OFF, 2 and 3 are ON, digital output 1 is ON, and digital output 2 is OFF

- **When "status" only, returns the states of the Signal Tower.**

rsh␣192.168.10.10␣-l␣patlite␣status

Response: 201003

Example 2

When getting the operation state of a main unit whose product IP address is "192.168.10.10", account is "patlite", state is Amber flashing pattern 2, Blue light on, no channel playback, digital inputs 1 and 2 are OFF, 3 and 4 are ON, digital output 1 and 2 are OFF

- **By adding the "-s" option, as there is no channel playing, 0 is returned.**

rsh␣192.168.10.10␣-l␣patlite␣status␣-s

Response: 0

- **By adding the "di" and "do" options, returns the state of the digital input terminal block and the digital output terminal block, respectively.**

rsh␣192.168.10.10␣-l␣patlite␣status␣di␣do

Response: DI:0011

Response: DO:00

● Using PNS Commands

For information on PNS Commands, refer to "5.3.11. PNS Command Function (product compatibility commands)" (☞ page 43).

Example **When Signal Tower's Red light is on, Amber is flashing pattern 1, Green is flashing pattern 2, Blue and White are off, and buzzer pattern is 4**

Data Area: 6 bytes					
Signal Tower					Preset Channels
1	2	3	4	5	6
01H	02H	03H	00H	00H	04H

● Using PHN Commands

For information on PHN Commands, refer to "5.3.12. PHN Command Function (product compatibility commands)" (☞ page 52).

Example 1 **When Signal Tower's Green light is on and Amber is flashing pattern 1**

R (52H) 8 bits								Response Data (44H) 8 bits							
0	1	0	1	0	0	1	0	0	1	0	0	0	1	0	0

Example 2 **When Signal Tower's Green light is flashing pattern 2 and buzzer pattern is neither 1 nor 2**

R (52H) 8 bits								Response Data (9H) 8 bits							
0	1	0	1	0	0	1	0	1	0	0	1	1	1	0	0

⚠ CAUTION

⚠ Using PHN Commands, you cannot get the following operation states of the Signal Tower and channels on this product. To get these states, use other methods such as PNS or RSH Commands.

- The Signal Tower's Red, Amber, and Green lights on with flashing pattern 2, flashing pattern 3, and flashing pattern 4
- The Signal Tower's Blue and White lights on, with flashing pattern 1, flashing pattern 2, flashing pattern 3, and flashing pattern 4
- Buzzer pattern 3, buzzer pattern 4, or buzzer pattern 5
- Channels 1 to 60, and channels 63 to 71

● Using HTTP Commands

- For information on HTTP Commands, refer to "5.3.13. HTTP Command Reception Function" (☞ page 54). If required, in the security settings set the communication protocol beforehand. For information, refer to "7.7. Setting Up Security" (☞ page 118).
- The parameter in order to get the Signal Tower state is implemented in "status".

Example **To turn on the Signal Tower's Red and Green lights, turn off Amber, Blue, and White, and play audio playback 5**

http://192.168.10.1/api/status?format=xml

- Execution Result

```
<?xml version='1.0' encoding='utf-8'?>
<signaltower>
  <color>
    <color name="LED1" value="1"/>
    <color name="LED2" value="0"/>
    <color name="LED3" value="1"/>
    <color name="LED4" value="0"/>
    <color name="LED5" value="0"/>
    <color name="MULTI_COL" value="2"/>
    <color name="MULTI_PAT" value="1"/>
  </color>
  <sound>
    <sound name="SOUND" value="5"/>
  </sound>
  <port>
    <port name="DO-1" value="0"/>
    <port name="DO-2" value="0"/>
    <port name="DIN-1" value="0"/>
    <port name="DIN-2" value="0"/>
    <port name="DIN-3" value="0"/>
    <port name="DIN-4" value="0"/>
  </port>
</signaltower>
```

● Using SNMP Commands

- For information on SNMP Commands, refer to "5.3.14. SNMP Command Functions" (☞ page 60).
- For information on MIB, refer to "10. MIB List" (☞ page 367).
- You can get the state of the Signal Tower with the "SNMP GET Command".

Example 1 **Using GET Command when the Signal Tower's Red light is on**

Object	Object ID	Get Value
controlLightCurrentState	1.3.6.1.4.1.20440.4.1.5.1.2.1.4.1	2

Example 2 **Using GET Command when the Signal Tower's Amber light is off**

Object	Object ID	Get Value
controlLightCurrentState	1.3.6.1.4.1.20440.4.1.5.1.2.1.4.2	1

8.3.1.3. Controlling Signal Tower States

- This section describes the procedure to use various commands to control the state of the Signal Tower.
- Before executing this operation, enable the command function and set the command main unit operation settings.
- "8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)

● Using RSH/SSH Commands

- For information on RSH/SSH Commands, refer to "5.3.10. RSH/SSH Command Function" (☞ page 35).
- You can control the state of the Signal Tower with the "alert", "sound", and "color" commands.
- The following describes control with "alert" and "color" commands.

Example 1 **With product IP address of "192.168.10.10" and account "patlite", turn on Signal Tower's Red and Green lights, turn off others, and play channel 62 (buzzer pattern 2)**

rsh␣192.168.10.10␣-l␣patlite␣alert␣101002

Response: 101002

Example 2 **With product IP address of "192.168.10.10" and account "patlite", change Multi-color unit to White with flashing pattern 3 and emit buzzer pattern 4**

rsh␣192.168.10.10␣-l␣patlite␣color␣White␣4␣-b␣4

Response: White 4 -b 4

● Using PNS Commands

- For information on PNS Commands, refer to "5.3.11. PNS Command Function (product compatibility commands)" (☞ page 43).
- You can control the state of the Signal Tower with "Signal Tower / Buzzer Control Command".

Example **When turning Red Signal Tower light on, Amber flashing pattern 1, Green flashing pattern 2, turning Blue and White lights off, and emitting buzzer pattern 4**

- Setting

Product Category (XX)		ID (S)	(unused)	Data Size		Data Area: 6 bytes					
58H	58H	53H	00H	00H	06H	01H	02H	03H	00H	00H	04H

- Product Response

Normal response	Error response
ACK	NAK
06H	15H

● Using PHN Commands

For information on PHN Commands, refer to "5.3.12. PHN Command Function (product compatibility commands)" (☞ page 52).

Example **When turning on the Signal Tower's Red and Amber lights, and emitting channel 62 (buzzer pattern 2)**

・Setting

W (57H)								Response Data (13H)							
0	1	0	1	0	1	1	1	0	0	0	1	0	0	1	1

・Product Response

Normal response (output response)			Error response (output failed)		
A (41H)	C (43H)	K (4BH)	N (4EH)	A (41H)	K (4BH)
1 byte	1 byte	1 byte	1 byte	1 byte	1 byte

⚠ CAUTION

⚠ Using PHN Commands, you cannot control the following for Signal Tower and channels.
To control these states, use other methods such as PNS or RSH Commands.
The Signal Tower's Red, Amber, and Green lights with flashing pattern 2, flashing pattern 3, or flashing pattern 4
The Signal Tower's Blue and White lights on, with flashing pattern 1, flashing pattern 2, flashing pattern 3, or flashing pattern 4
Buzzer pattern 3, buzzer pattern 4, or buzzer pattern 5
Channels 1 to 60, or channels 63 to 71

⚠ Be cautious as channels 61 and 62 (Buzzer pattern 1, 2) are always played back in [Playback from latest input mode].
For information, refer to " ● Audio Playback Mode"(☞ page 25).

Point

● For operations you want performed, enter "1" for the operation bit, for operations you do not want performed, enter "0".

● Using HTTP Commands

・For information on HTTP Commands, refer to "5.3.13. HTTP Command Reception Function" (☞ page 54).
・You can control the state of the Signal Tower with the "alert", "led", and "color" parameters.
・The following procedure describes how to use the "alert" parameter.

Example **To turn on the Signal Tower's Red and Green lights, turn off Amber, Blue, and White, and emit buzzer pattern 2**

http://192.168.10.1/api/control?alert=101002

● Using SNMP Commands

- For information on SNMP Commands, refer to "5.3.14. SNMP Command Functions" (☞ page 60).
- For information on MIB, refer to "10. MIB List" (☞ page 367).
- You can control the state of the Signal Tower with the "SNMP SET Command".

Example 1 **To turn on the Signal Tower's Red light after 10 seconds**

Object	Object ID	Value
controlLightControlState	1.3.6.1.4.1.20440.4.1.5.1.2.1.2.1	2
controlLightControlTimer	1.3.6.1.4.1.20440.4.1.5.1.2.1.3.1	10

Example 2 **To turn off the Signal Tower's Amber light**

Object	Object ID	Value
controlLightControlState	1.3.6.1.4.1.20440.4.1.5.1.2.1.2.2	1
controlLightControlTimer	1.3.6.1.4.1.20440.4.1.5.1.2.1.3.2	0

Example 3 **To execute the Clear operation function**

Object	Object ID	Value
controlLightSnmpClear	1.3.6.1.4.1.20440.4.1.5.1.3.0	1

8.3.1.4. Controlling Audio NHV Series

- This section describes procedures on how to use commands to control audio on this product.
- Before executing this operation, enable the command function and set the command main unit operation settings.
- "8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)

● Using RSH/SSH Commands

- For information on RSH/SSH Commands, refer to "5.3.10. RSH/SSH Command Function" (☞ page 35).
- Audio control commands are "alert", "sound", and "stop".
- The following describes control with "sound" and "stop" commands.

Example 1 **With product IP address of "192.168.10.10" and account "patlite", One-shot playback of channel 24**

rsh␣192.168.10.10␣-l␣patlite␣sound␣24

⚠ CAUTION

⚠ Channels 61 to 64 and 71 (buzzer patterns 1 to 5) are always played using [Playback from latest input mode]. For information, refer to "5.3.2. Audio Playback Function" (☞ page 24).

Point

● The state of the Signal Tower can be set at the same time as audio playback.

Example 2 **Product IP address of "192.168.10.10" and account "patlite", playing channel 55**

rsh␣192.168.10.10␣-l␣patlite␣stop

Response: 55

● Using PNS Commands

- For information on PNS Commands, refer to "5.3.11. PNS Command Function (product compatibility commands)" (☞ page 43).
- You can playback audio with the "MP3 Channel Control Command" and "Signal Tower/Channel Control Command".
- The following procedure describes how to use the "Write MP3 Channel Control Command".

Example **To play channel 32, 15 times**

- Setting

Product Category (XX)		ID (V)	(unused)	Data Size		Data Area: 4 bytes			
58H	58H	56H	00H	00H	04H	01H	0EH	00H	32H

- Product Response

Normal response	Error response
ACK	NAK
06H	15H

⚠ CAUTION

⚠ Channels 61 to 64 and 71 (buzzer patterns 1 to 5) are always played using [Playback from latest input mode]. For information, refer to "5.3.2. Audio Playback Function" (☞ page 24).

● Using HTTP Commands

- For information on HTTP Commands, refer to "5.3.13. HTTP Command Reception Function" (☞ page 54).
- The parameter for playing audio is "sound".
- The following describes the control procedure for using "sound" and "stop" parameters.

Example 1 **To play channel 1 endlessly**

http://192.168.10.1/api/control?repeat=255&sound=1

Example 2 **To stop playing the channel**

Example 3 **To play the next audio in memory in Memory playback mode**

http://192.168.10.1/api/control?stop=1

Point

- When HTTP Command Control Function is [Disabled], this function does not operate.
- Specify the "repeat" parameter at the same time as the "sound" parameter or "speech" parameter.
- The parameters that you can specify together are as follows.

  "led" & "sound"

  "sound" & "repeat"

  "led" & "sound" & "repeat"

  "led" & "speech"

  "led" & "speech" & "repeat"

● Using SNMP Commands

- For information on SNMP Commands, refer to "5.3.14. SNMP Command Functions" (☞ page 60).
- For information on MIB, refer to "10. MIB List" (☞ page 367).
- You can control the state of the Signal Tower with the "SNMP Set Command".

Example **Signal Tower's Green light flashing pattern 2, Repeat playback of channel 65 one time**

Object	Object ID	Value
controlSoundLight	1.3.6.1.4.1.20440.4.1.5.2.2.0	993991001065

8.3.1.5. Play Any Text NHV Series

- This section describes procedures on how to use commands to playback text on this product.
- Before playing text on this product, enable the command function and set the command main unit operation settings.
- For information on each, refer to "8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172).

● Using HTTP Commands

- The parameter for playing any text is "speech".
- The following procedure describes how to play audio using the GET method's "speech" parameter.

Example 1 **To play "こんにちは" in Japanese**

http://192.168.10.1/api/control?speech=こんにちは&lang=jp

Example 2 **To play "Hello" in English**

http://192.168.10.1/api/control?speech=Hello&lang=en

- If you omit a parameter, play with the following settings. For information on each parameter refer to "5.3.13. HTTP Command Reception Function" (☞ page 54).

Parameter Name	Default
lang	jp
voice	male
speed	0
tone	0
notify	0
notifyTail	0
lineout	0

8.3.1.6 Clearing the Status of This Product

- This section describes procedures on how to use commands to clear the status of this product.
- Before clearing the status of this product, enable the command function and set the command main unit operation settings.
- For information on each, refer to "8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172).

● Using RSH/SSH Commands

- For information on RSH/SSH Commands, refer to "5.3.10. RSH/SSH Command Function" (☞ page 35).
- You can clear the status with the "clear" and "doclear" commands.
- The following procedure describes how to use the "clear" command.

Example 1 **Product IP address of "192.168.10.10", send-from address is set to disable, with common account "patlite"**

rsh␣192.168.10.10␣-l␣patlite␣clear

Example 2 **When Account is Omitted**

rsh␣192.168.10.10␣clear

Example 3 **Using ssh command to clear the product IP address "192.168.10.100", login name "patlite", and password "patlite", all except the Signal Tower**

ssh 192.168.10.100 -l patlite clear -z (patlite's password:) patlite

● Using PNS Commands

For information on PNS Commands, refer to "5.3.11. PNS Command Function (product compatibility commands)" (☞ page 43).

Example **Return to normal operation status**

- Setting

Product Category (XX)		ID (C)	(unused)	Data Size	
58H	58H	43H	00H	00H	00H

- Return Value

Normal response	Error response
ACK	NAK
06H	15H

● Using HTTP Commands

- For information on HTTP Commands, refer to "5.3.13. HTTP Command Reception Function" (☞ page 54).
- Return to normal operation state with the "clear" parameter.

Example **To execute the Clear operation**

http://192.168.10.1/api/control?clear=1

● Using SNMP Commands

- For information on SNMP Commands, refer to "5.3.14. SNMP Command Functions" (☞ page 60).
- For information on MIB, refer to "10. MIB List" (☞ page 367).
- You can control the state of the Signal Tower with the "SNMP Set Command".

Example **To execute the Clear operation function**

Object	Object ID	Value
controlLightSnmpClear	1.3.6.1.4.1.20440.4.1.5.1.3.0	1

8.3.1.7. Checking the Contact Input/Output States NHV Series (D model)

- This section describes the procedure to use commands to check the state of Contact Input/Output.
- Before executing this operation, enable the command function and set the command main unit operation settings.
- "8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)

● Using RSH/SSH Commands

For information on RSH/SSH Commands, refer to "5.3.10. RSH/SSH Command Function" (☞ page 35).

Example 1 **Get the operation state of main unit whose product IP address is "192.168.10.10", account is "patlite", contact input 1 and 4 are OFF, and 2 and 3 are ON**

rsh 192.168.10.10 -l patlite status di

Response: DI:0110

Example 2 **When product IP address is "192.168.10.10", account is "patlite", and contact output 1 is ON and 2 is OFF**

rsh 192.168.10.10 -l patlite status do

Response: DO:10

● Using SNMP Commands

- For information on SNMP Commands, refer to "5.3.14. SNMP Command Functions" (☞ page 60).
- For information on MIB, refer to "10. MIB List" (☞ page 367).

Example 1 **Sending GET Command with digital input 3 ON**

Object	Object ID	Value
diEntry3	1.3.6.1.4.1.20440.4.1.4.4.3.0	1

Example 2 **Sending GET Command with digital output 1 OFF**

Object	Object ID	Value
doEntry1	1.3.6.1.4.1.20440.4.1.4.5.1.0	0

8.3.1.8. Controlling Contact Output NHV Series (D model)

- This section describes procedures on how to use commands to control contact output on this product.
- Before controlling contact output on this product, enable the command function and set the command main unit operation settings.
- For information on each, refer to "8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172).

● Using RSH/SSH Commands

For information on RSH/SSH Commands, refer to "5.3.10. RSH/SSH Command Function" (☞ page 35).

Example **To turn digital output 1 OFF and digital output 2 ON when product IP address is "192.168.10.10" and account is "patlite"**

rsh␣192.168.10.10 -l␣patlite␣ alert␣ do␣01

Response: 01

⚠ CAUTION

⚠ When set to Busy output, during a Busy output operation you cannot use RSH/SSH Commands to operate digital output.

● Using PNS Commands

For information on PNS Commands, refer to "5.3.11. PNS Command Function (product compatibility commands)" (☞ page 43).

Example 1 **To turn contact output 1 on and not to change contact output 2**

- Command

Product Category (XX)		ID (D)	(unused)	Data Size		Data Area	
58H	58H	44H	00H	00H	02H	01H	09H

- Return Value

Normal response	Error response
ACK	NAK
06H	15H

Example 2 **To turn contact output 1 off and contact output 2 on**

- Command

Product Category (XX)		ID (D)	(unused)	Data Size		Data Area	
58H	58H	44H	00H	00H	02H	00H	01H

- Return Value

Normal response	Error response
ACK	NAK
06H	15H

⚠ CAUTION

⚠ Digital output control commands enabled only when [Contact Output] is set to [Digital Output Mode].
For information, refer to "5.3.5. External Contact Output Function" (☞ page 29).

● Using HTTP Commands

- For information on HTTP Commands, refer to "5.3.13. HTTP Command Reception Function" (☞ page 54).
- The parameter for controlling contact output is "output".

Example **To turn contact output 1 on and contact output 2 off**

http://192.168.10.1/api/control?output=10

● Using SNMP Commands

- For information on HTTP Commands, refer to "5.3.14. SNMP Command Functions" (☞ page 60).
- For information on MIB, refer to "10. MIB List" (☞ page 367).
- You can control the state of contact output with the "SNMP Set Command".

Example **To turn on contact output 2**

Object	Object ID	Value
doEntry2	1.3.6.1.4.1.20440.4.1.4.5.2.0	1

8.3.1.9. Performing the Self-test Operation

- This section describes the procedure to use commands to execute the self-test operation.
- Before executing this operation, enable the command function and set the command main unit operation settings.
- "8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)

● Using RSH/SSH Commands

- For information on RSH/SSH Commands, refer to "5.3.10. RSH/SSH Command Function" (☞ page 35).
- You can use the "test" or "dotest" command to execute the operation test.

Example 1 **Operation check with product IP address of "192.168.10.10", when send-from address is set to disable with common account "patlite"**

rsh␣192.168.10.10␣-l␣patlite␣test

rsh␣192.168.10.10␣-l␣patlite␣dotest

Response: None

Example 2 **When account is omitted**

rsh␣192.168.10.10␣test

rsh␣192.168.10.10␣dotest

Response: None

⚠ CAUTION

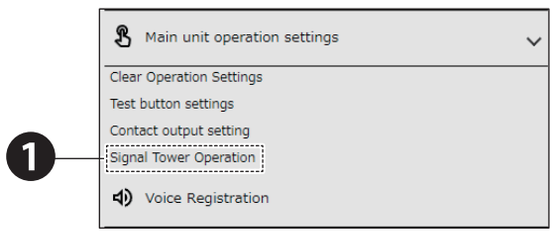
- ⚠ When the test is run, the Signal Tower is in operation.
  If you want to do this at run time, check that running the operation will not cause any issues.
- ⚠ The monitoring function continues running during the test. Be cautious when you use the test function to check the operation of this product.
- ⚠ During or after the test is executed, PHN and PNS Commands return an error response.
  Additionally, the RSH/SSH Command returns a Busy response.
- ⚠ After the test is complete, Signal Tower operations executed with the monitoring function run normally.
- ⚠ For information on test operation stop methods, refer to "5.3.22. Self-test Function"(☞ page 79).
- ⚠ Executing a test operation clears the memory.

8.3.2. Checking and Controlling the Signal Tower on the Web Setup Screen

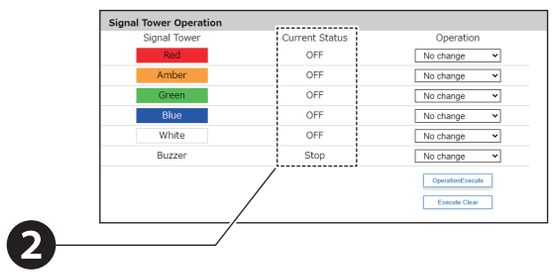
You can check and control the state of the Signal Tower on the Web Setup Screen.

8.3.2.1. Checking the Signal Tower States

1 From the [Main unit operation settings] tab, click [Signal Tower Operation] to enter the [Signal Tower Operation] screen.



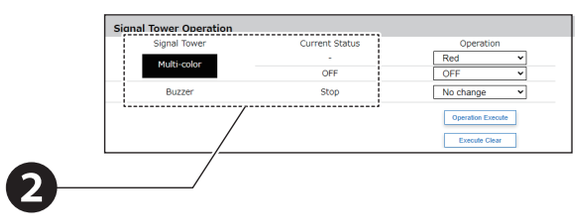
Normal LED Unit



2 From [Current Status], check the states of the listed Signal Tower.

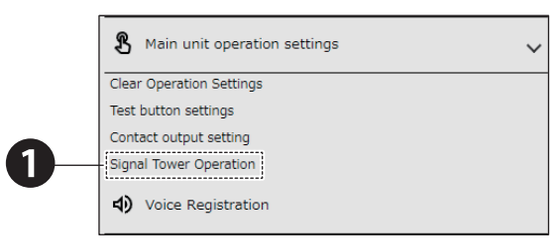
When the multi-color unit is selected, "OFF" is displayed when the control state is not supported.

Multi-color unit



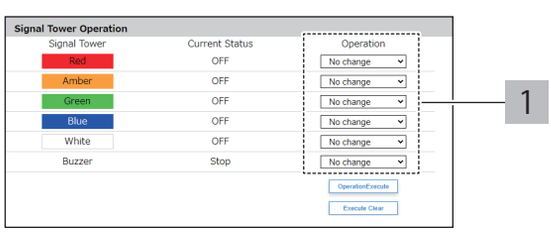
8.3.2.2. Controlling Signal Tower States

1 From the [Main unit operation settings] tab, click [Signal Tower Operation] to enter the [Signal Tower Operation] screen.



2 Define the settings on the [Signal Tower Operation] screen.

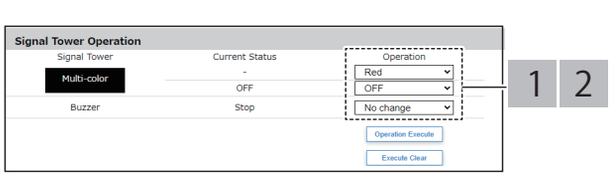
Normal LED Unit



■ **Normal LED Unit**

1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Multi-color unit



■ **Multi-color unit**

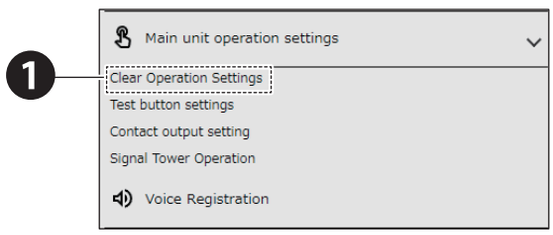
1	Select the color of the Signal Tower light, [Red], [Amber], [Green], [Blue], [White], [Purple], or [Light blue].
2	Select operation [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

8.3.3. Operating the Product with the Clear Button

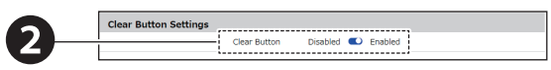
The Clear button clears the states on the product and notifies the user that it has been cleared.
[Clear Button Settings] and [Clear Operation Settings] must be set. Make sure you set these up before use.

8.3.3.1. Setting Up the Clear Operation Settings

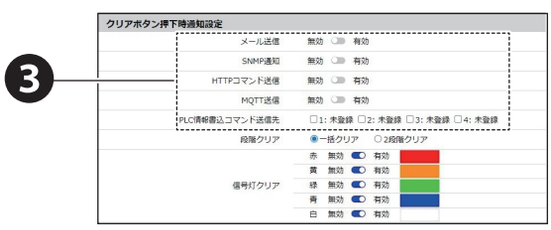
1. From the [Main unit operation settings] tab, click [Clear Operation Settings] to enter the [Clear Operation Settings] screen.



2. In the [Clear Button Settings] screen, set [Clear Button] to [Enabled].



3. When the Clear button is pressed, set [Send Email], [SNMP Notification], [Send HTTP Command], [Send MQTT], and [PLC Information Write Command Destination].



4 When the Clear button is pressed, notifications set to [Enabled] are executed.

Note: To execute notifications, notification settings must be configured beforehand based on the notification method.
"8.1. Notifying Equipment" (☞ page 134)

■ Using Send Email

To send email, setting up email notifications and email content beforehand is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

Before using SNMP notification, [SNMP Notification] must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Send PLC Information Write Command

When sending PLC information write command, it is necessary to register the destination of the PLC information write command in advance.
"5.3.25.2. PLC Information Write Command Transmission Function" (☞ page 87)

1	Select the destination of the PLC information write command. • You can select multiple destinations. • The command will not be sent to an unregistered destination even if you select it.

5 For [Clear stages], select either [Clear All] or [Depress twice to Clear all].

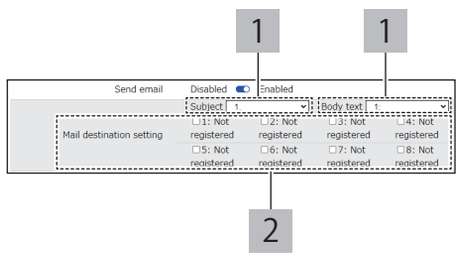
■ Using Clear All

Simultaneously clear Signal Tower, digital output, and channels.

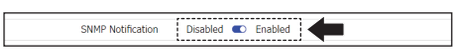
■ Using Depress twice to Clear all

- The first time the button is pressed, the buzzer, channel, and contact output are cleared.
- The second time the button is pressed, the Signal Tower is cleared.

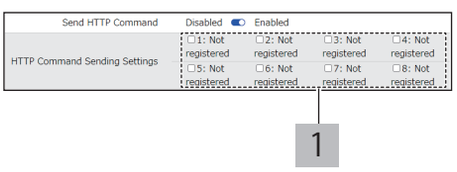
Using Send Email



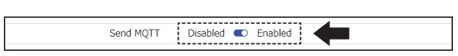
Using SNMP Notification



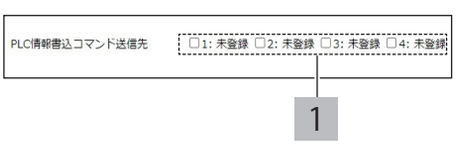
Using Send HTTP Command

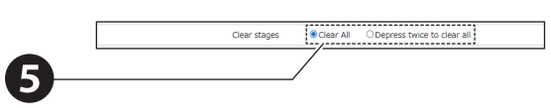


Using Send MQTT



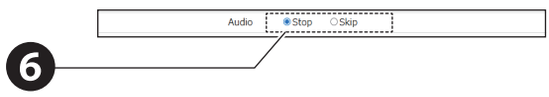
Using Send PLC Information Write Command





6 Select [Audio] from [Stop] or [Skip].

Note: To use this function, the [Audio Playback Mode] must be set to [Memory playback mode].
"7.12. Setting Up Audio Playback Mode" (☞ page 124)



■ When Stopped

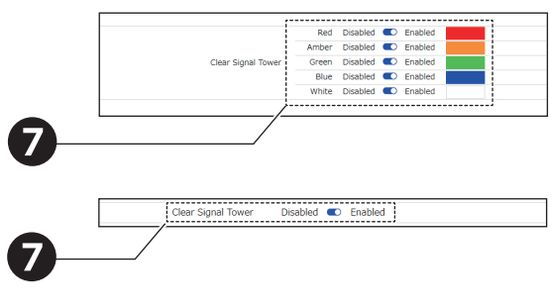
- Stops audio playback and stops Busy output.
- Memory is erased.

■ Skip Track

- Stops audio playback and starts playback of audio registered in the memory.
- If the memory is empty, audio playback will stop.

7 Select the Signal Tower colors to clear.

- The operation state of color units set to [Enabled] becomes Clear or Normal. The states of color units set to [Disabled] do not change.
- In [Additional units], when [Multi-color unit] is selected, you can set just one target in the multi-color unit to clear.

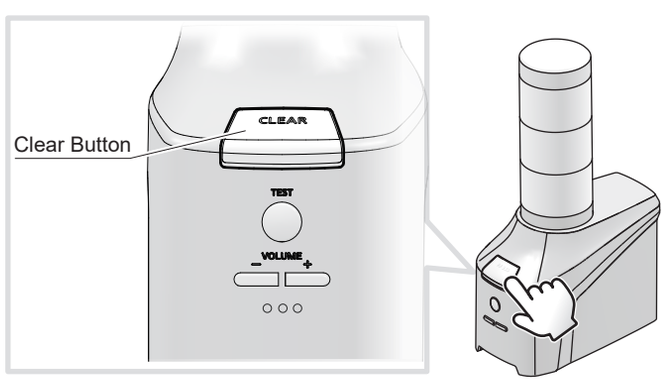


8 Click [Set] to apply the defined settings.

8.3.3.2. Using Clear Button to Execute Clear Operation

1 Press the Clear Button.

- When the Clear Button is pressed, the clear operation specified in the [Clear Operation Settings] is executed.



8.4. Monitoring

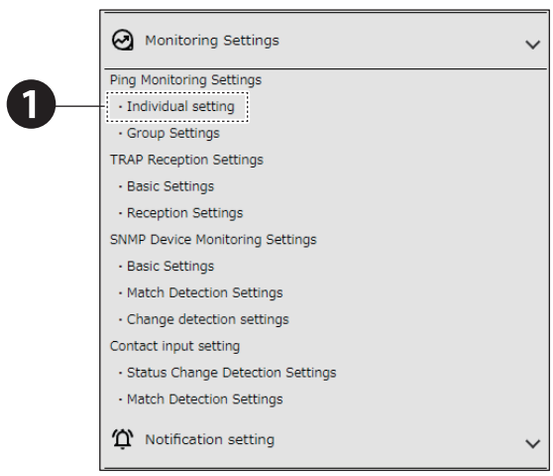
8.4.1. Ping Monitoring

- Set up to use ping monitoring.
- For information on each item, refer to "9.3.1. Ping Monitoring Settings" (☞ page 286).

8.4.1.1. Setup Procedure

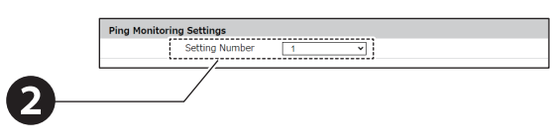
Individual Monitoring

1. From the [Monitoring Settings] tab, click [Individual setting] to enter the [Ping Monitoring Settings] - [Individual setting] screen.



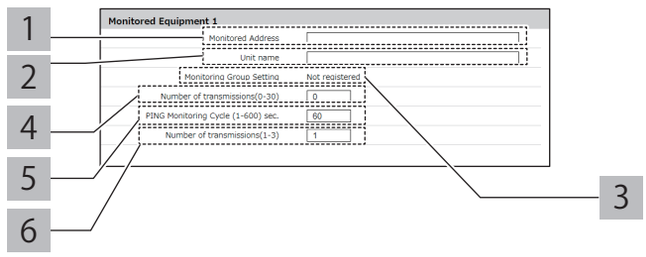
2. Specify the [Ping Monitoring Settings] - [Setting Number].

For each setting number, you can set one monitoring target.
Select from 1 to 24 for the [Setting Number].



3 Set the Monitored Equipment.

1	In [Monitored Equipment], register the Monitored Address of the equipment.
2	In [Unit name], register the name of the device to monitor. • The unit name is used to identify the device on which an event occurred for use in emails. • This setting can be omitted.
3	The group configured in [Ping Monitoring Settings] - [Group Settings]. • Use the Monitoring Group Setting for multiple monitored equipment.
4	In [Number of transmissions] (0-30), set the number of Ping responses that are identified as errors.
5	In [PING Monitoring Cycle (1-600) sec.], set the frequency of Ping transmissions.
6	In [Number of transmissions] (1-3), set the number of Ping to send for each frequency.



4 Set operation settings for when an error occurs.

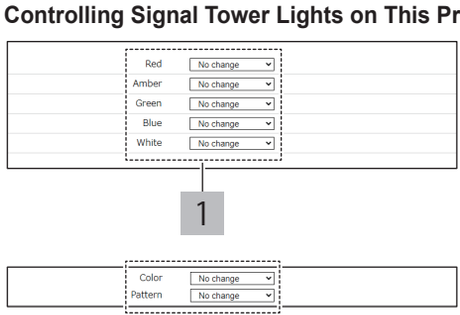
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



■ Controlling Audio

NHB	
1	Select the Buzzer, [Stop], [Buzzer pattern 1], [Buzzer pattern 2], [Buzzer pattern 3], [Buzzer pattern 4], [Buzzer pattern 5], or [No change].

NHV To play audio other than the presets, the audio needs to be registered. "7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

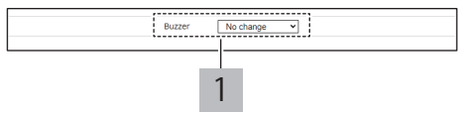
Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

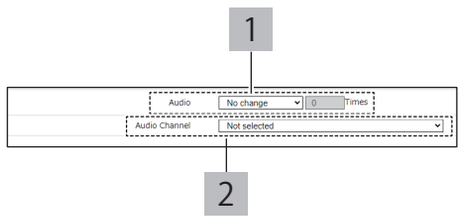
Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

Controlling Audio

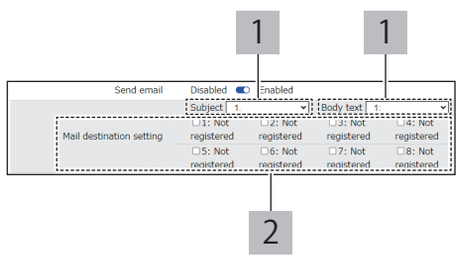
● NHB



● NHV

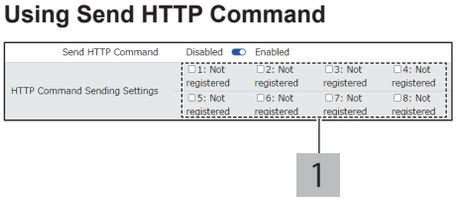


Using Send Email



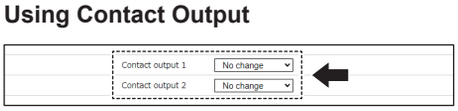
Using SNMP Notification

Using Send HTTP Command



Using Send MQTT

Using Contact Output



5

Sets operation setting for recovery from an error.

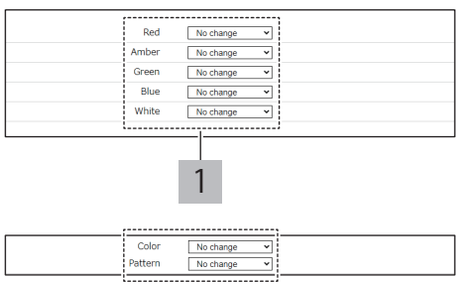
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



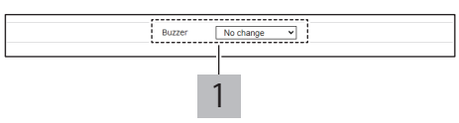
■ Controlling Audio

NHB	
1	Select the buzzer, [Stop], [Buzzer pattern 1], [Buzzer pattern 2], [Buzzer pattern 3], [Buzzer pattern 4], [Buzzer pattern 5], or [No change].

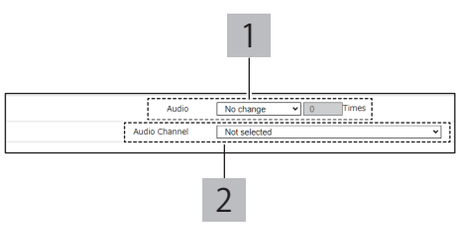
NHV To play audio other than the presets, the audio needs to be registered. "7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

● NHB



● NHV

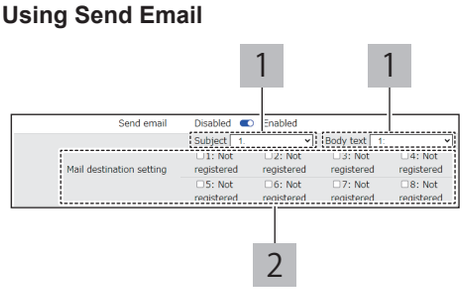


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

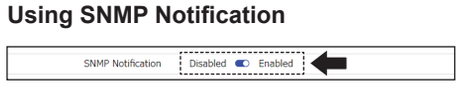
Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

Using SNMP Notification



■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

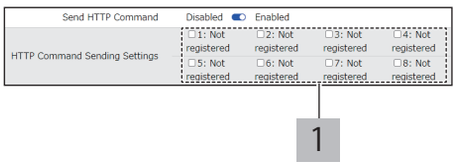
■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

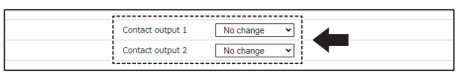
Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

Using Send HTTP Command



Using Send MQTT

Using Contact Output



6 Click [Set] to apply the defined settings.

- For each monitoring target setting, click the [Set] button to apply the defined settings to the product. Settings for multiple monitoring targets cannot be updated at one time.

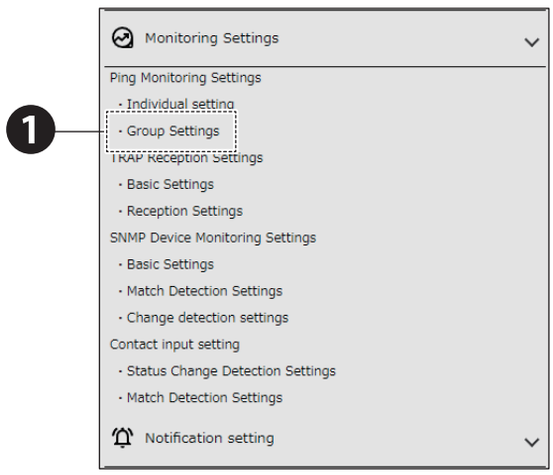
7 Ping monitoring is started.

- Restart is unnecessary.

Using the Group Monitoring Function

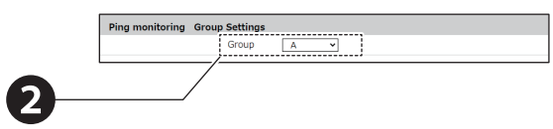
Use the Monitoring Group Setting for multiple monitored equipment. If more than one monitored equipment in a group enters an error state, the product continues with error state operations until all the equipment in the group are restored.

1 From the [Monitoring Settings] tab, click [Group Settings] to display the [Ping Monitoring Settings] - [Group Settings] screen.



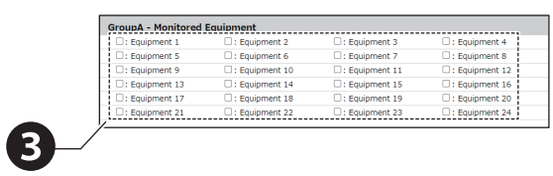
2 Select the [Group] to configure.

- You can set up three groups (A, B, and C).



3 Select the [Equipment] for the group.

- Devices specified in a group do not perform the operation defined in the individual setting, but perform the operation defined in the group setting.
- A device assigned to a group cannot also be assigned to another group.



4 Set operation settings for when an error occurs.

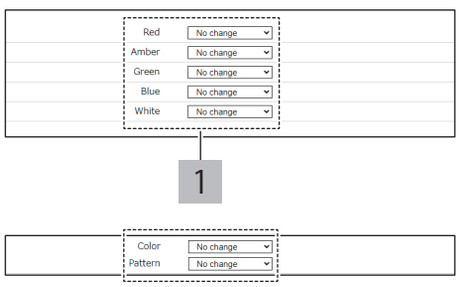
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



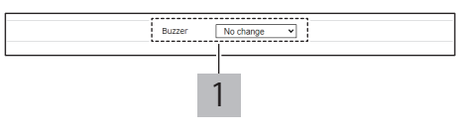
■ Controlling Audio

NHB	
1	Select the buzzer, [Stop], [Buzzer pattern 1], [Buzzer pattern 2], [Buzzer pattern 3], [Buzzer pattern 4], [Buzzer pattern 5], or [No change].

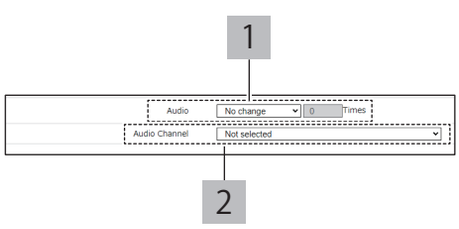
NHV To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

● NHB



● NHV

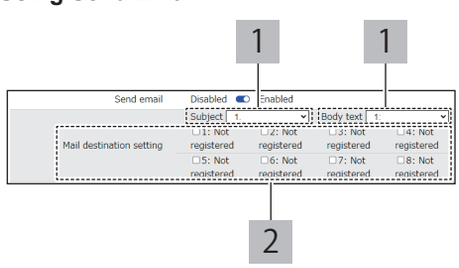


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

Using SNMP Notification

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

5 Set operation setting for recovery from an error.

■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

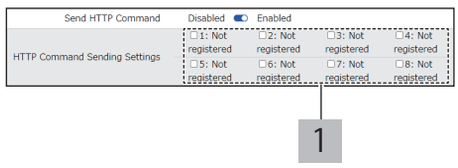
In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

■ Controlling Audio

NHB	
1	Select the buzzer, [Stop], [Buzzer pattern 1], [Buzzer pattern 2], [Buzzer pattern 3], [Buzzer pattern 4], [Buzzer pattern 5], or [No change].

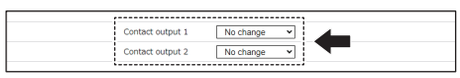
NHV To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Using Send HTTP Command

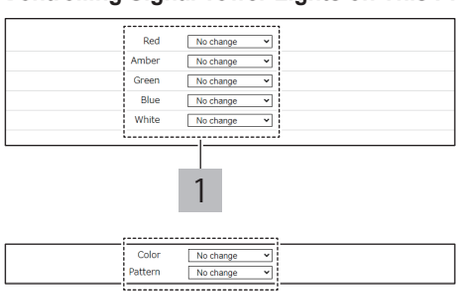


Using Send MQTT

Using Contact Output

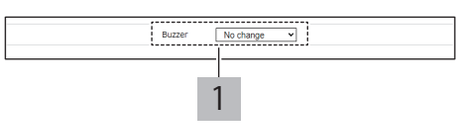


Controlling Signal Tower Lights on This Product

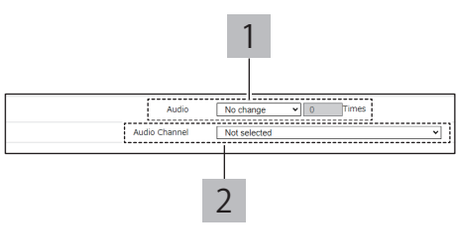


Controlling Audio

● NHB



● NHV



■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

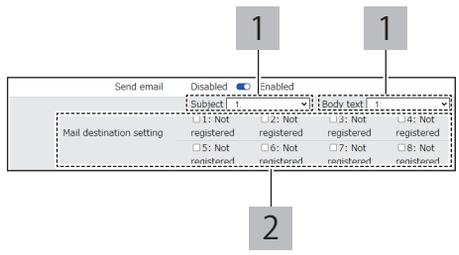
6 Click [Set] to apply the defined settings.

- For each monitoring target setting, click the [Set] button to apply the defined settings to the product. Settings for multiple monitoring targets cannot be updated at one time.

7 Ping monitoring is started.

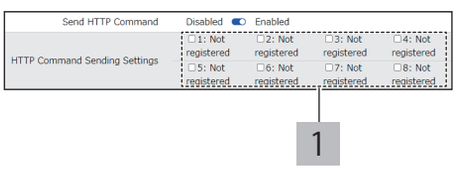
- Restart is unnecessary.

Using Send Email

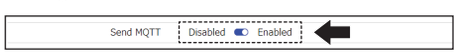


Using SNMP Notification

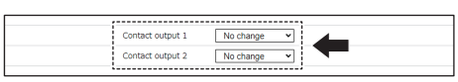
Using Send HTTP Command



Using Send MQTT



Using Contact Output



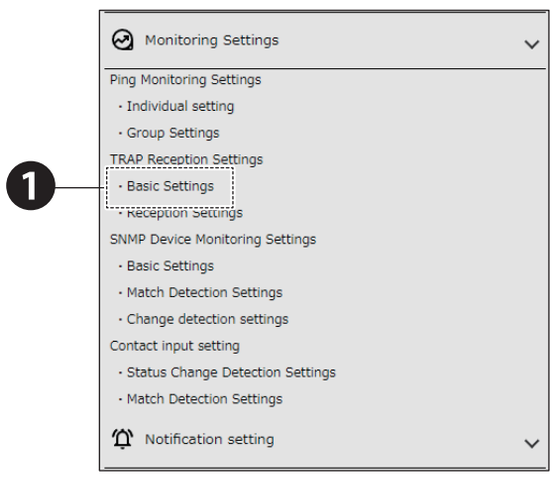
8.4.2. SNMP TRAP Monitoring

- Set up TRAP monitoring settings or TRAP receive settings.
- For information on each item, refer to "9.3.2. TRAP Reception Settings" (☞ page 292).

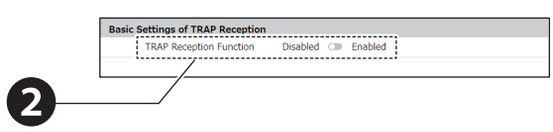
8.4.2.1. Setup Procedure

● Enable SNMP Function

1. From the [Monitoring Settings] tab, click [Basic Settings] to enter the [TRAP Reception Settings] - [Basic Settings] screen.



2. Set the [TRAP Reception Function] to [Enabled].



3. From [Version selection], select [v1/v2c] or [v3].

4 Set up TRAP receive.

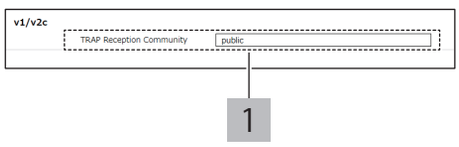
■ **v1/v2c**

1	Set up the TRAP Reception Community.

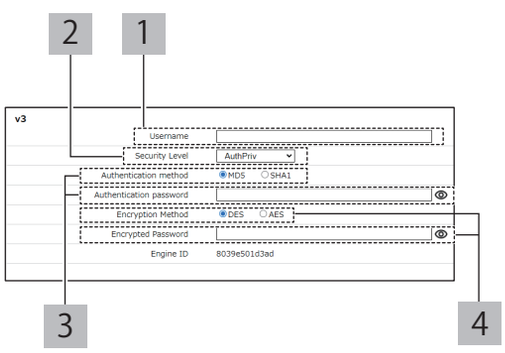
■ **v3**

1	Set an user name.
2	Select the security level, [noAuthNoPriv], [AuthNoPriv], or [AuthPriv]. • noAuthNoPriv: Communication authentication and encryption are not performed. • AuthNoPriv: Performs communication authentication only. • AuthPriv: Performs communication authentication and encryption.
3	When either [AuthNoPriv] or [AuthPriv] is selected for the security level, set the Authentication method and authentication password. • For the Authentication method, select either [MD5] or [SHA]. Select to match settings on supported equipment.
4	When you set the [Security Level] to [AuthPriv], set the Encryption Method and Encrypted Password. • For the Encryption Method, select either [DES] or [AES]. Select to match settings on supported equipment.

v1/v2c



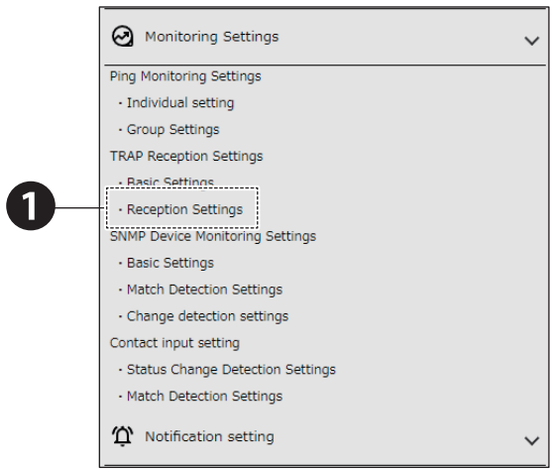
v3



5 Click [Set] to apply the defined settings.

● Set up SNMP TRAP Monitoring

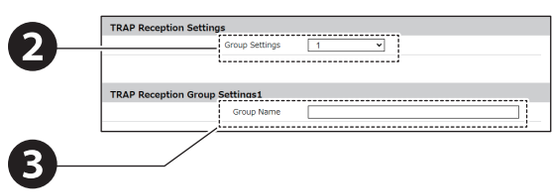
1 From the [Monitoring Settings] tab, click [Reception Settings] to enter the [TRAP Reception Settings] screen.



2 Specify the [Group Settings] for TRAP Reception Settings.

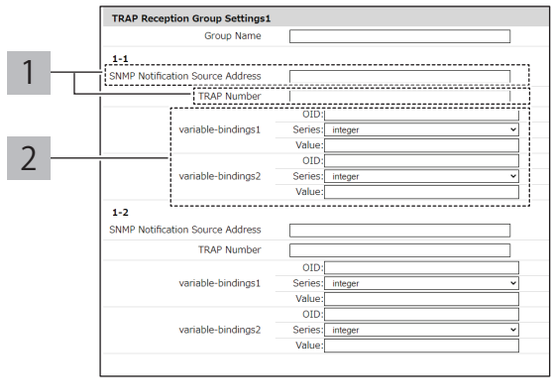
- Select from 1 to 16 for the [Group Settings].

3 In [Group Name], set the name for the selected number.



4 Configure the TRAP Receive group settings.

1	Set the [SNMP Notification Source Address] and [TRAP Number].
2	Set [variable-bindings (1-2)]. • Of two registration items in [variable-bindings], it can be registered only with the first of these. • In [variable-bindings], you can use an asterisk (*) at the end. When an asterisk (*) is used, any integer value at the end is considered to match the condition. • With the Receive Function, the number of variable-bindings that can be identified is up to 64 per TRAP. When a TRAP is received with more than 65 variable-bindings, among variable-bindings OID, the 65th and subsequent OID will not work even if they are set up.



- When a SNMP notification source address item is entered, you can omit the [TRAP Number] and [variable-bindings] fields. If the [TRAP Number] and [variable-bindings] fields are omitted, all TRAP received from the address in the [SNMP Notification Source Address] field will be received.
- If the [SNMP Notification Source Address] is omitted, only the TRAP number is used.
- If both [SNMP Notification Source Address] and [TRAP Number] are omitted, after receipt no operation is performed.
- When duplicate TRAP numbers are registered in a group, group operations use the TRAP with the smallest number. Operation for the subsequent group number is not performed.
- If the [GenericTrap type] of the TRAP received is 6 (enterprisespecific), at the end of the received TRAP append the specific-trap value.

5 Sets the operation when TRAP is received.

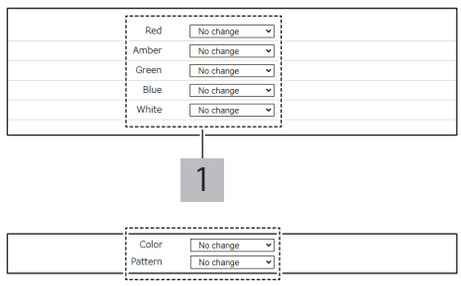
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



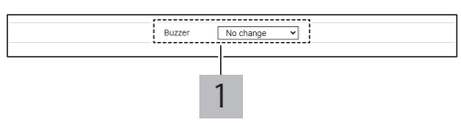
■ Controlling Audio

NHB	
1	Select the buzzer, [Stop], [Buzzer pattern 1], [Buzzer pattern 2], [Buzzer pattern 3], [Buzzer pattern 4], [Buzzer pattern 5], or [No change].

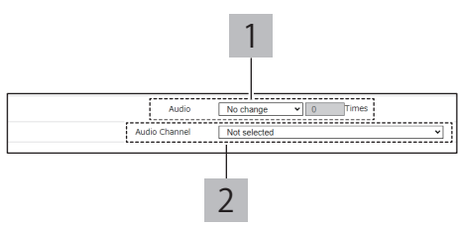
NHV To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

● NHB



● NHV

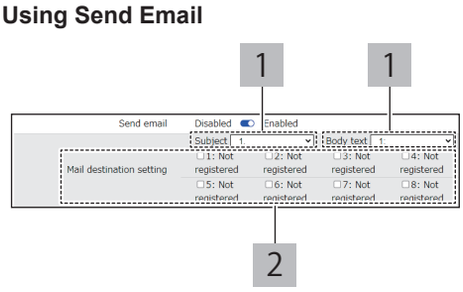


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

Using SNMP Notification

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

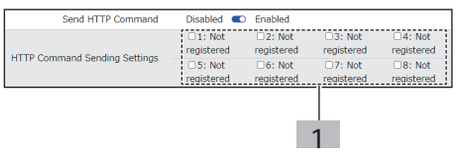
6 Click [Set] to apply the defined settings.

- For each TRAP Receive group setting, click the [Set] button to apply the defined settings to the product. Settings for multiple TRAP Receive groups cannot be updated at one time.

7 SNMP TRAP monitoring is started.

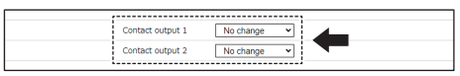
- Restart is unnecessary.

Using Send HTTP Command



Using Send MQTT

Using Contact Output



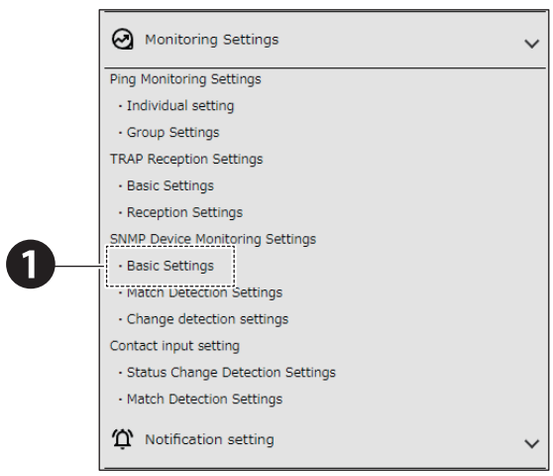
8.4.3. SNMP Device Monitoring

- Set up to use SNMP Device Monitoring.
- For information on each item, refer to "9.3.3. SNMP Device Monitoring Settings" (☞ page 297).

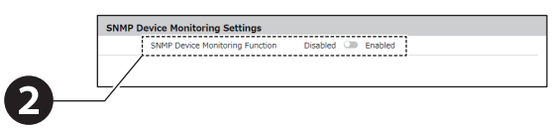
8.4.3.1. Setup Procedure

● Enable SNMP Device Monitoring Function

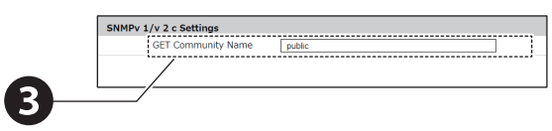
1. From the [Monitoring Settings] tab, click [Basic Settings] to enter the [SNMP Device Monitoring Settings] - [Basic Settings] screen.



2. In [SNMP Device Monitoring], set [SNMP Device Monitoring Function] to [Enabled].

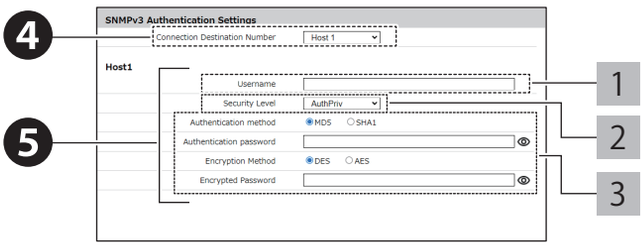


3. When using SNMP v1 or v2c, in the [SNMP v1/v2c Settings] set [GET Community Name].



4 When using SNMP v3, in [SNMPv3 Certification] select the [Connection Destination Number].

- You can register up to 20 connection destination numbers.



5 Set the connection for the selected [Connection Destination Number].

1	Set an user name.
2	Select the security level, [noAuthNoPriv], [AuthNoPriv], or [AuthPriv]. • noAuthNoPriv: Communication authentication and encryption are not performed. • AuthNoPriv: Performs communication authentication only. • AuthPriv: Performs communication authentication and encryption.
3	When either [AuthNoPriv] or [AuthPriv] is selected for the security level, set the Authentication method and authentication password. • For the Authentication method, select either [MD5] or [SHA]. Match settings on supported equipment. When you set the [Security Level] to [AuthPriv], set the Encryption Method and Encrypted Password. • For the Encryption Method, select either [DES] or [AES]. Match settings on supported equipment.

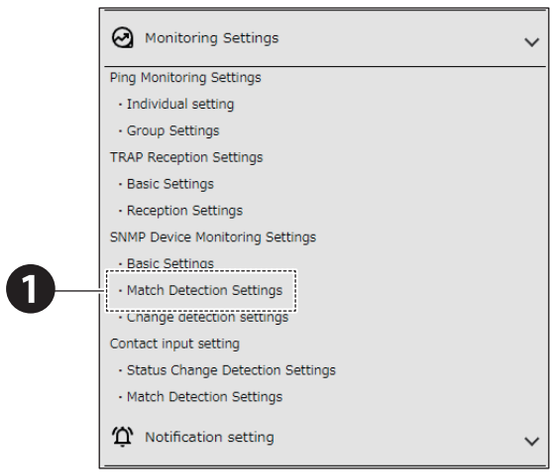
6 Click [Set] to apply the defined settings.

- For each connection destination, click the [Set] button to apply the defined settings to the product. Settings for multiple connection destinations cannot be updated at one time.

● Set up SNMP Device Monitoring

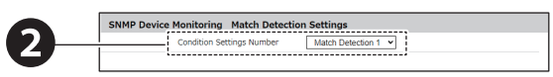
Match Detection

1 From the [Monitoring Settings] tab, click [Match Detection Settings] to enter the [SNMP Device Monitoring Settings] - [Match Detection Settings] screen.

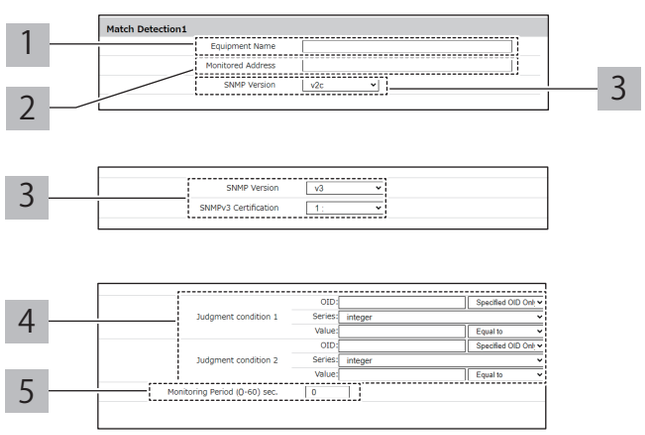


2 Select a [Condition Settings Number].

- You can register up to 20 condition settings.



3 Set the Match Detection for the selected [Condition Settings Number].

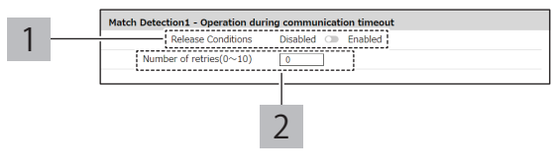


1	Register the Equipment Name. • The unit name is used to identify the device on which an event occurred for use in email. • This setting can be omitted.
2	Set the Monitored Address.
3	Specify the SNMP Version. • When v3 is selected, SNMPv3 Certification is displayed. Specify the connection destination number that was set in the [Basic Settings].
4	Set the Judgment condition. • Select the OID detection method from [Specified OID only] and [All Specified OID Below]. • You can omit the value. • Select from [Equal to], [More than], and [Less than]. • If both Judgment conditions are set, the operation is performed when both conditions are met.
5	Set the Monitoring Period from 0 to 60 seconds.

4 Sets the [Operation during communication timeout].

To put this product in monitoring status when a communication timeout with the monitoring target occurs, set up the following.

1	Set [Release Conditions] to [Enabled].
2	Set the [Number of retries] from 0 to 10.



5 Set the operation when the condition matches.

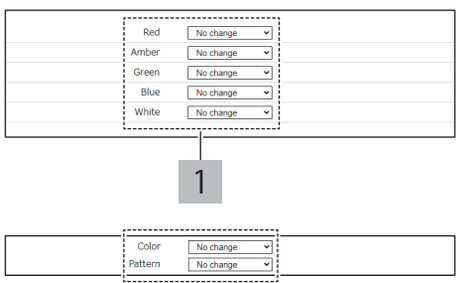
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



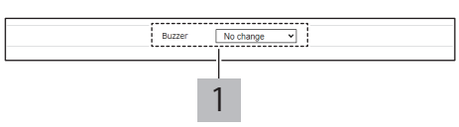
■ Controlling Audio

NHB	
1	Select the buzzer, [Stop], [Buzzer pattern 1], [Buzzer pattern 2], [Buzzer pattern 3], [Buzzer pattern 4], [Buzzer pattern 5], or [No change].

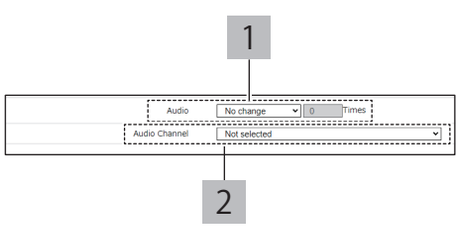
NHV To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

● NHB



● NHV

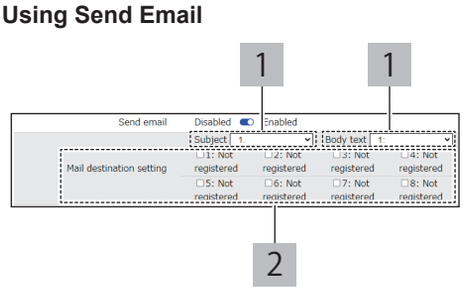


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send Email



■ Using SNMP Notification

Before using SNMP Notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

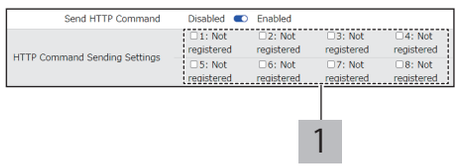
Using SNMP Notification

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

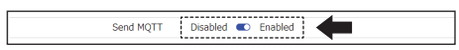
Using Send HTTP Command



■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

Using Send MQTT



■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

Using Contact Output

6 Set the release condition operation.

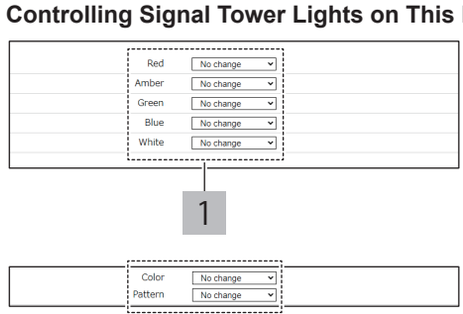
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



■ Controlling Audio

NHB	
1	Select the buzzer, [Stop], [Buzzer pattern 1], [Buzzer pattern 2], [Buzzer pattern 3], [Buzzer pattern 4], [Buzzer pattern 5], or [No change].

NHV To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

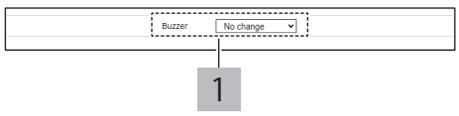
Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

■ When Re-evaluation of Match is Selected

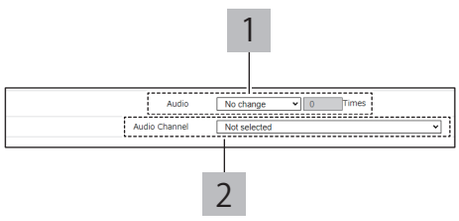
This setting can be omitted. Set this product setting so you can re-evaluate specific equipment.

Controlling Audio

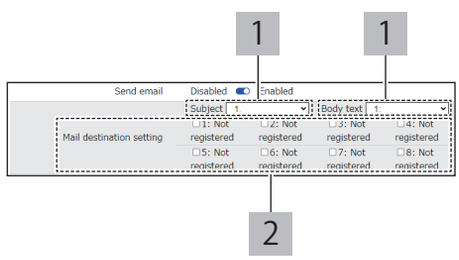
● NHB



● NHV

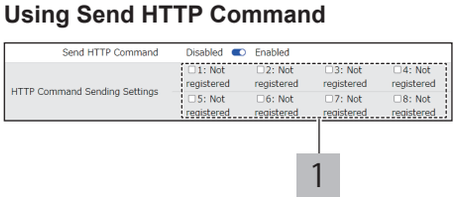


Using Send Email

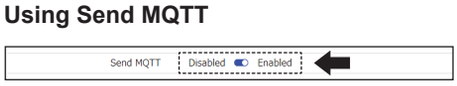


Using SNMP Notification

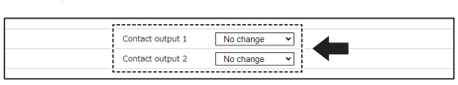
Using Send HTTP Command



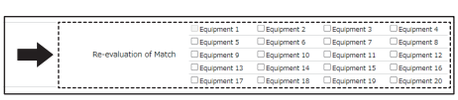
Using Send MQTT



Using Contact Output



When Re-evaluation of Match is Selected



7 Click [Set] to apply the defined settings.

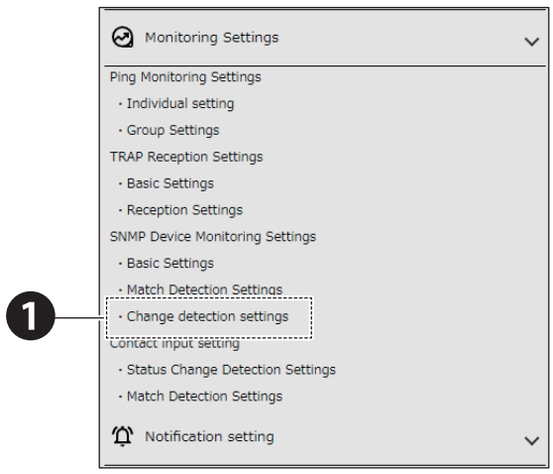
- For each condition setting, click the [Set] button to apply the defined settings to the product. Settings for multiple conditions cannot be updated at one time.

8 SNMP Device Monitoring is started.

- Restart is unnecessary.

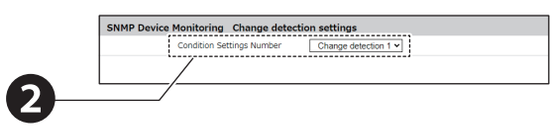
Detect Change

1 From the [Monitoring Settings] tab, click [Change detection settings] to enter the [SNMP Device Monitoring Settings] - [Change detection settings] screen.



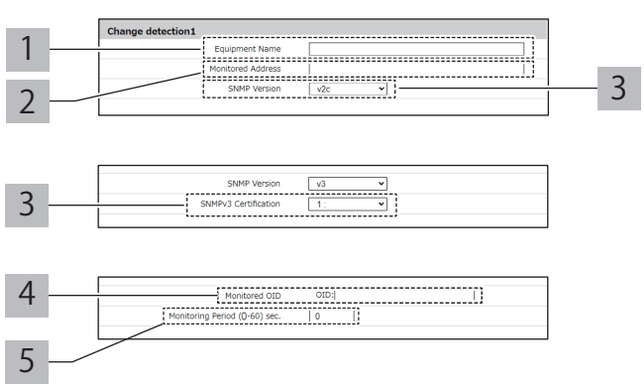
2 Select a [Condition Settings Number].

- Select from [Change detection 1] to [Change detection 5].



3 Set the Change detection.

1	Register the Equipment Name. • The equipment name is used to identify the device on which an event occurred for use in emails. • This setting can be omitted.
2	Set the Monitored Address.
3	Specify the SNMP Version. • When v3 is selected, SNMPv3 Certification is displayed. Specify the connection destination number that was previously set.
4	Set the Monitored OID.
5	Set the Monitoring Period from 0 to 60 seconds.



4 Set the operation for when a change is detected.

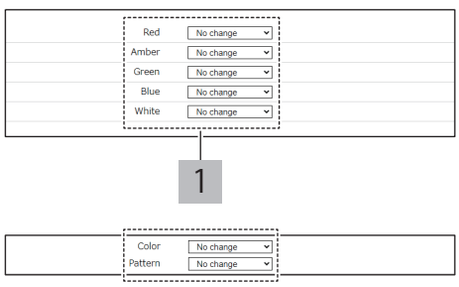
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



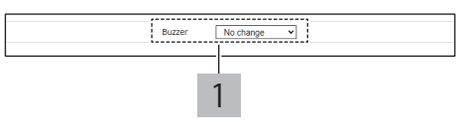
■ Controlling Audio

NHB	
1	Select the buzzer, [Stop], [Buzzer pattern 1], [Buzzer pattern 2], [Buzzer pattern 3], [Buzzer pattern 4], [Buzzer pattern 5], or [No change].

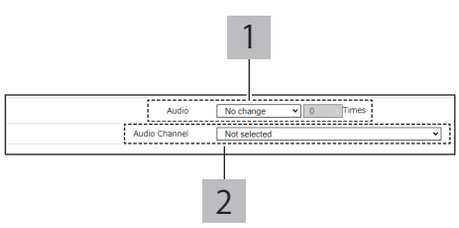
NHV To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

● NHB



● NHV

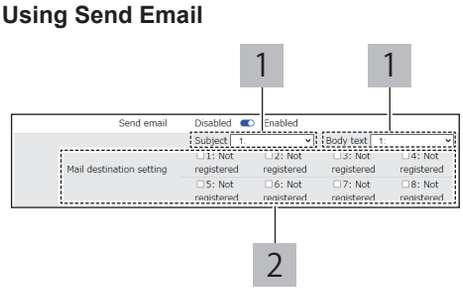


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

Using SNMP Notification

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

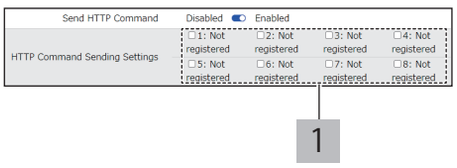
■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

Using Send HTTP Command



Using Send MQTT

Using Contact Output

5 Click [Set] to apply the defined settings.

- For each condition setting, click the [Set] button to apply the defined settings to the product. Settings for multiple conditions cannot be updated at one time.

6 SNMP Device Monitoring is started.

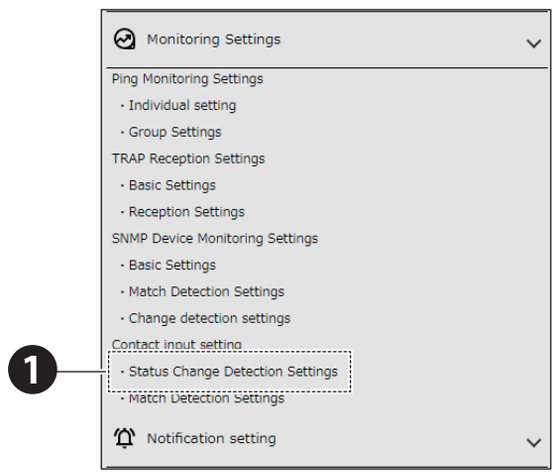
- Restart is unnecessary.

8.4.4. Contact Input Status Monitoring NHV Series (D model)

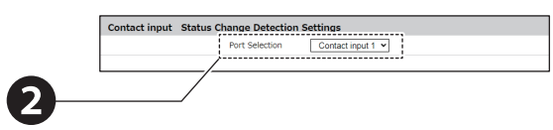
- This setting is used when monitoring the status of contact input.
- For information on each item, refer to "9.3.4. Contact Input Setting" (☞ page 305).

8.4.4.1. Setting Up Contact Input Function

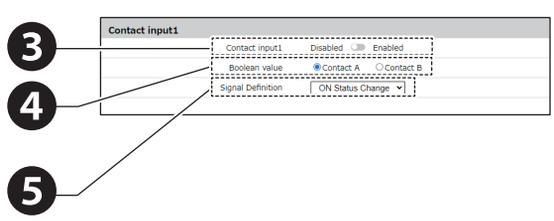
1. From the [Monitoring Settings] tab, click [Status Change Detection Settings] to enter the [Contact input setting] - [Status Change Detection Settings] screen.



2. From [Port Selection], select the Contact input to set up.



3. Set [Contact Input] to [Enabled].
4. Select the [Boolean Value] as either [Contact A] or [Contact B].
5. Select the Signal Definition, [ON Status Change], [OFF Status Change], and [Status change].



6 Set operation settings for ON Status Change.

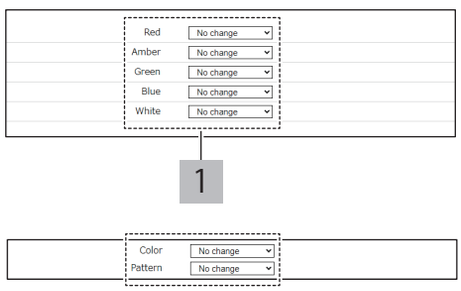
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

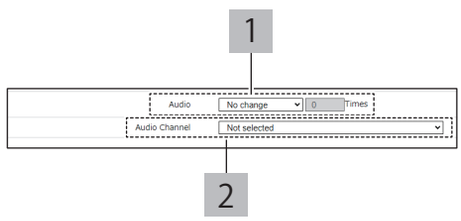
Controlling Signal Tower Lights on This Product



■ Controlling Audio

To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

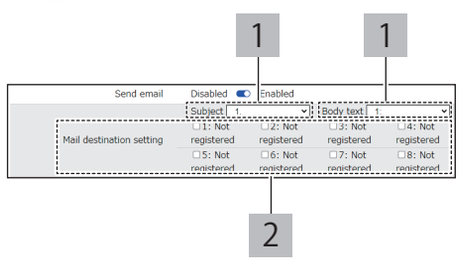


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

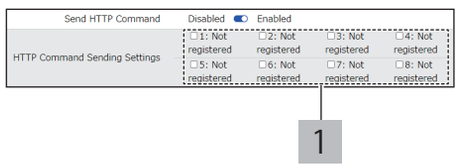
Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

■ Configuring Clear Conditions

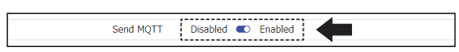
- Before clearing conditions, match detection settings must be set up.
  "8.4.5. Contact Input Condition Monitoring" (☞ page 227)
- By setting this item, when the contact changes state OFF → ON, as per the condition specified in the [Match Detection Settings], the input time is reset.
  "5.3.19. Contact Input Match Detection" (☞ page 68)

Using SNMP Notification

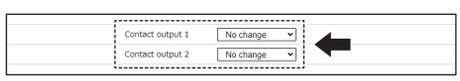
Using Send HTTP Command



Using Send MQTT



Using Contact Output



Configuring Clear Conditions

7 Set operation settings for OFF Status Change.

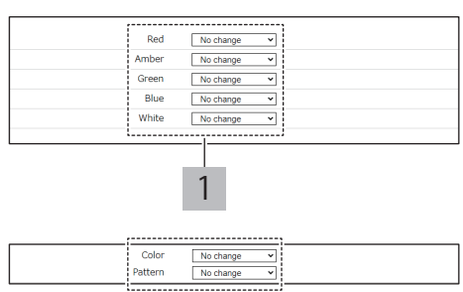
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



■ Controlling Audio

To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

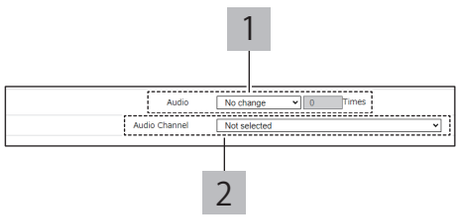
■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

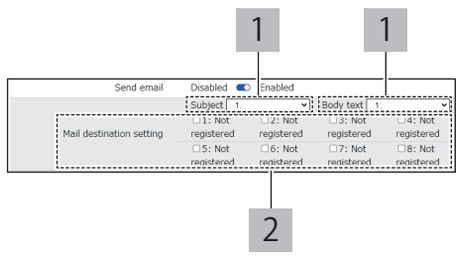
■ Configuring Clear Conditions

- Before clearing conditions, match detection settings must be set up.
  "8.4.5. Contact Input Condition Monitoring" (☞ page 227)
- By setting this item, when the contact changes state ON → OFF, as per the condition specified in the [Match Detection Settings], the input time is reset.
  "5.3.19. Contact Input Match Detection" (☞ page 68)

Controlling Audio

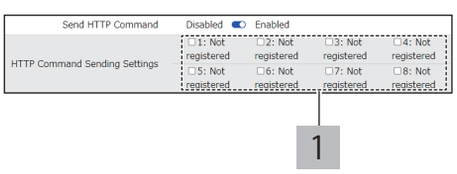


Using Send Email

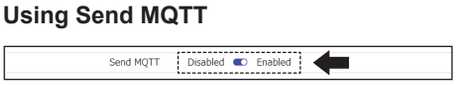


Using SNMP Notification

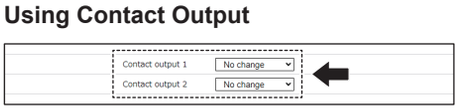
Using Send HTTP Command



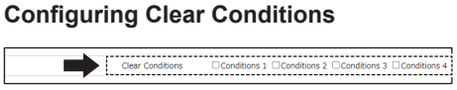
Using Send MQTT



Using Contact Output



Configuring Clear Conditions



8 Click [Set] to apply the defined settings.

- For each port setting, click the [Set] button to apply the defined settings to the product. Settings for multiple ports cannot be updated at one time.

9 Contact input status monitoring is started.

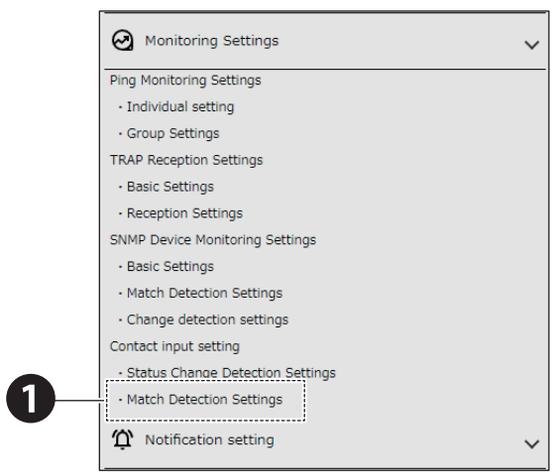
- Restart is unnecessary.

8.4.5. Contact Input Condition Monitoring NHV Series (D model)

- This setting is used when monitoring the condition of contact inputs.
- For information on each item, refer to "9.3.4.2. Match Detection Settings" (☞ page 308).

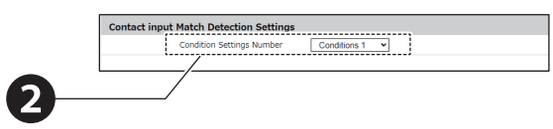
8.4.5.1. Setting Up Contact Input Condition

1. From the [Monitoring Settings] tab, click [Match Detection Settings] to enter the [Contact input setting] - [Match Detection Settings] screen.



2. Set the Condition Settings Number in the [Contact input setting] - [Match Detection Settings] screen.

- You can register up to 4 condition settings.

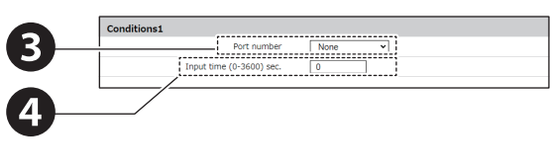


3. Select a port number for the Conditions.

- You can register up to 4 port numbers.

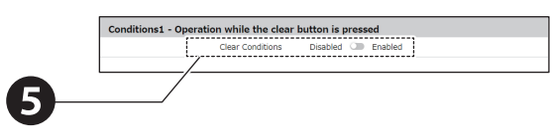
4. Select the length of input time for the Conditions.

- If 0 is set, detection is disabled.

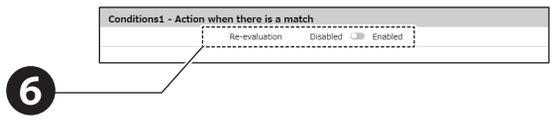


5. Select [Enabled] or [Disabled] for the operation when Clear button pressed.

- By setting this item, when the Clear button is pressed, the condition's input time is reset. "5.3.19. Contact Input Match Detection" (☞ page 68)



6 Select [Enabled] or [Disabled] for the [Action when there is a match].



- Enabled: Even after the first detect condition match, operation is executed every time a detect condition match occurs.
- Disabled: Operation is executed only the first time a detect condition match occurs, and not after even if other detect condition matches occur.
- When set to [None], perform the following operations to detect match again.

1	Run the Clear operation . • "5.3.21. Clear Operation Function" (☞ page 77)
2	Enable clear condition, and press the Clear button. • "8.3.3. Operating the Product with the Clear Button" (☞ page 194)
3	In [Contact input setting] - [Status Change Detection Settings], from [Clear Conditions], select the condition that you want to detect match again, and then change the state of contact input. • "8.4.5. Contact Input Condition Monitoring" (☞ page 227)

7 Set the operation when the condition matches.

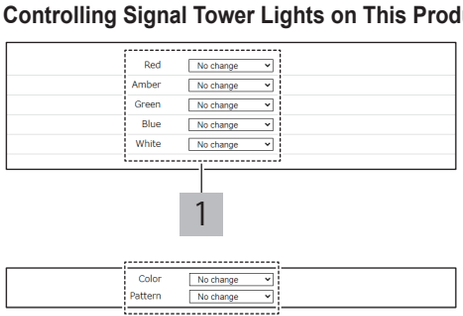
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



■ Controlling Audio

To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

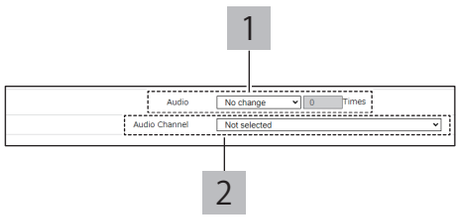
■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

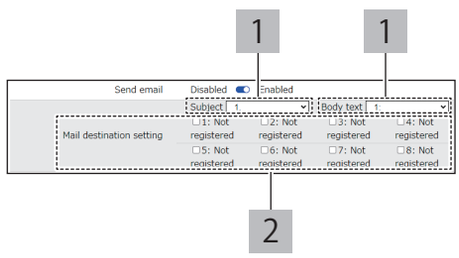
■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

Controlling Audio

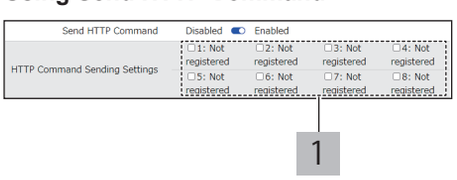


Using Send Email

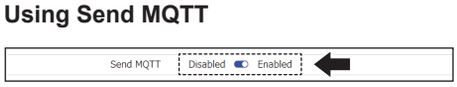


Using SNMP Notification

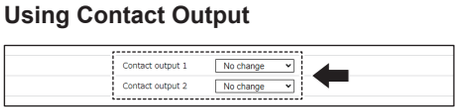
Using Send HTTP Command



Using Send MQTT



Using Contact Output



8 Click [Set] to apply the defined settings.

- For each condition setting, click the [Set] button to apply the defined settings to the product. Multiple condition settings cannot be updated at one time.

9 Contact input condition monitoring is started.

- Restart is unnecessary.

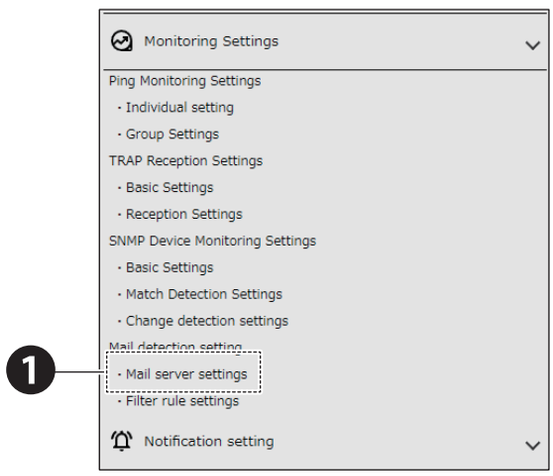
8.4.6. Detecting Email NHV Series

- Set up to use the detect email function.
- For information on each item, refer to "9.3.5. Mail Detection Setting" (☞ page 311).

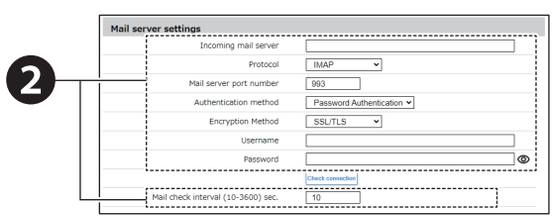
8.4.6.1. Setup Procedure

● Set the Mail Server to Monitor

1 From the [Mail detection setting] tab, click [Mail server settings] to enter the [Mail server settings] screen.

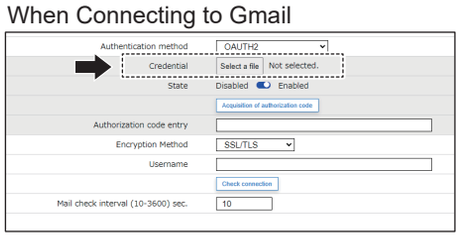


2 In the [Mail server settings], set the [Incoming mail server], [Protocol], [Mail server port number], [Authentication method], [Encryption Method], [Username], [Password], [Mail check interval], [Authentication method], and [Mail check interval (10-3600) sec.].

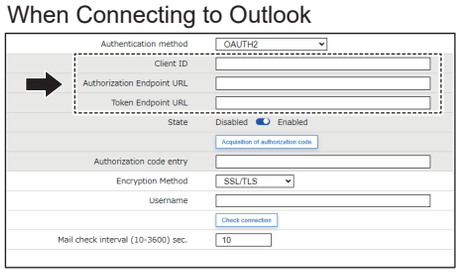


- For the Authentication method, you can select [OAuth2] or [Password Authentication] when one of the following addresses is specified as the [Incoming mail server]. When any other server is specified, authentication is fixed as [Password Authentication].
  - Gmail server: imap.gmail.com
    pop.gmail.com
  - Outlook server: outlook.office365.com

When Connecting to Gmail



When Connecting to Outlook



■ Connecting to Gmail*1 *2

Register the credential file in the [Credential] section.

■ Connecting to Outlook*1 *2

Register the [Client ID], [Authorization Endpoint URL] and [Token Endpoint URL].

*1 Set the [State] to [Enabled].

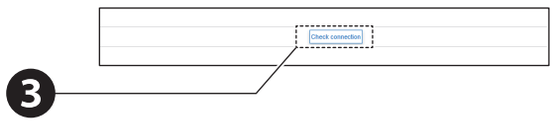
*2 Click the [Acquisition of authorization code] button, and from the authentication screen that pops up, get the authentication code. In the [Authentication code entry] field, enter the authentication code that you retrieved.

[POP] is Selected in [Protocol]

- When [POP] is selected in [Protocol], [Delete the mail in the server after receiving] is set.
- By enabling this function, email detected as having been received by this product are deleted from the mail server. Do not enable this function if you handle important emails.

3 Press the [Check connection] button to confirm you can connect to the mail server with the defined settings.

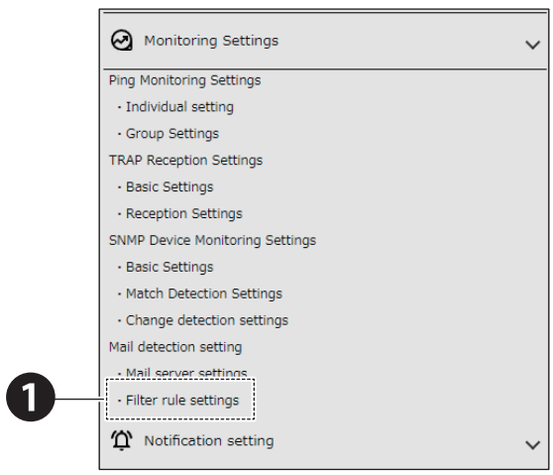
- When [OAUTH2] is specified in [Authentication method], get the authentication code, and enter the authentication code that you retrieved in the [Authentication code entry] field again.



4 Click [Set] to apply the defined settings.

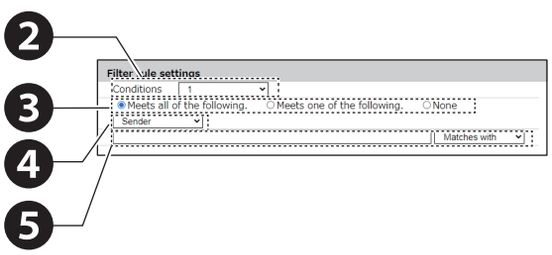
● Set Filter Rules

1 From the [Mail detection setting] tab, click [Filter rule settings] to enter the [Filter rule settings] screen.



2 Select a condition.

- You can register to detect from 1 to 20 conditions.
- For a single condition, you can register up to 5 rules.
- By registering multiple rules, you can fine tune the detection range.



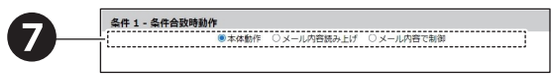
3 Select the range of conditions, [Meets all of the following], [Meets one of the following], and [None].

4 Select what to detect, from [Sender], [Subject], and [Body text].

5 Enter a string in the [Keyword] field, and select the Judgment condition from [Matches with], [Beginning with], [Include], and [Be free of].

6 To set more conditions, register a second or subsequent rules.

7 Select the operation contents from [Main unit operation], [Read aloud the contents of the email], or [Control by the contents of the email]



If you select [Main unit operation]

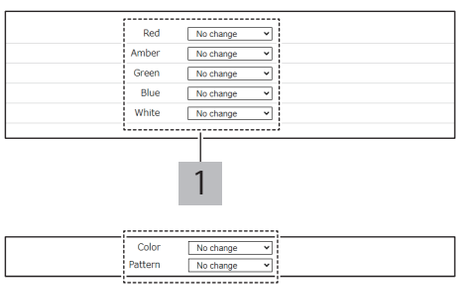
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

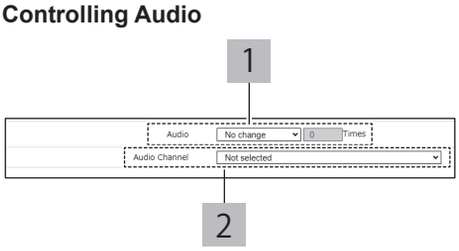
Controlling Signal Tower Lights on This Product



■ Controlling Audio

To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

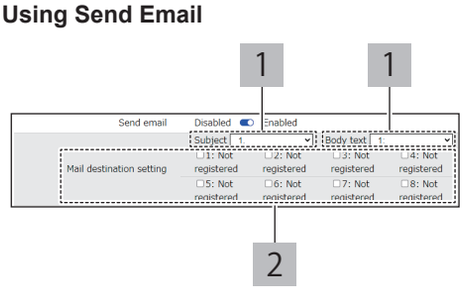


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

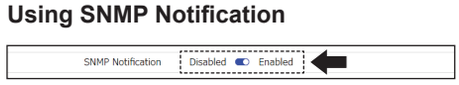
Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

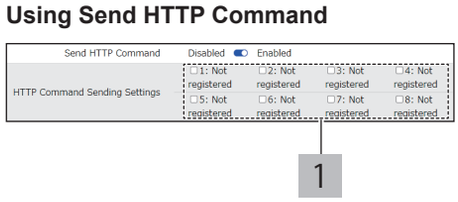
Using SNMP Notification



■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

Using Send HTTP Command



1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

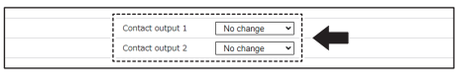
Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

Using Send MQTT

Using Contact Output



If you select [Read aloud the contents of the email]

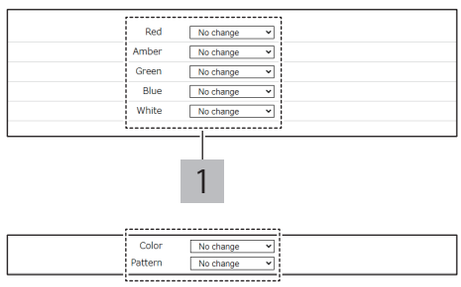
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

Controlling Signal Tower Lights on This Product



■ Settings of read aloud the contents of the email

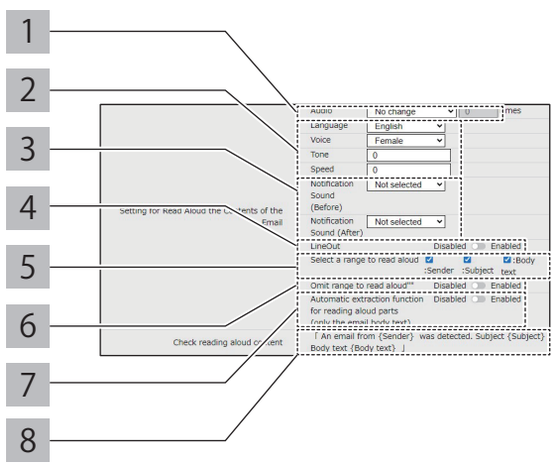
"5.3.20.1. Reading Aloud Email Contents" (☞ page 70)

1	Select the audio from [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, also specify the number of times for it to play.
2	Set the [Language], [Speed], [Voice], and [Tone] values. • With the [Language] setting, read aloud text in Japanese or English or Chinese (Mandarin). • With the [Voice] setting, read aloud text in a male or female voice. Also, by decreasing the [Tone] value, read aloud text in a calmer voice. • With the [Speed] setting, read aloud text faster by increasing the value. Also, by decreasing the value, slow down the reading of text.
3	Set the values for [Notification Sound (Before)] and [Notification Sound (After)]. • If you do not want to set a notification sound, set it to [Unselected].
4	Select [Enable/Disable] for the line out.
5	Select the readout range selection from [Sender/ Subject/Body text].

6	Select [Enable/Disable] for omitting reading aloud in [Read aloud range].
	• When set to disabled, it will be read aloud as follows.
	  • To read aloud the "Sender": read aloud "Email received from" before the "Sender" of the email.
	  • To read aloud the "Subject": Before reading aloud the content of "Subject" of the email, read aloud "Subject".
	  • To read aloud the "Body Text": Before reading aloud the content of "Body Text" of the email, read aloud "Body Text".

7	Select [Enable/Disable] for the automatic extraction function of reading parts.
8	The content to be read out will be displayed. Please check if the contents are correct. (The displayed language differs depending on the settings in 2 "Language")

Settings of read aloud the contents of the email



■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output

Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

If you select [Control by the contents of the email]

■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

■ Using SNMP Notification

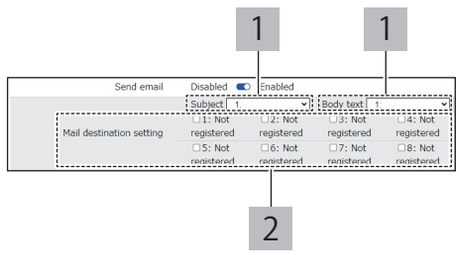
Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

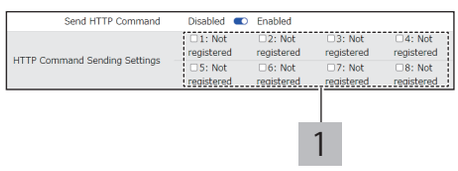
1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send Email



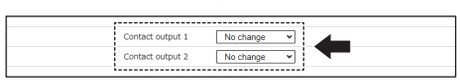
Using SNMP Notification

Using Send HTTP Command

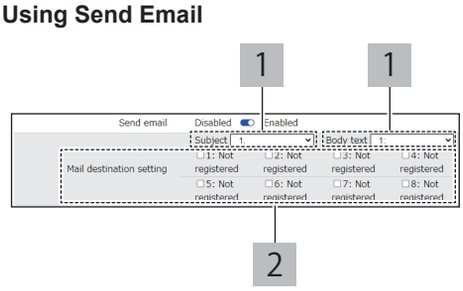


Using Send MQTT

Using Contact Output

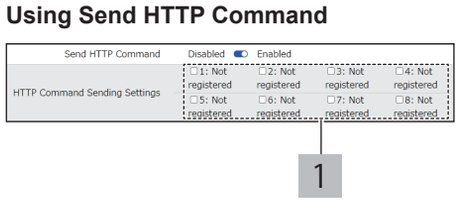


Using Send Email



Using SNMP Notification

Using Send HTTP Command



■ **Using Send MQTT**

Before using Send MQTT, the Cloud function must be enabled.

"8.2. Using the Cloud" (☞ page 144)

■ **Using Contact Output**

Before using contact output, the Contact Output Function must be [Enabled].

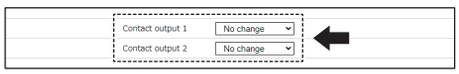
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

8 Click [Set] to apply the defined settings.

- For each condition, click the [Set] button to apply the defined settings to the product. Multiple conditions cannot be updated at one time.

Using Send MQTT

Using Contact Output



8.4.7. Monitor PLC Equipment

・Configure settings for monitoring PLC equipment.

・For detailed explanations of each setting item, refer to "9.3.6. PLC Communication Function Settings" (☞ page 317).

・The following PLCs have been tested for operation.

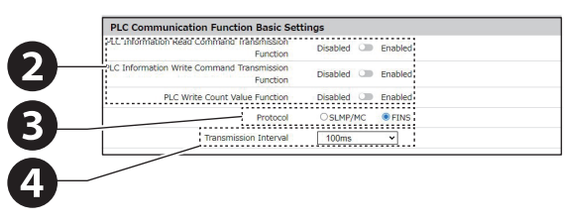
Manufacturer	Protocol	Series Name/CPU Unit Name
Mitsubishi Electric	SLMP(MC)	MELSECiQ-R series, iQ-F series, Q series, L series
Omron	FINS	CP2E, CJ2, NX1

*Not all device types and ranges from each company are supported.
*For details, please refer to the instruction manual of each PLC device.
*When using a sequencer manufactured by Mitsubishi Electric, set the sequencer as follows before using it.
・Communication data code settings: Set to "Binary code communication"
・Open method: Set to "MC protocol"
・Set to "Allow write during RUN"

8.4.7.1. Perform Basic Settings

1. From the [Monitoring Settings] tab, click [Basic Settings] of [PLC Linkage Function Settings] to enter the [PLC Linkage Function Basic Settings] screen.

2. Set Enable/Disable for various functions.



■ **When Using PLC Information Read Command Function**
When using PLC information read command function, it is necessary to set the PLC information read command function in advance.
"8.4.7.2. Setting PLC Information Read Command Function" (☞ page 241)

■ **When Using PLC Information Write Command Function**
When using PLC information write command function, it is necessary to set the PLC information write command function in advance.
"8.4.7.3. Setting PLC Information Write Command Function" (☞ page 243)

■ **When Using PLC Information Write Command Transmission Function**
When using PLC Information Write Command Transmission Function, it is necessary to set the PLC Information Write Command Transmission Function in advance.
"8.4.7.4. Setting Count Value Write Function to the PLC" (☞ page 244)

3. Select the protocol from [SLMP(MC) / FINS].

・You cannot select both.

4. Select the transmission interval from [10 ms / 50 ms / 100 ms].

5

Set the operation when an error data is acquired by the PLC information read command.

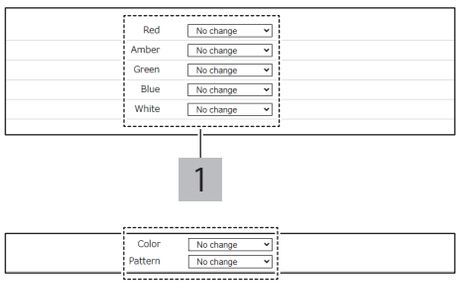
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

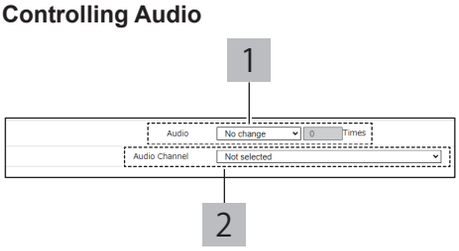
Controlling Signal Tower Lights on This Product



■ Controlling Audio

To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

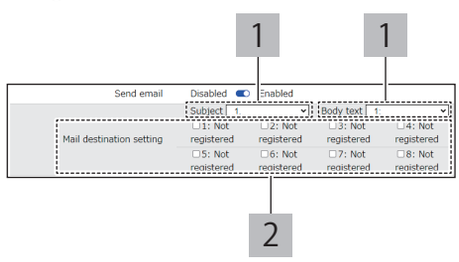


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

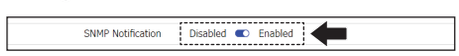
Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

Using SNMP Notification

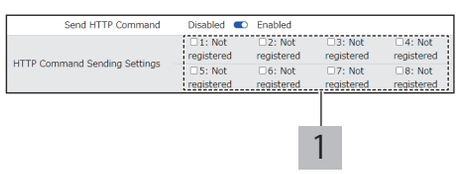


■ Using Send HTTP Command

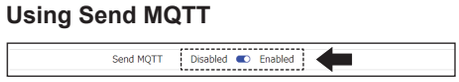
Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send HTTP Command



Using Send MQTT



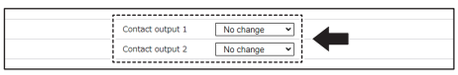
■ Using Send MQTT
Before using Send MQTT, the Cloud function must be enabled.

"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output
Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

Using Send MQTT

Using Contact Output

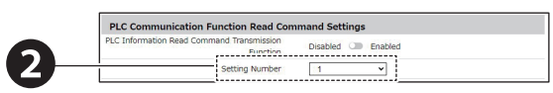


8.4.7.2. Setting PLC Information Read Command Function

1 From the [Monitoring Settings] tab, click [PLC Information Read Command Settings] of [PLC Linkage Function Settings] to enter the [PLC Information Read Command Settings] screen.

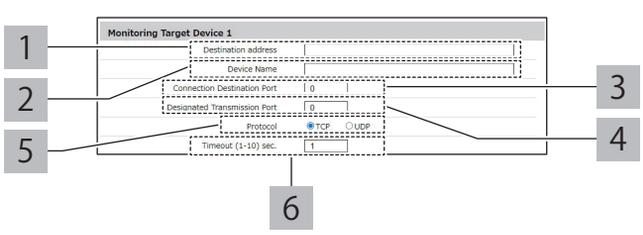
2 In the [PLC Information Read Command Settings] screen, select the setting number of the PLC Information Read Command Settings.

・You can register up to 16 settings.

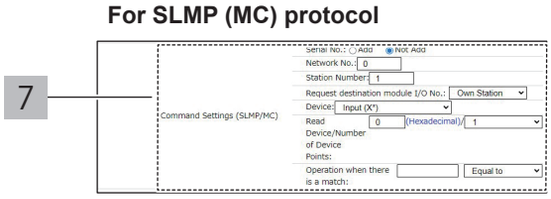


3 Set the monitored devices.

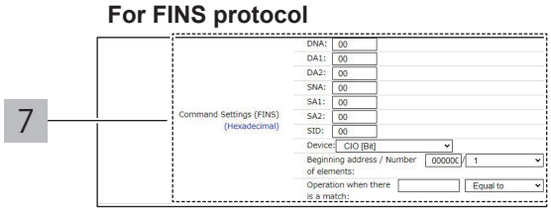
1	Set the connection destination address.
2	Set the device name.
3	Set the connection destination port.
4	Set the source port.
5	Select the protocol from [TCP / UDP].
6	Set the timeout from 1 to 10 seconds.
7	Set each item. <For SLMP (MC) protocol> Serial number: Add / Do NOT add Network number Station number Request unit I/O number : Local station / Management CPU / CPU1 to CPU4 device Reading device / Number of reading points Operation for when the condition matches <For FINS protocol> DNA DA1 DA2 SNA SA1 SA2 SID Device Start address / Number of elements Operation for when the condition matches



For SLMP (MC) protocol



For FINS protocol



4 Set the operation when the condition matches by the PLC information read command.

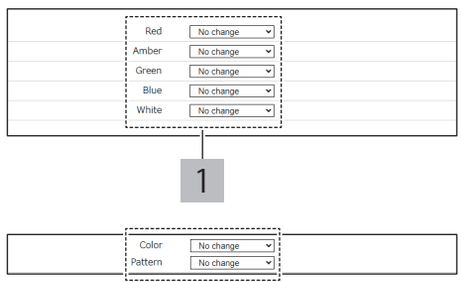
■ Controlling Signal Tower Lights on This Product

Depending on the selections in [Basic Settings] - [Additional units], setup items may differ.

In [Additional units], [Not Used] is selected	
1	For each Signal Tower light ([Red], [Amber], [Green], [Blue], and [White]), select [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

In [Additional units], [Multi-color unit] is selected	
1	Select the color, [Red], [Amber], [Green], [Blue], [White], [Purple], [Light blue], or [No change].
2	Select the pattern, [OFF], [Continuous ON], [Flashing pattern 1], [Flashing pattern 2], [Flashing pattern 3], [Flashing pattern 4], or [No change].

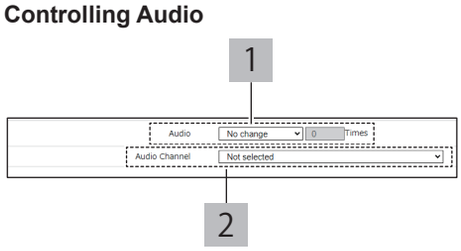
Controlling Signal Tower Lights on This Product



■ Controlling Audio

To play audio other than the presets, the audio needs to be registered."7.16. Setting Up Voice Registration" (☞ page 128)	
1	Select the audio, [Stop], [One-shot playback], [Repeat playback], or [No change]. • When [Repeat playback] is selected, specify the number of times for it to play.
2	From [Audio Channel], specify the audio channel to play.

Controlling Audio

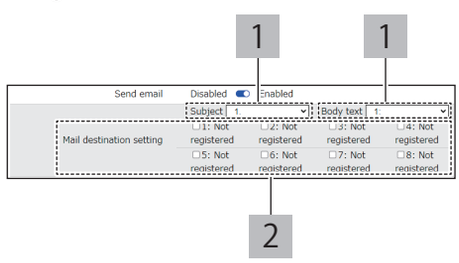


■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

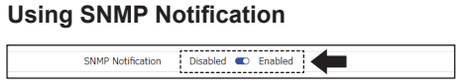
Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

Using SNMP Notification

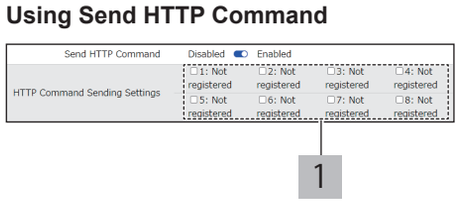


■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send HTTP Command



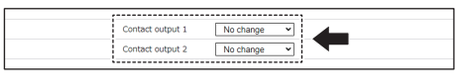
■ Using Send MQTT
Before using Send MQTT, the Cloud function must be enabled.

"8.2. Using the Cloud" (☞ page 144)

■ Using Contact Output
Before using contact output, the Contact Output Function must be [Enabled].
"8.1.4. Setting Up Contact Output Settings" (☞ page 143)

Using Send MQTT

Using Contact Output

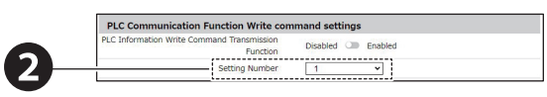


8.4.7.3. Setting PLC Information Write Command Function

1. From the [Monitoring Settings] tab, click [PLC Information Write Command Settings] of [PLC Linkage Function Settings] to enter the [PLC Information Write Command Settings] screen.

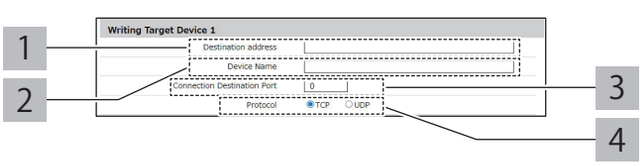
2. In the [PLC Information Write Command Settings] screen, select the setting number of the PLC Information Write Command Settings.

・You can register up to four settings.

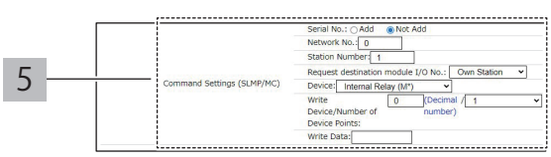


3. Set the monitored devices.

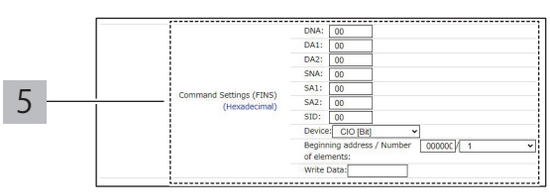
1	Set the connection destination address.
2	Set the device name
3	Set the connection destination port.
4	Select the protocol from [TCP / UDP].
5	Set each item. <For SLMP (MC) protocol> Serial number: Add / Do NOT add Network number Station number Request unit I/O number Device Writing device / Number of writing points Write data <For FINS protocol> DNA DA1 DA2 SNA SA1 SA2 SID Device Start address / Number of elements Write data



For SLMP (MC) protocol



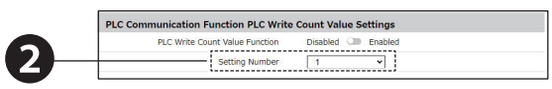
For FINS protocol



8.4.7.4. Setting Count Value Write Function to the PLC

1 From the [Monitoring Settings] tab, click [PLC Count Value Write Settings] of [PLC Linkage Function Settings] to enter the [PLC Count Value Write Settings] screen.

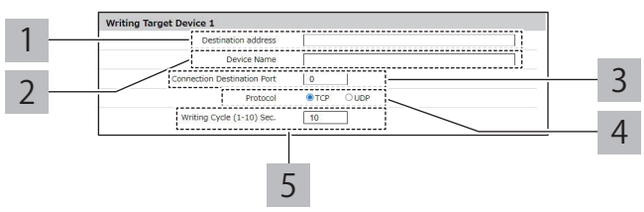
2 In the [PLC Count Value Write Settings] screen, select the setting number of the PLC Count Value Write Settings.



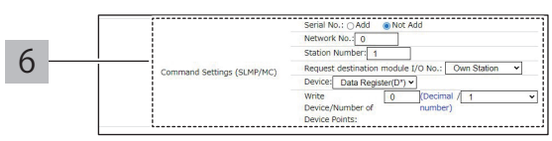
・You can register up to four settings.

3 Set the monitored devices.

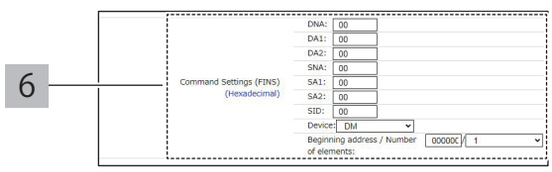
1	Set the connection destination address.
2	Set the device name.
3	Set the connection destination port.
4	Select the protocol from [TCP / UDP].
5	Set the write cycle in the range of "1 to 10 seconds."
6	Set each item. <For SLMP (MC) protocol> Serial number: Add / Do NOT add Network number Station number Request unit I/O number Device Writing device / Number of writing points <For FINS protocol> DNA DA1 DA2 SNA SA1 SA2 SID Device Start address / Number of elements



For SLMP (MC) protocol



For FINS protocol



8.5. Doing Maintenance

8.5.1. Checking the Product Settings

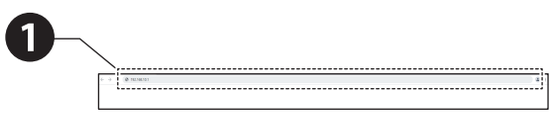
- You can check the product settings and product status from the home screen and status LED on the main unit.
- On the home screen, you can check the main unit information and list of current settings.
- This section describes how to display the home screen.

8.5.1.1. Screen Display Procedure

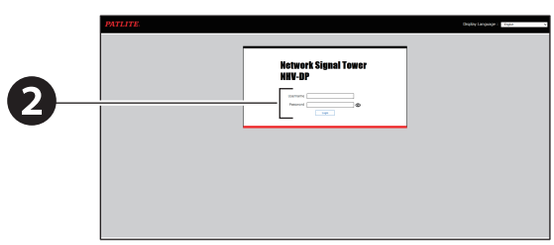
● Go to the Setup Screen

Before Logging in to the Web Setup Screen

1. From a Web browser, enter the IP address of this product.
   - If this product is being used for the first time, or if the product is initialized, refer to "7. Before Use" (☞ page 105).

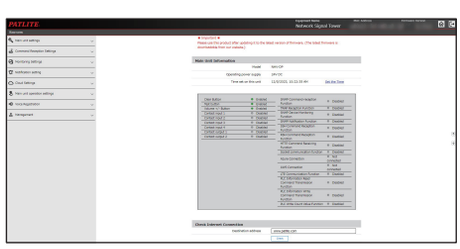


2. On the login screen, enter the user name and password, and click the [Login] button.



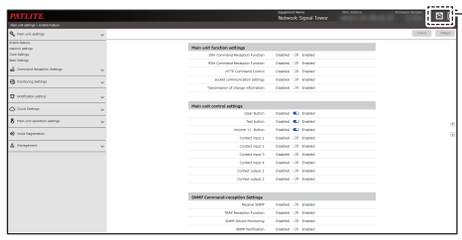
3. The Home screen appears.

Home Screen



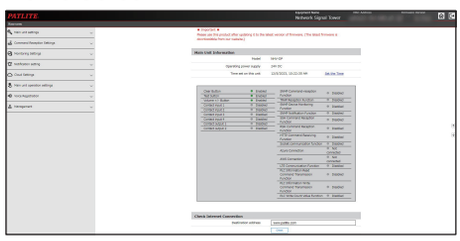
When Logged in to the Web Setup Screen

1. In the upper right corner of the current Web Setup Screen, press the button .

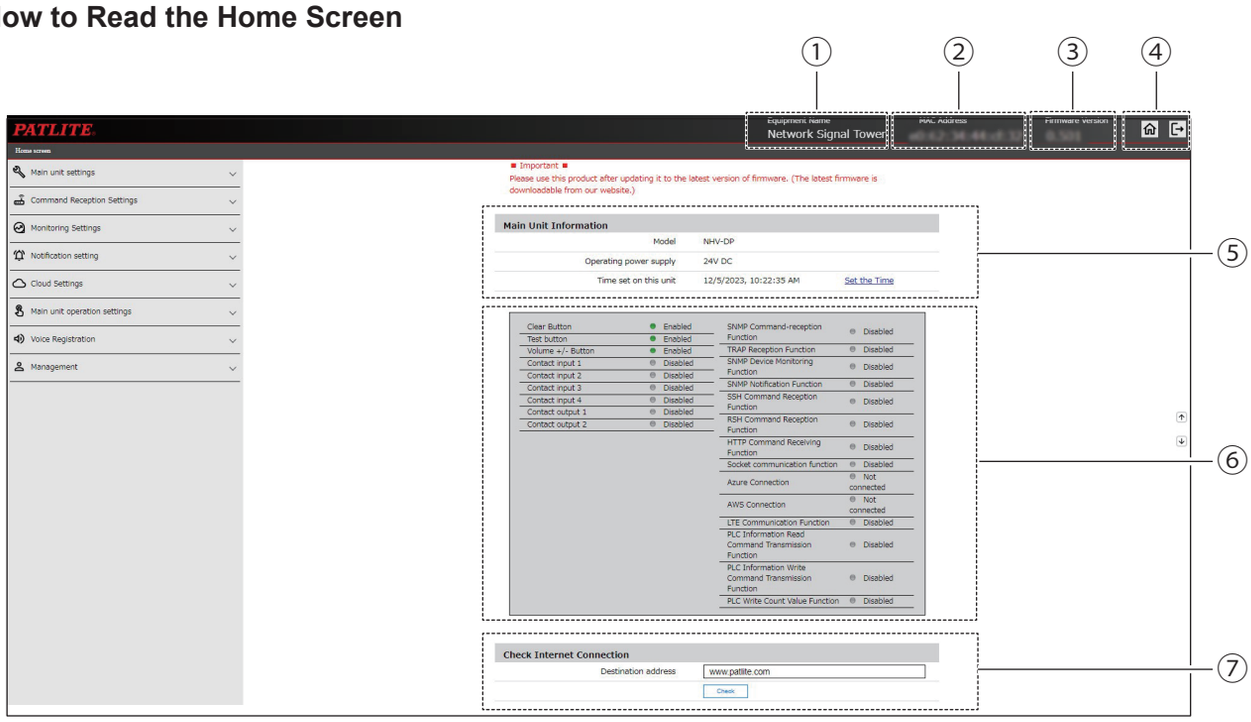


2. The Home screen appears.

Home Screen



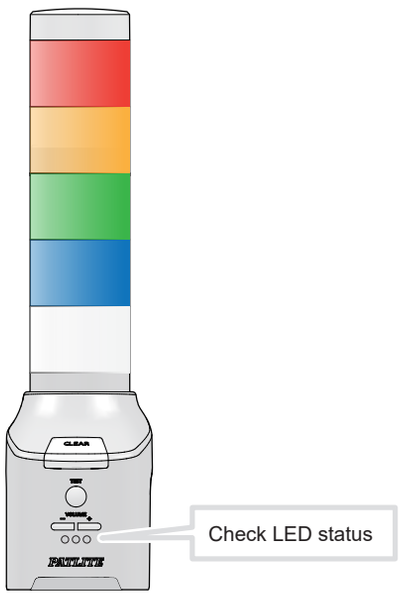
● How to Read the Home Screen



No.	Name	Description
①	Equipment Name	Indicate the equipment name registered in Basic Settings - Main unit settings.
②	MAC Address	Check the MAC Address on the product.
③	Firmware Version	Check the firmware version that the product is currently using.
④	Button	There are the home button and the logout button in the home screen.
⑤	Main Unit Information	Check the product model name, operating power supply, and clock.
⑥	Product Function List	Check the setup status of each function.
⑦	Internet connection check	You can check whether the product is connected to the Internet. For information, refer to "8.5.1.3. How to Check the Internet Connection" (☞ page 248).

8.5.1.2. Using Status LED to Check the Status of this Product

You can check the product status by checking the status LED on the main unit.



LED Status	Description
Blue light	Product is operating.
Green light	Product is starting up.
Flashing Red	Product is in an error state.
Magenta light	Product initialization is complete.
Amber light	Product changed to DHCP mode.
Flashing Cyan / Cyan light	Flashing: Configuration, sound package write, or firmware upload is in progress. Light on: Above running completed.
Flashing Blue / Blue light	Flashing: Loading event log, config, audio package is in progress. Light on: Above running completed.

Point

● For information on DIP Switches operation processes, refer to the following.

- "7.1. Enabling DHCP Function" (☞ page 106)
- "8.5.2.2. Initialization with DIP Switches" (☞ page 250)
- "8.5.7.2. Reading Configuration and Sound Packages Using USB Memory" (☞ page 259)
- "8.5.7.4. Writing Configuration and Sound Packages Using USB Memory" (☞ page 261)
- "8.5.8.2. Updating Firmware Using USB Memory" (☞ page 263)
- "8.5.9.3. Downloading Log Using USB Memory" (☞ page 265)

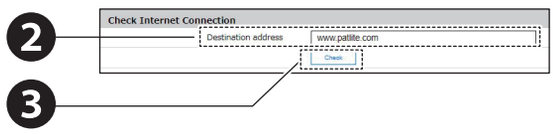
8.5.1.3. How to Check the Internet Connection

You can check whether the product is connected to the Internet.

1. Click "Check Internet Connection" on the "Main unit settings" tab to move to the home screen.

2. Enter the connection destination address.

- The default value is entered as "www.patlite.com."
- Input methods that can be entered are host name and IPv4 address format.

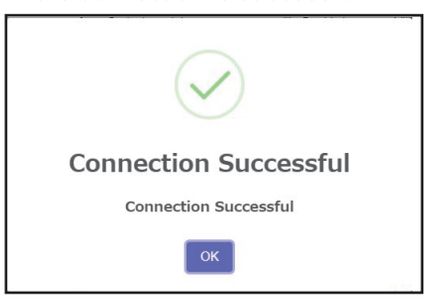


3. Click "Check Execute".

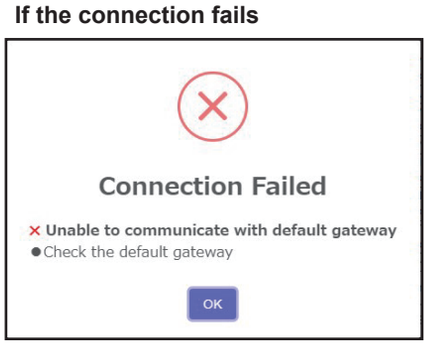
4. The connection result is displayed in a pop-up dialog.

- Check the contents and click the [OK] button.
- If the connection fails, the product is not connected to the Internet. Check the displayed message and take action.

If the connection is successful



If the connection fails



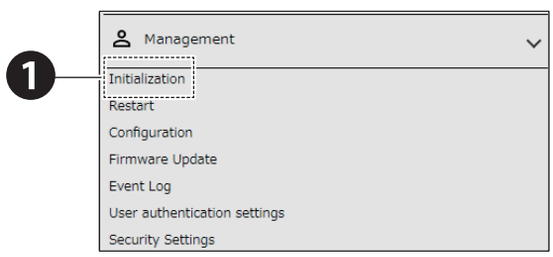
8.5.2. Initializing This Product

- From the Web Setup Screen, you can initialize the settings of the product.
  For information on setup items, refer to "9.8.1. Settings Initialization" (☞ page 360).
- Using DIP switches, you can perform operations such as initialize network settings only, or resetting to the factory default state.

8.5.2.1. Initialization on the Web Setup Screen

1 From the [Management] tab click [Initialization], to enter the [Initialization] screen.

- If the current setting information is required, extract the configuration data beforehand.
  "8.5.7.1. Extracting the Configuration" (☞ page 258)
- If the log is required, download the Event Log beforehand.
  "8.5.9.2. Downloading the Log" (☞ page 264)



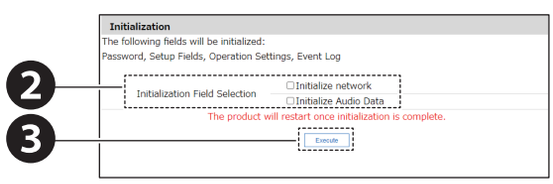
2 Select the required initialization items.

■ **Initialize Including Network Settings**

- Select the [Initialize network] check box.
- [Network Settings] refer to items in the [Network Settings] screen, such as [IP Address], [Subnet Mask], [Prefix length], [Default Gateway], [DNS Server Address], and [Host Name].
- When network settings are also initialized, as the IP address is reset to the factory default, network settings have to be set up again.

■ **Initializing Audio Registered in [Voice Registration] Screen**

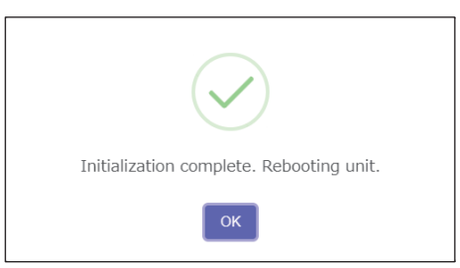
- Select the [Initialize Audio Data] check box.
- Audio data registered from the Web Setup Screen is erased when initialization is executed.



3 Click the [Execute] button.

4 Settings are initialized.

- After settings are initialized, the product is automatically restarted.



8.5.2.2. Initialization with DIP Switches

⚠ WARNING

- Before any work is done, disconnect the power.

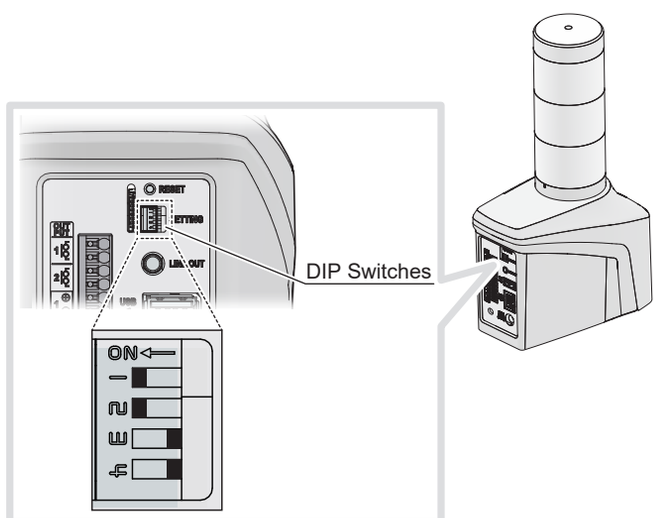
⚠ CAUTION

- Do not use excessive force on this product. Failure to follow this instruction could result in deformed frame and product damage.
- Do not use sharp tipped objects with this product. Operation may become impossible as scratches develop on switches and switch contacts are interfered with.
- Do not set the DIP switch ON if it is not required.

1 Turn off the power on the product.

2 Set DIP switches ON in accordance with how much to initialize.

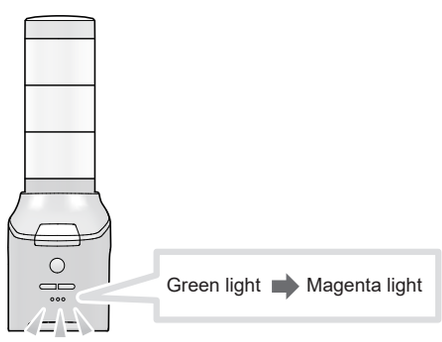
Switch Number	Initialize only Network Settings	Initialize and Return to Factory Default Settings
1	ON	ON
2	ON	ON
3	OFF	ON
4	OFF	ON



3 Power up the product.

4 Settings are initialized.

- When initialization is complete, the status LED changes from Green to Magenta.
- In NHV Series, following messages are played at the initializing.
  ● Initializing only Network settings
  "The network setup was initialized. Return the setting switch and reboot the main unit."
  ● Initializing and Returning to Factory Default Settings
  "The setting has been initialized. Return the setting switch and restart the main unit."



5 After initialization is complete, turn the power off.

6 Reset all the DIP switches OFF.

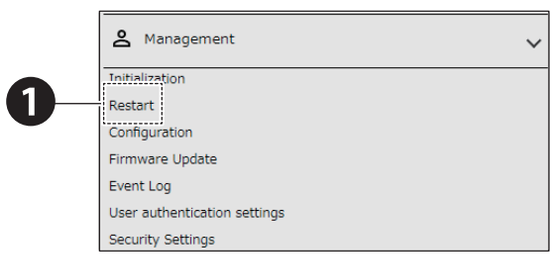
- As required, start up and set up the product.

8.5.3. Restarting this Product

- You can restart this product from the Web Setup Screen. For information on setup items, refer to "9.8.2. Restart" (☞ page 361).
- You can also restart this product with the Reset button.
- To prevent accidental operation, the Reset button is located on the back of the product, inside a hole.

8.5.3.1. Restarting from the Web Setup Screen

1. From the [Management] tab click [Restart] to enter the [Restart] screen.

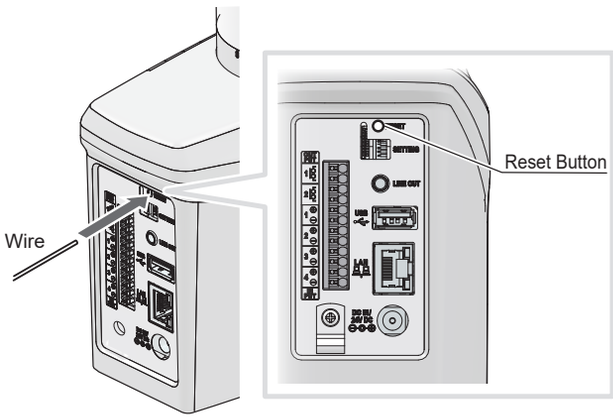


2. Click the [Restart] button.

3. Restarting begins.

8.5.3.2. Restarting with the Reset Button

1 On the back of the main unit, press the Reset Button with a wire about 1 mm in diameter (such as a straightened paper clip).



- Do not press too hard. Failure to follow this instruction could result in equipment damage.
- Pressing the Reset button restarts the system, however, all output terminal blocks are open during this time.
  Be cautious when pressing the Reset button while the system is in operation.
- Do not use excessive force on this product.
  Failure to follow this instruction could result in deformed frame and product damage.
- Do not use sharp tipped objects with this product.
  Operation may become impossible as scratches develop on switches and switch contacts are interfered with.

2 Restarting begins.

- For action in restarting, refer to "6.6.3. Checking at Startup" (☞ page 104).

8.5.4. Changing the Sound Volume

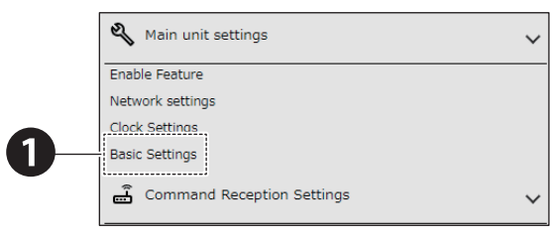
- From the Web Setup Screen, change the volume all at once of all channels played by all playback events on this product.
- Change the volume separately for the speaker and line out.
- For information on setup items, refer to "9.1.5. Basic Settings" (☞ page 277).
- For buzzer and speaker volume, change the volume using the volume buttons on the front of the speaker.
- On the NHB, adjust the speaker volume from three levels.
- On the NHV, adjust the volume on both speaker and line out from 16 levels.

⚠ CAUTION

If audio is distorted or cracked, turn down the volume.
Failure to follow this instruction could result in speaker damage.

8.5.4.1. Adjusting the Volume on the Web Setup Screen

1. From the [Main unit settings] tab, click [Basic Settings] to enter the [Basic Settings] screen.



2. In the [Basic Settings] screen, use the slider to adjust the speaker volume.

■ Changing the Buzzer Volume NHB Series

- In the [Main Unit Information] screen, use the pull-down to adjust the line out volume.

■ Changing the Speaker Volume NHV Series

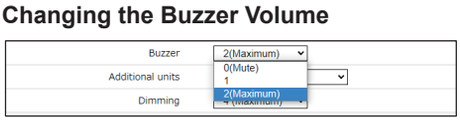
- In the [Main Unit Information] screen, use the slider to adjust the speaker volume.
- To mute the volume, select the [Mute] check box to the right of the slider.
  Turning off the power or restarting disables mute.

■ Changing the Line Out Volume NHV Series

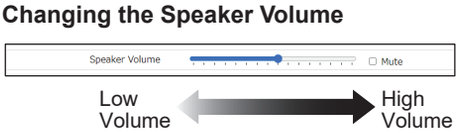
- In the [Main Unit Information] screen, use the slider to adjust the line out volume.

3. Click [Set] to apply the defined settings.

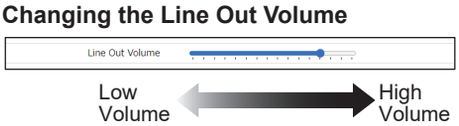
Changing the Buzzer Volume



Changing the Speaker Volume

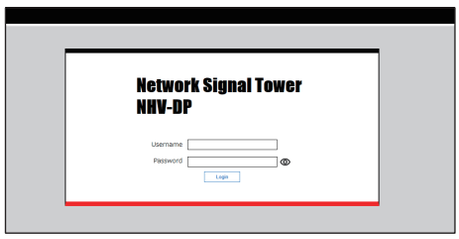


Changing the Line Out Volume

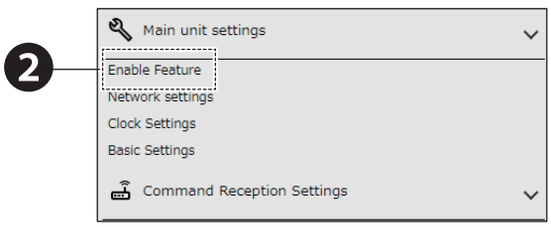


8.5.4.2. Adjusting the Volume with + / - Volume Control Buttons

1. Log in to the Web Setup Screen.

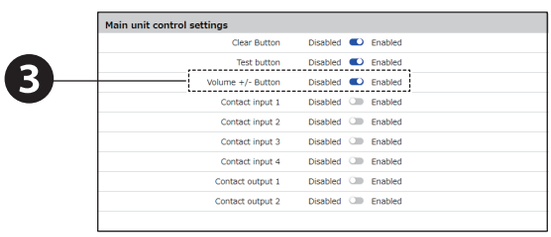


2. From the [Main unit settings] tab, click [Enable Feature] to enter the [Main unit control settings] screen.



3. In the [Main unit control settings] set [Volume +/- Button] to [Enabled].

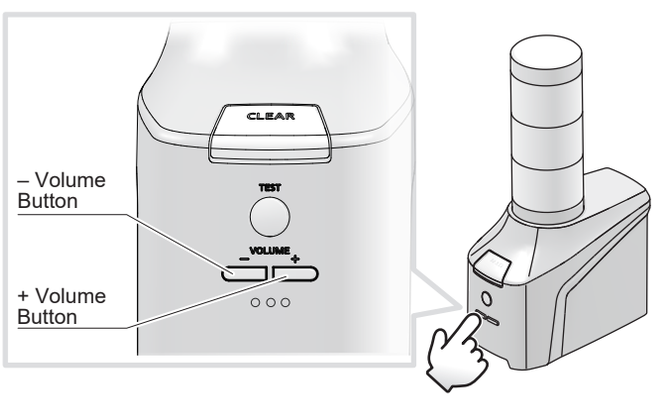
4. Click [Set] to apply the defined settings.



5. Press the +Volume and -Volume buttons on the main unit to adjust the volume.

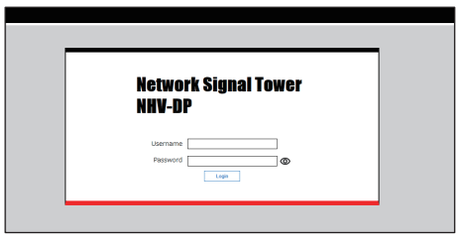
- Press the +Volume button to increase the volume by 1.
- Press the -Volume button to decrease the volume by 1.
- Each press of the button changes the volume one time.
- When adjusting the volume, the following sound is emitted .

	Adjusting (min.)	Adjusting	Adjusting (max.)
NHV Series	None	"Pop"	Double "Pop"
NHB Series	None	"Beep"	

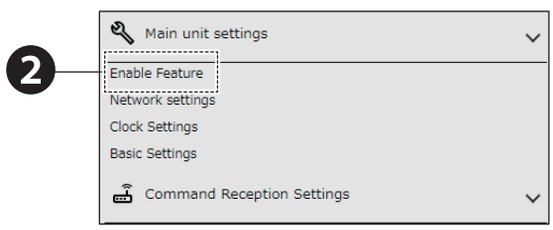


8.5.4.3. Muting the Volume NHV Series

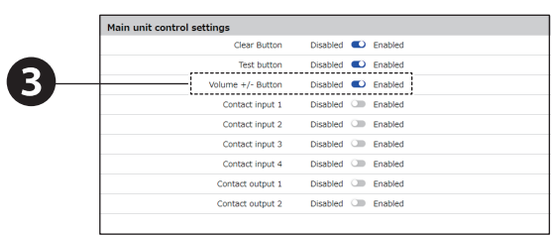
1. Log in to the Web Setup Screen.



2. From the [Main unit settings] tab, click [Enable Feature] to enter the [Main unit control settings] screen.



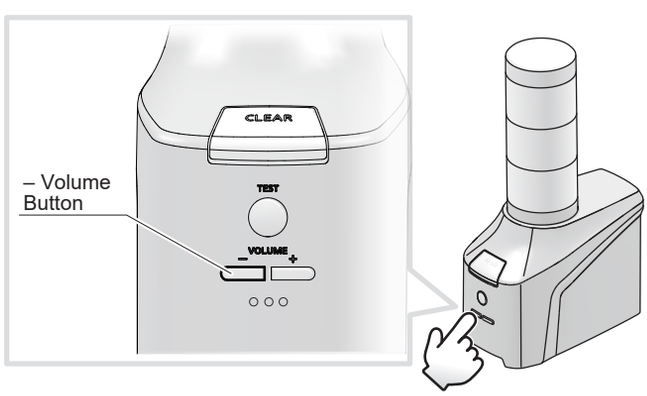
3. In the [Main unit control settings] set [Volume +/- Button] to [Enabled].



4. Click [Set] to apply the defined settings.

5. Press and hold the -Volume button on the main unit for at least two seconds to mute the volume.

- When muted, the status LED flashes blue three times.
- Press the +Volume button to disable mute.
- Turning off the power or restarting disables mute.

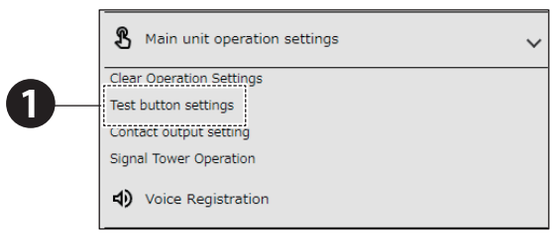


8.5.5. Verifying the Self-test Operation

- You can set the operation for when the Test button is pressed from the Web Setup Screen.
- For information on setup items, refer to "9.6.2. Test Button Setting" (☞ page 351).

8.5.5.1. Enabling the Test Button Function

1 From the [Main unit operation settings] tab, open [Test button settings].



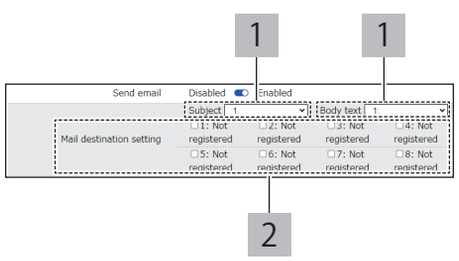
2 Set a notification for when the Test button is pressed.

■ Using Send Email

To send email, setting up email notifications and email content is required.
"8.1.2. Setting Up Email Notification Settings" (☞ page 138)

1	Select the Subject and Body text.
2	Select the email recipients. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

Using Send Email



■ Using SNMP Notification

Before using SNMP notification, the SNMP Notification Function must be [Enabled].
"8.1.1. Setting Up SNMP (Trap Inform) Notification Settings" (☞ page 134)

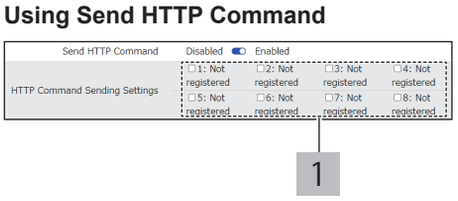
Using SNMP Notification

■ Using Send HTTP Command

Before sending HTTP Commands, the HTTP Command must be registered.
"8.1.3. Setting Up HTTP Command Sending Settings" (☞ page 141)

1	Select the HTTP Command Destination. • You can select multiple recipients. • If the recipient is not registered, it will not be sent even when selected.

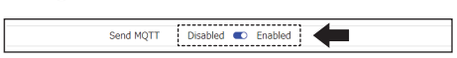
Using Send HTTP Command



■ Using Send MQTT

Before using Send MQTT, the Cloud function must be enabled.
"8.2. Using the Cloud" (☞ page 144)

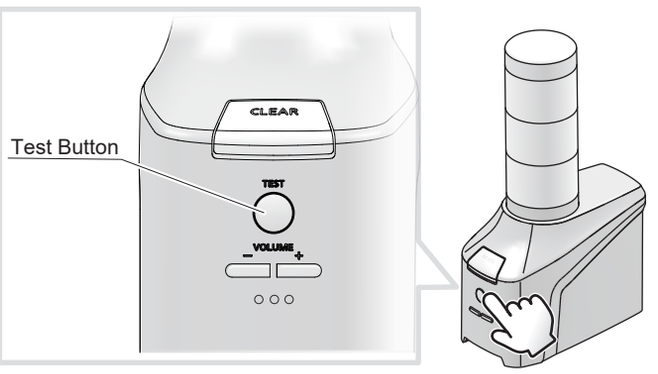
Using Send MQTT



3 Click [Set] to apply the defined settings.

4 Press the Test button.

The test operation is started.
・After test operation, press the clear button to return to normal operation.

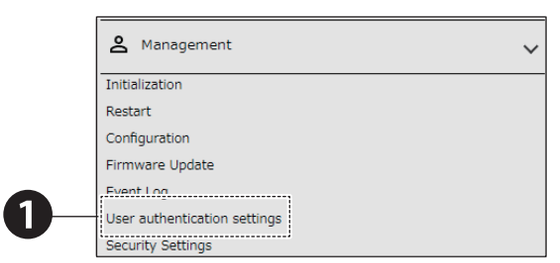


8.5.6. Changing User Authentication Settings

・You can edit passwords for logging in to this product.
・After completing setup, you can use the passwords from the next login.
・For information on setup items, refer to "9.8.6. User Authentication Settings" (☞ page 365).

8.5.6.1. User Authentication Settings

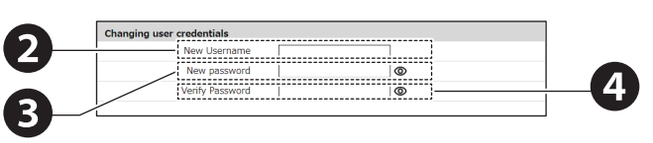
1 From the [Management] tab, click [User authentication settings] to enter the [Changing user credentials] screen.



2 In [New Username], set a new user name.

3 In [New password], set a new password.

4 In [Verify Password], enter the set password.



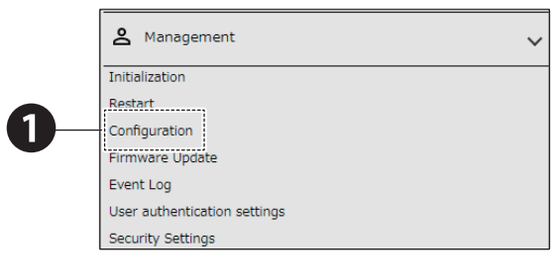
5 Click [Set] to apply the defined settings.

8.5.7. Exporting and Importing Product Settings (Configuration)

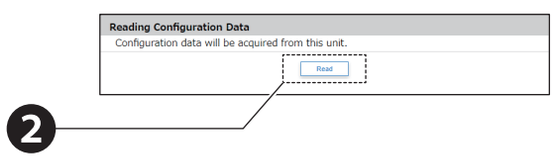
- You can extract the product settings and save them to your computer as configuration data.
- There are two files of config data that can be extracted: operation setting information (config.ini) and audio data (sound_cfg.json, NHV series only).
- Select configuration data extracted from the product for writing.
- For information on setup items, refer to "9.8.3. Configuration" (☞ page 362).

8.5.7.1. Extracting the Configuration

1 From the [Management] tab click [Configuration] to enter the [Reading Configuration Data] screen.



2 From [Reading Configuration Data], click [Read] to save the configuration data to your computer.



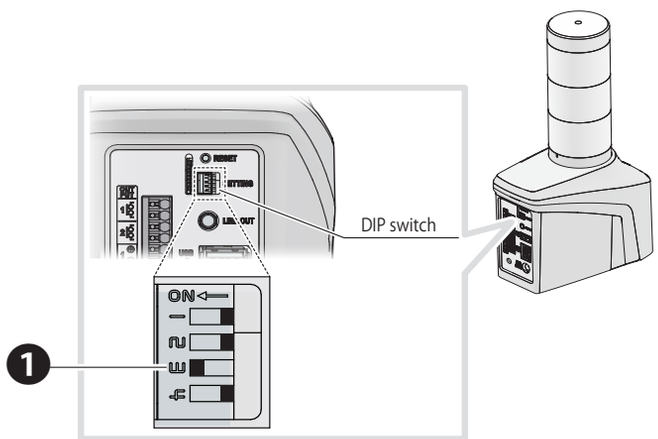
- The configuration data consists of operation settings registered in the main unit.
  The following content is not included in configuration data.
  - Network Settings
  - Cloud Settings
  - Security Settings
- If the multiple file download confirmation dialog is displayed, select "Allow".

8.5.7.2. Reading Configuration and Sound Packages Using USB Memory

- If the NH folder does not exist on the USB memory when the read function is executed, it is created automatically.
- The name of the configuration file saved on the USB memory is "config.ini" and the name of the sound package file is "sound.pkg".
- Sound package reading is only available for NHV series.
- For the detailed explanation of the USB memory function, please refer to "5.3.24. USB Memory Function" (☞ page 82).

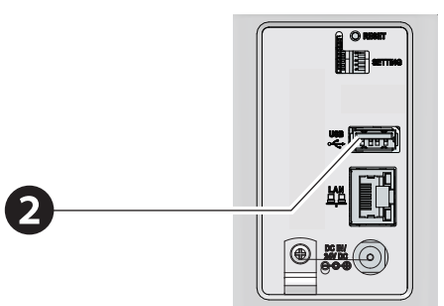
1 Turn ON DIP switch 3 while the product is in normal startup mode.

2 Plug in the USB memory.



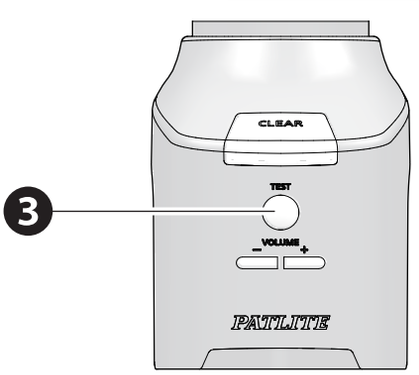
3 Press the Test button.

- Recognizing the USB memory may take some time. If the status LED turns red, wait 10 seconds and press the test button again.



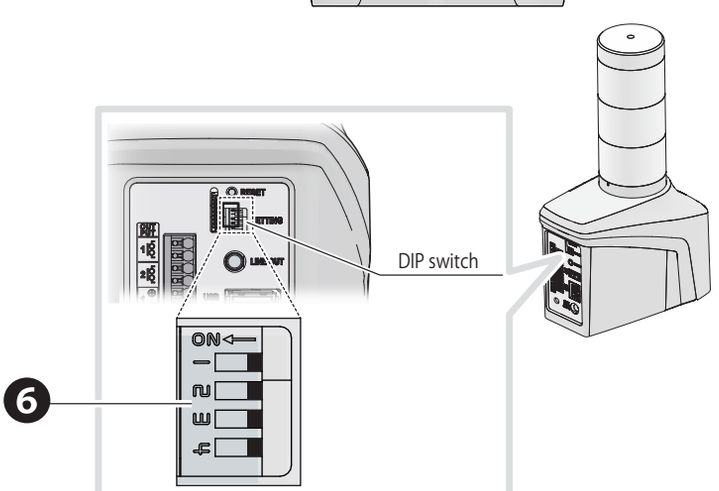
4 Configuration and sound package download begins, and the status LED starts flashing blue.

Note: Do not remove the USB memory while reading the configuration file or sound package file.
The files on the USB memory may be corrupted.



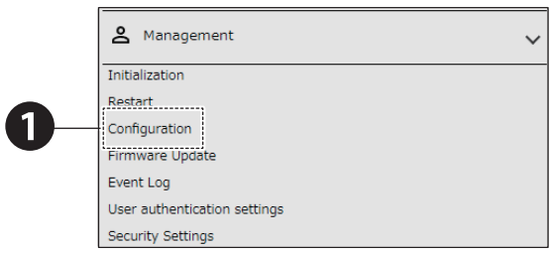
5 When the status LED changes from flashing to light on.
For the NHV series, the message "Saving setting data to USB memory is complete. Reset the DIP switches." is played.

6 remove the USB memory and turn off all DIP switches.



8.5.7.3. Writing to Configuration

＜ When writing configuration data ＞



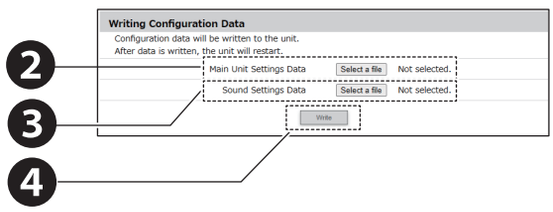
1 From the [Management] tab click [Configuration] to enter the [Writing Configuration Data] screen.

2 Click the [Select file] button in the device setting data of [Write configuration data], and select the configuration data you want to write to this product.

- You can carry forward not only NHB and NHV series settings, but also NH-FB and NH-FV series settings.

Note: Do not register configuration data from products other than those listed above. Failure to follow this instruction could result in product damage.

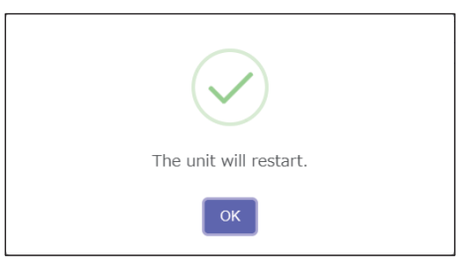
Note: If you write configuration data for the NH-FB series or NH-FV series, some functions may be enabled.



＜ When writing an audio package (NHV only) ＞

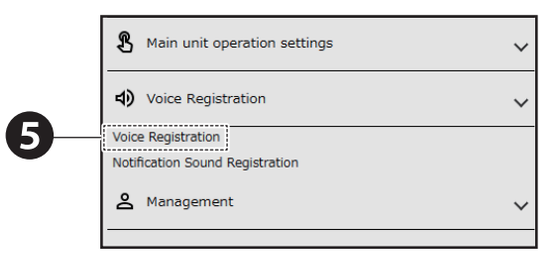
3 Select the audio package you want to write to this product by clicking the "Select file" button in the audio setting data of "Write config data".

- After the write is complete, the product restarts automatically.



4 From [Writing Configuration Data], click the [Write] button to begin the write operation.

- Old sound setting data (sound_cfg.json) can also be written.
  In that case, perform steps ❺ to ❼ after step ❹ .

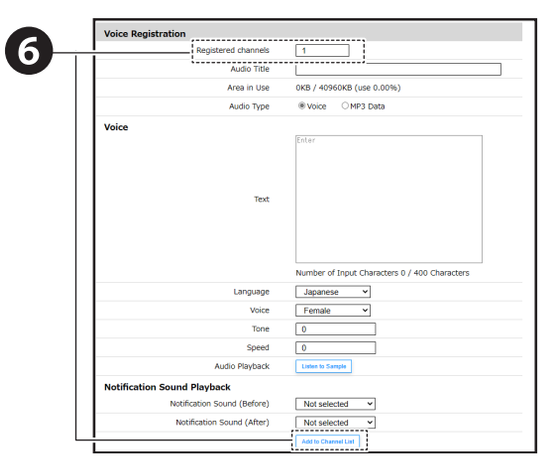


＜ When writing the old sound setting data (sound_cfg.json) ＞

5 When voice data is written, click [Voice Registration] to enter the [Voice Registration] screen.

6 Select the channel you want to register the voice and click the [Add to Channel List] button.

7 Click [Set] to apply the defined settings.



8.5.7.4. Writing Configuration and Sound Packages Using USB Memory

- For preparation, create an NH folder on the USB memory, and place the configuration file for writing "config_w.ini" and the sound package file "sound_w.pkg" in the conf folder.
- Three patterns of writing from USB memory are possible: configuration only, sound package only, and both configuration and sound package.
- Sound package writing is only available for NHV series.
- For the detailed explanation of the USB memory function, please refer to "5.3.24. USB Memory Function" (☞ page 82).

1 Turn off the power on the product.

2 Turn ON DIP switch 3.

3 Plug in the USB memory.

4 Power up the product.

5 After starting the main unit, press the Test button.

- For the NHV series, the system sound reads out the file to write after starting the main unit. Confirm that the file to write is correct before pressing the Test button.

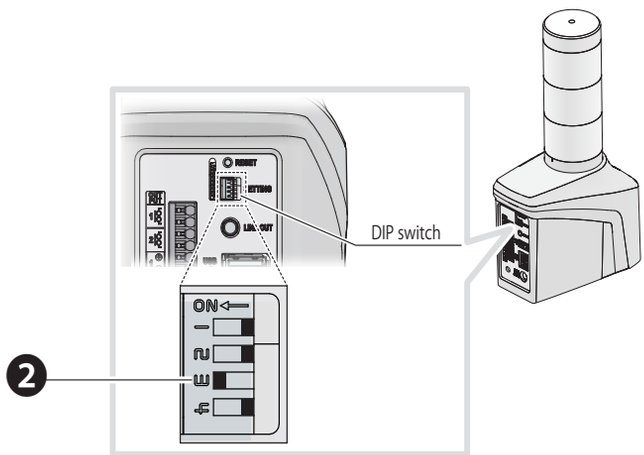
6 Uploading of configuration and sound packages begins, and the status LED starts flashing cyan.

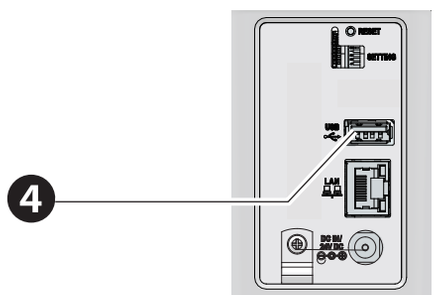
Note: Do not remove the USB memory while uploading the configuration file or sound package file.

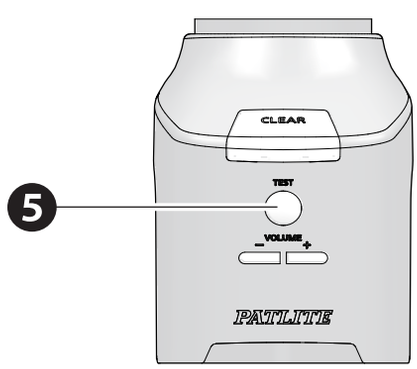
This product may not operate properly.

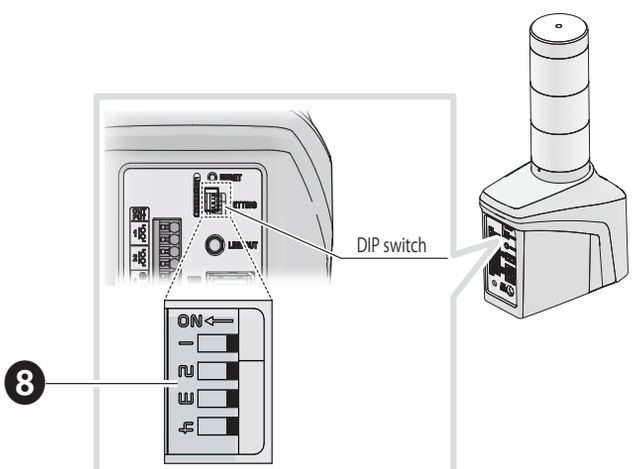
7 When the status LED changes from flashing to light on.
For the NHV series, the message "Writing is complete. Reset the DIP switches and restart the main unit." is played.

8 Remove the USB memory and turn off all the DIP switches.









8.5.8. Updating Firmware

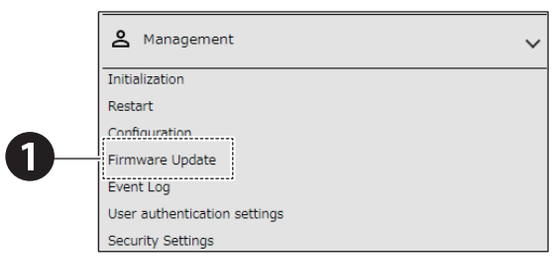
- You can update the product firmware by selecting the firmware saved to your computer or other location.
- For information on setup items, refer to "9.8.4. Updating Firmware" (☞ page 363).

⚠ CAUTION

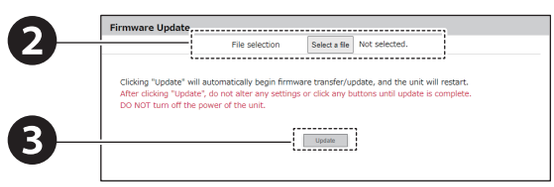
- While updating, do not disconnect the power or LAN cables.
  Failure to follow this instruction could result in product failure.
- Before updating, check the version and models supported by the firmware.
  Updating with unsupported firmware could result in equipment damage.

8.5.8.1. Updating Firmware

1. From the [Management] tab, click [Firmware Update] to enter the [Firmware Update] screen.



2. In the [Firmware Update] screen, click [Select a file] and select the firmware to write to this product.



3. Click [Execute] to start updating.

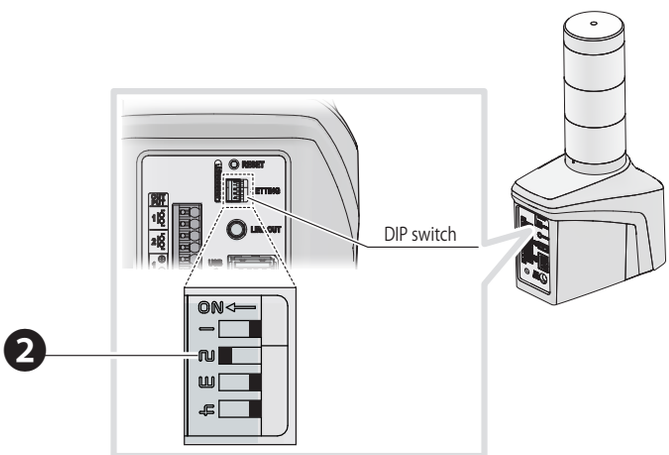
- After the update is complete, the product restarts automatically.

8.5.8.2. Updating Firmware Using USB Memory

- For preparation, create an NH folder on the USB memory and place the firmware update file "nh_update" in the update folder.
- For the detailed explanation of the USB memory function, please refer to "5.3.24. USB Memory Function" (☞ page 82).

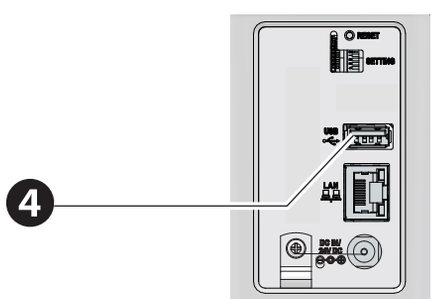
1. Turn off the power on the product.

2. Turn ON DIP switch 2.

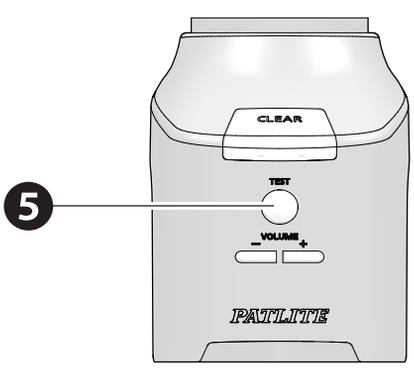


3. Plug in the USB memory.

4. Power up the product.



5. After starting up the main unit, confirm tha and press the Test button.
   - For the NHV series, after starting the main unit, the system sound plays "Execute updating the firmware. Press the TEST button.".
   - Recognizing the USB memory may take some time. If the status LED turns red, wait 10 seconds and press the test button again.

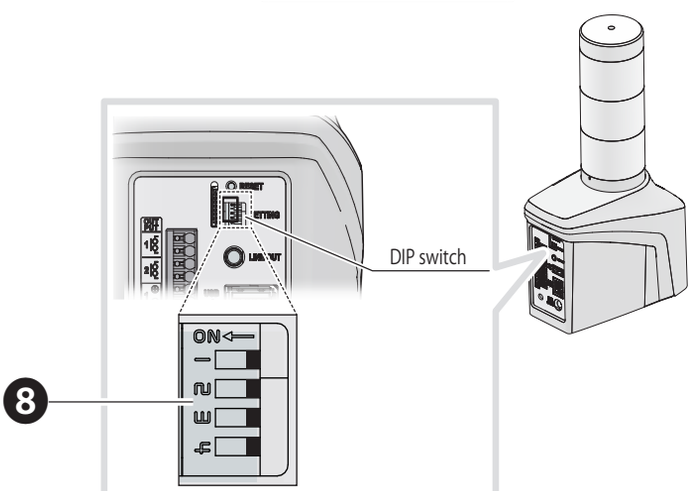


6. The firmware update begins and the status LED starts flashing cyan.

   Note: Do not remove the USB memory while uploading the configuration file or sound package file.

   This product may not operate properly.

7. When the status LED changes from flashing to light on.
   For the NHV series, the message "Firmware update complete. Reset the DIP switches and restart the main unit." is played.



8. Remove the USB memory and turn off all the DIP switches.

8.5.9. Checking the Event Log

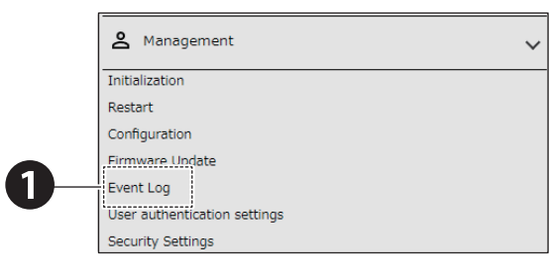
- Displays the product's event log.
- You can display the latest 100 logged events.
- You can click [Download Event Log] to download the event log file.
- The event log can have up to 1000 events.
- For information on setup items, refer to "9.8.5. Event Log" (☞ page 364).

⚠ CAUTION

⚠ The event log is cleared when the following operation is performed.
- From the [Initialization] screen, execute initialization
- Initialize and Return to Factory Default Settings in DIP Switches

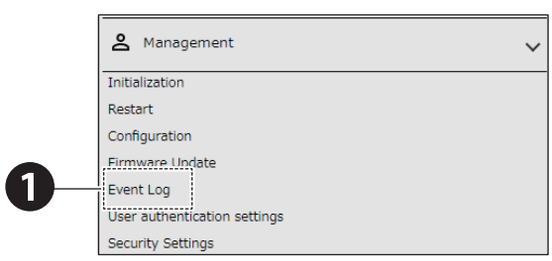
8.5.9.1. Displaying the Event Log

1. From the [Management] tab click [Event Log] to enter the [Event Log] screen.
   - The [Event Log] screen is displayed.

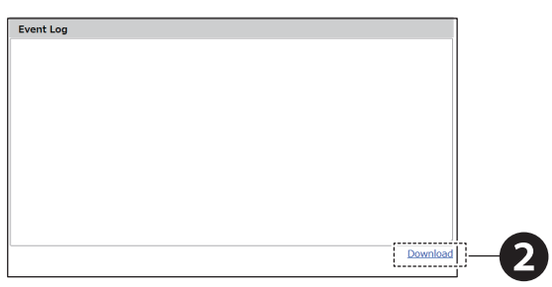


8.5.9.2. Downloading the Log

1. From the [Management] tab click [Event Log] to enter the [Event Log] screen.
   - The [Event Log] screen is displayed.



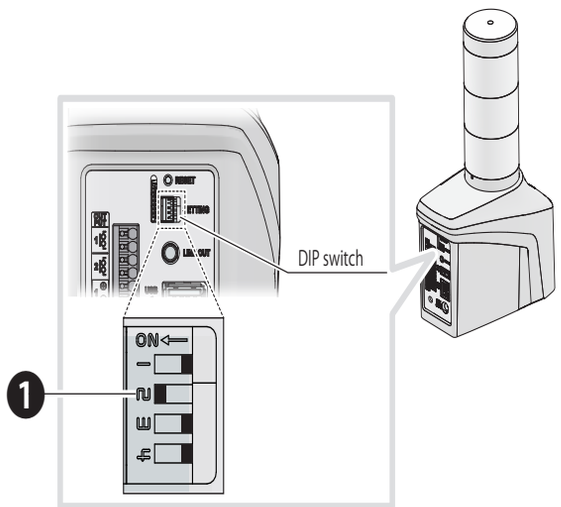
2. Click the [Download] button to download the event log file.



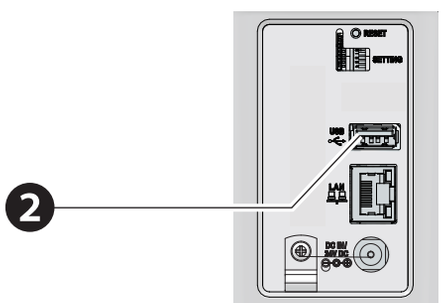
8.5.9.3. Downloading Log Using USB Memory

- If the NH folder does not exist on the USB memory when the download log function is executed, it is created automatically.
- The log file downloaded to the USB memory is named "log.txt".
- For the detailed explanation of the USB memory function, please refer to "5.3.24. USB Memory Function" (☞ page 82).

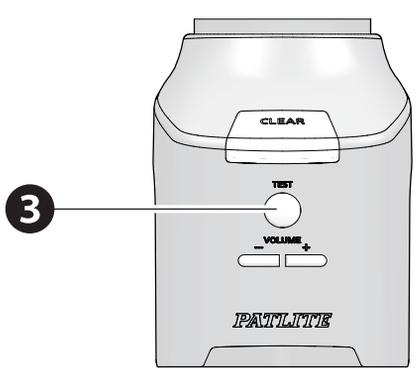
1 Turn ON DIP switch 2 while the product is in normal startup mode.



2 Plug in the USB memory.



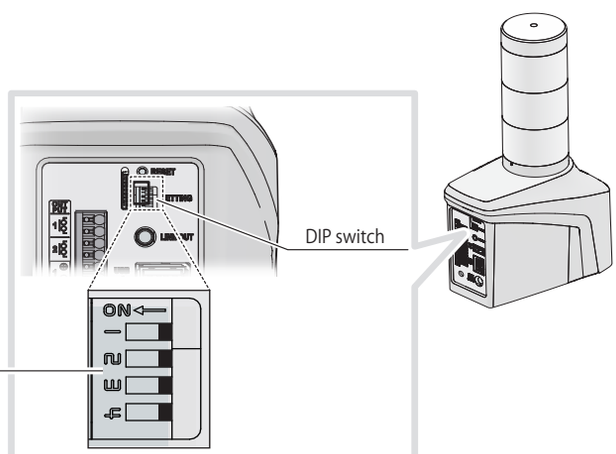
3 Press the Test button.



4 Log download begins, and the status LED starts flashing blue.

Note: Do not remove the USB memory while reading the configuration file or sound package file.
The files on the USB memory may be corrupted.

5 When the status LED changes from flashing to light on.
For the NHV series, the message "The event log has been saved to USB memory. Reset the DIP switches." is played.



6 Remove the USB memory and turn off all DIP switches.

8.5.9.4. Event Log contents

Displayed Event Name	coldStart	Displayed Event Contents	No Display
Event Details	Records from the start up time.		

Displayed Event Name	ACCESS	Displayed Event Contents	No Display
Event Details	Records at the moment of authentication failure. • At the moment of a Web login failure		

Displayed Event Name	MAIL	Displayed Event Contents	"send mail" "Mail sending failure" "SMTP authentication mail sending failure" "POP authentication mail sending failure"
Event Details	"send mail": It records at the moment of an E-mail transmission. "Mail sending failure" : It records at the moment of an E-mail transmission failure. "SMTP authentication mail sending failure" : It records at the moment of the SMTP authentication mail failure. "POP authentication mail sending failure": It records at the moment of the POP authentication mail failure.		

Displayed Event Name	TRAP	Displayed Event Contents	"received"
Event Details	"received" : It records when the registered Trap is received.		

Displayed Event Name	PING	Displayed Event Contents	"error occurred", the IP address, the registered number, and the group "error recovered", the IP address, the registered number, and the group *
Event Details	It records when the Ping monitor status changes. "error occurred" : It records with the target IP address and the target group when an abnormality event in the Ping monitor occurs. "error recovered" : It records with the target IP address and the target group when an abnormality in the Ping monitor is restored. * "non" is displayed when the target is not belong to the group.		

Displayed Event Name	CLEAR	Displayed Event Contents	""CLEAR" Button" "SNMP" "RSH/SSH" and designated sender IP address "PNS Command" "Web Setup Tool" "HTTP Command" "Azure" "AWS"
Event Details	The Signal Tower is returned to its normal operating status during operation. ""CLEAR" Button" : It records when the clear button to this product is pushed. "SNMP" : It records when a "CLEAR" has been executed by the SNMP Command (controlLightSnmpClear). "RSH/SSH" : It records when a "CLEAR" has been executed by the RSH Command, and displays the designated sender IP address. "PNS Command" : It records when a "CLEAR" has been executed by the PNS Command. "Web Setup Tool" : It records when a "Clear" has been executed from the Web Setup Screen. "HTTP Command" : It records when a "clear" has been executed by the HTTP Command. "Azure" : It records when a "clear" has been executed from the Azure. "AWS" : It records when a "clear" has been executed from the AWS.		

Displayed Event Name	RSH/SSH	Displayed Event Contents	"alert", command argument, and the designated sender IP address "status" "test" "sound", audio playback channel, and the designated sender IP address "stop" and the designated sender IP address "color" *
Event Details	It records when the RSH/SSH Command is executed. (The "Clear" execution is not included) "alert" : When the "alert" command is executed, it records the argument and designated sender IP address. "status" : The "status" command is recorded at the time of execution. "test" : The "test" command records at the time of execution. "sound" : When the "sound" command is executed, it records the audio playback channel and designated sender IP address. "stop" : When the "stop" command is executed, it records the designated sender IP address. "color" : The "color" command records at the time of execution. *In RSH command, an IP address is not written in cases where the designated sender address is inactivated.		

Displayed Event Name	SNMP	Displayed Event Contents	"Sound controlled" and audio playback channel "Sound stop controlled" "Signal controlled" and the index number of OID "Get status" "Digital out" "Signal/Sound controlled" and command argument
Event Details	"Sound controlled" : It records when audio playback is played by SET command of SNMP. "Sound stop controlled" : It records when playing audio playback is stopped by SET command of SNMP. "Signal controlled" : It records when Signal Tower is operated by SET command of SNMP. "Get status" : It records when GET command of SNMP is received. "Digital out" : It records when digital outputs are operated SET command of SNMP. "Signal/Sound controlled" : It records when Signal Tower and audio playback are operated by SET command of SNMP.		

Displayed Event Name	SOCKET	Displayed Event Contents	"RECV" "RECV PHN" "SEND" "SEND PHN" "ERROR"
Event Details	"RECV" : When the PNS command is executed and this product is operated, it records the ID. "RECV PHN" : When the PHN command is executed and this product is operated, it records the Request Command. "SEND" : When the PNS/PHN command is executed and this product responds, it records "ACK" or "NAK". When the Get status in PNS command is executed and this product responds, it records the Response Command "G". "SEND PHN" : When the PHN command is executed and this product responds, it records the Response Command "R". "ERROR" : It records when the PNS/PHN command is executed and the error occurs.		

Displayed Event Name	SNMPGET	Displayed Event Contents	"SNMP matched the condition" "SNMP release the condition" "SNMP detected the change"
Event Details	It will record, depending on the Supported equipment SNMP Monitor Operation. "SNMP matched the condition" : It records, depending on the condition agreement operation. "SNMP release the condition" : It records, when the condition is canceled. "SNMP detected the change" : It records, when it operates by a Change Detection.		

Displayed Event Name	DIN	Displayed Event Contents	The "digital input operation" port number and status "digital input state change ON" and port number "digital input state change OFF" and port number
Event Details	"digital input state change ON" : When it changes to ON for the digital input set up signal definition, it is recorded. "digital input state change OFF" : When it changes to OFF for the digital input set up signal definition, it is recorded.		

Displayed Event Name	COND	Displayed Event Contents	"matched the condition setting" and condition number
Event Details	"matched the condition setting" : It records, depending on the digital input condition agreement.		

Displayed Event Name	DOUT	Displayed Event Contents	"Digital Output", port number, and status "Digital Output Busy" and status
Event Details	"Digital Output" : When it changes to ON or OFF for the digital output set up signal definition, it is recorded. "Digital Output Busy" : When it changes to ON or OFF for the busy output set up signal definition, it is recorded.		

Displayed Event Name	HTTP	Displayed Event Contents	"CONTROL"
Event Details	It records when the HTTP Command is executed. (The "clear" execution is not included)		

Displayed Event Name	HTTPSEND	Displayed Event Contents	Command name and "HTTP send command" Command name and "HTTP command failure"
Event Details	"HTTP send command" : It records when HTTP command is send. "HTTP command failure" : It records when sending HTTP command fails.		

Displayed Event Name	AZURE	Displayed Event Contents	"CONNECTED" "DISCONNECTED" "CONTROLLED"
Event Details	"CONNECTED" : It records when connecting to Azure. "DISCONNECTED" : It records when closing the connection to Azure. "CONTROLLED" : It records when Azure operation is run.		

Displayed Event Name	AWS	Displayed Event Contents	"CONNECTED" "CONNECTION_FAILED" "DISCONNECTED" "CONTROLLED"
Event Details	"CONNECTED" : It records when connecting to AWS. "CONNECTION_FAILED" : It records when AWS connection fails. "DISCONNECTED" : It records when closing the connection to AWS. "CONTROLLED" : It records when AWS operation is run.		

Displayed Event Name	MAILDETECT	Displayed Event Contents	"Filter matched" and the matched filter number "Failed to receive email" "Failed to read email" "controlled" "Failed to controll"
Event Details	"Filter matched": It records when receiving the mail that is matched the set filter. "Failed to receive email": It records when receiving emails fails. "Failed to read email": It records when reading aloud emails fails. "controlled": It records when the mail control function controls the main unit when the filter matches. "Failed to control": It records when the mail control function fails to control the main unit when the filter matches.		

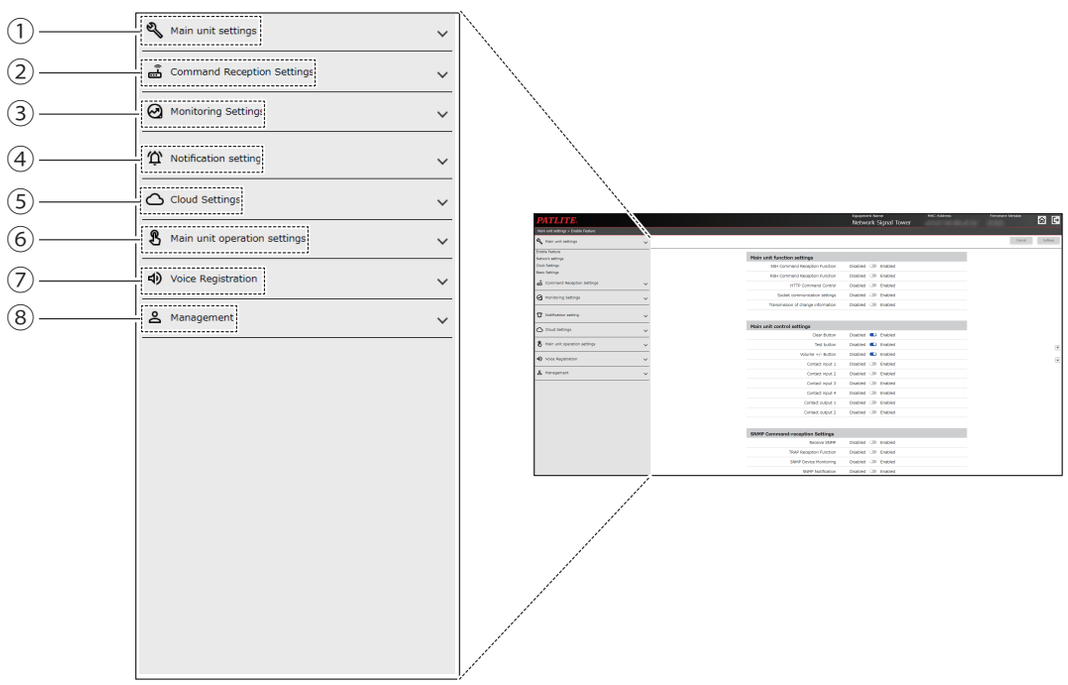
Displayed Event Name	PLC	Displayed Event Contents	"PLC-Matched" and condition settings number "PLC-Error" and condition settings number
Event Details	It records when the operation by the PLC information read command is executed. "PLC-Matched": It records when the set condition matches and the operation is performed. "PLC-Error": It records when an error response is received.		

Displayed Event Name	SOURCE_PORT	Displayed Event Contents	"ERROR: PLC-READ" and condition settings number "ERROR: PLC-WRITE" and condition settings number
Event Details	"ERROR: PLC-READ": It records when the source port could not be set when sending a PLC information read command. "ERROR: PLC-WRITE": It records when the source port could not be set when sending a PLC information write command.		

* Displayed events within the double quotes are not recognized in the log.

9. Web Setup Screen Descriptions

- This section describes the settings for using the various functions.
- To implementing the various settings, click the item you want to set. The selected set up screen is displayed.
- If you want to move from one of the various setting screens to another setting screen, click the item you want to set.

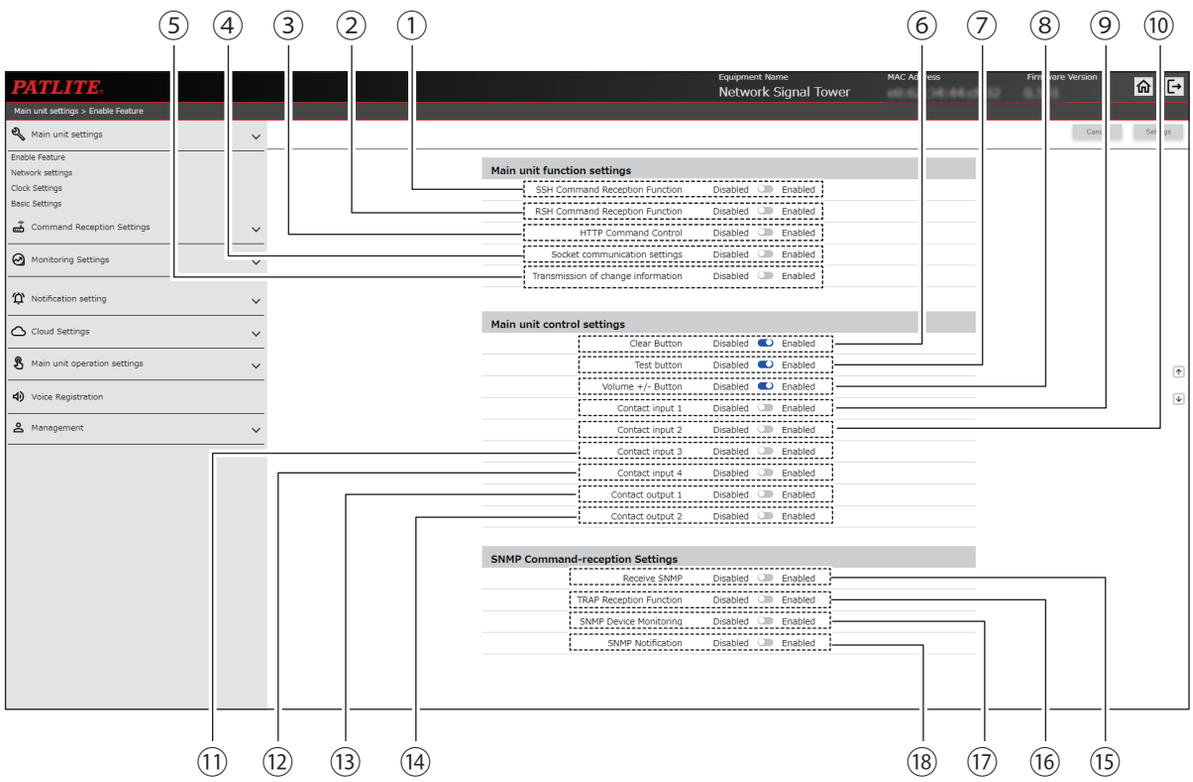


No.	Item	Description
①	Main unit settings	You can configure [Enable Feature], [Network Settings], [LTE Settings], [Internet Connection Check], [Clock Settings], and [Basic Settings].
②	Command Reception Settings	You can configure [Socket communication settings], [RSH/SSH Command Reception Settings], and [SNMP Command-reception Settings].
③	Monitoring Settings	You can configure [Ping Monitoring Settings, Individual Settings, Group Settings], [TRAP Reception Settings, Basic Settings, Receive Settings], [SNMP Device Monitoring Settings, Basic Settings, Match Detection Settings, Change Detection Settings], [Contact Input Setting, Status Change Detection Settings, Match Detection Settings], [Mail Detection Setting, Mail Server Settings, Filter Rule Settings], and [PLC Linkage Function Settings, Basic Settings, PLC Information Read Command Settings, PLC Information Write Command Settings, PLC Count Value Write Settings].
④	Notification settings	You can configure [SNMP Notification Settings], [Email Notification], and [HTTP Transmission Settings], [HTTP command recipient settings], [Change information recipient settings].
⑤	Cloud Settings	You can configure [Azure Connection Settings] and [AWS Connection Settings].
⑥	Main unit operation settings	You can configure [Clear Operation Settings], [Test Button Settings], [Contact output setting], and [Signal Tower Operation].
⑦	Voice Registration	You can configure [Voice Registration] and [Notification Sound Registration] settings.
⑧	Management	You can run operations for [Initialization], [Restart], [Configuration], [Firmware Update], [Event Log], [User authentication settings], and [Security Settings].

9.1. Main Unit Settings

9.1.1. Function Activation

You can select to [Enabled] or [Disabled] product functions.



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	SSH Command Reception Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the SSH Command Reception Function.	●	●	●	●
②	RSH Command Reception Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the RSH Command Reception Function.	●	●	●	●
③	HTTP Command Control	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the HTTP Command Control function.	●	●	●	●
④	Socket communication settings	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the Socket Communication settings function.	●	●	●	●
⑤	Transmission of change information	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the Transmission of change information function.	●	●	●	●
⑥	LTE Communication Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the LTE Communication function.	●	●	●	●
⑦	Clear Button	Enabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the Clear Button operation.	●	●	●	●
⑧	Test button	Enabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the Test Button operation.	●	●	●	●
⑨	Volume +/- Button	Enabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the Volume +/- Button.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑩	Contact input 1	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] Contact input 1.	–	–	–	●
⑪	Contact input 2	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] Contact input 2.	–	–	–	●
⑫	Contact input 3	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] Contact input 3.	–	–	–	●
⑬	Contact input 4	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] Contact input 4.	–	–	–	●
⑭	Contact output 1	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] Contact output 1.	–	–	–	●
⑮	Contact output 2	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] Contact output 2.	–	–	–	●
⑯	Receive SNMP	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the SNMP Command-reception Function.	●	●	●	●
⑰	TRAP Reception Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the TRAP Reception Function.	●	●	●	●
⑱	SNMP Device Monitoring	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the SNMP Device Monitoring Function.	●	●	●	●
⑲	SNMP Notification	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the SNMP Notification Function.	●	●	●	●

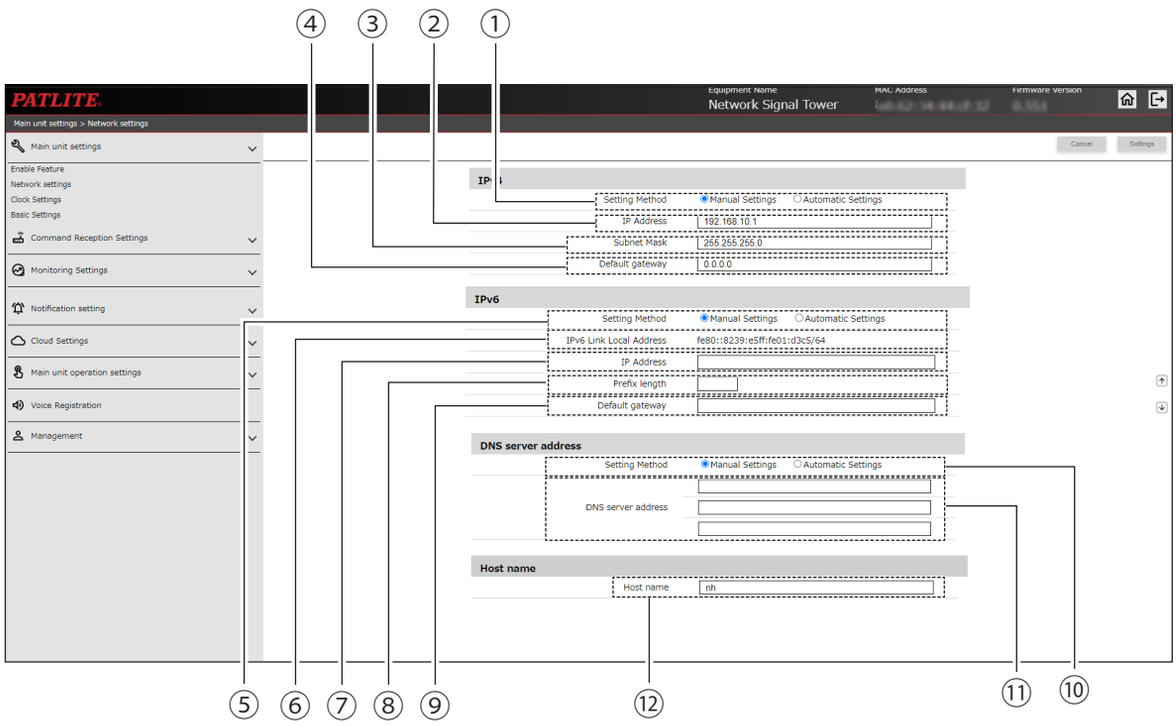
9.1.2. Network Settings

You can change the network settings on this product.

CAUTION

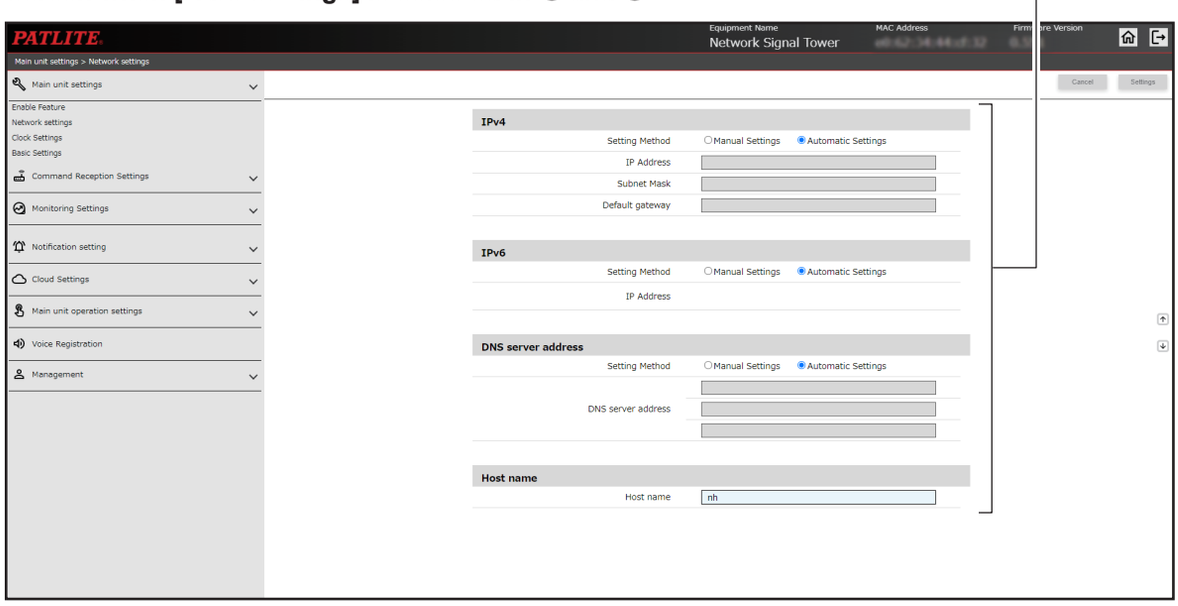
- After changing network settings, click [Set] to apply the defined settings.
- Click [Set] to automatically restart the network.

Screen when [Manual Settings] is selected in ① and ⑤



Screen when [Auto Settings] is selected in ① and ⑤

Refer to the above



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Setting Method	Manual Settings	Set up manually / Set up automatically	Select how to configure the IPv4 address for this product.	●	●	●	●
②	IP Address*1	192.168.10.1	IPv4 Address Format	Enter the IPv4 address of this product.	●	●	●	●
③	Subnet Mask*1	255.255.255.0		Enter the subnet mask of this product.	●	●	●	●
④	Default gateway*1	0.0.0.0		Enter the default gateway of this product.	●	●	●	●
⑤	Setting Method	Manual Settings	Set up manually / Set up automatically	Select how to configure the IPv6 address for this product.	●	●	●	●
⑥	IPv6 Link Local Address*2	–	–	Displays the link local address of this product.	●	●	●	●
⑦	IP Address*3	(Blank)	IPv6 Address Format	Enter the IPv6 address of this product.	●	●	●	●
⑧	Prefix length*2	(Blank)	1 to 128	Enter the Prefix length of this product.	●	●	●	●
⑨	Default gateway*2	(Blank)	IPv6 Address Format	Enter the default gateway of this product.	●	●	●	●
⑩	Setting Method	Manual Settings	Set up manually / Set up automatically	Select how the DNS server is configured for this product.	●	●	●	●
⑪	DNS server address	(Blank)	IPv4/IPv6 Address Format	Enter the DNS server address.	●	●	●	●
⑫	Host name	nh	63 single-byte alphanumeric characters	Enter the host name.	●	●	●	●

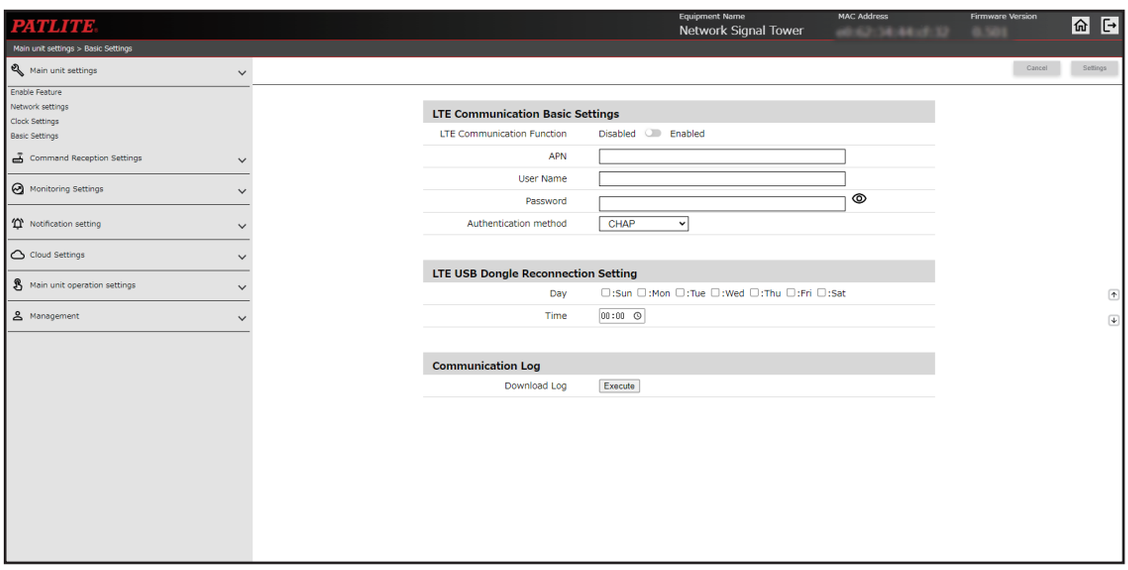
*1 When [Automatic Settings] is selected, input is disabled.

*2 When [Automatic Settings] is selected, setup items do not display.

*3 When [Automatic Settings] is selected, up to three IPv6 addresses acquired by this product are displayed.

9.1.3. LTE Settings

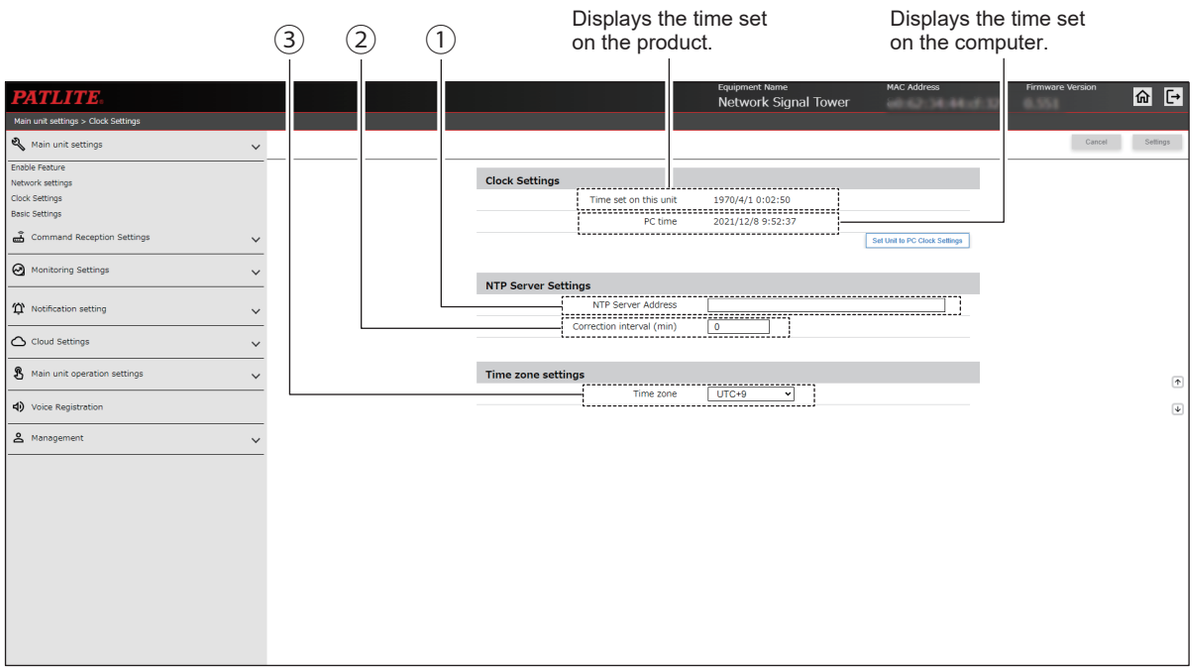
This function is for Japan only.



9.1.4. Clock Settings

Set the clock on this product. There are two ways to set the clock on the product.

For information, refer to "7.6. Setting Up the Clock" (☞ page 116)



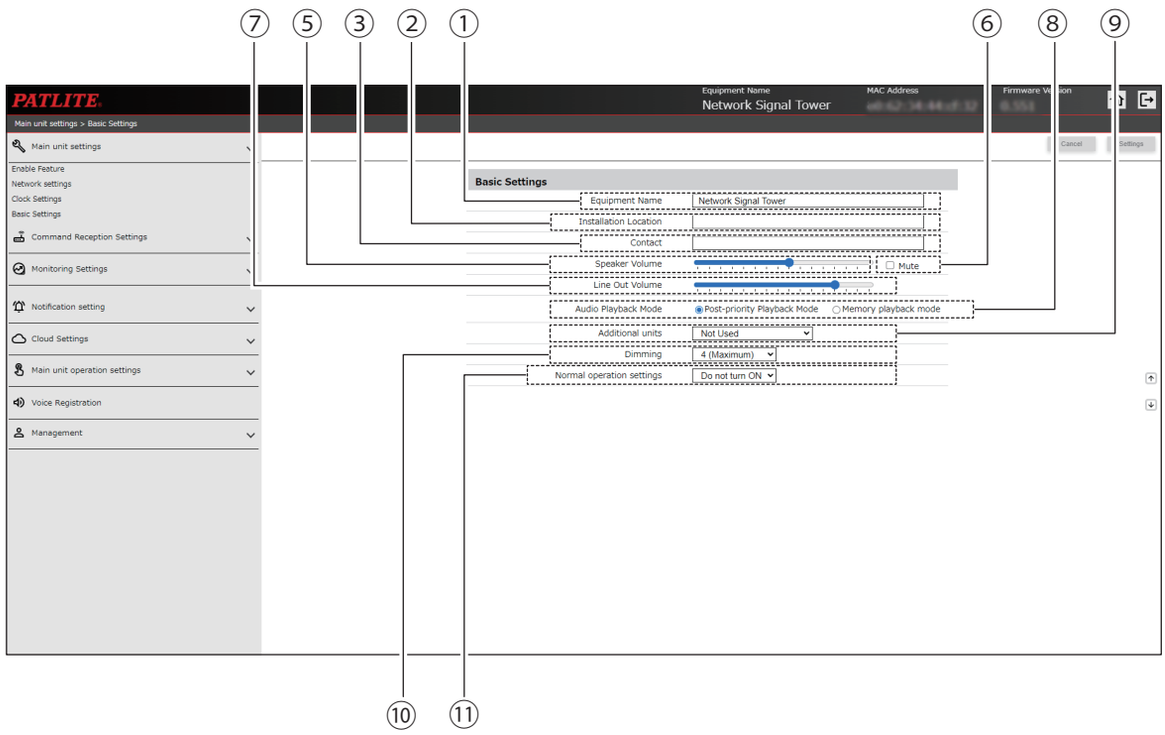
No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	NTP Server Address	(Blank)	IP Address Format (v4/v6) or host name (63 characters)	Set the NTP Server address.*	●	●	●	●
②	Correction interval (min)	0	0 to 1440	Set the interval for NTP server communication.	●	●	●	●
③	Time zone	UTC+9	UTC-12 to +12	Set the Time zone.	●	●	●	●

* When you do not use a NTP server, either leave the NTP Server address blank or set to "0.0.0.0".

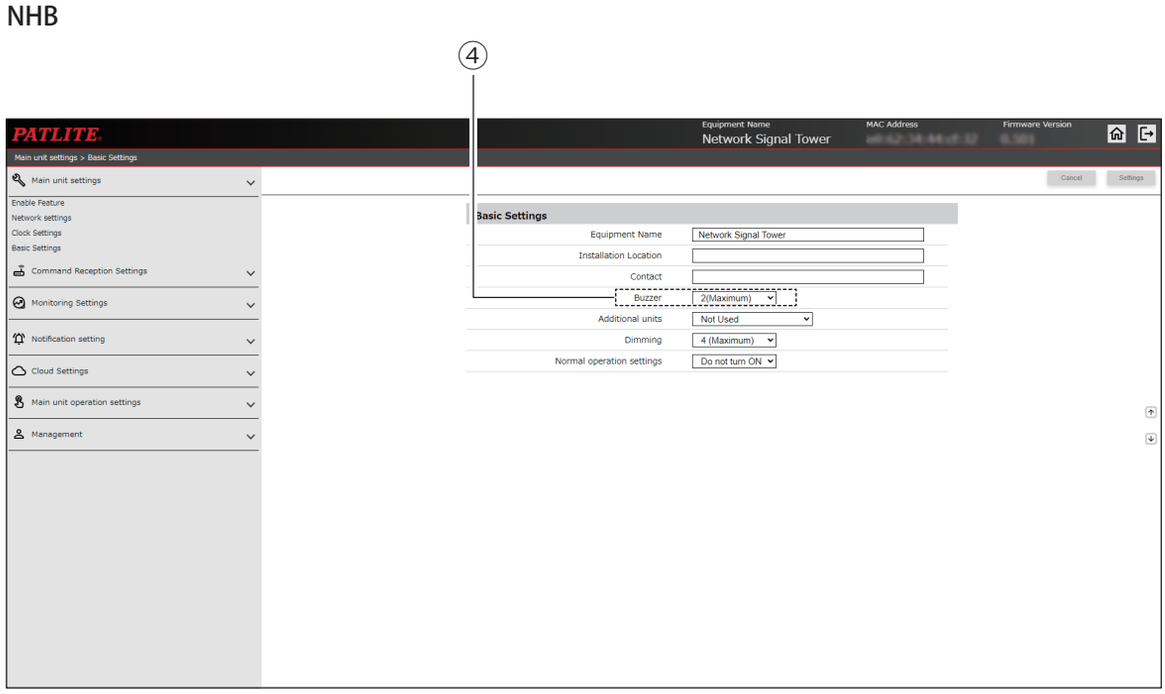
9.1.5. Basic Settings

Set basic operations on this product.

NHV



NHB



No.	Item	Default Value	Input Range	Description	Setting (● : Yes, –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Equipment Name	Network Signal Tower	31 single-byte or double-byte characters	Enter the Equipment name for this product.	●	●	●	●
②	Installation Location	(Blank)	31 single-byte alphanumeric and underscore (_)	Enter the installation location of this product.	●	●	●	●
③	Contact	(Blank)	Email address format (maximum 63 characters)	Enter the contact information.	●	●	●	●
④	Buzzer	2 (Maximum)	2 / 1 / 0 (Maximum) (OFF)	Configure the buzzer volume on this product.	●	–	–	–
⑤	Speaker Volume	8	0 to 15	Configure the speaker volume on this product.	–	●	●	●
⑥	Mute*1	(Not selected)	–	Set whether to mute the volume on this product. Select the check box to erase sound on the product.	–	●	●	●
⑦	Line Out Volume	12	0 to 15	Configure the line out volume on this product.	–	●	●	●
⑧	Audio Playback Mode	Post-priority Playback Mode	Post-priority Playback Mode / Memory playback mode	Select either [Post-priority Playback Mode] or [Memory playback mode] for audio playback.	–	●	●	●
⑨	Additional units*2 *3	Not Used	Not Used/ WDT / Multi-color unit	Select the unit from [Not Used], [WDT], or [Multi-color unit].	●	●	●	●
⑩	Dimming	4 (maximum)	4 / 3 / 2 / 1 (maximum) (minimum)	Set the brightness of the Signal Tower when on or flashing.	●	●	●	●
⑪	Normal operation settings*4	Do not turn ON	Red / Amber / Green / Blue / White / Do not turn ON	Set the Signal Tower light during normal operation.	●	●	●	●

*1 Mute is automatically disabled when the product is turned off or restarted.

*2 [WDT] and [Multi-color unit] cannot be selected at the same time.

*3 When [WDT] or [Multi-color unit] is selected, the dimmer is fixed at [Maximum].

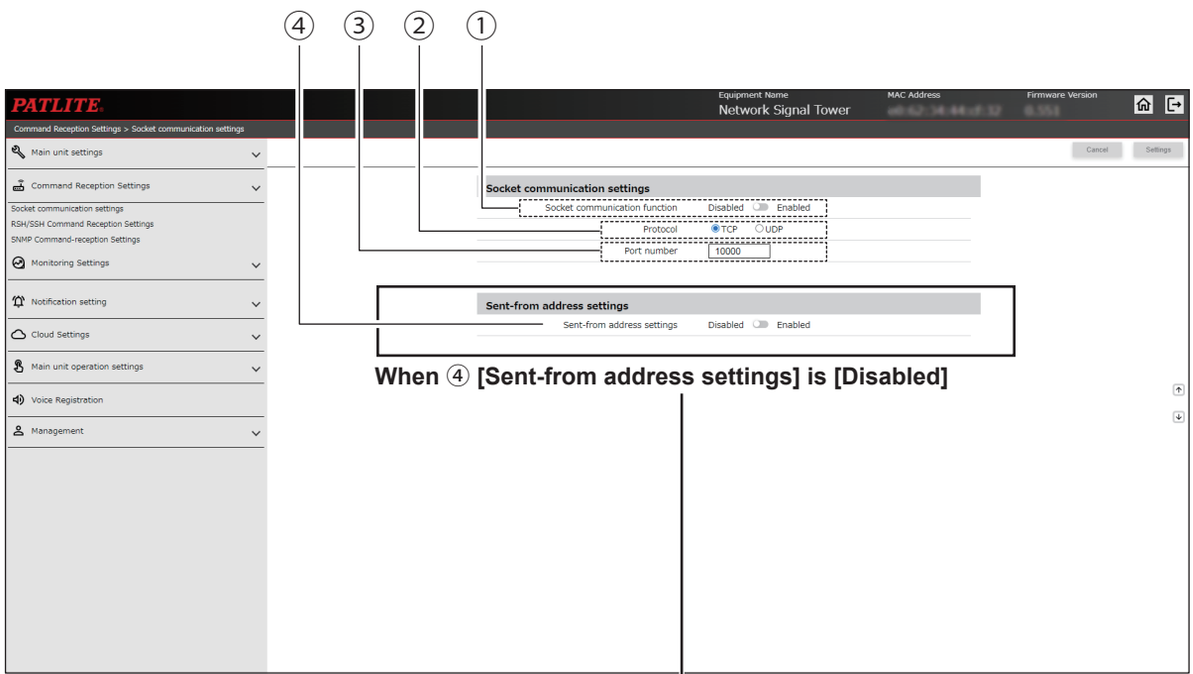
*4 If you execute the clear operation after setup is complete, the product starts up in the set normal operation.

Colors other than the set Signal Tower color are turned off during normal operation.

9.2. Command Reception Settings

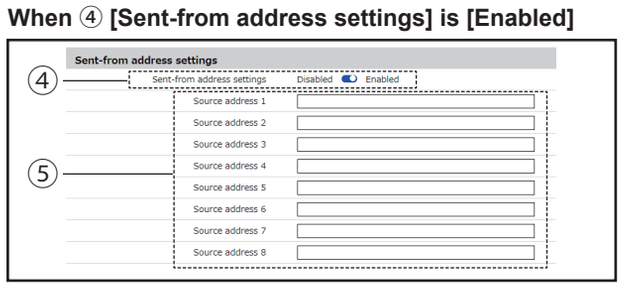
9.2.1. Socket Communication Settings

Set socket communication used by PNS and PHN Commands.



When ④ [Sent-from address settings] is [Disabled]

When ④ [Sent-from address settings] is [Enabled]

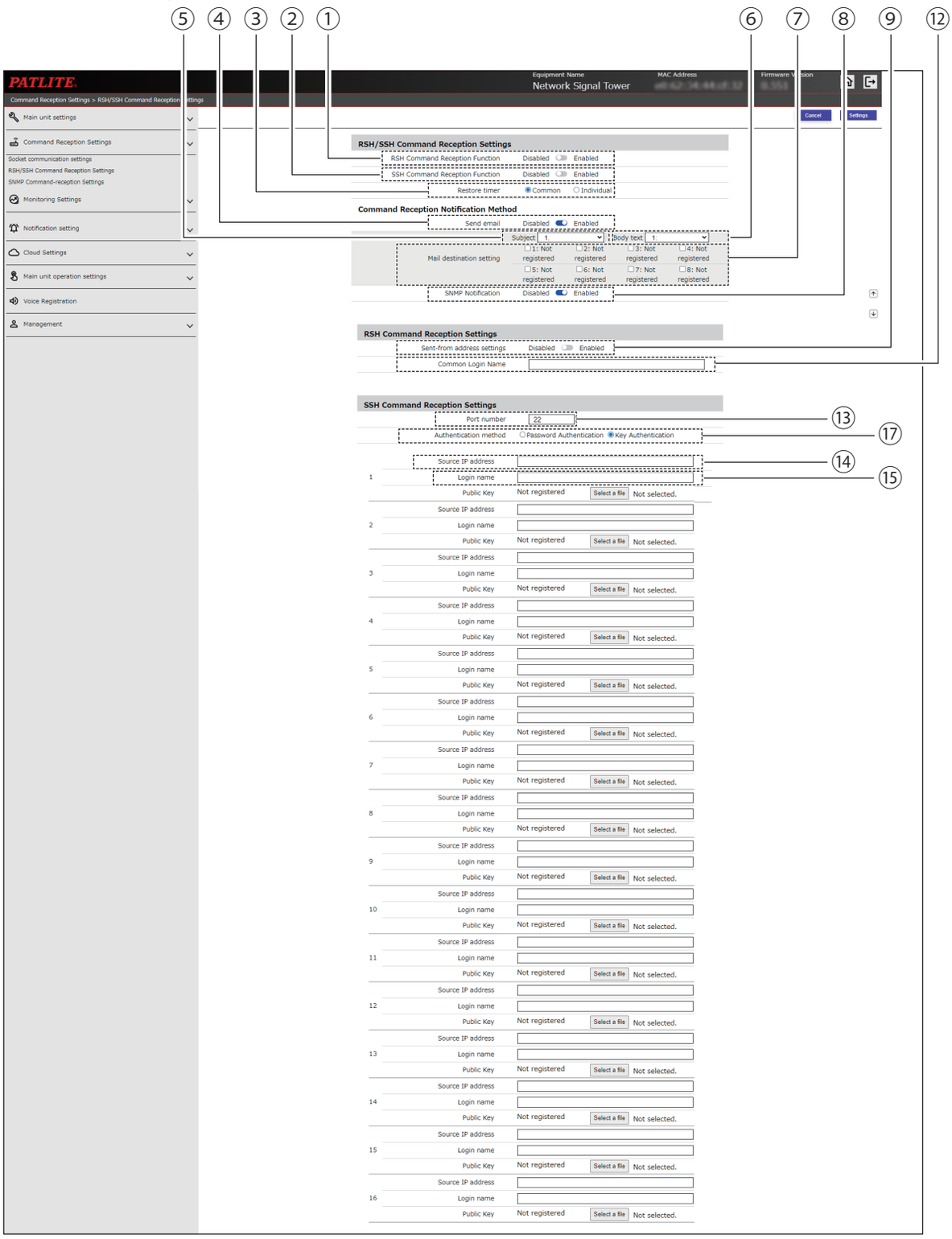


No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Socket communication function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the Socket Communication function.	●	●	●	●
②	Protocol	TCP	TCP / UDP	Select either [TCP] or [UDP].	●	●	●	●
③	Port number	10000	5000 to 65535	Enter the port number for receiving data.	●	●	●	●
④	Sent-from address settings	Disabled	Enabled / Disabled	You can choose whether or not to limit addresses that can transmit commands by selecting either [Enabled] or [Disabled].	●	●	●	●
⑤	Source address 1 to 8	(Blank)	IP Address Format (v4/v6)	Enter the IP addresses that are allowed to execute commands.	●	●	●	●

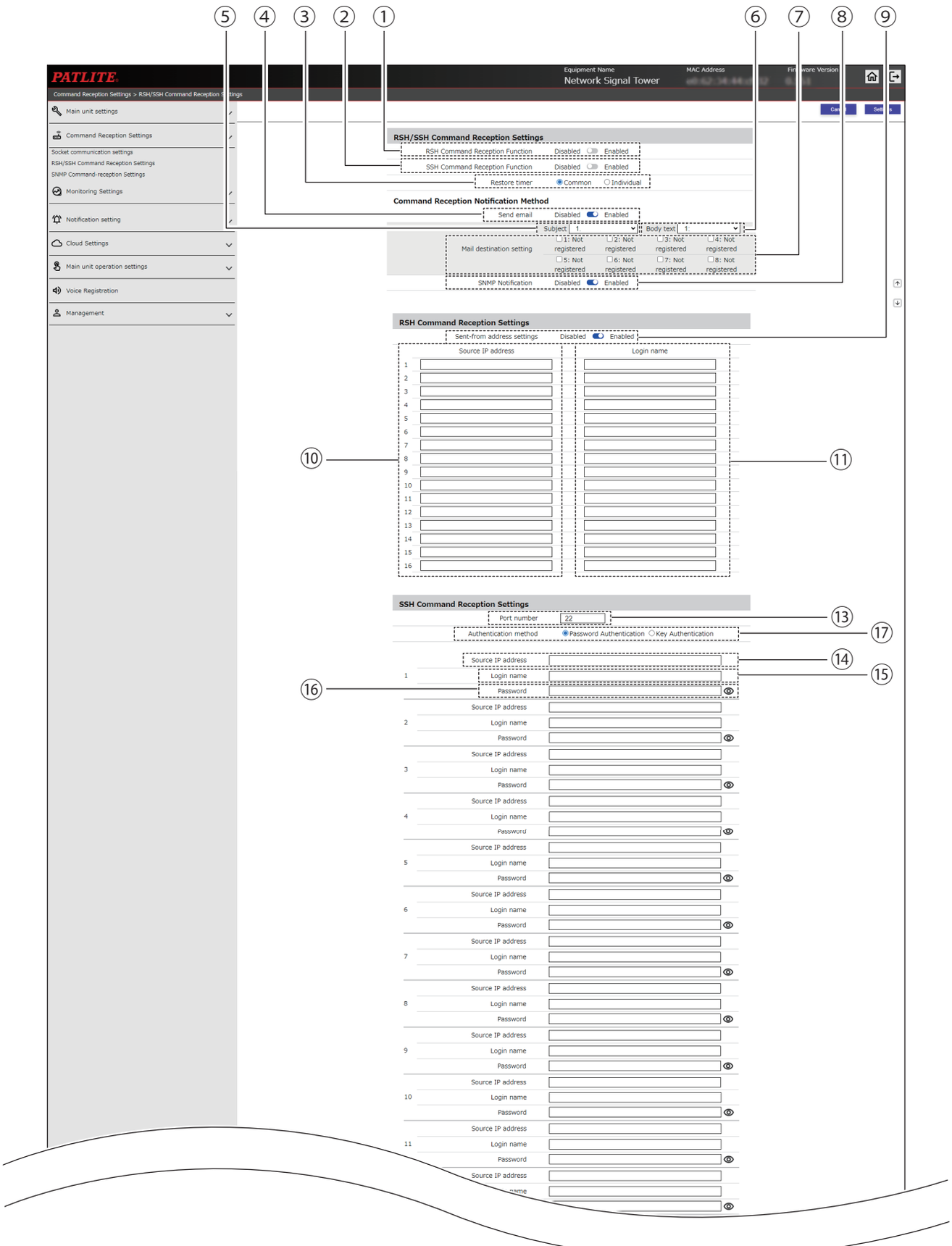
9.2.2. RSH/SSH Command Reception Settings

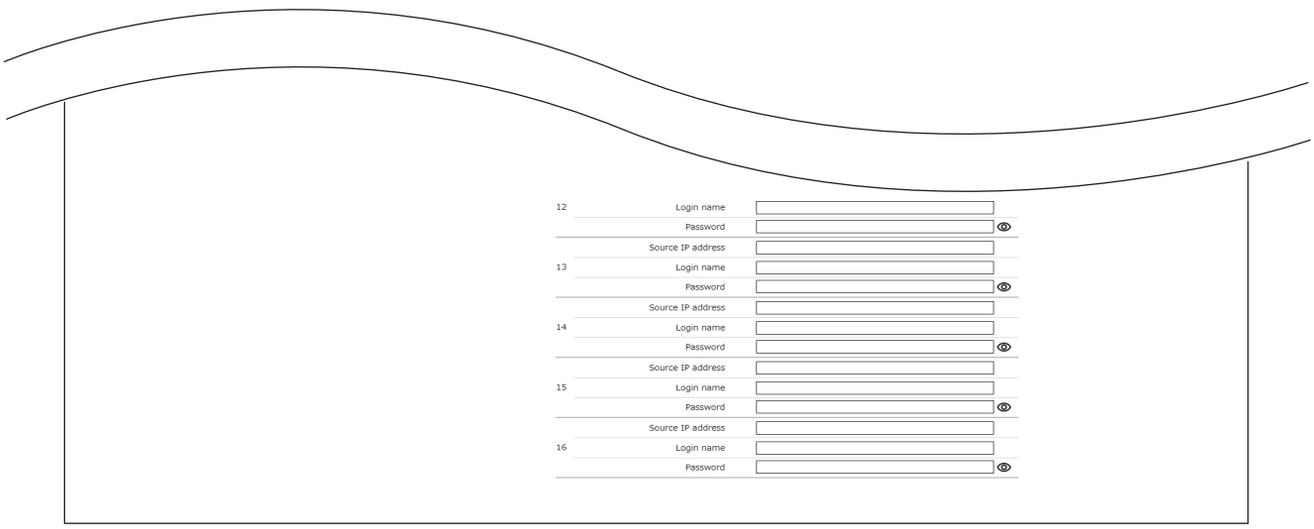
Define the settings for receiving RSH or SSH Commands.

Screen when [Disabled] is selected in ⑨, or screen when [Key Authentication] is selected in ⑰



Screen when [Enabled] is selected in ⑨, or screen when [Password Authentication] is selected in ⑰





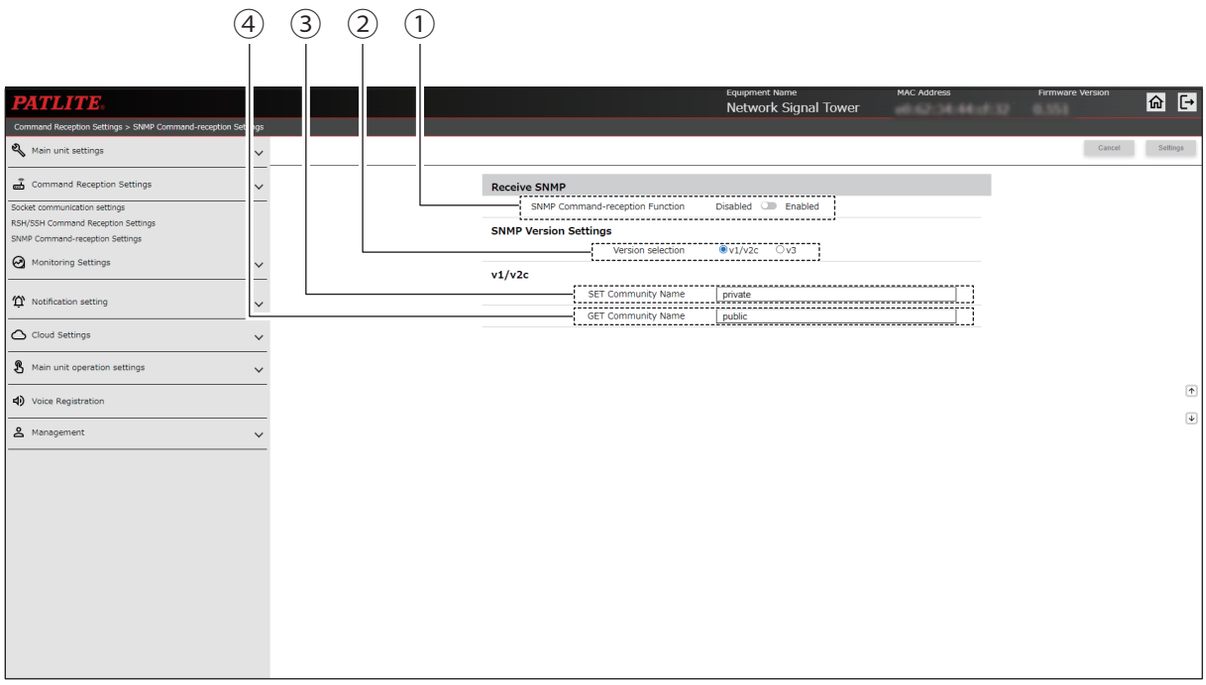
No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	RSH Command Reception Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the RSH Command Reception function.	●	●	●	●
②	SSH Command Reception Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the SSH Command Reception function.	●	●	●	●
③	Restore timer	Common	Common / Individual	Set [Common] or [Individual] for the timer function so you can set the operating time of each color and buzzer of the Signal Tower.	●	●	●	●
④	Send email	Disabled	Enabled / Disabled	For when a command is received, set [Enabled] or [Disabled] for Send email.	●	●	●	●
⑤	Subject	1	1 to 17	Select the subject of the email to send.	●	●	●	●
⑥	Body text	1	1 to 17	Select the body text of the email to be sent.	●	●	●	●
⑦	Mail destination setting	(Not selected)	–	Select the email recipient.	●	●	●	●
⑧	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP Notification.	●	●	●	●
⑨	Sent-from address settings	Disabled	Enabled / Disabled	You can choose whether or not to limit addresses that can transmit RSH Commands by selecting either [Enabled] or [Disabled].	●	●	●	●
⑩	Source IP address	(Blank)	IP Address Format (v4/v6)	Enter the IP addresses that are allowed to execute RSH Commands.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑪	Login name	(Blank)	16 single-byte alphanumeric characters, period (.), and hyphen (-)	Enter the login names that are allowed to execute RSH Commands.	●	●	●	●
⑫	Common Login Name	(Blank)	16 alphanumeric or symbol characters	Enter the login name for when the RSH Command's [Sent-from address settings] is [Disabled].	●	●	●	●
⑬	Port number	22	1 to 65535	Set the port for receiving SSH Commands.	●	●	●	●
⑭	Source IP address	(Blank)	IP Address Format (v4/v6)	Enter the IP addresses that are allowed to execute SSH Commands.	●	●	●	●
⑮	Login name	(Blank)	16 single-byte alphanumeric characters, period (.), and hyphen (-)	Enter the login names that are allowed to execute SSH Commands.	●	●	●	●
⑯	Password	(Blank)	32 alphanumeric or symbol characters	Enter the password for Password Authentication.	●	●	●	●
⑰	Authentication method	Key Authentication	Password Authentication / Key Authentication	For the [Authentication method], select either [Password Authentication] or [Key Authentication].	●	●	●	●

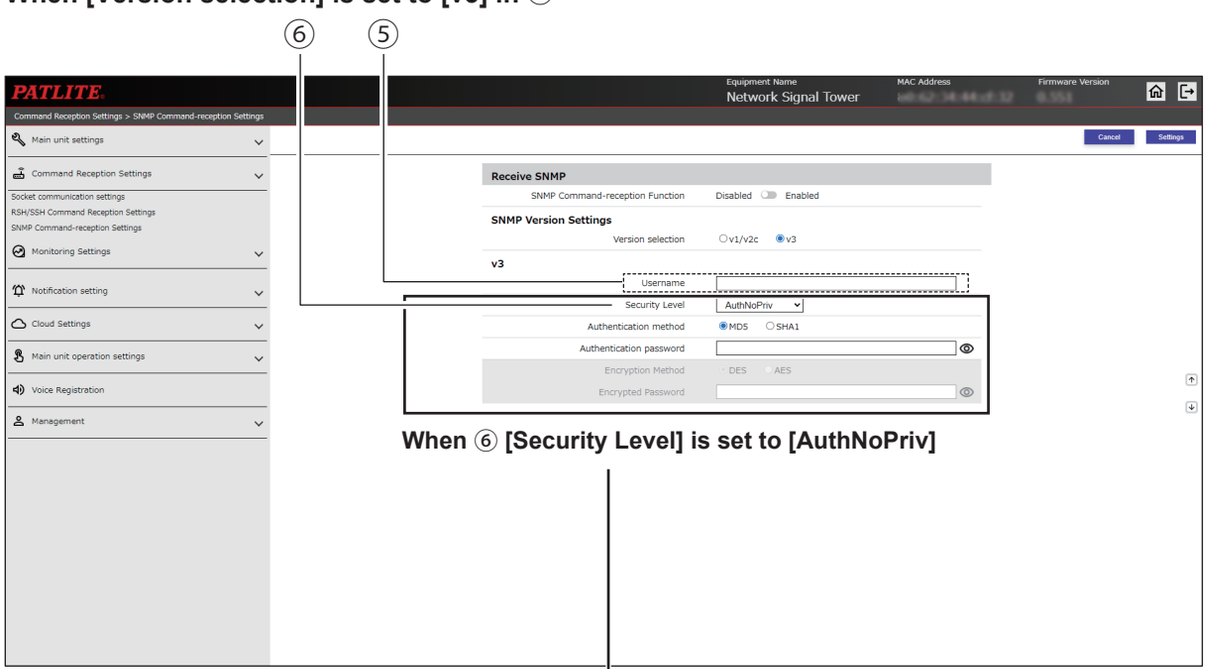
9.2.3. SNMP Command Reception Settings

Set the [Community Name], [Security Level], [Authentication method], and so on, used with SNMP to reference and set each these items for this product.

When [Version selection] is set to [v1/v2c] in ②

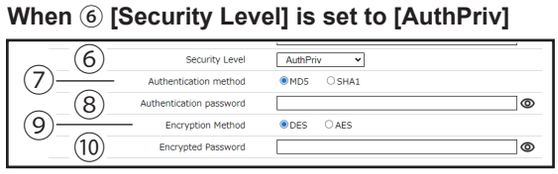


When [Version selection] is set to [v3] in ②

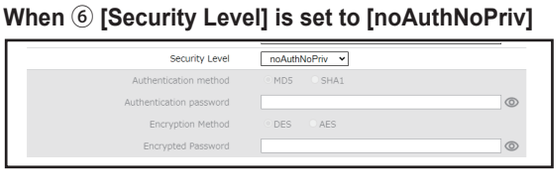


When ⑥ [Security Level] is set to [AuthNoPriv]

When ⑥ [Security Level] is set to [AuthPriv]



When ⑥ [Security Level] is set to [noAuthNoPriv]



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	SNMP Command-reception Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the SNMP Command-reception Function.	●	●	●	●
②	Version selection	v1/v2c	v1/v2c / v3	Select the SNMP version to use for Receive SNMP.	●	●	●	●
③	SET Community Name*1	private	32 single-byte alphanumeric characters and underscore (_)	Enter the name for reading and writing settings with SNMP v1/v2c.	●	●	●	●
④	GET Community Name*1	public	32 single-byte alphanumeric characters and underscore (_)	Enter the name for reading settings with SNMP v1/v2c.	●	●	●	●
⑤	Username*2	(Blank)	32 single-byte alphanumeric characters	Set the user name used for authentication in SNMP v3.	●	●	●	●
⑥	Security Level*2	AuthPriv	noAuthNoPriv / AuthNoPriv / AuthPriv	Select the security level for authentication in SNMP v3.	●	●	●	●
⑦	Authentication method*2 *3	MD5	MD5 / SHA1	Select the Authentication method for authentication in SNMP v3.	●	●	●	●
⑧	Authentication password*2 *3	(Blank)	8 to 64 single-byte alphanumeric characters	Register the Authentication password.	●	●	●	●
⑨	Encryption Method*2 *4	DES	DES / AES	Select the Encryption Method for authentication in SNMP v3.	●	●	●	●
⑩	Encryption Password*2 *4	(Blank)	8 to 64 single-byte alphanumeric characters	Register the Encrypted Password.	●	●	●	●

*1 Displays when [v1/v2c] is selected for [Version selection].

*2 Displays when [v3] is selected for [Version selection].

*3 If you select [noAuthNoPriv] for the [Security Level], you cannot configure this setup item.

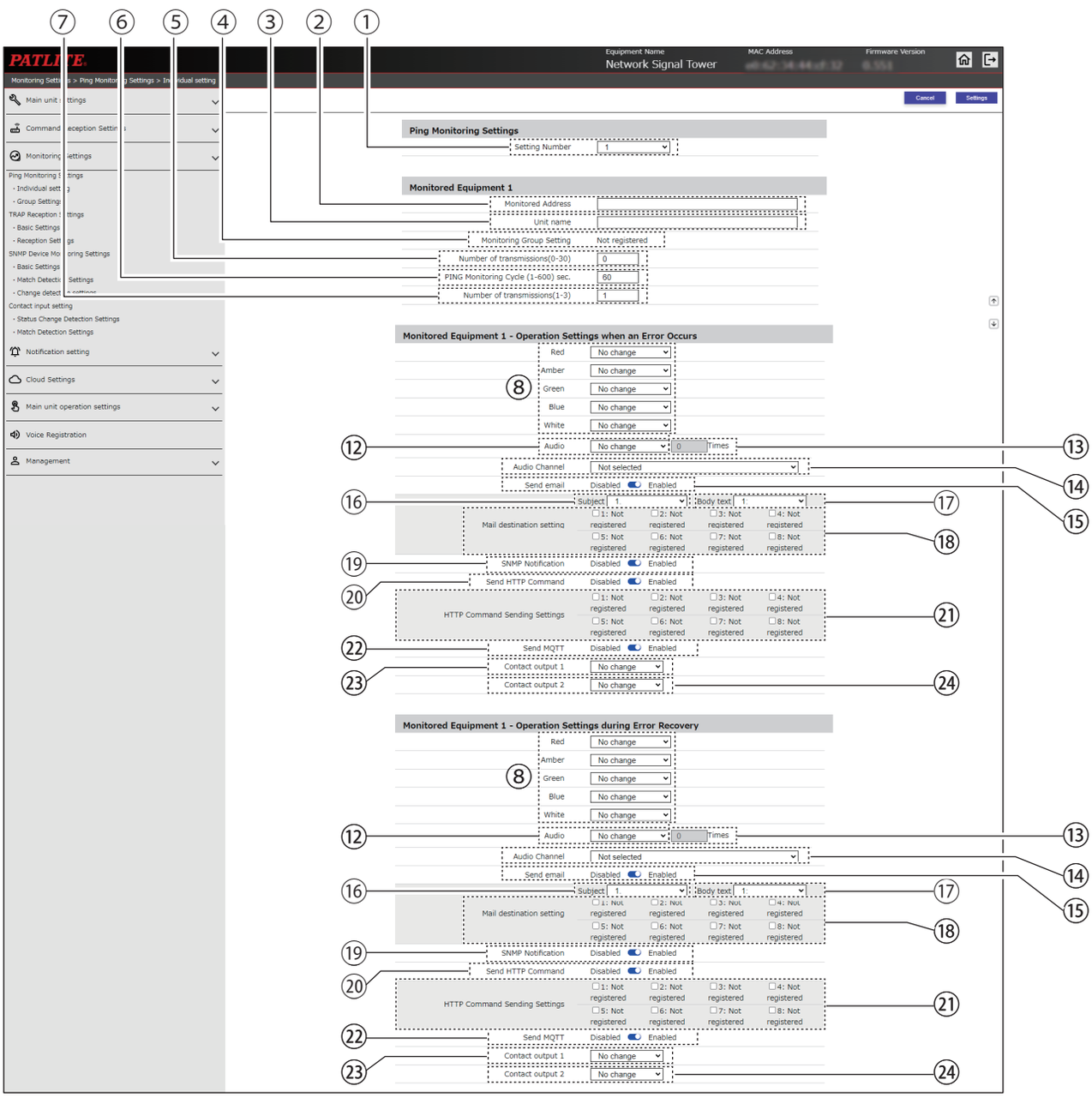
*4 If you select [noAuthNoPriv] or [AuthNoPriv] for the [Security Level], you cannot configure this setup item.

9.3. Monitor Settings

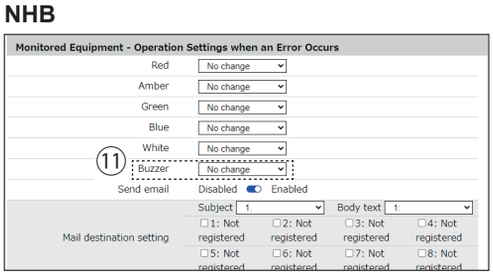
9.3.1. Ping Monitoring Settings

9.3.1.1. Individual Settings

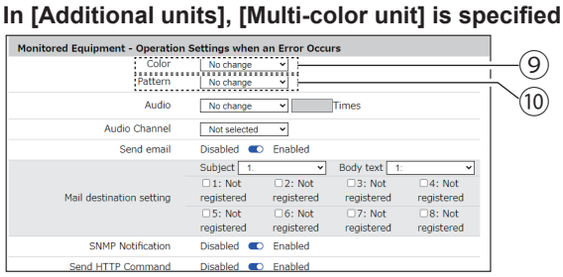
- Set up ping monitoring.
- When the monitoring result is identified as an error, the operation for when there is a monitoring error is performed. After a monitoring error occurs, if there is a response to the ping request, it is determined to have recovered from the error state and the operation for when there is a recovery is performed.



NHB



In [Additional units], [Multi-color unit] is specified



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Setting Number	1	1 to 24	Select the setting number for Ping Monitoring Settings.	●	●	●	●
②	Monitored Address	(Blank)	IP Address Format (v4/v6) or host name (63 characters)	Enter the address to monitor.	●	●	●	●
③	Unit name	(Blank)	32 single-byte or double-byte characters	Enter the name of equipment to monitor.	●	●	●	●
④	Monitoring Group Setting*1	-	-	Displays the monitoring group in which the monitored equipment is set.	●	●	●	●
⑤	Number of transmissions (0-30)	0	0 to 30	Select the number of transmissions until an error is detected.	●	●	●	●
⑥	PING Monitoring Cycle (1-600) sec.	60	1 to 600	Select the frequency of ping transmissions.	●	●	●	●
⑦	Number of transmissions (1-3)	1	1 to 3	Select the number of ping to send at a time.	●	●	●	●
⑧	Red, Amber, Green, Blue, White	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Select each color of the Signal Tower.	●	●	●	●
⑨	Color	No change	Red / Amber / Green / Blue / White / Purple / Light blue / No change	Specify the color of the Multi-color unit.	●	●	●	●
⑩	Pattern	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Specify the lighting pattern of the Multi-color unit.	●	●	●	●
⑪	Buzzer	No change	Stop / Buzzer pattern 1 / Buzzer pattern 2 / Buzzer pattern 3 / Buzzer pattern 4 / Buzzer pattern 5 / No change	Select the buzzer sound pattern.	●	–	–	–
⑫	Audio	No change	Stop / One-shot playback/ Repeat playback / No change	Select the audio playback pattern.	–	●	●	●
⑬	Audio (when [Repeat playback] is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	–	●	●	●
⑭	Audio Channel*2	Not selected	Not selected / 1 to 71	Select a registered channel.	–	●	●	●
⑮	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑯	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
⑰	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●
⑱	Mail destination setting	(Not selected)	–	Select the email recipient.	●	●	●	●
⑲	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP Notification.	●	●	●	●
⑳	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	●	●	●	●
㉑	HTTP Command Sending Settings	(Not selected)	–	Select the recipient of the HTTP Command.	●	●	●	●
㉒	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	●	●	●	●
㉓	Contact output 1*3	No change	ON / OFF / No change	Specify operation of contact output 1.	–	–	–	●
㉔	Contact output 2	No change	ON / OFF / No change	Specify operation of contact output 2.	–	–	–	●

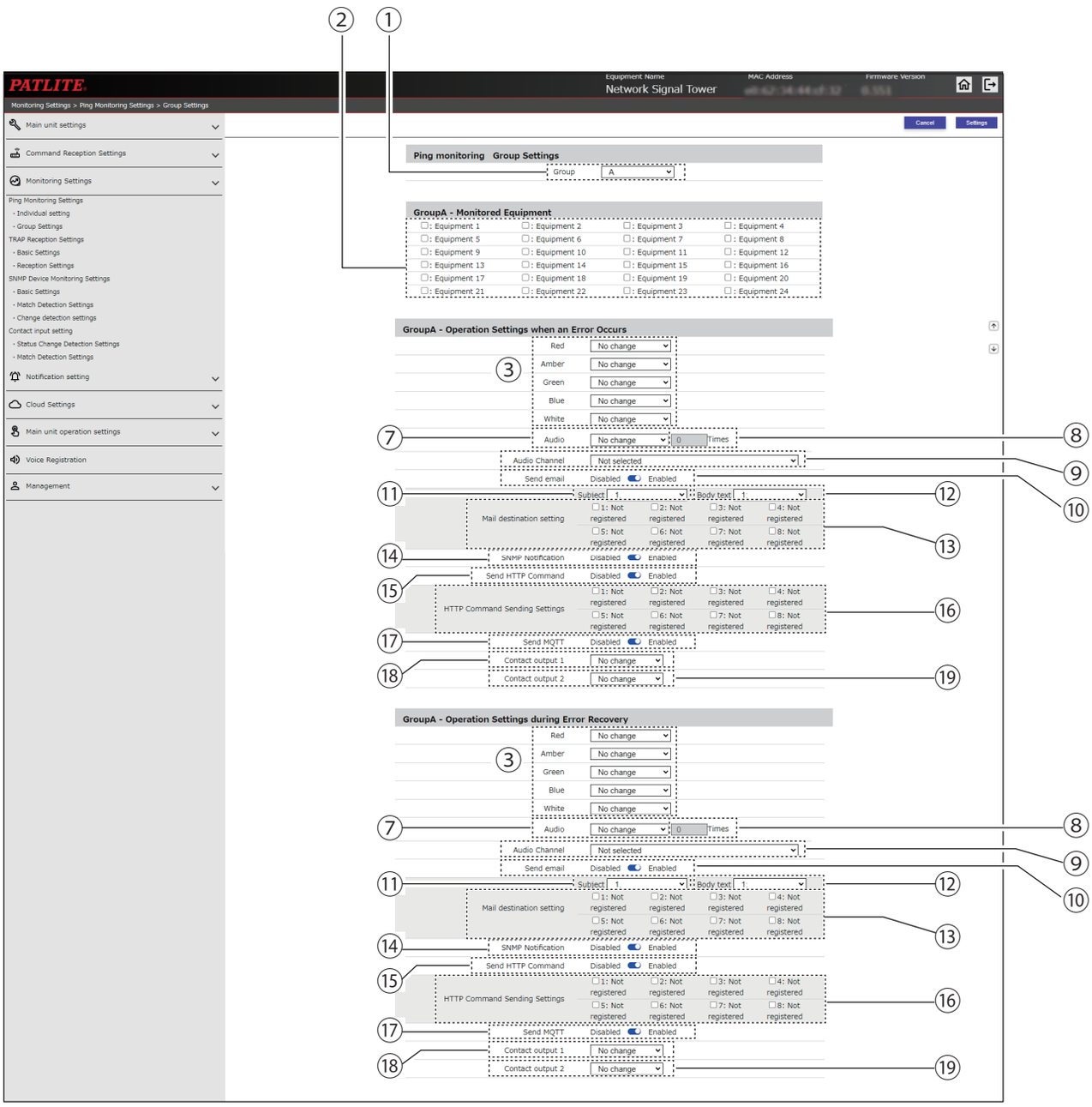
*1 Set up monitoring group settings in [Ping Monitoring Settings] - [Group Settings].

*2 For the audio channel, you can select the following channels.

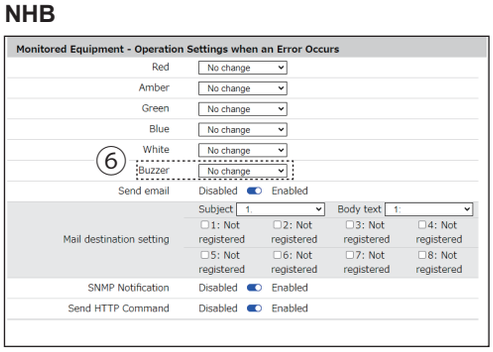
- In the [Voice Registration] screen, channel with registered audio
- Preset channel

*3 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

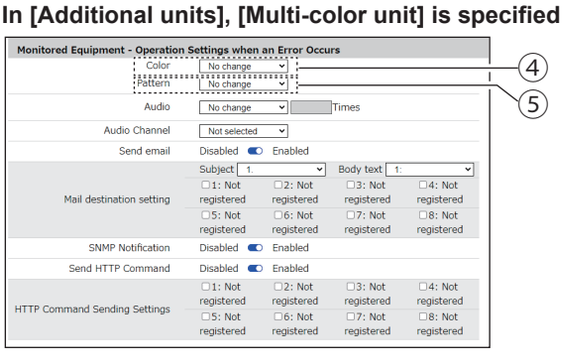
9.3.1.2. Group Settings



NHB



In [Additional units], [Multi-color unit] is specified



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Group	A	A / B / C	Select the group for the Ping Monitoring Settings.	●	●	●	●
②	Monitored Equipment	(Not selected)	–	Select the equipment to specify for the group.	●	●	●	●
③	Red, Amber, Green, Blue, White	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Select each color of the Signal Tower.	●	●	●	●
④	Color	No change	Red / Amber / Green/ Blue / White/ Purple / Light blue / No change	Specify the color of the Multi-color unit.	●	●	●	●
⑤	Pattern	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Specify the lighting pattern of the Multi-color unit.	●	●	●	●
⑥	Buzzer	No change	Stop / Buzzer pattern 1 / Buzzer pattern 2 / Buzzer pattern 3 / Buzzer pattern 4 / Buzzer pattern 5 / No change	Select the buzzer sound pattern.	●	–	–	–
⑦	Audio	No change	Stop / One-shot playback / Repeat playback / No Change	Select the audio playback pattern.	–	●	●	●
⑧	Audio (when [Repeat playback] is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	–	●	●	●
⑨	Audio Channel*1	Not selected	Not selected / 1 to 71	Select a registered channel.	–	●	●	●
⑩	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	●	●	●	●
⑪	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
⑫	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●
⑬	Mail destination setting	(Not selected)	–	Select the email recipient.	●	●	●	●
⑭	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP Notification.	●	●	●	●
⑮	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑯	HTTP Command Sending Settings	(Not selected)	–	Select the recipient of the HTTP Command.	●	●	●	●
⑰	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	●	●	●	●
⑱	Contact output 1*2	No change	OFF / ON / No change	Specify operation of contact output 1.	–	–	–	●
⑲	Contact output 2	No change	OFF / ON / No change	Specify operation of contact output 2.	–	–	–	●

*1 For the audio channel, you can select the following channels.

- In the [Voice Registration] screen, channel with registered audio
- Preset channel

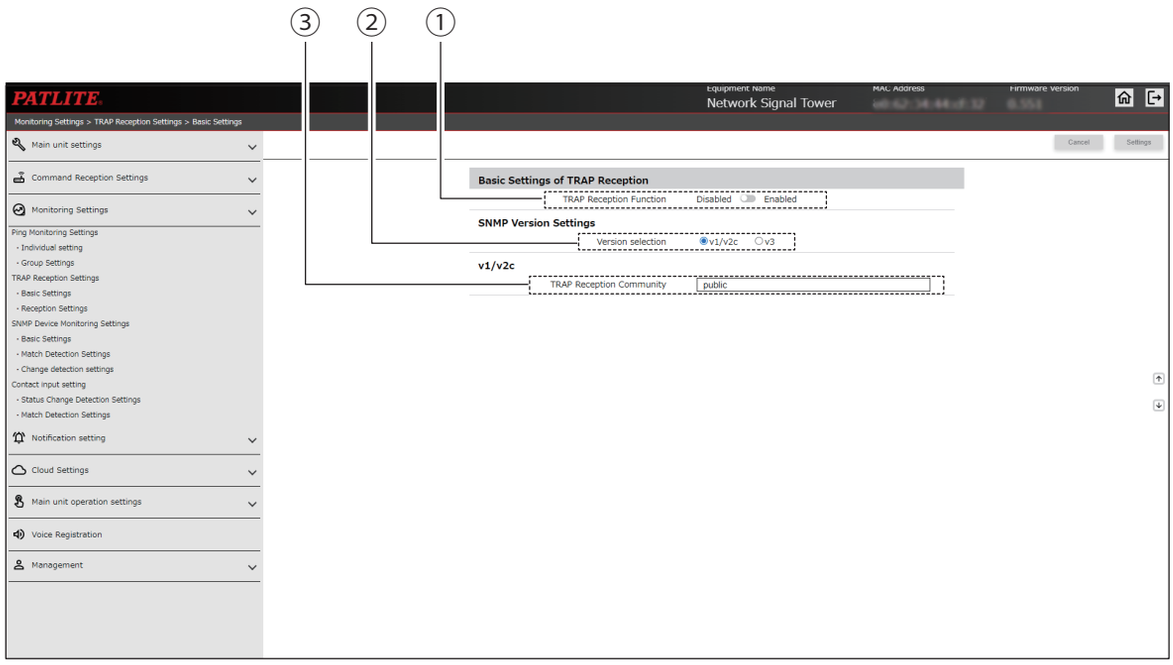
*2 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

9.3.2. TRAP Reception Settings

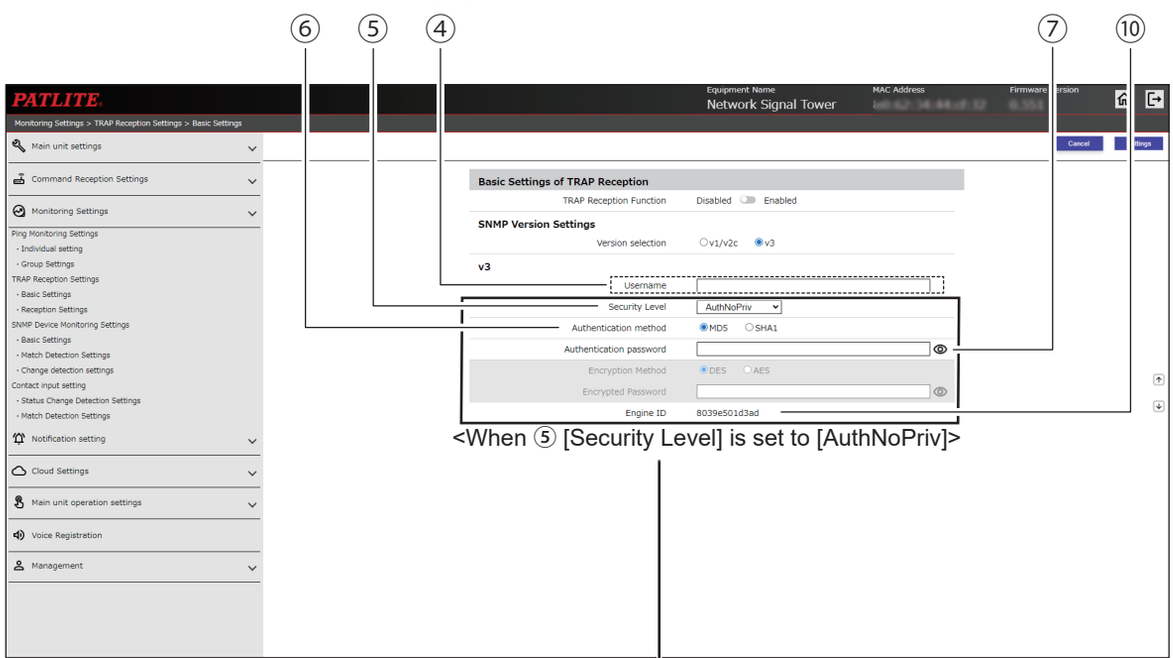
9.3.2.1. Basic Settings

You can set which TRAP are allowed to be received.

When [Version selection] is set to [v1/v2c]

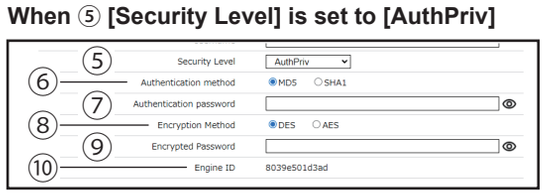


When [Version selection] is set to [v3]



<When ⑤ [Security Level] is set to [AuthNoPriv]>

When ⑤ [Security Level] is set to [AuthPriv]



When ⑤ [Security Level] is set to [noAuthNoPriv]

No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	TRAP Reception Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the TRAP Reception Function.	●	●	●	●
②	Version selection	v1/v2c	v1/v2c / v3	Select the SNMP version to use for receiving TRAP.	●	●	●	●
③	TRAP Reception Community*1	public	32 single-byte alphanumeric characters and underscore (_)	Enter the name for receiving settings with SNMP v1/v2c.	●	●	●	●
④	Username*2	(Blank)	32 single-byte alphanumeric characters	Set the user name used for authentication in SNMP v3.	●	●	●	●
⑤	Security Level*2	AuthPriv	noAuthNoPriv / AuthNoPriv / AuthPriv	Select the security level for authentication in SNMP v3.	●	●	●	●
⑥	Authentication method*2 *3	MD5	MD5 / SHA1	Select the Authentication method for authentication in SNMP v3.	●	●	●	●
⑦	Authentication password*2 *3	(Blank)	8 to 64 single-byte alphanumeric characters	Register the authentication password.	●	●	●	●
⑧	Encryption Method*2 *4	DES	DES / AES	Select the Encryption Method for authentication in SNMP v3.	●	●	●	●
⑨	Encryption Password*2 *4	(Blank)	8 to 64 single-byte alphanumeric characters	Register the Encrypted Password.	●	●	●	●
⑩	Engine ID*2	–	–	Displays this product's engine ID.	●	●	●	●

*1 Displays when [v1/v2c] is selected for [Version selection].

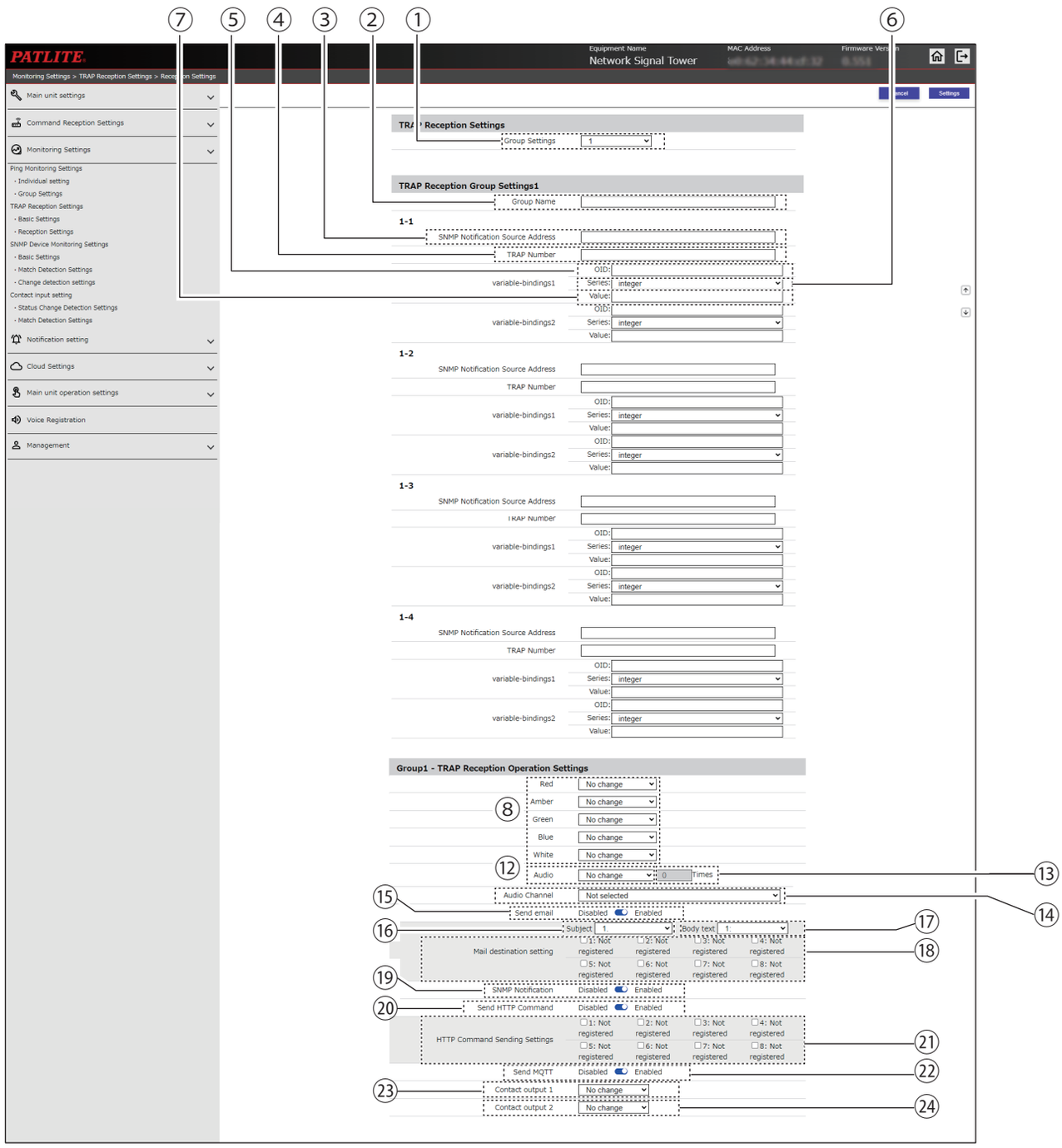
*2 Displays when [v3] is selected for the [Version selection].

*3 If you select [noAuthNoPriv] for the [Security Level], you cannot configure this setup item.

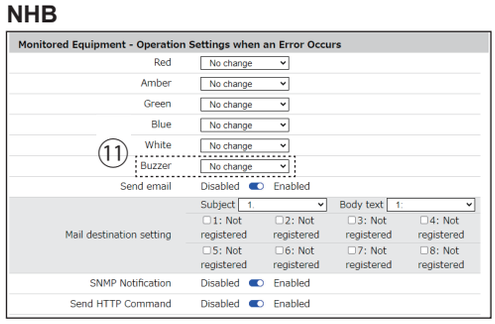
*4 If you select [noAuthNoPriv] or [AuthNoPriv] for the [Security Level], you cannot configure this setup item.

9.3.2.2. Reception Settings

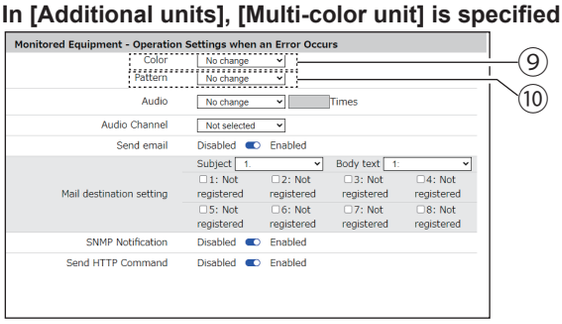
You can set which TRAP are allowed to be received, and the operation to run after receiving TRAP.



NHB



In [Additional units], [Multi-color unit] is specified



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Group Settings	1	1 to 16	Select the group number from 1 to 16.	●	●	●	●
②	Group Name	(Blank)	32 single-byte or double-byte characters	Enter the name of the group.	●	●	●	●
③	SNMP Notification Source Address	(Blank)	IP Address Format (v4/v6)	Enter the SNMP Notification Source Address from which to receive.	●	●	●	●
④	TRAP Number	(Blank)	OID format	Enter the TRAP OID to receive.	●	●	●	●
⑤	OID	(Blank)	OID format	Enter the variable-bindings OID to receive.	●	●	●	●
⑥	Series	Integer	Integer / OCTET STRING (String)/ OCTET STRING (Binary)	For the variable-bindings OID to receive, select the type from [integer], [OCTET STRING (String)], or [OCTET STRING (Binary)].	●	●	●	●
⑦	Value	(Blank)	0 to 2147483647 / 63 single-byte characters / 16 bytes (including comma as 1Byte)	Enter the value of variable-bindings to receive.	●	●	●	●
⑧	Red, Amber, Green, Blue, White	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Select each color of the Signal Tower.	●	●	●	●
⑨	Color	No change	Red / Amber / Green / Blue / White / Purple / Light blue / No change	Specify the color of the Multi-color unit.	●	●	●	●
⑩	Pattern	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Specify the lighting pattern of the Multi-color unit.	●	●	●	●
⑪	Buzzer	No change	Stop / Buzzer pattern 1 / Buzzer pattern 2 / Buzzer pattern 3 / Buzzer pattern 4 / Buzzer pattern 5 / No change	Select the buzzer sound pattern.	●	–	–	–
⑫	Audio	No change	Stop / One-shot playback / Repeat playback / No Change	Select the audio playback pattern.	–	●	●	●
⑬	Audio (when [Repeat playback] is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	–	●	●	●
⑭	Audio Channel*1	Not selected	Not selected / 1 to 71	Select a registered channel.	–	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑮	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Sending email.	●	●	●	●
⑯	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
⑰	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●
⑱	Mail destination setting	(Not selected)	–	Select the email recipient.	●	●	●	●
⑲	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP Notification.	●	●	●	●
⑳	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	●	●	●	●
㉑	HTTP Command Sending Settings	(Not selected)	–	Select the recipient of the HTTP Command.	●	●	●	●
㉒	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	●	●	●	●
㉓	Contact output 1*2	No change	ON / OFF / No change	Specify operation of contact output 1.	–	–	–	●
㉔	Contact output 2	No change	ON / OFF / No change	Specify operation of contact output 2.	–	–	–	●

*1 For the audio channel, you can select the following channels.

・In the [Voice Registration] screen, channel with registered audio

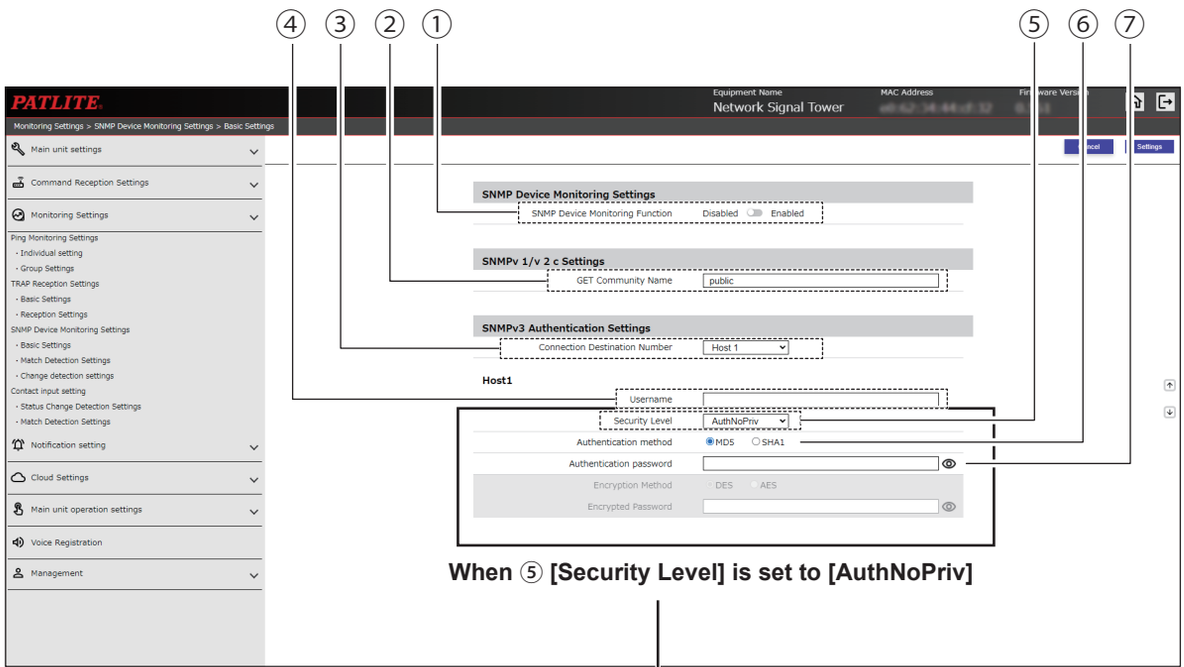
・Preset channel

*2 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

9.3.3. SNMP Device Monitoring Settings

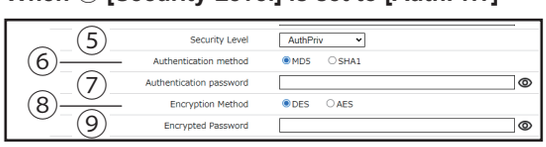
9.3.3.1. Basic Settings

You can perform the SNMP Device Monitoring Function's authentication settings.

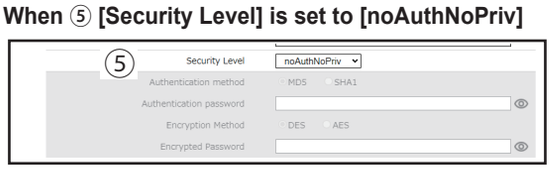


When ⑤ [Security Level] is set to [AuthNoPriv]

When ⑤ [Security Level] is set to [AuthPriv]



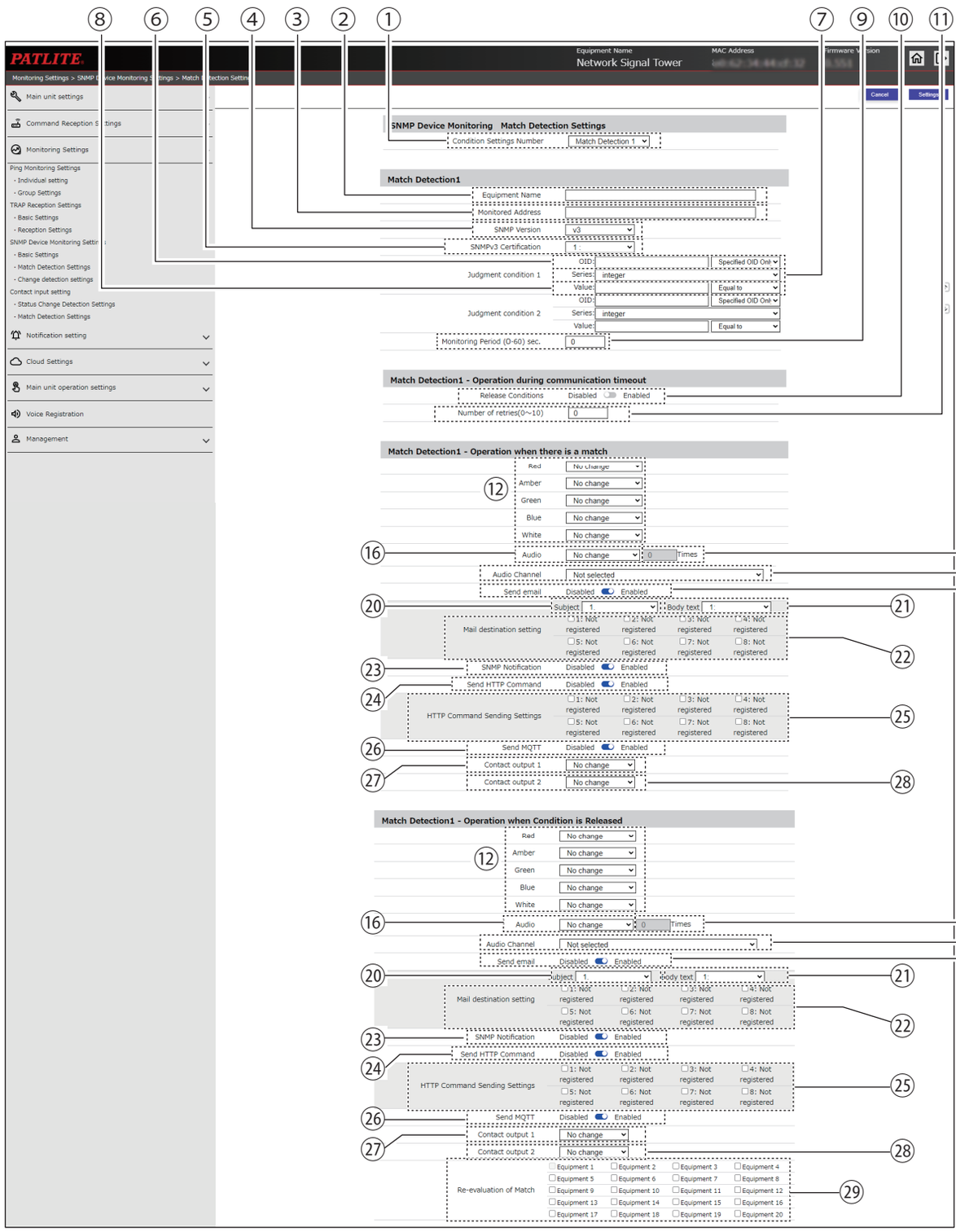
When ⑤ [Security Level] is set to [noAuthNoPriv]



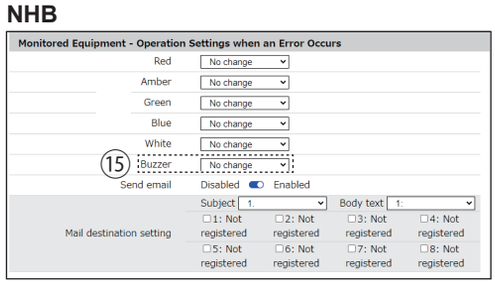
No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	SNMP Device Monitoring Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the SNMP Device Monitoring Function.	●	●	●	●
②	GET Community Name	public	32 single-byte alphanumeric characters and underscore (_)	Enter the name for setting SNMP v1/v2c.	●	●	●	●
③	Connection Destination Number	Host 1	Host 1 to 20	Select the setting number of the monitoring target to connect with via SNMP v3.	●	●	●	●
④	Username	(Blank)	32 single-byte alphanumeric characters	Set the user name used for authentication in SNMP v3.	●	●	●	●
⑤	Security Level	AuthPriv	noAuthNoPriv / AuthNoPriv / AuthPriv	Select the security level for authentication in SNMP v3.	●	●	●	●
⑥	Authentication method	MD5	MD5 / SHA1	Select the Authentication method for authentication in SNMP v3.	●	●	●	●
⑦	Authentication password	(Blank)	8 to 64 single-byte alphanumeric characters	Register the authentication password.	●	●	●	●
⑧	Encryption Method	DES	DES / AES	Select the Encryption Method for authentication in SNMP v3.	●	●	●	●
⑨	Encryption Password	(Blank)	8 to 64 single-byte alphanumeric characters	Register the Encrypted Password.	●	●	●	●

9.3.3.2. Match Detection Settings

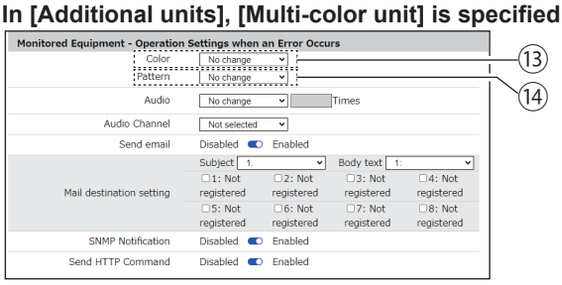
You can perform the SNMP Device Monitoring Function's Match Detection settings.



NHB



In [Additional units], [Multi-color unit] is specified



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Condition Settings Number	Match Detection 1	Match Detection 1 to 20	Select the condition settings number to set.	●	●	●	●
②	Equipment Name	(Blank)	32 single-byte or double-byte characters	Register the name of the monitored equipment.	●	●	●	●
③	Monitored Address	(Blank)	IP Address Format (v4/v6) or host name (63 characters)	Register the monitored address.	●	●	●	●
④	SNMP Version	v2c	v1 / v2c / v3	Set the SNMP version to use.	●	●	●	●
⑤	SNMPv3 Certification (when SNMP version v3 is selected)	1	1 to 20	As set in [Basic Settings], specify the [Connection Destination Number].	●	●	●	●
⑥	OID	(Blank)	127 numeric characters and period (.)	Register the OID of the monitoring target. Also, select either [Specified OID Only], or [All Specified OID Below].	●	●	●	●
⑦	Series	Integer	Integer / OCTET STRING (String) / OCTET STRING (Binary)	Select the type of the variable-bindings OID to receive.	●	●	●	●
⑧	Value	(Blank)	0 to 2147483647 / 63 single-byte characters / 16 bytes (including comma as 1Byte)	Enter the value of variable-bindings to receive.	●	●	●	●
⑨	Monitoring Period (0-60) sec.	0	0 to 60	Select the monitoring frequency of the target equipment.	●	●	●	●
⑩	Release Conditions	Disabled	Enabled / Disabled	Select either [Enabled] or [Disabled] for the release condition on a communication timeout.	●	●	●	●
⑪	Number of retries (0 ～ 10)	0	0 to 10	Select the number of SNMP Command transmissions until a communication timeout is identified.	●	●	●	●
⑫	Red, Amber, Green, Blue, White	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Select each color of the Signal Tower.	●	●	●	●
⑬	Color	No change	Red / Amber / Green / Blue / White / Purple / Light blue / No change	Specify the color of the Multi-color unit.	●	●	●	●
⑭	Pattern	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Specify the lighting pattern of the Multi-color unit.	●	●	●	●

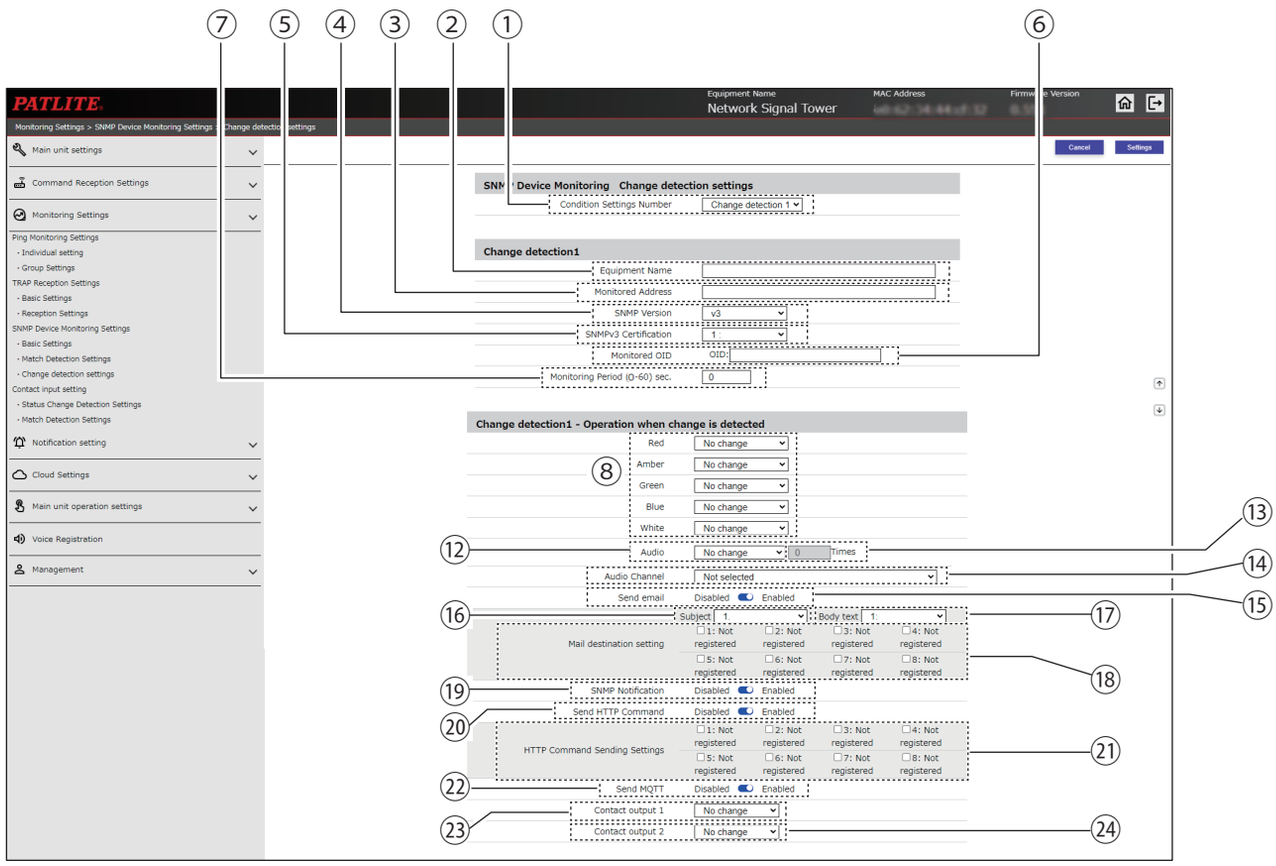
No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑮	Buzzer	No change	Stop / Buzzer pattern 1 / Buzzer pattern 2 / Buzzer pattern 3 / Buzzer pattern 4 / Buzzer pattern 5 / No change	Select the buzzer sound pattern.	●	–	–	–
⑯	Audio	No change	Stop / One-shot playback / Repeat playback / No Change	Select the audio playback pattern.	–	●	●	●
⑰	Audio (when [Repeat playback] is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	–	●	●	●
⑱	Audio Channel*1	Not selected	Not selected / 1 to 71	Select a registered channel.	–	●	●	●
⑲	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	●	●	●	●
⑳	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
㉑	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●
㉒	Mail destination setting	(Not selected)	–	Select the email recipient.	●	●	●	●
㉓	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP Notification.	●	●	●	●
㉔	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	●	●	●	●
㉕	HTTP Command Sending Settings	(Not selected)	–	Select the recipient of the HTTP Command.	●	●	●	●
㉖	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	●	●	●	●
㉗	Contact output 1*2	No change	OFF / ON / No change	Specify operation of contact output 1.	–	–	–	●
㉘	Contact output 2	No change	OFF / ON / No change	Specify operation of contact output 2.	–	–	–	●
㉙	Re-evaluation of Match	(Not selected)	–	For the release condition operation, select the condition settings number that is returned to monitoring status.	●	●	●	●

*1 For audio, you can select the following channels.
- In the [Voice Registration] screen, channel with registered audio
- Preset channel

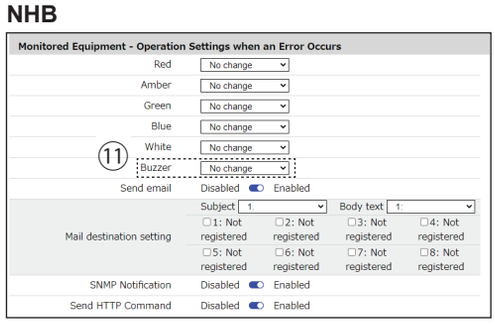
*2 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

9.3.3.3. Change Detection Settings

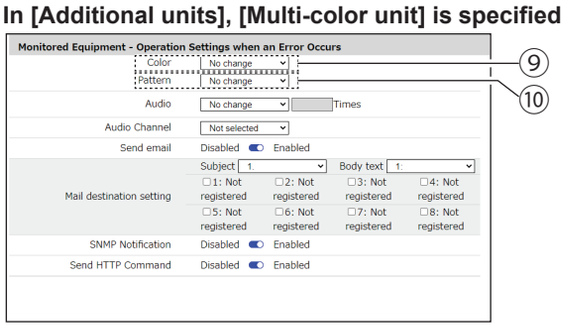
You can perform SNMP Device Monitoring Function's Detect Change settings.



NHB



In [Additional units], [Multi-color unit] is specified



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Condition Settings Number	Change detection 1	Change detection 1 to 5	Select the condition settings number to set.	●	●	●	●
②	Equipment Name	(Blank)	32 single-byte or double-byte characters	Register the name of the monitored equipment.	●	●	●	●
③	Monitored Address	(Blank)	IP Address Format (v4/v6) or host name (63 characters)	Register the monitored address.	●	●	●	●
④	SNMP Version	v1	v1 / v2c / v3	Set the SNMP version to use.	●	●	●	●
⑤	SNMPv3 Certification (when SNMP version v3 is selected)	1	1 to 20	As set in [Basic Settings], specify the [Connection Destination Number].	●	●	●	●
⑥	Monitored OID	(Blank)	127 numeric characters and period (.)	Register the OID of the monitoring target.	●	●	●	●
⑦	Monitoring Period (0-60) sec.	0	0 to 60	Select the monitoring frequency of the target equipment.	●	●	●	●
⑧	Red, Amber, Green, Blue, White	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Select each color of the Signal Tower.	●	●	●	●
⑨	Color	No change	Red / Amber / Green/ Blue / White / Purple/ Light blue / No change	Specify the color of the Multi-color unit.	●	●	●	●
⑩	Pattern	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Specify the lighting pattern of the Multi-color unit.	●	●	●	●
⑪	Buzzer	No change	Stop / Buzzer pattern 1 / Buzzer pattern 2 / Buzzer pattern 3 / Buzzer pattern 4 / Buzzer pattern 5 / No change	Select the buzzer sound pattern.	●	–	–	–
⑫	Audio	No change	Stop / One-shot playback / Repeat playback / No Change	Select the audio playback pattern.	–	●	●	●
⑬	Audio (when [Repeat playback] is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	–	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑭	Audio Channel*1	Not selected	Not selected / 1 to 71	Select a registered channel.	–	●	●	●
⑮	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	●	●	●	●
⑯	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
⑰	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●
⑱	Mail destination setting	(Not selected)	–	Select the email recipient.	●	●	●	●
⑲	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP Notification.	●	●	●	●
⑳	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	●	●	●	●
㉑	HTTP Command Sending Settings	(Not selected)	–	Select the recipient of the HTTP Command.	●	●	●	●
㉒	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	●	●	●	●
㉓	Contact output 1*2	No change	OFF / ON / No change	Specify operation of contact output 1.	–	–	–	●
㉔	Contact output 2	No change	OFF / ON / No change	Specify operation of contact output 2.	–	–	–	●

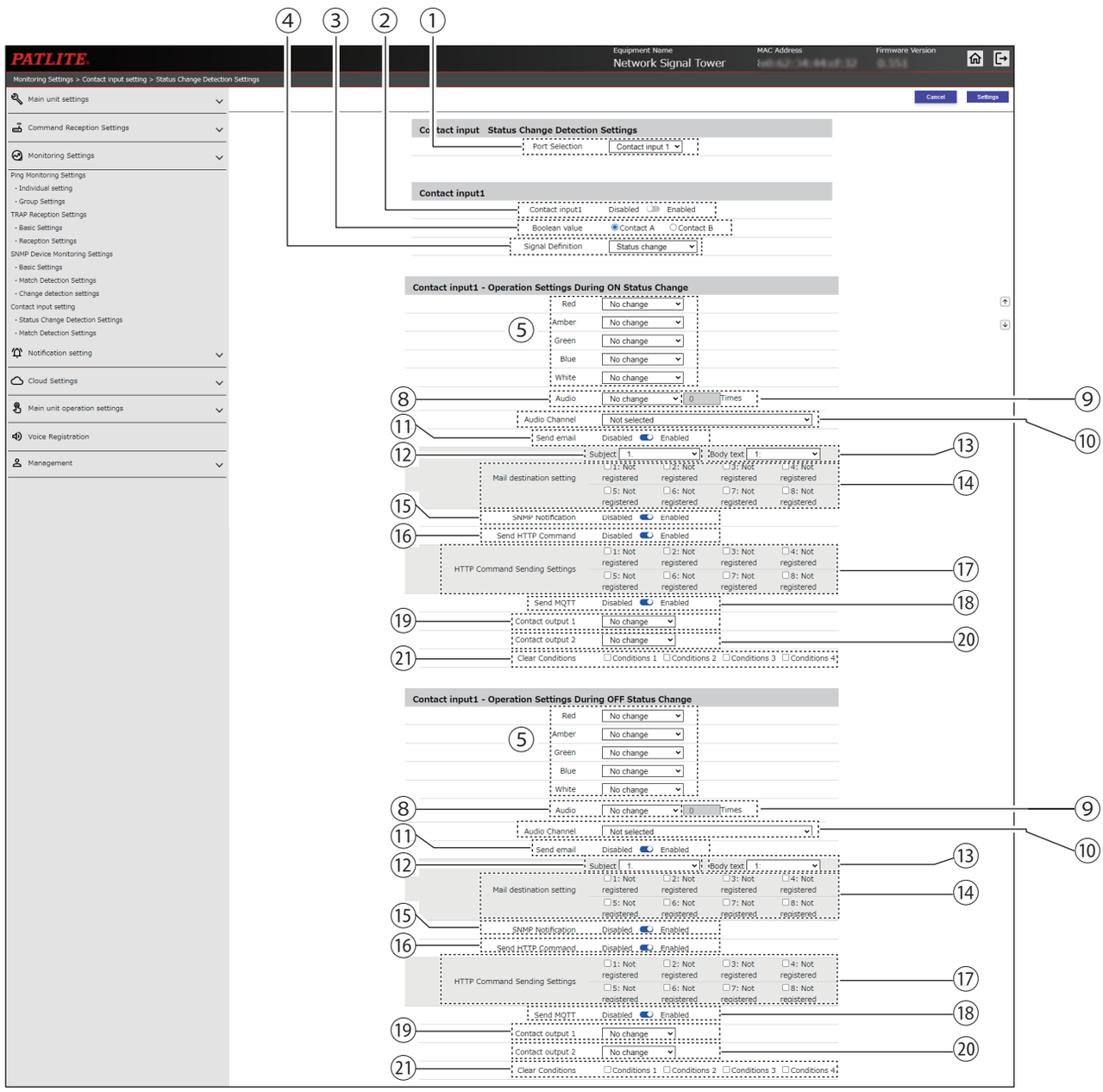
*1 For the audio channel, you can select the following channels.
- In the [Voice Registration] screen, channel with registered audio
- Preset channel

*2 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

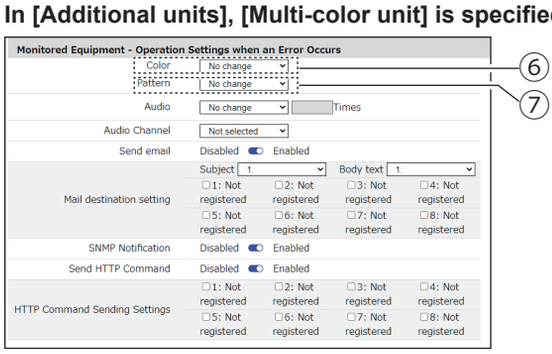
9.3.4. Contact Input Setting

9.3.4.1. Status Change Detection Settings NHV Series (D model)

Set the operation to run when there is a state change in contact input.



In [Additional units], [Multi-color unit] is specified



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Port Selection	Contact input 1	Contact input 1 to 4	Select the contact input number to set.	–	–	–	●
②	Contact input ■ *1	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the specified contact input.	–	–	–	●
③	Boolean value	Contact A	Contact A / Contact B	Select the [Boolean Value] as either [Contact A] or [Contact B].	–	–	–	●
④	Signal Definition	OFF Status Change	ON Status Change / OFF Status Change / Status change	Select the signal definition as [ON Status Change], [OFF Status Change], or [Status change].	–	–	–	●
⑤	Red, Amber, Green, Blue, White	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Select each color of the Signal Tower.	–	–	–	●
⑥	Color	No change	Red / Amber / Green/ Blue / White / Purple/ Light blue / No change	Specify the color of the Multi-color unit.	–	–	–	●
⑦	Pattern	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Specify the lighting pattern of the Multi-color unit.	–	–	–	●
⑧	Audio	No change	Stop / One-shot playback / Repeat playback / No change	Select the audio playback pattern.	–	–	–	●
⑨	Audio (when [Repeat playback] is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	–	–	–	●
⑩	Audio Channel*2	Not selected	Not selected / 1 to 71	Select a registered channel.	–	–	–	●
⑪	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	–	–	–	●
⑫	Subject	1	1 to 17	Select a subject for the email.	–	–	–	●
⑬	Body text	1	1 to 17	Select the body text of the email.	–	–	–	●
⑭	Mail destination setting	(Not selected)	–	Select the email recipient.	–	–	–	●
⑮	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP Notification.	–	–	–	●
⑯	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	–	–	–	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑰	HTTP Command Sending Settings	(Not selected)	–	Select the recipient of the HTTP Command.	–	–	–	●
⑱	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	–	–	–	●
⑲	Contact output 1*3	No change	OFF / ON / No change	Specify operation of contact output 1.	–	–	–	●
⑳	Contact output 2	No change	OFF / ON / No change	Specify operation of contact output 2.	–	–	–	●
㉑	Clear conditions	(Not selected)	–	Select the condition to reset the measurement time of the Match Detection Settings.	–	–	–	●

*1 ■ is a contact input number.

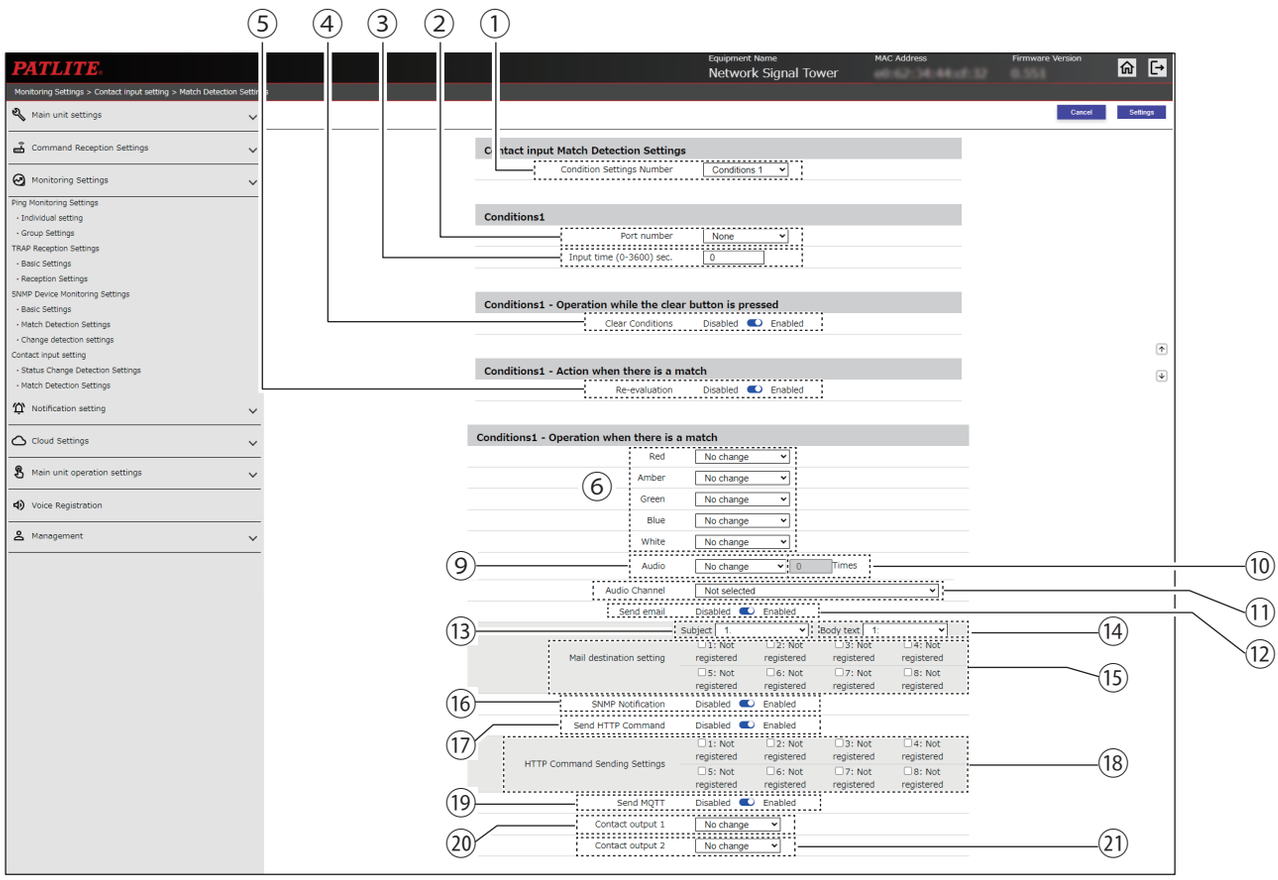
*2 For the audio channel, you can select the following channels.

- In the [Voice Registration] screen, channel with registered audio
- Preset channel

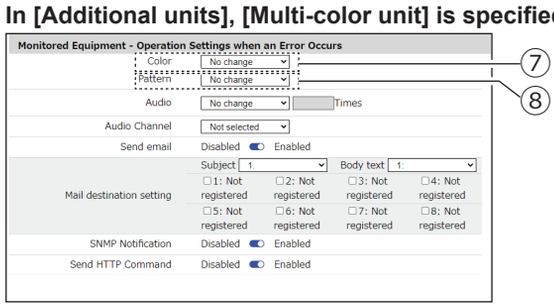
*3 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

9.3.4.2. Match Detection Settings NHV Series (D model)

Set the operation to run when there is a condition match in contact input.



In [Additional units], [Multi-color unit] is specified



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	M Model	D Model
①	Condition Settings Number	Condition 1	Condition 1 to 4	Select the condition settings number to set.	–	–	–	●
②	Port number	None	None / Contact input 1 to 4	Select the contact input number for performing the condition setting.	–	–	–	●
③	Input time (0-3600) sec.	0	0 to 3600	Set the input time.	–	–	–	●
④	Clear Conditions	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the clear function for when the Clear button is pressed.	–	–	–	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑤	Re-evaluation	Disabled	Enabled / Disabled	After the conditions match, you can select to [Enabled] or [Disabled] re-evaluating the same condition.	–	–	–	●
⑥	Red, Amber, Green, Blue, White	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Select each color of the Signal Tower.	–	–	–	●
⑦	Color	No change	Red / Amber / Green / Blue / White / Purple/ Light blue / No change	Specify the color of the Multi-color unit.	–	–	–	●
⑧	Pattern	No change	Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / OFF / No change	Specify the lighting pattern of the Multi-color unit.	–	–	–	●
⑨	Audio	No change	Stop / One-shot playback / Repeat playback / No Change	Select the audio playback pattern.	–	–	–	●
⑩	Audio (when [Repeat playback] is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	–	–	–	●
⑪	Audio Channel*1	Not selected	Not selected / 1 to 71	Select a registered channel.	–	–	–	●
⑫	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	–	–	–	●
⑬	Subject	1	1 to 17	Select a subject for the email.	–	–	–	●
⑭	Body text	1	1 to 17	Select the body text of the email.	–	–	–	●
⑮	Mail destination setting	(Not selected)	–	Select the email recipient.	–	–	–	●
⑯	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP Notification.	–	–	–	●
⑰	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	–	–	–	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑱	HTTP Command Sending Settings	(Not selected)	–	Select the recipient of the HTTP Command.	–	–	–	●
⑲	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	–	–	–	●
⑳	Contact output 1*2	No change	OFF / ON / No change	Specify operation of contact output 1.	–	–	–	●
㉑	Contact output 2	No change	OFF / ON / No change	Specify operation of contact output 2.	–	–	–	●

*1 For the audio channel, you can select the following channels.
- In the [Voice Registration] screen, channel with registered audio
- Preset channel

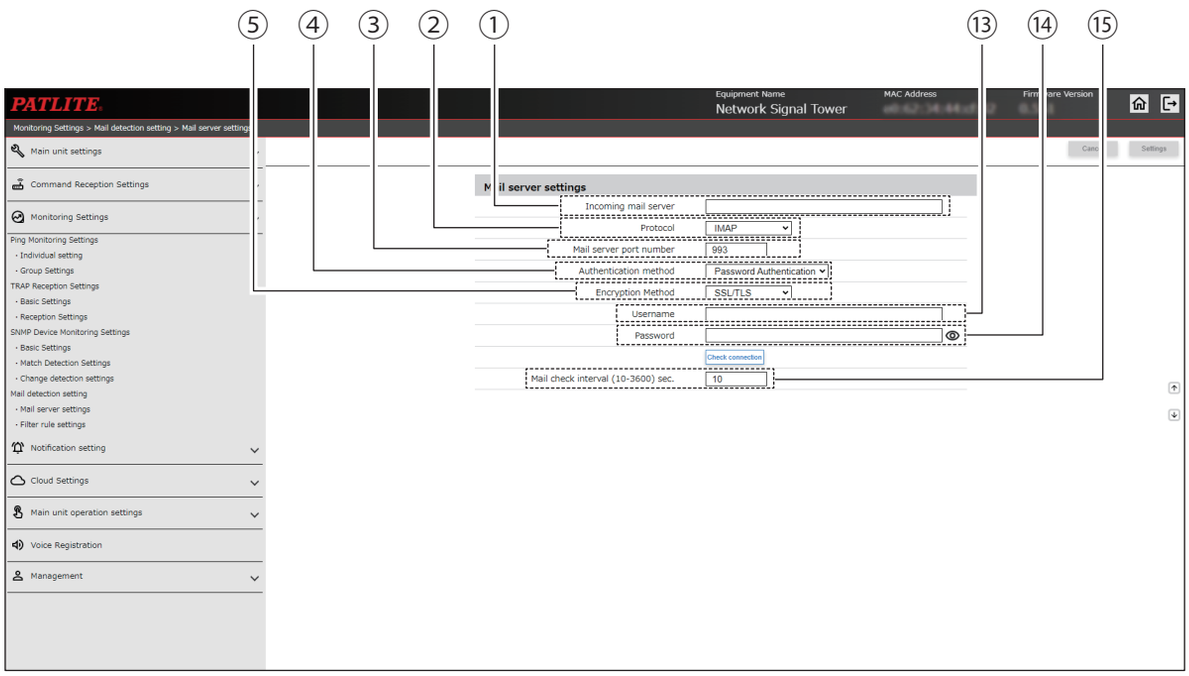
*2 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

9.3.5. Mail Detection Setting NHV Series

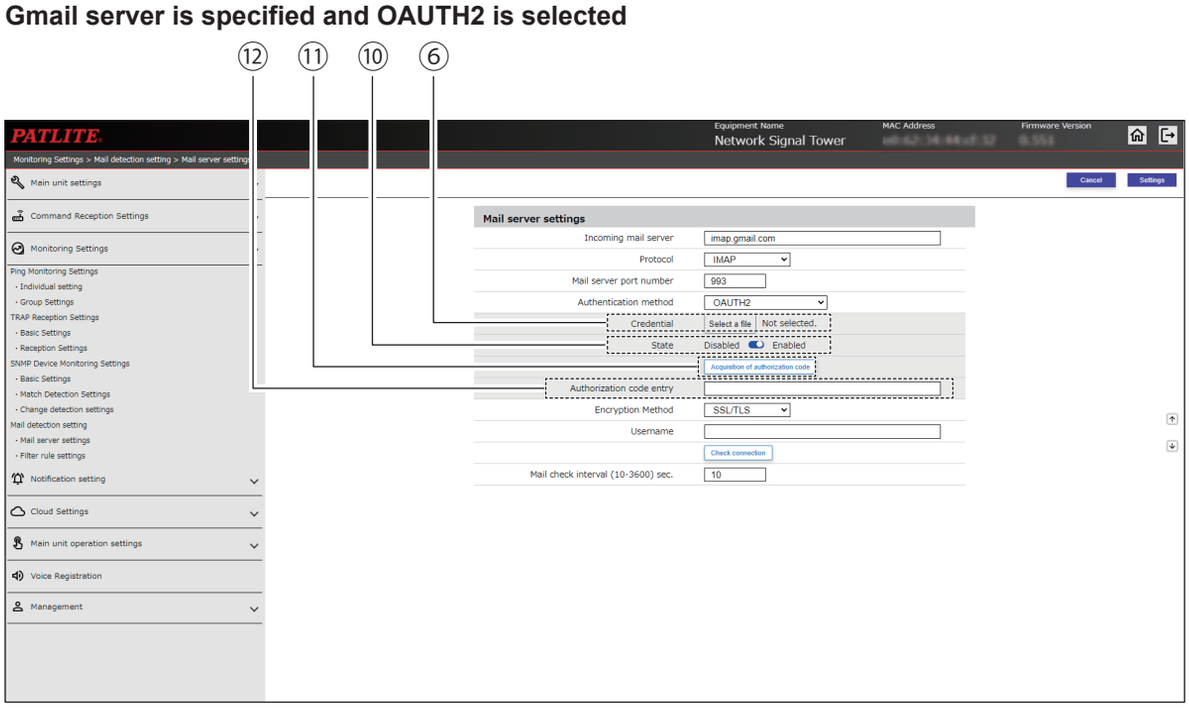
Configure the setting for detecting emails and the operation to perform when emails are detected.

9.3.5.1. Mail Server Settings

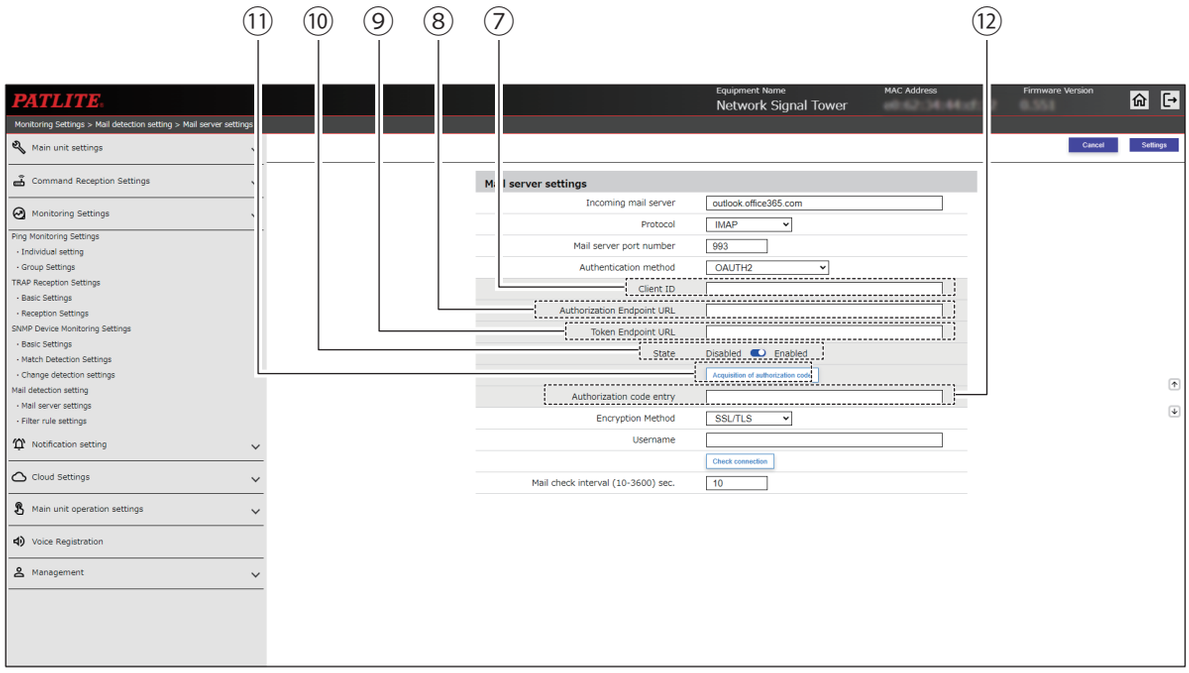
Mail server is undefined



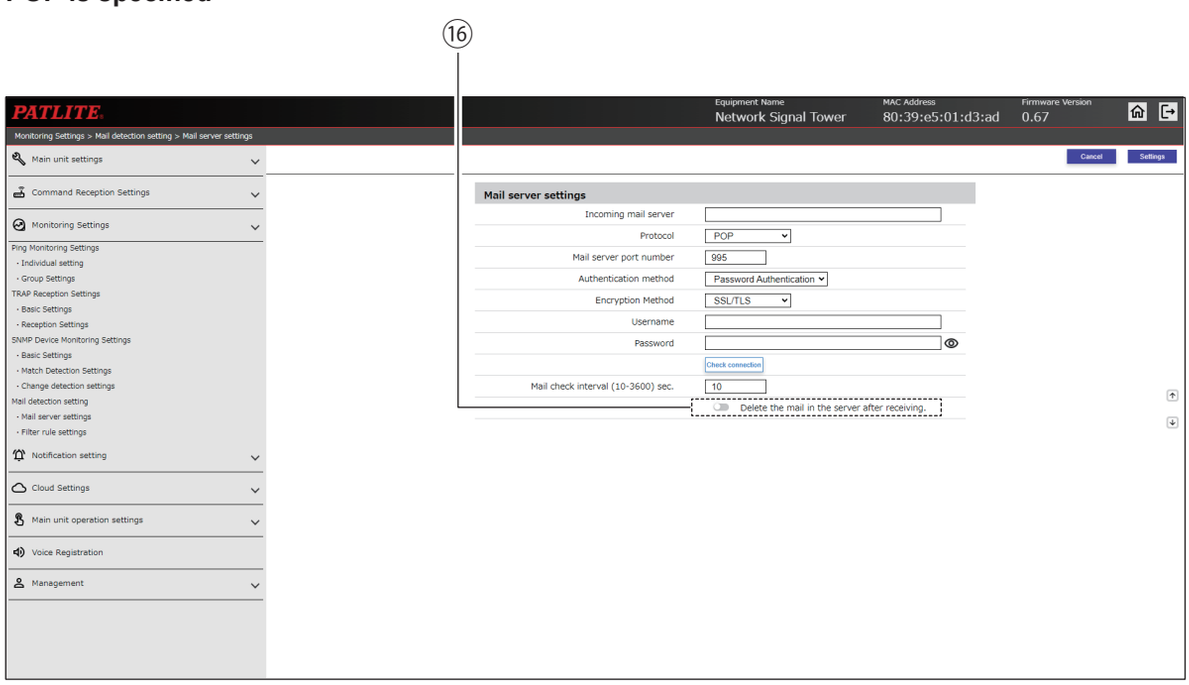
Gmail server is specified and OAUTH2 is selected



Outlook server is specified and OAUTH2 is selected



POP is specified

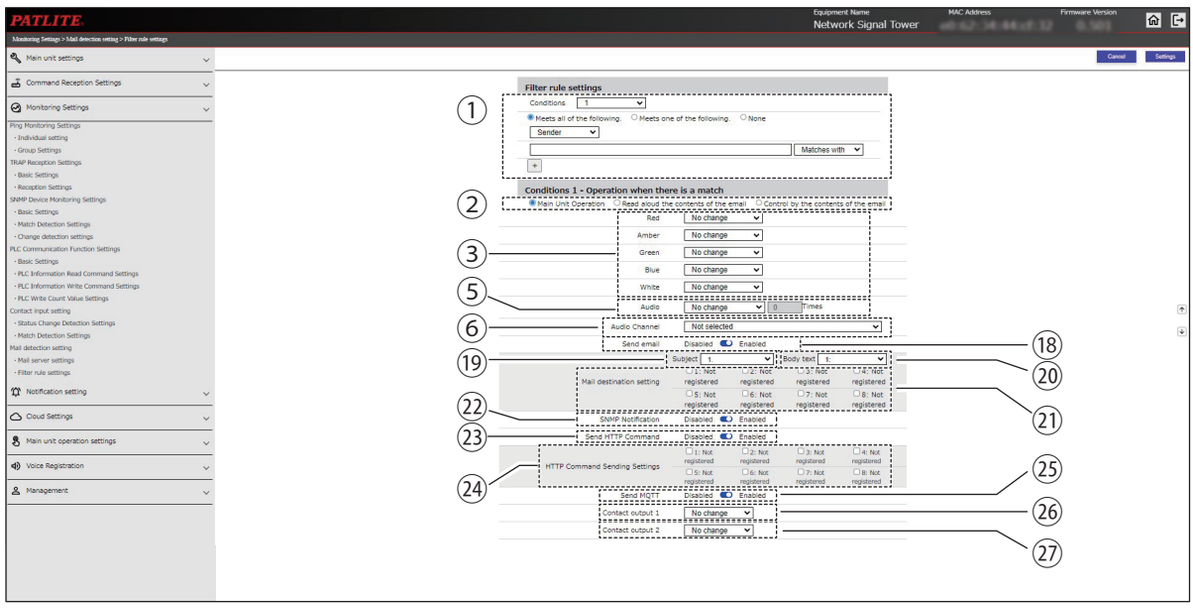


No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Incoming mail server	(Blank)	IP Address Format (v4/v6) or host name (63 characters)	Enter the mail server address.	–	●	●	●
②	Protocol	IMAP	IMAP / POP	Select the protocol for the mail server.	–	●	●	●
③	Mail server port number	993	1 to 65535	Enter the mail server port number. The default port for each protocol is entered when the protocol is selected.	–	●	●	●
④	Authentication method	Password Authentication	Password Authentication / OAUTH2*1	Select either [Password Authentication] or [OAuth2].	–	●	●	●
⑤	Encryption Method	SSL/TLS	SSL/TLS / STARTTLS / None	Select [SSL/TLS], [STARTTLS], or [None].	–	●	●	●
⑥	Credential	–	–	Upload the Credential file.	–	●	●	●
⑦	Client ID	(Blank)	127 single-byte alphanumeric and symbol characters	Enter the client ID.	–	●	●	●
⑧	Authorization Endpoint URL	(Blank)	511 single-byte alphanumeric and symbol characters	Enter the authorization endpoint URL.	–	●	●	●
⑨	Token Endpoint URL	(Blank)	511 single-byte alphanumeric and symbol characters	Enter the Token Endpoint URL.	–	●	●	●
⑩	State	Enabled	Enabled / Disabled	Select either [Enabled] or [Disabled] for the State.	–	●	●	●
⑪	Acquisition of authorization code	–	–	For an OAuth2 connection, get an authorization code.	–	●	●	●
⑫	Authorization code entry	(Blank)	–	Enter the authorization code you retrieved.	–	●	●	●
⑬	Username	(Blank)	63 single-byte alphanumeric and symbol characters	Enter a user name for Password Authentication.	–	●	●	●
⑭	Password	(Blank)	32 single-byte alphanumeric and symbol characters	Enter the password for Password Authentication.	–	●	●	●
⑮	Mail check interval (10-3600) sec.	10	10 to 3600	Specify the interval for checking the mail server.	–	●	●	●
⑯	Delete the mail in the server after receiving.*2	Disabled	Enabled / Disabled	Specify the interval for checking the mail server.	–	●	●	●

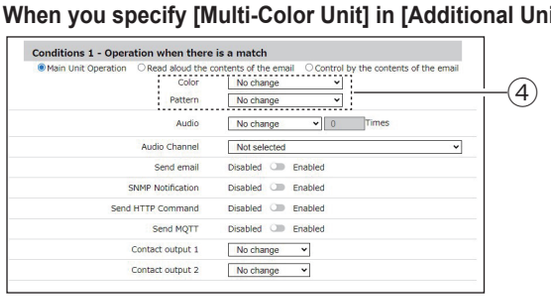
*1 You can select [OAUTH2] when one of the following addresses is specified as the [Incoming mail server].
- Gmail server: imap.gmail.com pop.gmail.com
- Outlook server: outlook.office365.com

*2 Setting is available only when [POP] is selected.

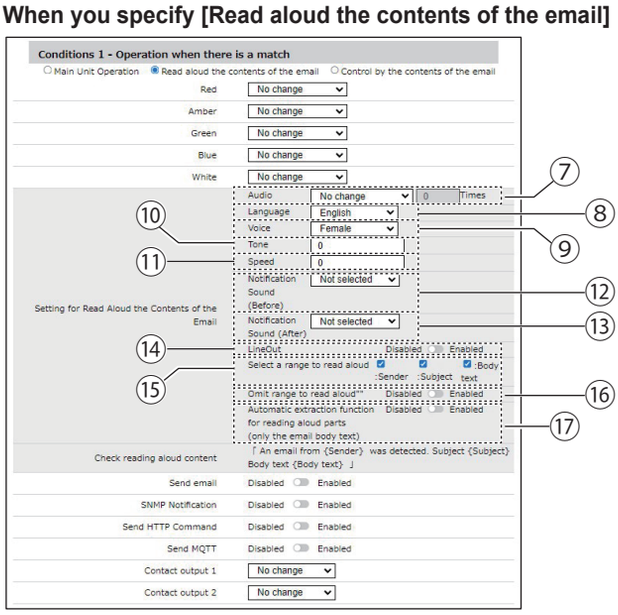
9.3.5.2. Filter Rule Settings



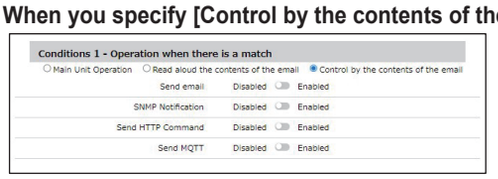
When you specify [Multi-Color Unit] in [Additional Units]



When you specify [Read aloud the contents of the email]



When you specify [Control by the contents of the email]



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Conditions	1	1 to 20	Select the condition number to set in a filter rule.	–	●	●	●
		Meets all of the following	Meets all of the following / Meets one of the following / None	Specify the match condition for when multiple filter rules are set.	–	●	●	●
		Sender	Sender / Subject / Body text	Select the content to detect.	–	●	●	●
		(Blank)	63 characters	Enter the text to detect.	–	●	●	●
		Matches with	Matches with / Beginning with / Include / Be free of	Select the matching condition.	–	●	●	●
②	Operation settings	Basic operations	Basic Operations / Reading Aloud Email /Mail Control	Specify the operation when the filter rule is matched.	–	●	●	●
③	Red / Amber / Green / Blue / White	No change	OFF / Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / No change	Select each color of the Signal Tower.	–	●	●	●
④	Color	No change	Red / Amber / Green / Blue / White / Purple / Light blue / No change	Specify the color of the Multi-color unit.	–	●	●	●
	Pattern	No change	OFF / Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / No change	Specify the lighting pattern of the Multi-color unit.	–	●	●	●
⑤	Audio	No change	Stop / One-shot playback / Repeat playback / No change	Select the audio playback pattern.	–	●	●	●
⑥	Audio Channel	Not selected	Not selected / 1 to 71[*1]	Select the registered channel.	–	●	●	●
⑦	Audio	No change	Stop / One-shot playback / Repeat playback / No change	In [Reading Aloud Email], select the audio playback pattern.	–	●	●	●
⑧	Language	Japanese	Japanese / English / Chinese (Mandarin)[*2]	In [Reading Aloud Email], select either Japanese / English / Chinese (Mandarin) for the playback language.	–	●	●	●
⑨	Voice	Female	Male / Female	In [Reading Aloud Email], select either [Male] or [Female] for the voice used in playback.	–	●	●	●
⑩	Tone	0	-5 to 5	In [Reading Aloud Email], set the tone of the audio playback.	–	●	●	●
⑪	Speed	0	-5 to 5	In [Reading Aloud Email], set the speed of the audio playback.	–	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑫	Notification Sound (Before)	(Not selected)	(Not selected) / 1 to 10	Set a notification sound to play before the sound playback.	–	●	●	●
⑬	Notification Sound (After)	(Not selected)	(Not selected) / 1 to 10	Set a notification sound to play after the sound playback.	–	●	●	●
⑭	LineOut	Disabled	Enabled / Disabled	Select either [Enabled] or [Disabled] for LineOut output of the audio to be played by [Reading Aloud Email].	–	●	●	●
⑮	Select a range to read aloud	(All selected)	Sender / Subject / Body text	Specify the email readout range.	–	●	●	●
⑯	Omit range to read aloud""	Disabled	Enabled / Disabled	Select either [Enabled] or [Disabled] for omitting reading aloud [Readout Range].	–	●	●	●
⑰	Automatic extraction function for reading aloud parts (only the email body text)	Disabled	Enabled / Disabled	Select either [Enabled] or [Disabled] for automatically extracting the readout parts of the email body text.	–	●	●	●
⑱	Send email	Disabled	Enabled / Disabled	Set [Enabled] or [Disabled] for Send email.	–	●	●	●
⑲	Subject	1	1 to 17	Select the subject of the email.	–	●	●	●
⑳	Body text	1	1 to 17	Select the body text of the email.	–	●	●	●
㉑	Mail destination setting	(Not selected)	-	Select an email recipient.	–	●	●	●
㉒	SNMP Notification	Disabled	Enabled / Disabled	Set SNMP Notification to [Enabled] or [Disabled].	–	●	●	●
㉓	Send HTTP Command	Disabled	Enabled / Disabled	Set Send HTTP Command to [Enabled] or [Disabled].	–	●	●	●
㉔	HTTP Command Sending Settings	(Not selected)	-	Select the recipient of the HTTP Command.	–	●	●	●
㉕	Send MQTT	Disabled	Enabled / Disabled	Set Send MQTT to [Enabled] or [Disabled].	–	●	●	●
㉖	Contact Output 1 *3	No change	OFF / ON / No change	Specify operation of Contact Output 1.	–	–	–	●
㉗	Contact Output 2	No change	OFF / ON / No change	Specify operation of Contact Output 2.	–	–	–	●

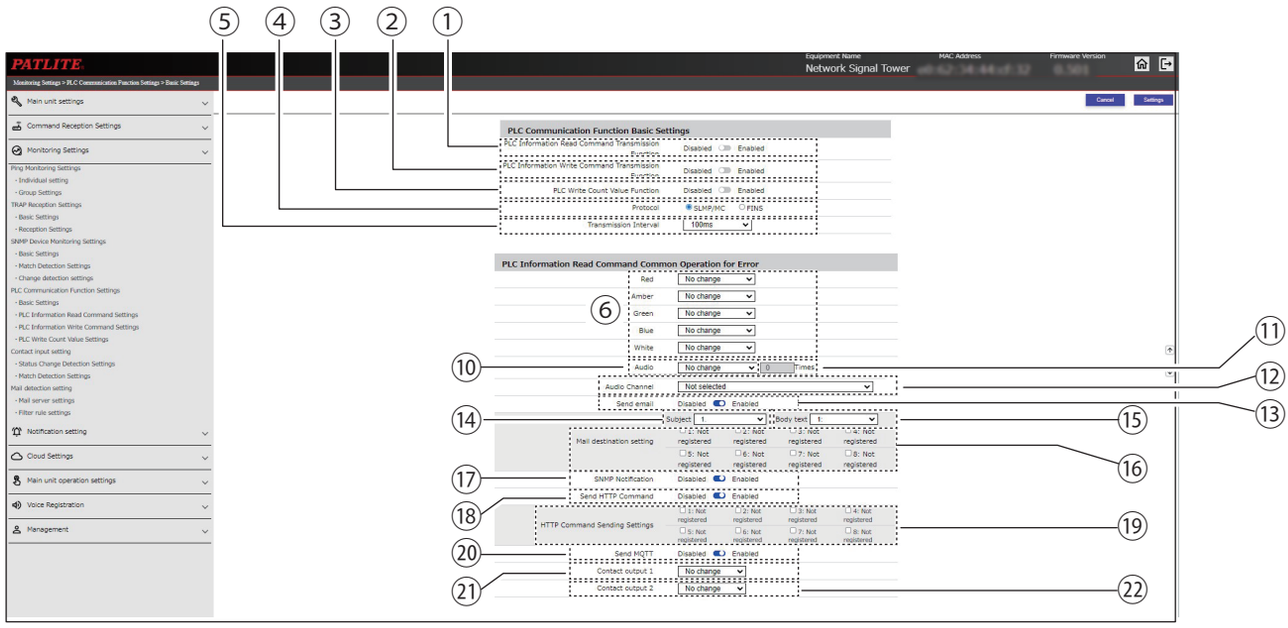
*1 You can select the following audio channels.
・Channel with audio registered in the [Voice Registration] screen
・Preset channel

*2 "Chinese" will not be displayed for products that do not have the Voice Synthesizer of Chinese.

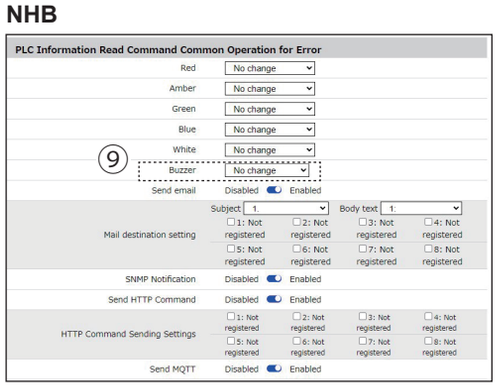
*3 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

9.3.6. PLC Communication Function Settings

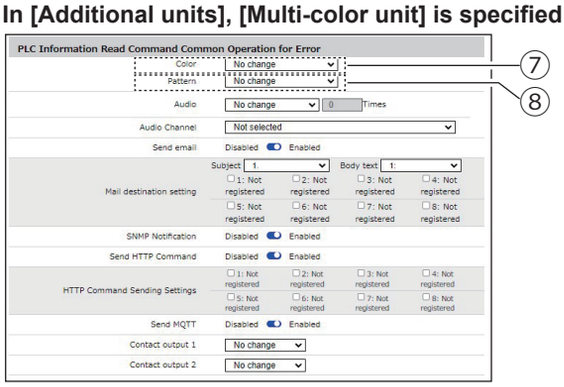
9.3.6.1. Basic Settings



NHB



In [Additional units], [Multi-color unit] is specified



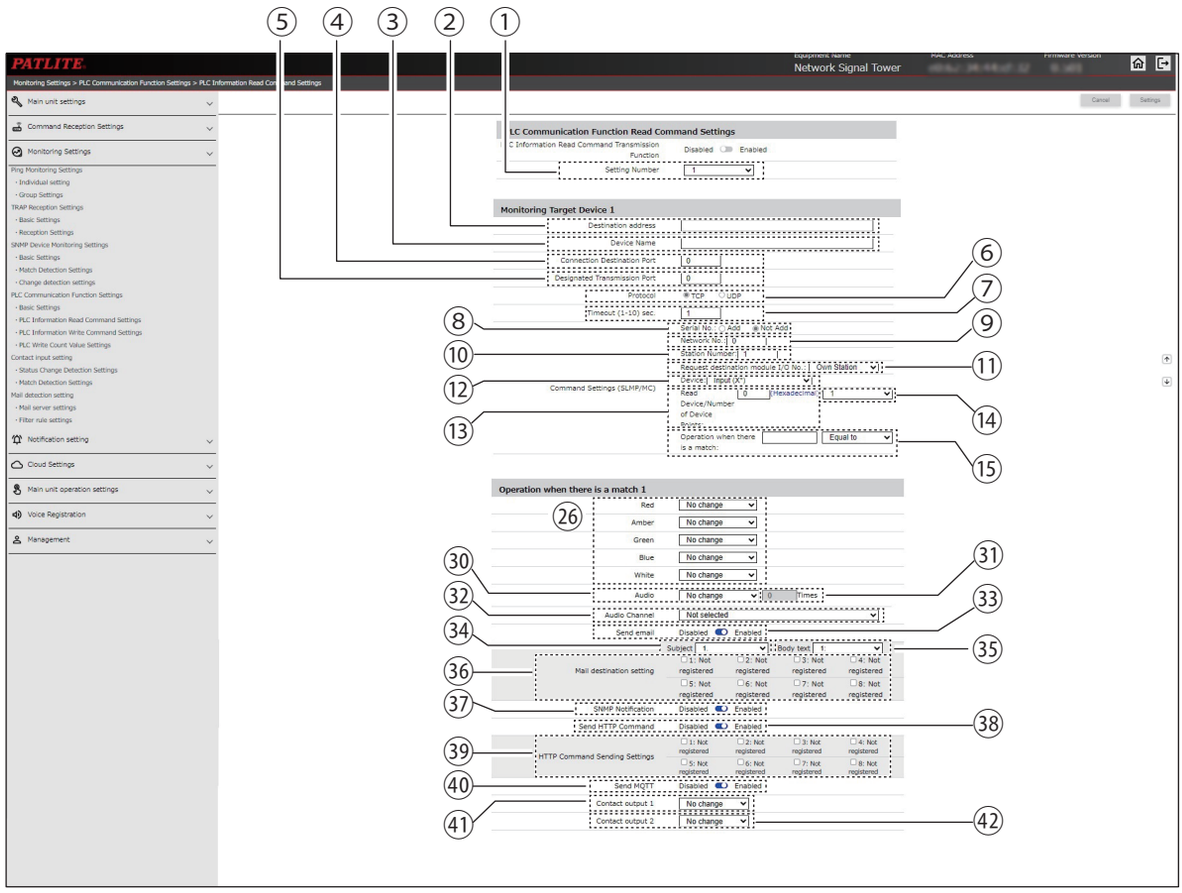
No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	PLC Information Read Command Transmission Function	Disabled	Enabled / Disabled	Select [Enabled] or [Disabled] for the PLC Information Read Command Function.	●	●	●	●
②	PLC Information Write Command Transmission Function	Disabled	Enabled / Disabled	Select [Enabled] or [Disabled] for the PLC Information Write Command Function.	●	●	●	●
③	PLC Write Count Value Function	Disabled	Enabled / Disabled	Select [Enabled] or [Disabled] for the PLC Count Value Write Function.	●	●	●	●
④	Protocol	SLMP(MC)	SLMP(MC)/ FINS	Select a protocol to be used.	●	●	●	●
⑤	Transmission Interval	100ms	10ms/50ms/ 100ms	Select a transmission interval of the PLC Information Read Command.	●	●	●	●
⑥	Red / Amber / Green / Blue / White	No change	OFF / Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / No change	Select each color of the Signal Tower.	●	●	●	●
⑦	Color	No change	Red / Amber / Green / Blue / White / Purple / Light blue / No change	Specify the color of the Multi- color unit.	●	●	●	●
⑧	Pattern	No change	OFF / Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / No change	Specify the lighting pattern of the Multi-color unit.	●	●	●	●
⑨	Buzzer	No change	Stop / Buzzer pattern 1 / Buzzer pattern 2 / Buzzer pattern 3 / Buzzer pattern 4 / Buzzer pattern 5 / No change	Select the buzzer sound pattern.	●	–	–	–
⑩	Audio	No change	Stop / One-shot playback / Repeat playback / No change	Select the audio playback pattern.	–	●	●	●
⑪	Audio (when "Repeat playback" is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	–	●	●	●
⑫	Audio Channel[*1]	(Not selected)	Not selected / 1 to 71	Select the registered channel.	–	●	●	●
⑬	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	●	●	●	●
⑭	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
⑮	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●
⑯	Mail destination setting	(Not selected)	-	Select an email recipient.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑰	SNMP Notification	Disabled	Enabled / Disabled	Set SNMP Notification to [Enabled] or [Disabled].	●	●	●	●
⑱	Send HTTP Command	Disabled	Enabled / Disabled	Set Send HTTP Command to [Enabled] or [Disabled].	●	●	●	●
⑲	HTTP Command Sending Settings	(Not selected)	-	Select the recipient of the HTTP Command.	●	●	●	●
⑳	Send MQTT	Disabled	Enabled / Disabled	Set Send MQTT to [Enabled] or [Disabled].	●	●	●	●
㉑	Contact Output 1 *2	No change	OFF / ON / No change	Specify operation of Contact Output 1.	–	–	–	●
㉒	Contact Output 2	No change	OFF / ON / No change	Specify operation of Contact Output 2.	–	–	–	●

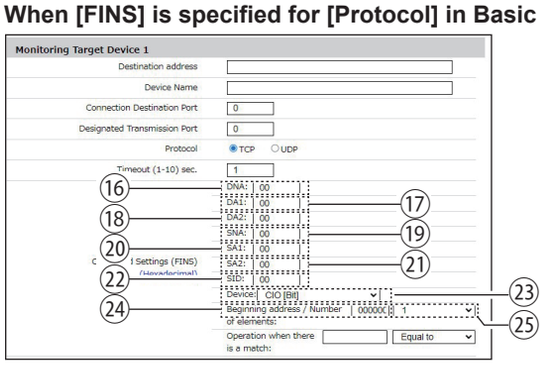
*1 You can select the following audio channels.
- Channel with audio registered in the [Voice Registration] screen
- Preset channel

*2 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

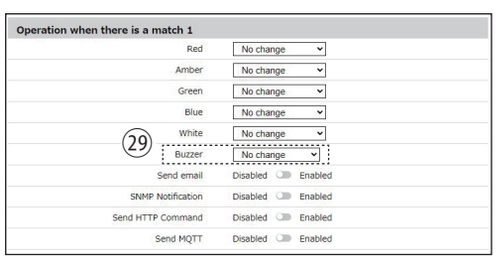
9.3.6.2. PLC Information Read Command Settings



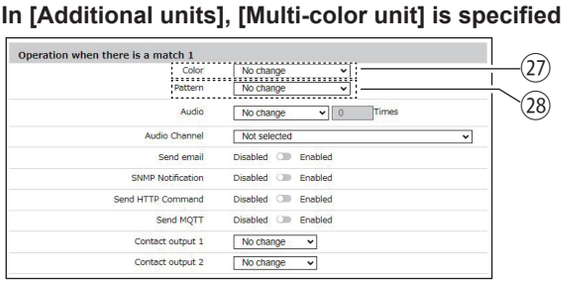
When [FINS] is specified for [Protocol] in Basic Settings



NHB



In [Additional units], [Multi-color unit] is specified



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Setting Number	1	1 to 16	Select a setting number for setting the PLC Information Read Command.	●	●	●	●
②	Destination adress	(Blank)	IP address format(v4) Host name 63 characters.	Enter the registered address of the command sending target. (PLC)	●	●	●	●
③	Device Name	(Blank)	Up to 31 single-byte or double-byte characters except single-byte apostrophe[']	Enter the name od the command sending target(PLC)	●	●	●	●
④	Connection Destination Port	0	0 to 65535	Enter the local station port number of the command sending target(PLC	●	●	●	●
⑤	Desingnated Transmissin Port *5	0	0 to 65535	Set the port number of this product.When 0 is set,the source port can be any value.	●	●	●	●
⑥	Protocol	TCP	TCP/UDP	Set the protocol to be used.	●	●	●	●
⑦	Timeout(1-10) sec.	1	1 to 10	Enter the timeout period for receiving a response.	●	●	●	●
⑧	Serial No.	Not assigned	Assigned/ Not assigned	Select whether a serial number is assigned or not assigned. Make sure to match the setting of the command sending target(PLC).In the case of 3E frame.select [Not assigned]	●	●	●	●
⑨	Network No.	0	00h:Local station 01h to EFh:Other stations.	Enter the network number to be accessed.Make sure to match the setting of the command setting target(PLC).In the case of a unit with an integrated CPU/Ethernet interface. select [FFh:Loical station]	●	●	●	●
⑩	Staion Number	1	FFh:Local station 01 to 78h:Station number 7Dh:Designated control station 7Eh:Current contol station	Enter the station number to be accessed.Make sure to match the setting of the command. sending target (PLC).In the case of a unit with an integrated CPU/Ethernet interface.select [FFh:Local station]	●	●	●	●
⑪	Request destination module i/o No.	Own Station	Own Station/Control CPU/CPU1 to CPU4	Select the CPU unit to be accessed.	●	●	●	●
⑫	Device	Input(x*)	*1	Select the type of the reading device.	●	●	●	●
⑬	Read device	0	0 to 65535/ 0000 to FFFFh	Enter the first number of the reading device.Make sure to match the format shown.	●	●	●	●
⑭	Number of Device Points	1	1/2	Select the read points of the reading device.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑮	Opertion when there is a match	(Blank)	Change by the value of read points 1:0000 to FFFFh 2:0000 to FFFFFFFFh	Enter a device value to be acquired(response data) at which it wil operate. Specify using a hexadeccimal number.	●	●	●	●
		Equal to	Equal to/Not equal to /More than /Less than / Or more /Or less	Set a condition under which the acquireed device value (response data)will operate.				
⑯	DNA	00	00 to 7Fh	Set the network address number where the destination node (PLC) exists. 00h: Local network 01 to 7Fh:Destination network number	●	●	●	●
⑰	DA1	00	00 to FFh	Set the node address of the destination node (PLC). 00 to FFh: Node address of destination node set in PLC	●	●	●	●
⑱	DA2	00	00 to FEh	Set the address of the unit in the destination node (PLC). 00h:CPU Unit 10 to 1Fh:CPU Bus Unit E1h:Inner Board FEh: Unit connected to network	●	●	●	●
⑲	SNA	00	00 to 7Fh	Set the address number of the source (NHB/NHV) network. 01 to 7Fh: Source network number	●	●	●	●
⑳	SA1	00	00 to FEh	Set the Source node address (NHB/NHV). ・TCP 00h: Automatic setting 01 to FEh: Any value ・UDP 01 to FEh: Any value *Node address with any value If you set other SA1 set a value that does not overlap with. *If you set 00h (automatic setting) in TCP, please set "FINS/TCP Connection Settings" on the PLC.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
㉑	SA2	00	00 / 10 to 1Fh	Set the address of the sender (NHB/NHV). 00,10 to 1Fh: Any value	●	●	●	●
㉒	SID	00	00 to FFh	Sets the source(NHB/NHV) process identifier. 00 to FFh: Any value	●	●	●	●
㉓	Device	CIO [bit]	*2	Set the type of I/O memory.	●	●	●	●
㉔	Beginning address	000000	000000 to FFFFFFh	Set the reading start device (3 bytes). *If the device is a channel, Address (2byte) + 00h *If the device is a bit, Address (2byte) + bit number (1byte)	●	●	●	●
㉕	Number of elements	1	1/2	Set the number of read data elements.	●	●	●	●
㉖	Red / Amber / Green / Blue / White	No change	OFF / Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / No change	Select each color of the Signal Tower.	●	●	●	●
㉗	Color	No change	Red / Amber / Green / Blue / White / Purple / Light blue / No change	Specify the color of the Multi-color unit.	●	●	●	●
㉘	Pattern	No change	OFF / Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / No change	Specify the lighting pattern of the Multi-color unit.	●	●	●	●
㉙	Buzzer	No change	Stop / Buzzer pattern 1 / Buzzer pattern 2 / Buzzer pattern 3 / Buzzer pattern 4 / Buzzer pattern 5 / No change	Select the buzzer sound pattern.	●	–	–	–
㉚	Audio	No change	Stop / One-shot playback / Repeat playback / No change	Select the audio playback pattern.	–	●	●	●
㉛	Audio (when "Repeat playback" is selected)	0	0 to 255	Set the number of times to repeat. In addition to normal audio playback, the audio is repeated the specified number of times. If the number of times to repeat is set to 255, playback is endless.	—	●	●	●
㉜	Audio Channel[*3]	(Not selected)	Not selected / 1 to 71	Select the registered channel.	—	●	●	●
㉝	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	●	●	●	●
㉞	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
㉟	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
㊱	Mail destination setting	(Not selected)	-	Select an email recipient.	●	●	●	●
㊲	SNMP Notification	Disabled	Enabled / Disabled	Set SNMP Notification to [Enabled] or [Disabled].	●	●	●	●
㊳	Send HTTP Command	Disabled	Enabled / Disabled	Set Send HTTP Command to [Enabled] or [Disabled].	●	●	●	●
㊴	HTTP Command Sending Settings	(Not selected)	-	Select the recipient of the HTTP Command.	●	●	●	●
㊵	Send MQTT	Disabled	Enabled / Disabled	Set Send MQTT to [Enabled] or [Disabled].	●	●	●	●
㊶	Contact Output 1 *4	No change	OFF / ON / No change	Specify operation of Contact Output 1.	–	–	–	●
㊷	Contact Output 2	No change	OFF / ON / No change	Specify operation of Contact Output 2.	–	–	–	●

*1 You can set the following devices.

Device	Device code binary (ASCII)	Type	Specified range	
Input (X*)	9CH	Bit	Hexadecimal	0 to 65535 for decimal 0000 to FFFFh for hexadecimal Specify in the range of the device numbers owned by the units to be accessed.
Output (Y*)	9DH		Hexadecimal	
Internal relay (M*)	90H		Decimal	
Latching relay (L*)	92H		Decimal	
Annunciator (F*)	93H		Decimal	
Edge relay (V*)	94H		Decimal	
Link relay (B*)	A0H		Hexadecimal	
Data register (D*)	ABH	Word	Decimal	
Link register (W*)	B4H		Hexadecimal	
Timer (TN)	C2H		Decimal	
Accumulation timer (STN)	C8H		Decimal	
Counter (CN)	C5H		Decimal	
Link special relay (SB)	A1H	Bit	Hexadecimal	
Link special register (SW)	B5H	Word	Hexadecimal	
Direct input (DX)	A2H	Bit	Hexadecimal	
Direct output (DY)	A3H		Hexadecimal	
Index register (Z*)	CCH	Word	Decimal	

*2 You can set the following devices.

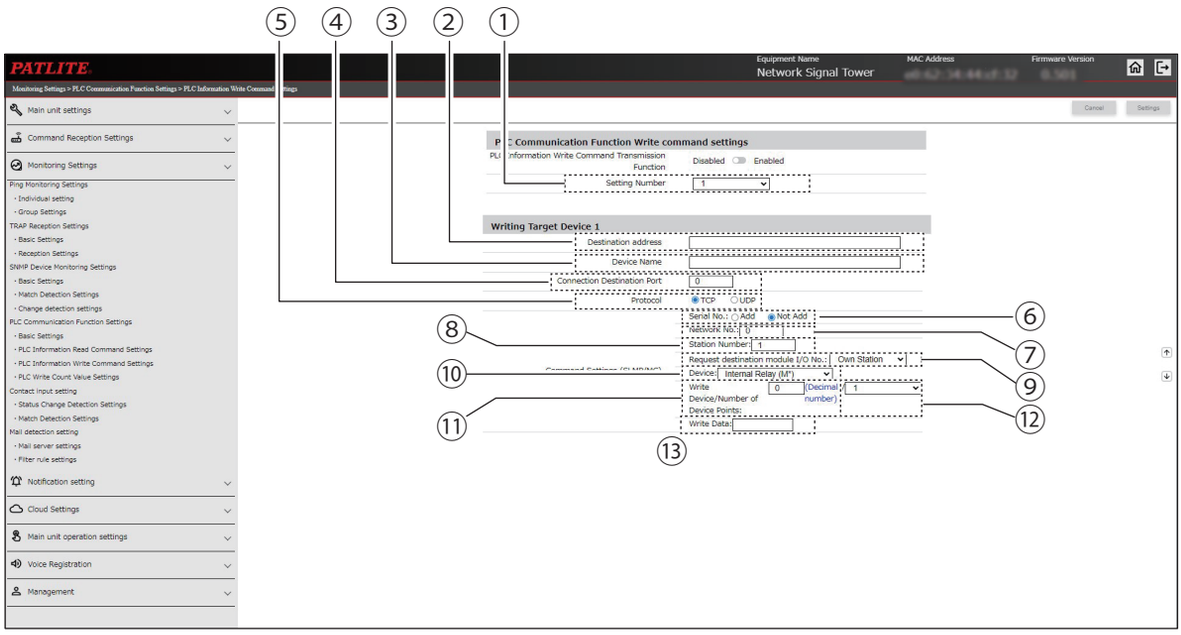
Device	Device code binary (ASCII)	Type	Specified range	
CIO [Bit]	30H	Bit	Hexadecimal	000000 to FFFFFFh Specify in the range of the device numbers owned by the units to be accessed.
CIO [Word]	B0H	Word (Channel)		
Work [Bit]	31H	Bit		
Work [Word]	B1H	Word (Channel)		
Holding Bit [Bit]	32H	Bit		
Holding Bit [Word]	B2H	Word (Channel)		
Auxiliary Bit [Bit]	33H	Bit		
Auxiliary Bit [Word]	B3H	Word (Channel)		
Timer [Completion Flag]	09H	Bit		
Counter [Completion Flag]	09H			
Timer [PV]	89H	Word (Channel)		
Counter [PV]	89H			
DM [Bit]	02H	Bit		
DM [Word]	82H	Word (Channel)		
Task Flag [Bit]	06H	Bit		
Task Flag [Status]	46H	Word (Channel)		
Index Register (IR)	DCH			
Data Register (DR)	BCH			
Clock Pulses [bit]	07H	Bit		
Condition Flag [Bit]	07H			

*3 You can select the following audio channels.
- Channel with audio registered in the [Voice Registration] screen
- Preset channel

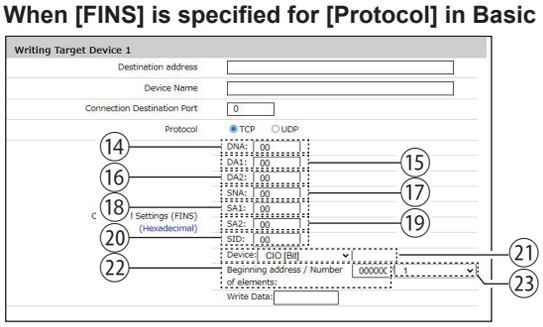
*4 When [Busy output] is specified in [Function] in [Contact output setting], this function is not operated.

*5 If you set the designated transmission port to a value other than 0, please set a different port number for each setting number.

9.3.6.3. PLC Information Write Command Settings



When [FINS] is specified for [Protocol] in Basic Settings



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	M Model	D Model
①	Setting Number	1	1 to 4	Select a setting number for setting the PLC Information Write Command.	●	●	●	●
②	Destination Address	(Blank)	IP address format (v4) Host name 63 characters	Enter the registered address of the command sending target (PLC).	●	●	●	●
③	Device Name	(Blank)	Up to 31 single-byte or double-byte characters except single-byte apostrophe [']	Enter the name of the command sending target (PLC).	●	●	●	●
④	Connection Destination Port	0	0 to 65535	Enter the local station port number of the command sending target (PLC).	●	●	●	●
⑤	Protocol	TCP	TCP/UDP	Set the protocol to be used.	●	●	●	●
⑥	Serial No.	Not Add	Add / Not Add	Select whether a serial number is assigned or not assigned. Make sure to match the setting of the command sending target (PLC).In the case of 3E frame, select [Not assigned].	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	M Model	D Model
⑦	Network No.	0	00h: Local station 01 to EFh: Other stations	Enter the network number to be accessed. Make sure to match the setting of the command sending target (PLC). In the case of a unit with an integrated CPU/Ethernet interface, select [00: Local station].	●	●	●	●
⑧	Station Number	1	FFh: Local station 01 to 78h: Station number 7Dh: Designated control station 7Eh: Current control station	Enter the station number to be accessed. Make sure to match the setting of the command sending target (PLC). In the case of a unit with an integrated CPU/Ethernet interface, select [FFh: Local station].	●	●	●	●
⑨	Request destination module I/O No.	Own Station	Own Station / Control CPU / CPU1 to CPU4	Select the CPU unit to be accessed.	●	●	●	●
⑩	Device	Internal Relay (M*)	*1	Select the type of the writing device.	●	●	●	●
⑪	Write Device	0	0 to 65535 / 0000 to FFFFh	Enter the first number of the writing device. Make sure to match the format shown.	●	●	●	●
⑫	Number of Device Points	1	1/2	Select the points of the writing device.	●	●	●	●
⑬	Write Data	(Blank)	Change by the value of write points 1: 0000 to FFFFh 2: 0000 to FFFFFFFFh	Enter the data to write.	●	●	●	●
⑭	DNA	00	00 to 7Fh	Set the network address number where the destination node (PLC) exists. 00h: Local network 01 to 7Fh:Destination network number	●	●	●	●
⑮	DA1	00	00 to FFh	Set the node address of the destination node (PLC). 00 to FFh: Node address of destination node set in PLC	●	●	●	●
⑯	DA2	00	00 to FEh	Set the address of the unit in the destination node (PLC). 00h:CPU Unit 10 to 1Fh:CPU Bus Unit E1h:Inner Board FEh: Unit connected to network	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑰	SNA	00	00 to 7Fh	Set the address number of the source (NHB/NHV) network. 01 to 7Fh: Source network number	●	●	●	●
⑱	SA1	00	00 to FEh	Set the Source node address (NHB/NHV). ・TCP 00h: Automatic setting 01 to FEh: Any value ・UDP 01 to FEh: Any value *Node address with any value If you set other SA1 set a value that does not overlap with. *If you set 00h (automatic setting) in TCP, please set "FINS/TCP Connection Settings" on the PLC.	●	●	●	●
⑲	SA2	00	00 / 10 to 1Fh	Set the address of the sender (NHB/NHV). 00,10 to 1Fh: Any value	●	●	●	●
⑳	SID	00	00 to FFh	Sets the source(NHB/NHV) process identifier. 00 to FFh: Any value	●	●	●	●
㉑	Device	CIO [bit]	*2	Set the type of I/O memory.	●	●	●	●
㉒	Beginning address	000000	000000 to FFFFFFh	Set the reading start device (3 bytes). *If the device is a channel, Address (2byte) + 00h *If the device is a bit, Address (2byte) + bit number (1byte)	●	●	●	●
㉓	Number of elements	1	1/2	Set the number of read data elements.	●	●	●	●

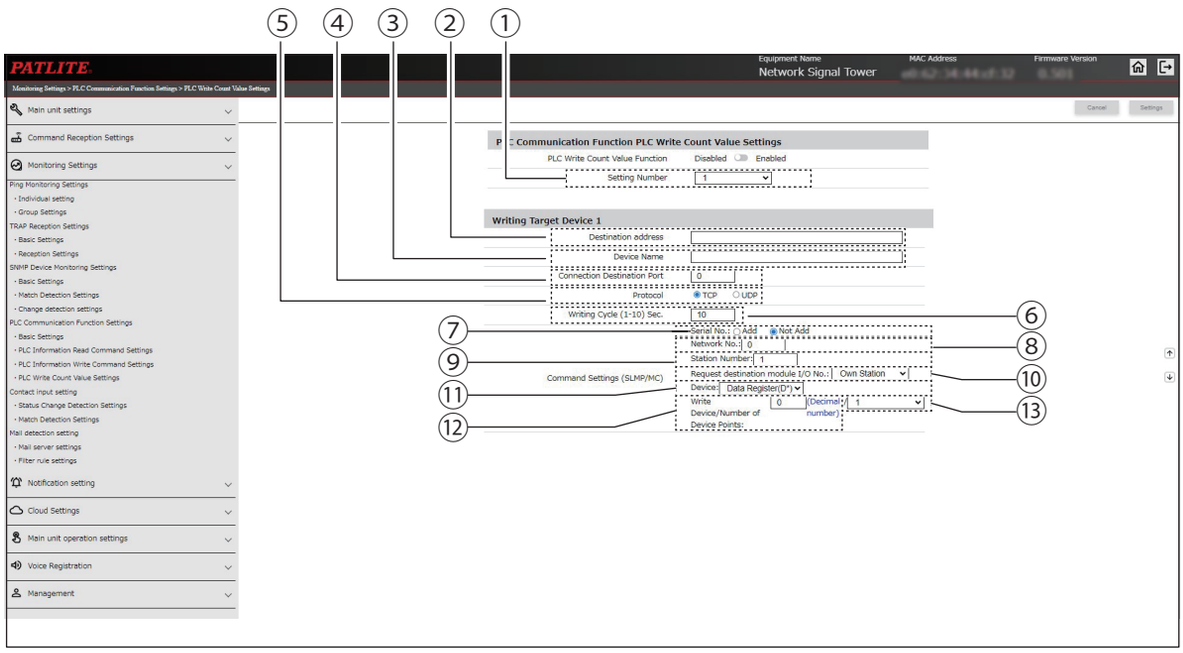
*1 You can set the following devices.

Device	Device code binary (ASCII)	Type	Specified range	
Internal relay (M*)	90H	Bit	Decimal	0 to 65535 for decimal 0000 to FFFFh for hexadecimal
Latching relay (L*)	92H		Decimal	
Annunciator (F*)	93H		Decimal	
Edge relay (V*)	94H		Decimal	
Link relay (B*)	A0H		Hexadecimal	
Data register (D*)	ABH	Word	Decimal	
Link register (W*)	B4H		Hexadecimal	
Timer (TN)	C2H		Decimal	
Accumulation timer (STN)	C8H		Decimal	
Counter (CN)	C5H		Decimal	
Link special relay (SB)	A1H	Bit	Hexadecimal	
Link special register (SW)	B5H	Word	Hexadecimal	
Index register (Z*)	CCH		Decimal	

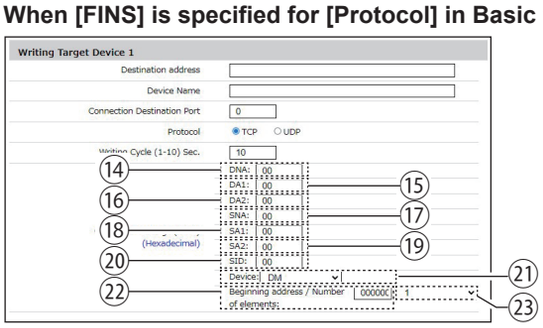
*2 You can set the following devices.

Device	Device code binary (ASCII)	Type	Specified range	
CIO [Bit]	30H	Bit	Hexadecimal	000000 to FFFFFFh Specify in the range of the device numbers owned by the units to be accessed.
CIO [Word]	B0H	Word (Channel)		
Work [Bit]	31H	Bit		
Work [Word]	B1H	Word (Channel)		
Holding Bit [Bit]	32H	Bit		
Holding Bit [Word]	B2H	Word (Channel)		
Auxiliary Bit [Bit]	33H	Bit		
Auxiliary Bit [Word]	B3H	Word (Channel)		
Timer [PV]	89H			
Counter [PV]	89H			
DM [Bit]	02H	Bit		
DM [Word]	82H	Word (Channel)		
Index register (IR)	DCH			
Data register (DR)	BCH			

9.3.6.4. PLC Write Count Value Settings



When [FINS] is specified for [Protocol] in Basic Settings



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	M Model	D Model
①	Setting Number	1	1 to 4	Select a setting number for setting the Count Value Write Command.	●	●	●	●
②	Destination Address	(Blank)	IP address format (v4) Host name 63 characters	Enter the registered address of the command sending target (PLC).	●	●	●	●
③	Device Name	(Blank)	Up to 31 single-byte or double-byte characters except single-byte apostrophe [']	Enter the name of the command sending target (PLC).	●	●	●	●
④	Connection Destination Port	0	0 to 65535	Enter the local station port number of the command sending target (PLC).	●	●	●	●
⑤	Protocol	TCP	TCP/UDP	Set the protocol to be used.	●	●	●	●
⑥	Writing Cycle (1-10) Sec	10	1 to 10	Enter the cycle at which Count Value Write is executed.	●	●	●	●
⑦	Serial No.	Not assigned	Assigned / Not assigned	Select whether a serial number is assigned or not assigned. Make sure to match the setting of the command sending target (PLC). In the case of 3E frame, select [Not assigned].	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑧	Network No.	0	00h: Local station 01 to EFh: Other stations	Enter the network number to be accessed. Make sure to match the setting of the command sending target (PLC). In the case of a unit with an integrated CPU/ Ethernet interface, select [00: Local station].	●	●	●	●
⑨	Station Number	1	FFh: Local station 01 to 78h: Station number 7Dh: Designated control station 7Eh: Current control station	Enter the station number to be accessed. Make sure to match the setting of the command sending target (PLC). In the case of a unit with an integrated CPU/Ethernet interface, select [FFh: Local station].	●	●	●	●
⑩	Request destination module I/O No.	Own Station	Own Station / Control CPU / CPU1 to CPU4	Select the CPU unit to be accessed.	●	●	●	●
⑪	Device	Data register (D*)	Data register (D*)	Select the type of the writing device. *Cannot select anything other than Data Register(D*).	●	●	●	●
⑫	Write Device	0	0 to 65535 / 0000 to FFFFh	Enter the first number of the writing device. Make sure to match the format shown.	●	●	●	●
⑬	Number of Device Points	1	1	Select the points of the writing device.	●	●	●	●
⑭	DNA	00	00 to 7Fh	Set the network address number where the destination node (PLC) exists. 00h: Local network 01 to 7Fh:Destination network number	●	●	●	●
⑮	DA1	00	00 to FFh	Set the node address of the destination node (PLC). 00 to FFh: Node address of destination node set in PLC	●	●	●	●
⑯	DA2	00	00 to FEh	Set the address of the unit in the destination node (PLC). 00h:CPU Unit 10 to 1Fh:CPU Bus Unit E1h:Inner Board FEh: Unit connected to network	●	●	●	●
⑰	SNA	00	00 to 7Fh	Set the address number of the source (NHB/NHV) network. 01 to 7Fh: Source network number	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑱	SA1	00	00 to FEh	Set the Source node address (NHB/NHV). ・TCP 00h: Automatic setting 01 to FEh: Any value ・UDP 01 to FEh: Any value *Node address with any value If you set other SA1 set a value that does not overlap with. *If you set 00h (automatic setting) in TCP, please set "FINS/TCP Connection Settings" on the PLC.	●	●	●	●
⑲	SA2	00	00 / 10 to 1Fh	Set the address of the sender (NHB/NHV). 00,10 to 1Fh: Any value	●	●	●	●
⑳	SID	00	00 to FFh	Sets the source(NHB/NHV) process identifier. 00 to FFh: Any value	●	●	●	●
㉑	Device	DM	DM	Set the type of I/O memory. *Cannot select anything other than DM.	●	●	●	●
㉒	Beginning address	000000	000000 to FFFFFFh	Set the reading start device (3 bytes). *If the device is a channel, Address (2byte) + 00h *If the device is a bit, Address (2byte) + bit number (1byte)	●	●	●	●
㉓	Number of elements	1	1	Set the number of write data elements.	●	●	●	●

Notes on using FINS

1) Please configure the IP address, FINS/UDP, FINS/TCP port (server specification/Keep-alive) settings, etc. to be used on the PLC side.

2) It is possible to traverse up to 3 networks, including the local network.

3) Please check the range of usable devices in the manual of the PLC you are using.
Settings for the device and address range to be used may be required on the PLC side.
Also, when setting the start address, consider the number of elements used (1 point or 2 points) and the data length per element of the device used, and set it so that the address range does not exceed.

Example: Index register Data length per element: 4 bytes: The number of elements can only be set to "1".

Example: Setting the start address

Device	Setting details	Value
Data memory (DM) [bit]	D32767.15 : 15th bit of data memory D32767ch	7FFF0F
Data memory (DM) [channel]	D32767 : Data memory D32767ch	7FFF00

*The upper 4 digits of the setting value represent the channel number in hexadecimal numbers, and the lower 2 digits represent the bit number in hexadecimal numbers (set to 00 for channel).

For counters, index registers, data registers, etc., offset values may be set as the start address.
Please check the I/O memory addressing method of each PLC before setting.

Example Index register IR0

Start address 010000 (CS/CJ/NSJ series)
Offset 0100 to the hexadecimal value of address 0000.

4) When setting the operation value and write data value when the conditions are matched, consider the number of elements to be used and the data length per element of the device.

Example Channel I/O [bit] Number of elements 2

The data length per element is 1 byte, set the condition that the 0th bit of 1ch is ON and the 1st bit is OFF.If you do so, please set it to 0100 (2 bytes).

5) When setting the communication protocol TCP/UDP, check the difference between FINS/UDP and FINS/TCP methods and the number of connections for FINS/TCP before setting.
As a guideline,
Local network connection, multiple connections, FINS/UDP method,
multi-layer network connection, improved communication quality, FINS/TCP method
is recommended.

6) When connecting to the PLC that has multiple Ethernet ports, check the "FINS command compatible port" before wiring (connection).

Example: NX102 CPU unit

Use port 2 of the built-in EtherNet/IP port.

7) When using "PLC Information Write Command Settings", it is necessary to set the event that triggers the sending.

Example: When the transmission trigger for "PLC Information Write Command Settings" is set to "when Clear Button is pressed"

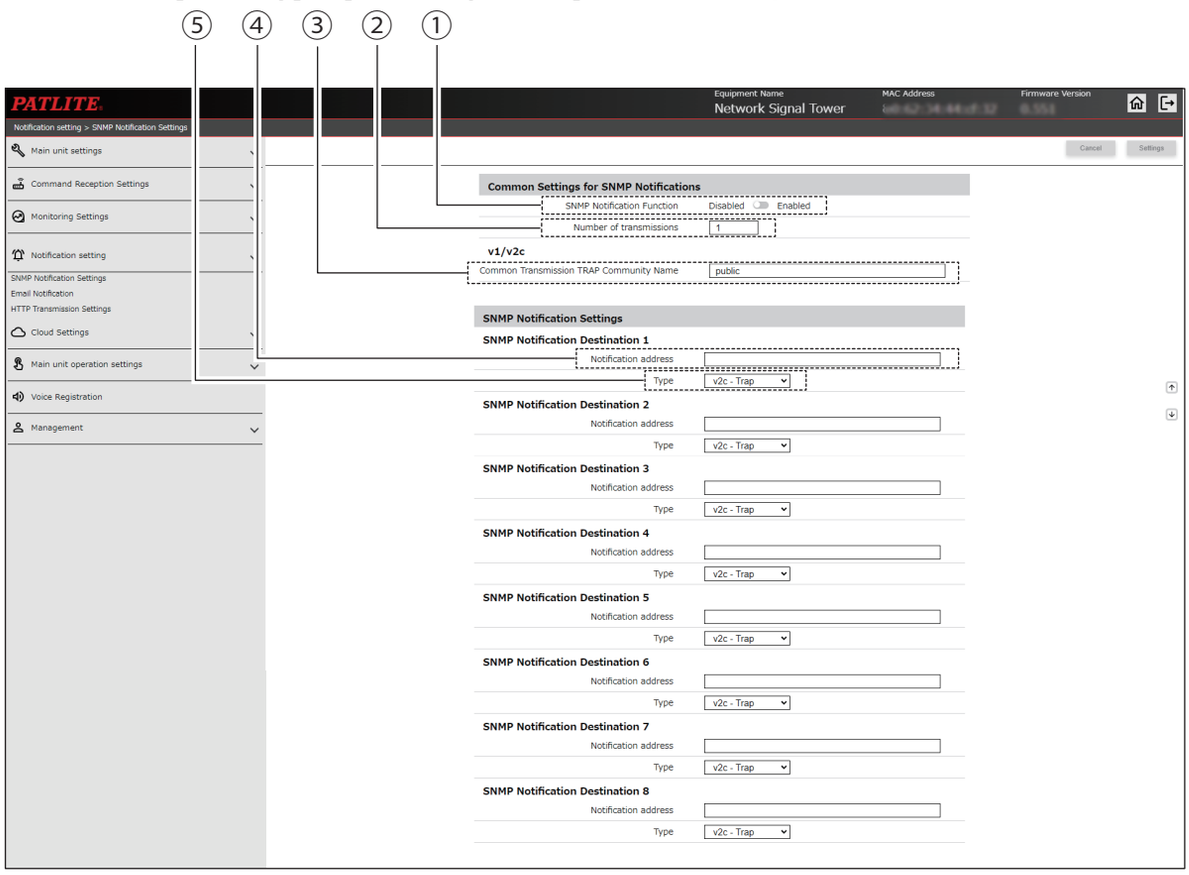
① Set "Clear button settings" to "Enable"
② Select the command you want to use from among the 4 options for "PLC Information Write Command Destination".

9.4. Notification Settings

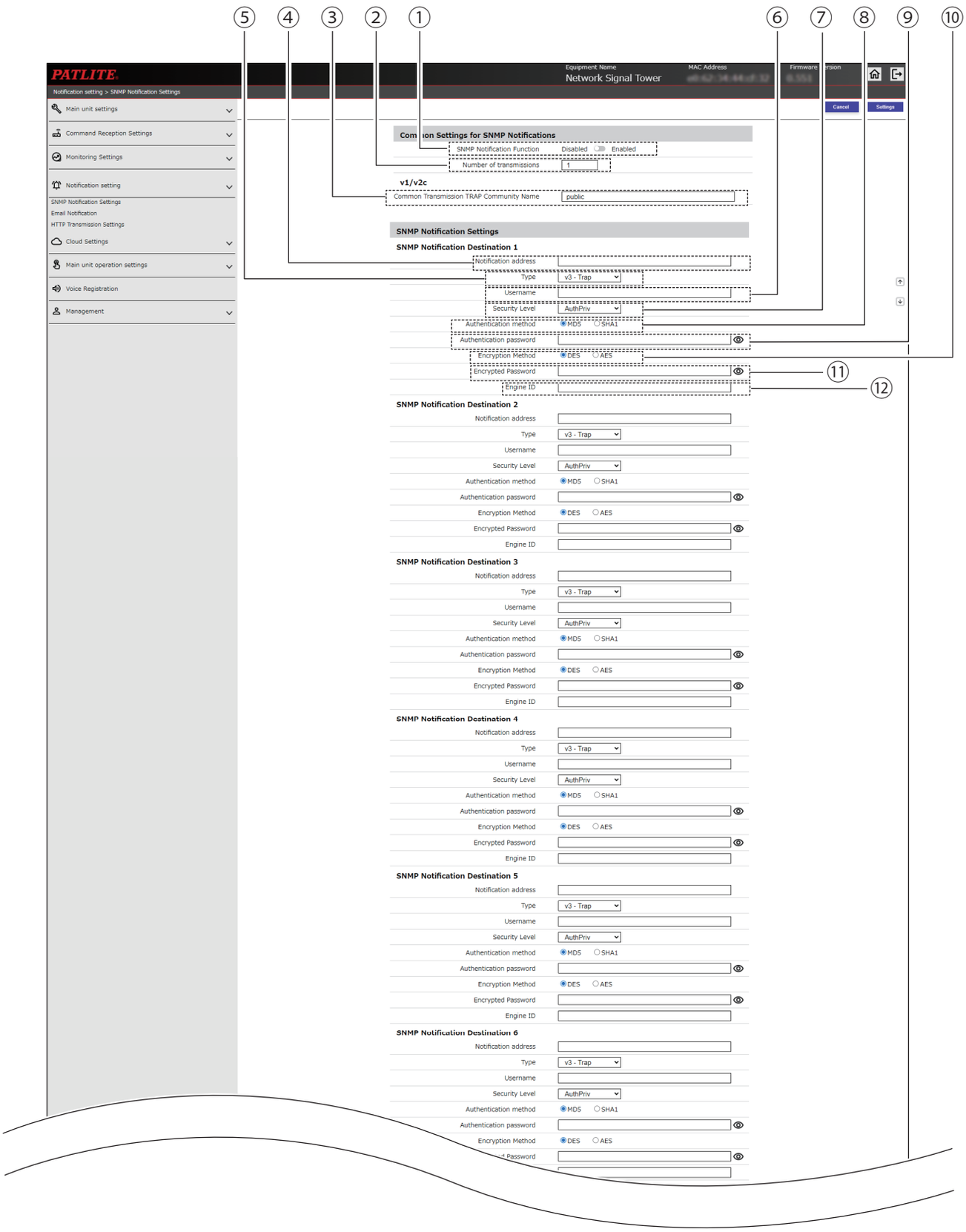
9.4.1. SNMP Notification Settings

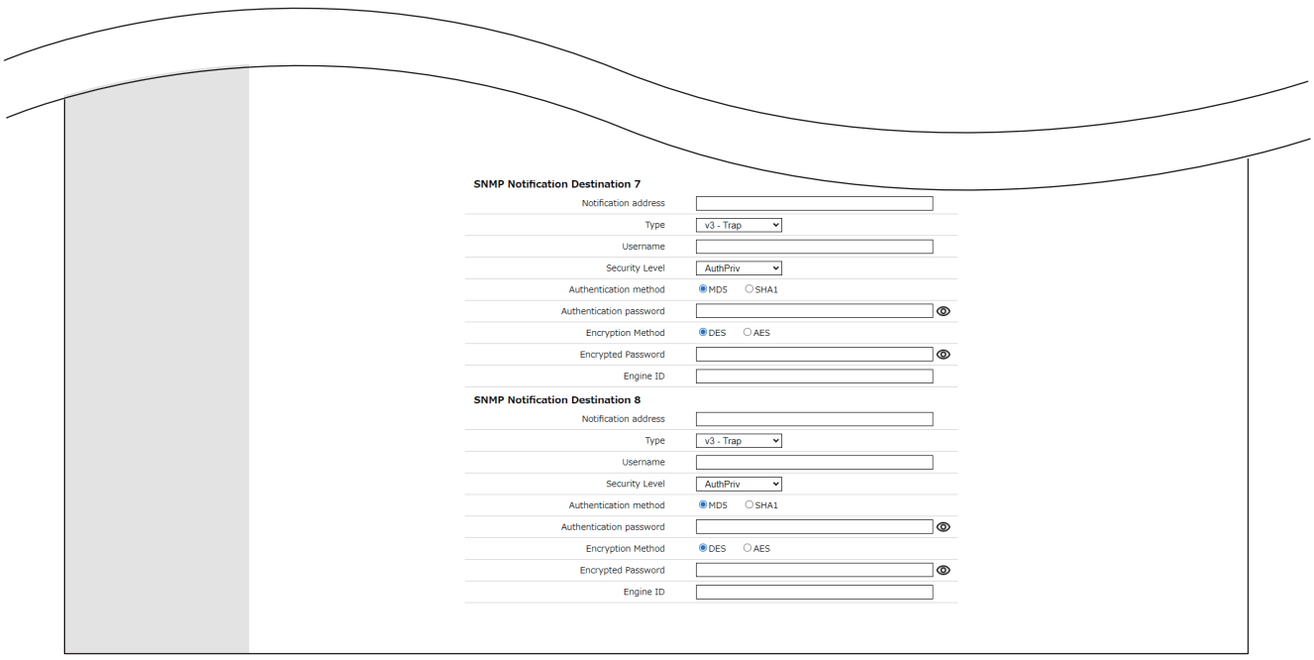
Set TRAP transmission settings for external notification of events that occur on this product.

Screen when [v1 - Trap] or [v2c - Trap/Inform] is selected in ⑤



Screen when [v3 - Trap/Inform] is selected in ⑤





No.	Item	Default Value	Input Range	Description	Setting (● : Yes, –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	SNMP Notification Function	Disabled	Enabled / Disabled	You can select to [Enabled] or [Disabled] the SNMP Notification Function.	●	●	●	●
②	Number of transmissions	1	0 to 10	For SNMP notification, enter the number of times the same TRAP is transmitted.	●	●	●	●
③	Common Transmission TRAP Community Name	public	32 single-byte alphanumeric characters and underscore (_)	When [v1/v2c] is selected, enter the community name to transmit.	●	●	●	●
④	Notification address	(Blank)	IP Address Format (v4/v6) or host name (63 characters)	Set the target address to which SNMP notifications are sent.	●	●	●	●
⑤	Type	v2c - Trap	v1 - Trap / v2c - Trapv2c - Inform/ v3 - Trap / v3 - Inform	Select the SNMP version and notification method.	●	●	●	●
⑥	Username*1	(Blank)	32 single-byte alphanumeric characters	Set the user name used for authentication in SNMP v3.	●	●	●	●
⑦	Security Level*1	AuthPriv	noAuthNoPriv / AuthNoPriv / AuthPriv	Select the security level for authentication in SNMP v3.	●	●	●	●
⑧	Authentication method*1 *2	MD5	MD5 / SHA1	Select the Authentication method for authentication in SNMP v3.	●	●	●	●
⑨	Authentication password*1 *2	(Blank)	8 to 64 single-byte alphanumeric characters	Enter the authentication password of equipment that is notified.	●	●	●	●

No.	Item	Default Value	Input Range	Description	Setting (● : Yes, –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑩	Encryption Method*1 *3	DES	DES / AES	Select the Encryption Method for authentication in SNMP v3.	●	●	●	●
⑪	Encryption Password*1 *3	(Blank)	8 to 64 single-byte alphanumeric characters	Enter the Encrypted Password of equipment that is notified.	●	●	●	●
⑫	Engine ID*1	(Blank)	64 hexadecimal characters	Displays the engine ID of equipment that is notified.	●	●	●	●

*1 Displays when the [SNMP Version] is either [v3 - Trap] or [v3 - Inform].

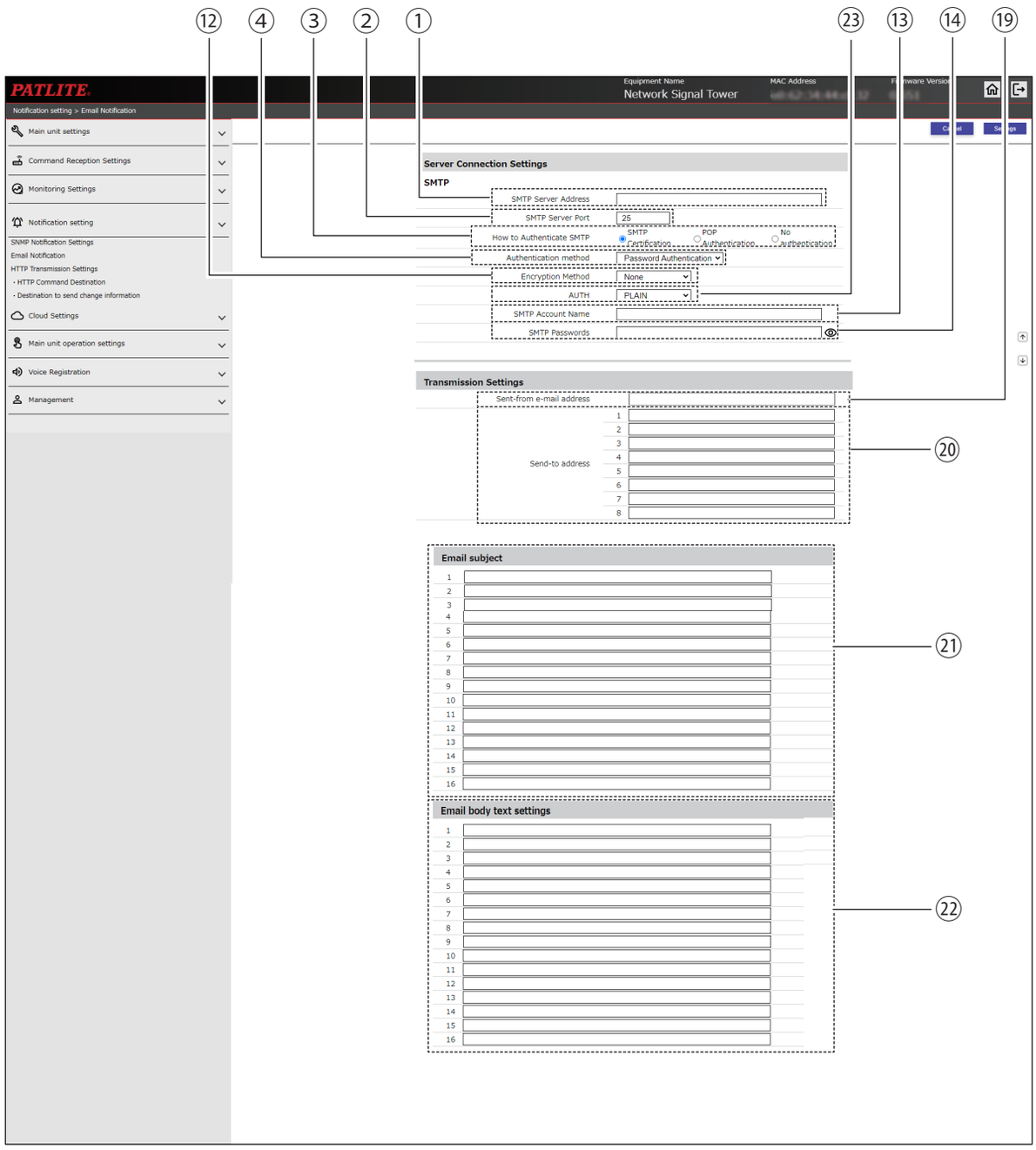
*2 If you select [noAuthNoPriv] for the [Security Level], you cannot configure this setup item.

*3 If you select [noAuthNoPriv] or [AuthNoPriv] for the [Security Level], you cannot configure this setup item.

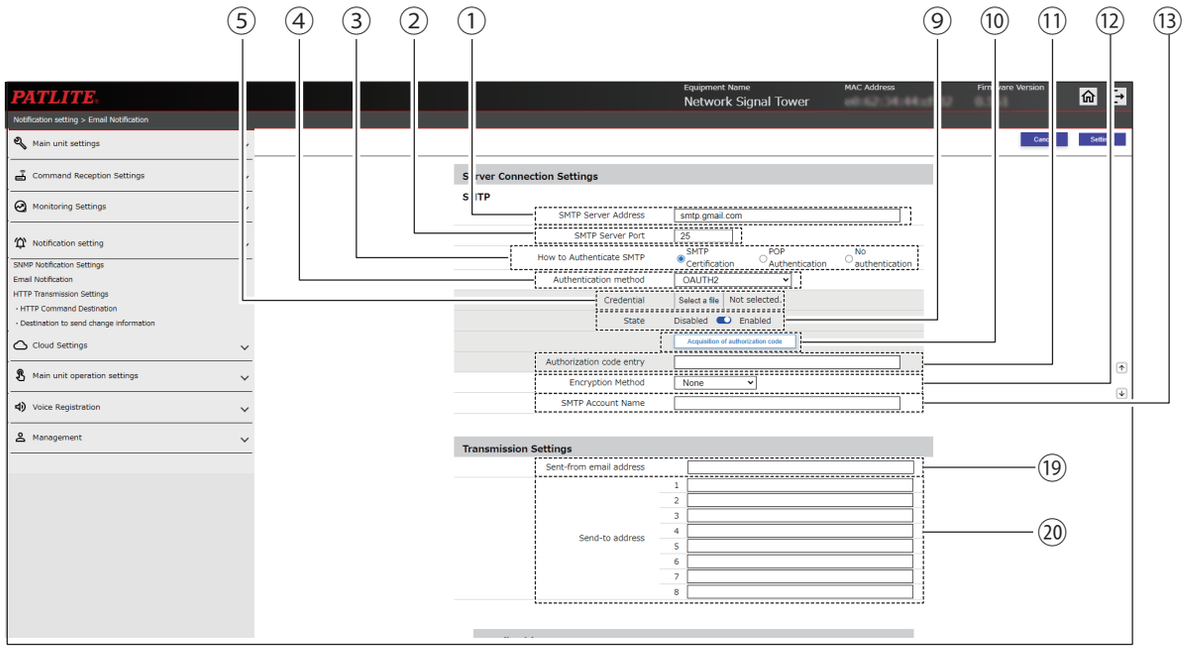
9.4.2. Email Notification Settings

Set the send email settings for this product, as well as the subject and body of email that is sent. When you send email, you can select from the subject and body content registered here.

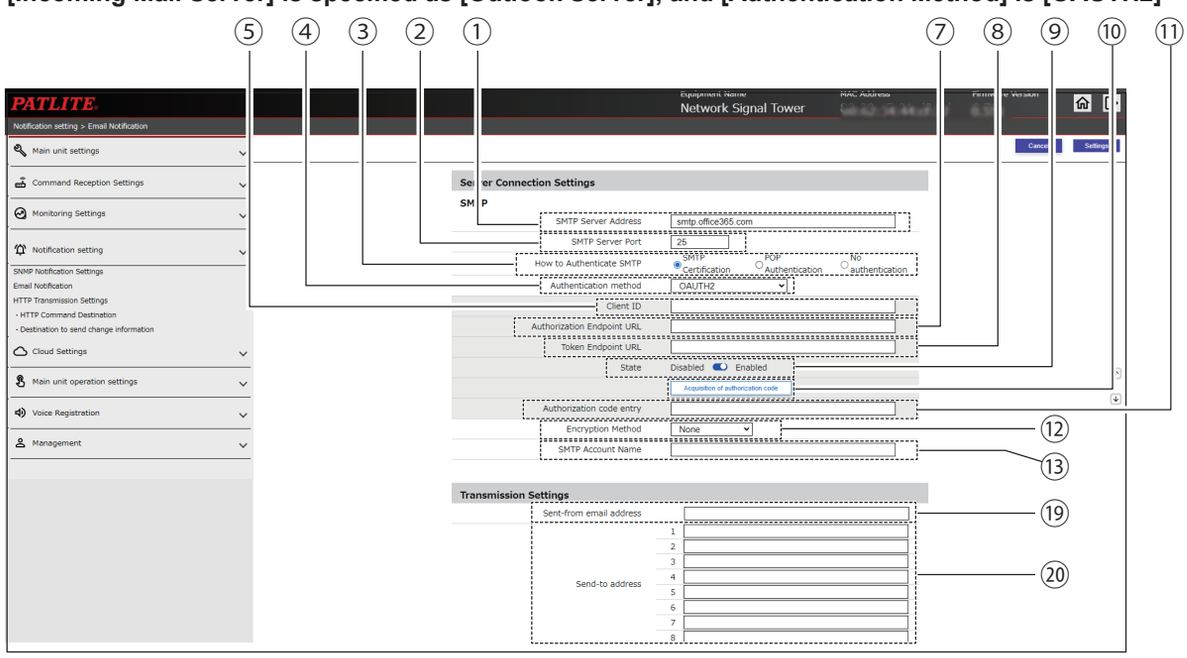
Screen when [SMTP Certification] is selected in ③



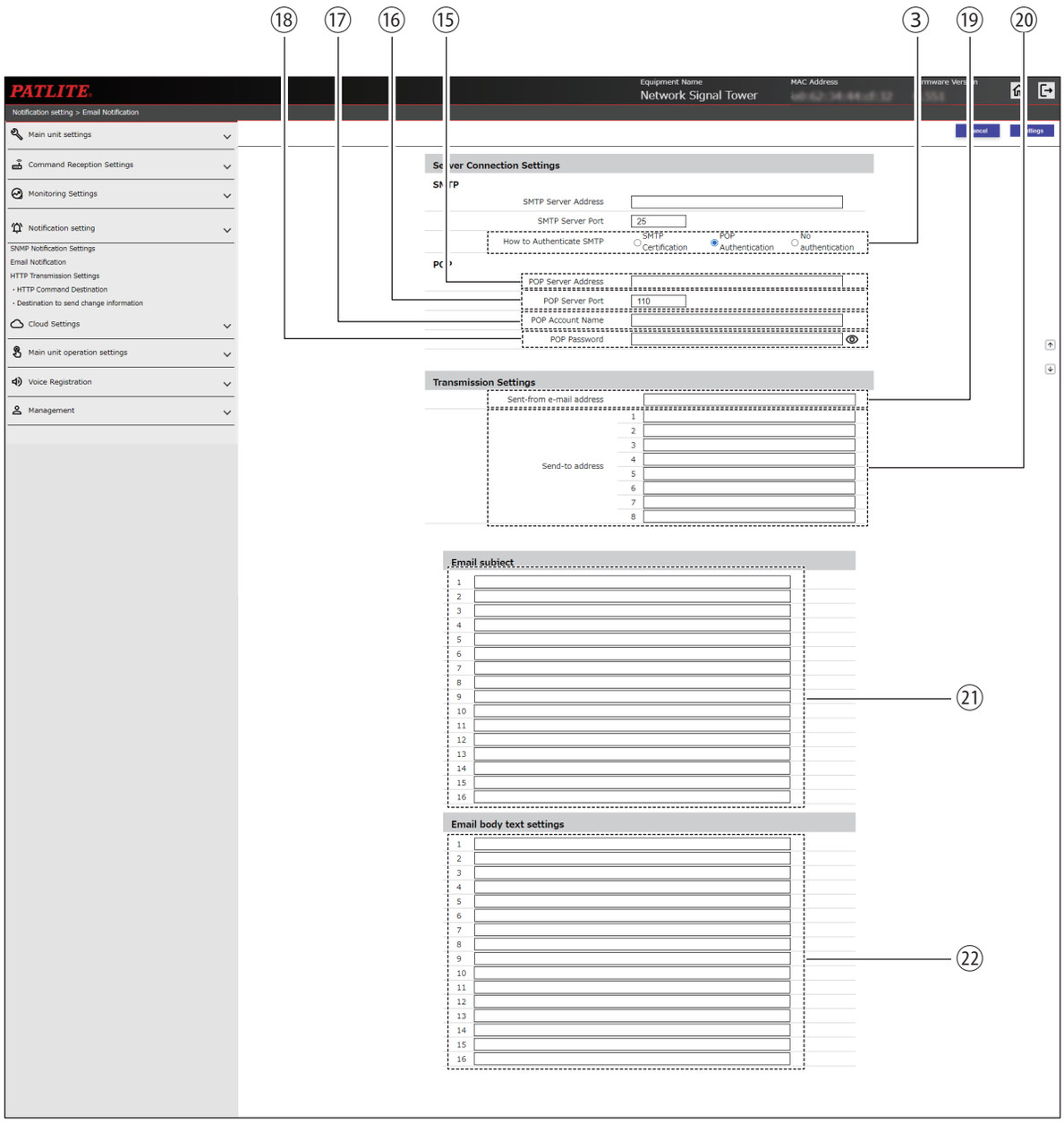
[Incoming Mail Server] is specified as [Gmail Server], and [Authentication Method] is [OAUTH2]



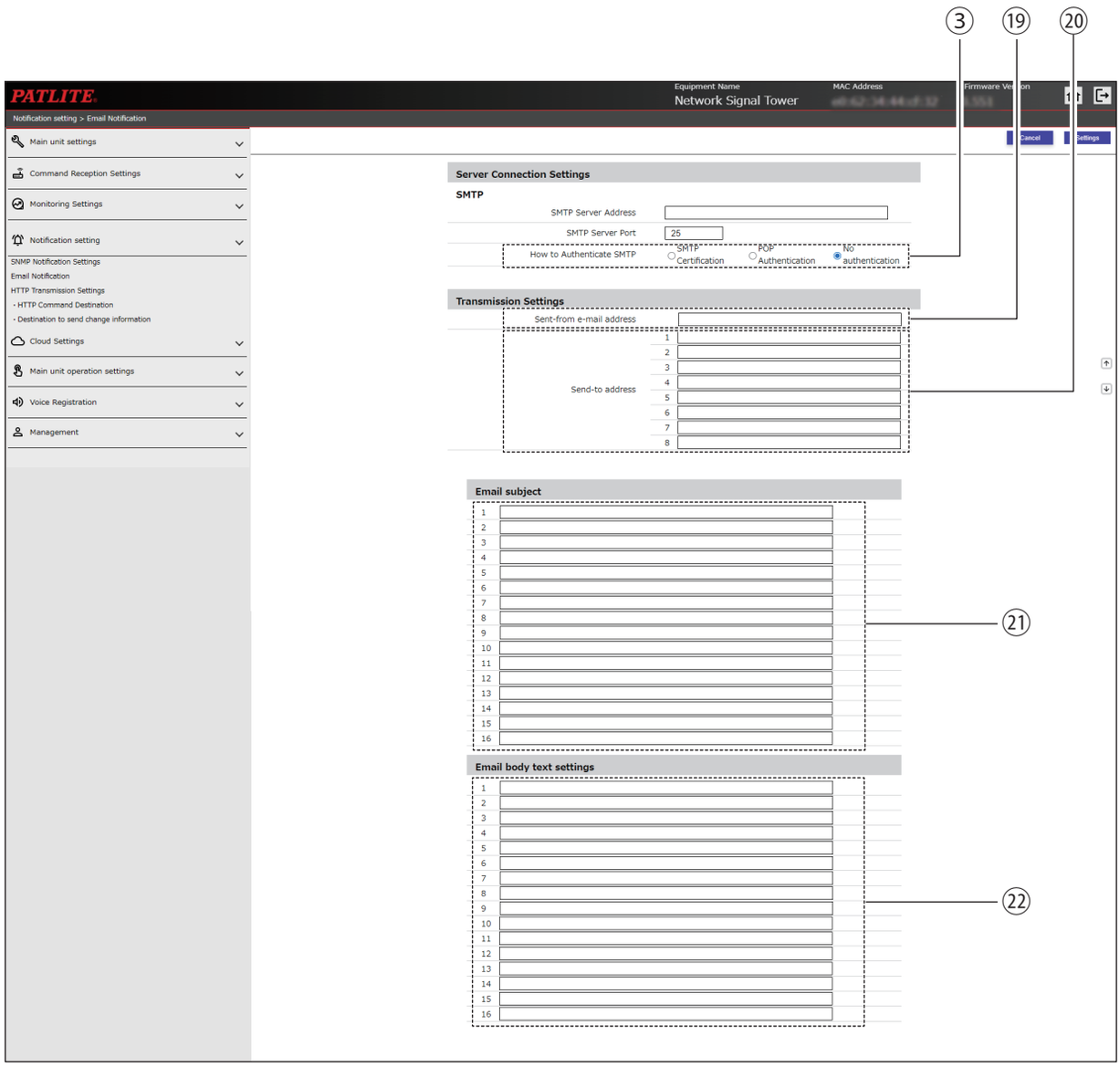
[Incoming Mail Server] is specified as [Outlook Server], and [Authentication Method] is [OAUTH2]



Screen when [POP Authentication] is selected in ③



Screen when [No authenticate] is selected in ③



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	SMTP Server Address	(Blank)	IP Address Format (v4/v6) or host name (63 characters)	Enter the SMTP Server Address.	●	●	●	●
②	SMTP Server Port	25	0 to 65535	Enter the SMTP Server port number.	●	●	●	●
③	How to Authenticate SMTP	No authentication	SMTP Certification / POP Authentication / No authentication	Select [SMTP Authentication], [POP Authentication], or [No authentication].	●	●	●	●
④	Authentication method	Password Authentication	Password Authentication / OAUTH2*1	Select either [Password Authentication] or [OAUTH2].	●	●	●	●
⑤	Credential	–	–	Upload the Credential file.	●	●	●	●
⑥	Client ID	(Blank)	127 single-byte alphanumeric and symbol characters	Enter the client ID.	●	●	●	●
⑦	Authorization Endpoint URL	(Blank)	511 single-byte alphanumeric and symbol characters	Enter the authorization endpoint URL.	●	●	●	●
⑧	Token Endpoint URL	(Blank)	511 single-byte alphanumeric and symbol characters	Enter the Token Endpoint URL.	●	●	●	●
⑨	State	Enabled	Enabled / Disabled	Select either [Enabled] or [Disabled] for the State.	●	●	●	●
⑩	Acquisition of authorization code	–	–	For an OAuth2 connection, get an authorization code.	●	●	●	●
⑪	Authorization code entry	–	–	Enter the authorization code you retrieved.	●	●	●	●
⑫	Encryption Method	None	SSL/TLS / STARTTLS / None	Select [SSL / TLS], [STARTTLS], or [None].	●	●	●	●
⑬	SMTP Account Name	(Blank)	63 single-byte alphanumeric and symbol characters	Enter an account name for SMTP authentication.	●	●	●	●
⑭	SMTP Passwords	(Blank)	32 single-byte alphanumeric and symbol characters	Enter the password for SMTP authentication.	●	●	●	●
⑮	POP Server Address	(Blank)	IP Address Format (v4/v6) or host name (63 characters)	Enter the POP3 Server Address.	●	●	●	●
⑯	POP Server Port	110	1 to 65535	Enter the POP3 Server port number.	●	●	●	●
⑰	POP Account Name	(Blank)	63 single-byte alphanumeric and symbol characters	Register an account name for POP authentication.	●	●	●	●
⑱	POP Password	(Blank)	32 single-byte alphanumeric and symbol characters	Register a password for POP authentication.	●	●	●	●

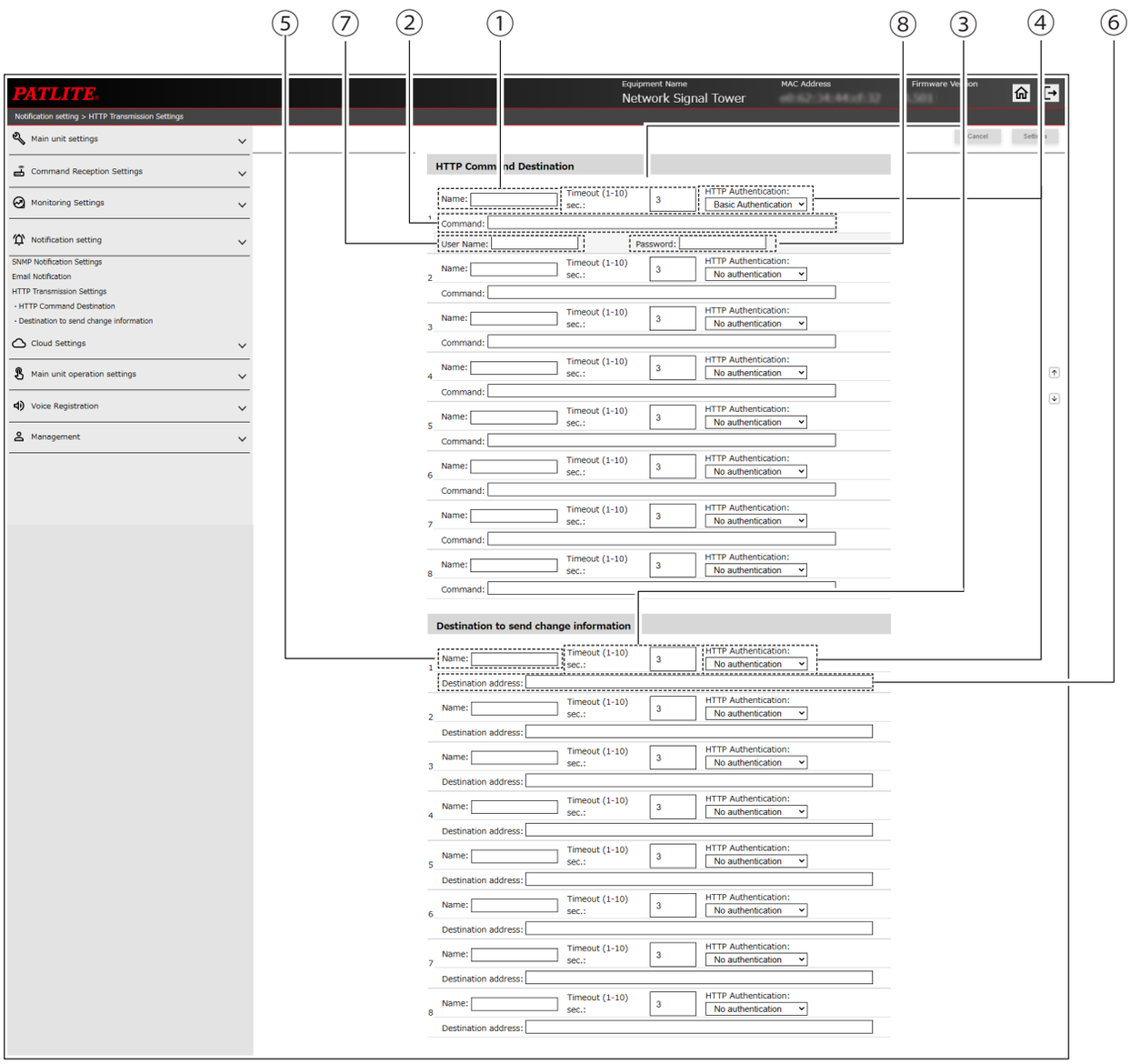
No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
⑲	Sent-from e-mail address	(Blank)	Email address format 63 single-byte alphanumeric and symbol characters	Enter the source address of email.	●	●	●	●
⑳	Send-to address	(Blank)	Email address format 63 single-byte alphanumeric and symbol characters	Enter the email address of the recipient.	●	●	●	●
㉑	Email subject 1 to 16	(Blank)	32 single-byte or double-byte characters	Enter subject 1 to 16.	●	●	●	●
㉒	Email body text Settings 1 to 16	(Blank)	63 single-byte or double-byte characters	Enter body 1 to 16.	●	●	●	●
㉓	SMTP-AUTH authentication method	PLAIN	LOGIN / PLAIN	Register the SMTP-AUTH authentication method.	●	●	●	●

*1 You can select [OAUTH2] when one of the following addresses is specified as the [SMTP Server Address].

- Gmail server: smtp.gmail.com
- Outlook server: smtp.office365.com

9.4.3. HTTP Transmission Settings

Set the HTTP Transmission Settings on this product.



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Name	(Blank)	64 single-byte or double-byte characters	Register the name of the command.	●	●	●	●
②	Command*1	(Blank)	256 single-byte or double-byte characters	Register the command.	●	●	●	●
③	Timeout (1-10) sec.	3	1 to 10	Register the timeout time.	●	●	●	●
④	HTTP Authentication	No Authentication	No authentication / Basic authentication / Digest authentication	Register the HTTP authentication method.	●	●	●	●
⑤	Name	(Blank)	64 single-byte or double-byte characters	Register the name of the connection target.	●	●	●	●
⑥	Destination address	(Blank)	IP Address Format (v4/v6) or host name (128 characters) including "http / https"	Register the connection target address.	●	●	●	●
⑦	User Name*2	(Blank)	64 single-byte or double-byte characters	Enter the User name for authentication	●	●	●	●
⑧	Password*2	(Blank)	64 single-byte or double-byte characters	Enter the Password for authentication	●	●	●	●

*1 You can enter the following symbols in locations that accept symbols.

" - (Hyphen)", " . (Period)", " # (Sharp)", " % (Percent)", " , (Comma)", " * (Asterisk)", " + (Plus)", " _ (Underscore)"

Some symbols (" - (Hyphen)", " . (Period)", and " # (Sharp)") cannot use as the first character.

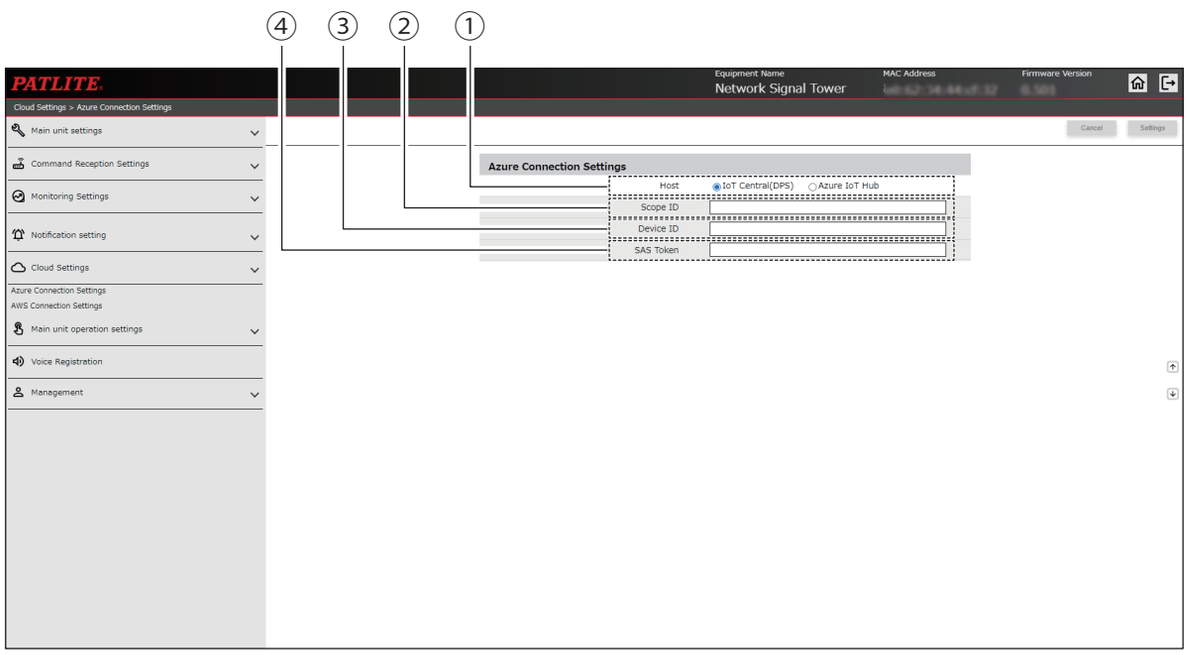
*2 User name and password fields are displayed only if Basic Authentication or Digest Authentication is selected for HTTP Authentication Is.

9.5. Cloud Settings

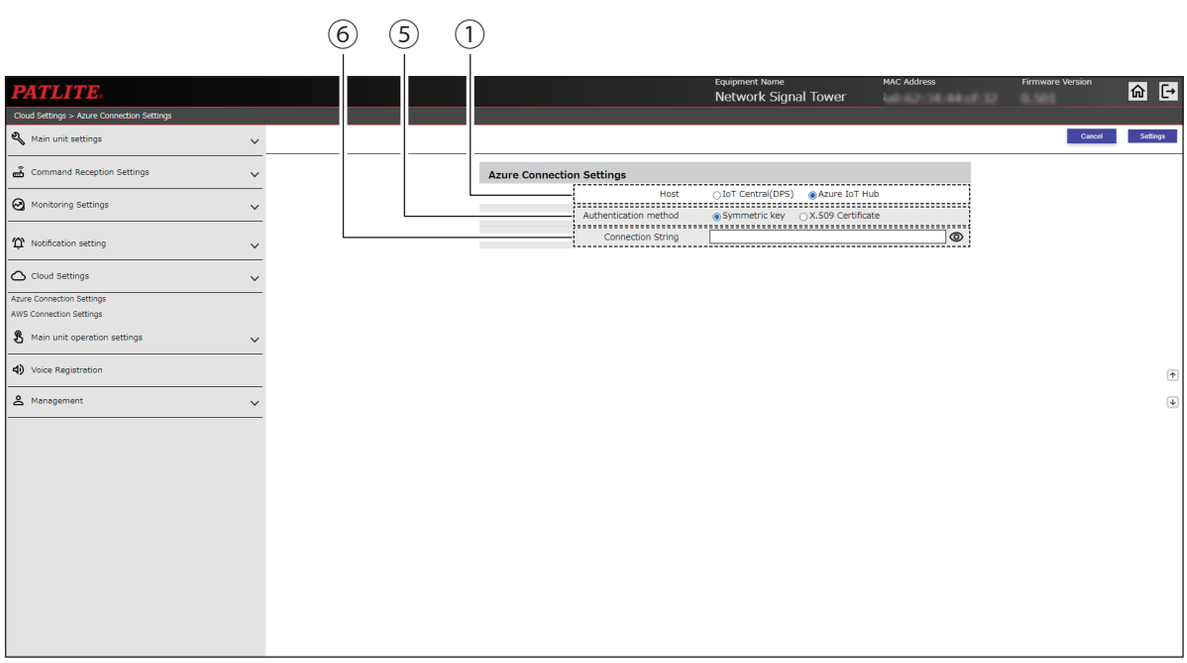
9.5.1. Azure Connection Settings

Configure settings to connect to IoT Central (DPS) or Azure IoT Hub.

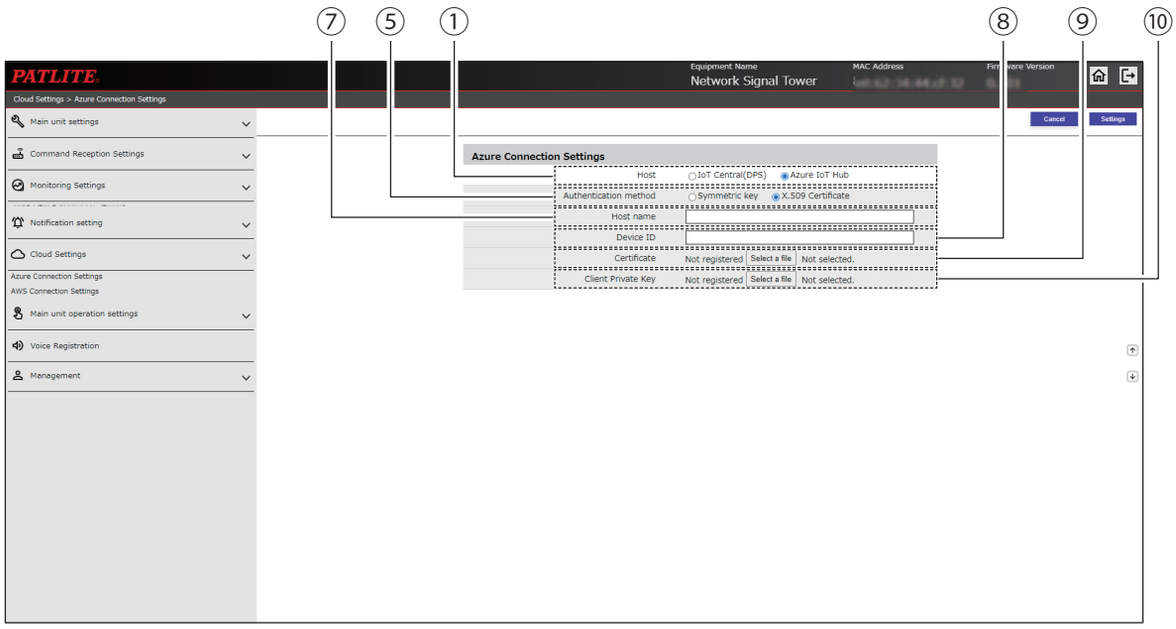
[Host] is specified as [IoT Central(DPS)]



[Host] is specified as [Azure IoT Hub], and [Authentication] is specified as [Symmetric key]



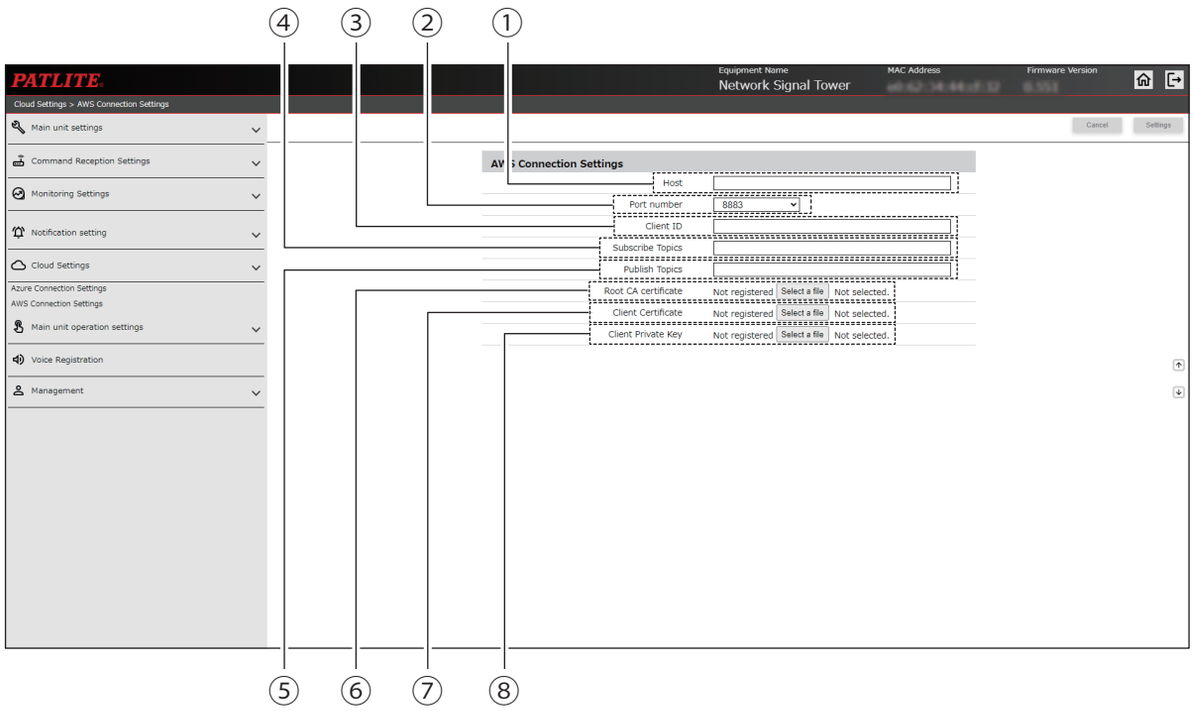
[Host] is specified as [Azure IoT Hub], and [Authentication] is specified as [X.509 Certificate]



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Host	IoT Central (DPS)	IoT Central (DPS) / Azure IoT Hub	Select [IoT Central (DPS)] or [Azure IoT Hub].	●	●	●	●
②	Scope ID	(Blank)	127 single-byte characters	Enter the scope ID to connect to [IoT Central (DPS)].	●	●	●	●
③	Device ID	(Blank)	127 single-byte characters	Enter the device ID to connect to [IoT Central (DPS)].	●	●	●	●
④	SAS Token	(Blank)	127 single-byte characters	Enter the SAS token to connect to [IoT Central (DPS)].	●	●	●	●
⑤	Authentication method	Symmetric key	Symmetric key / X.509 Certificate	Select either [Symmetric key] or [X.509 Certificate].	●	●	●	●
⑥	Connection String	(Blank)	511 single-byte characters	Enter the connection string to connect to [Azure IoT Hub].	●	●	●	●
⑦	Host name	(Blank)	255 single-byte characters	Enter the host name of [Azure IoT Hub].	●	●	●	●
⑧	Device ID	(Blank)	127 single-byte characters	Enter the device ID to connect to [Azure IoT Hub].	●	●	●	●
⑨	Certificate	–	–	Upload the X.509 certificate.	●	●	●	●
⑩	Client Private Key	–	–	Upload the client private key	●	●	●	●

9.5.2. AWS Connection Settings

Configure settings to connect to Amazon Web Services.

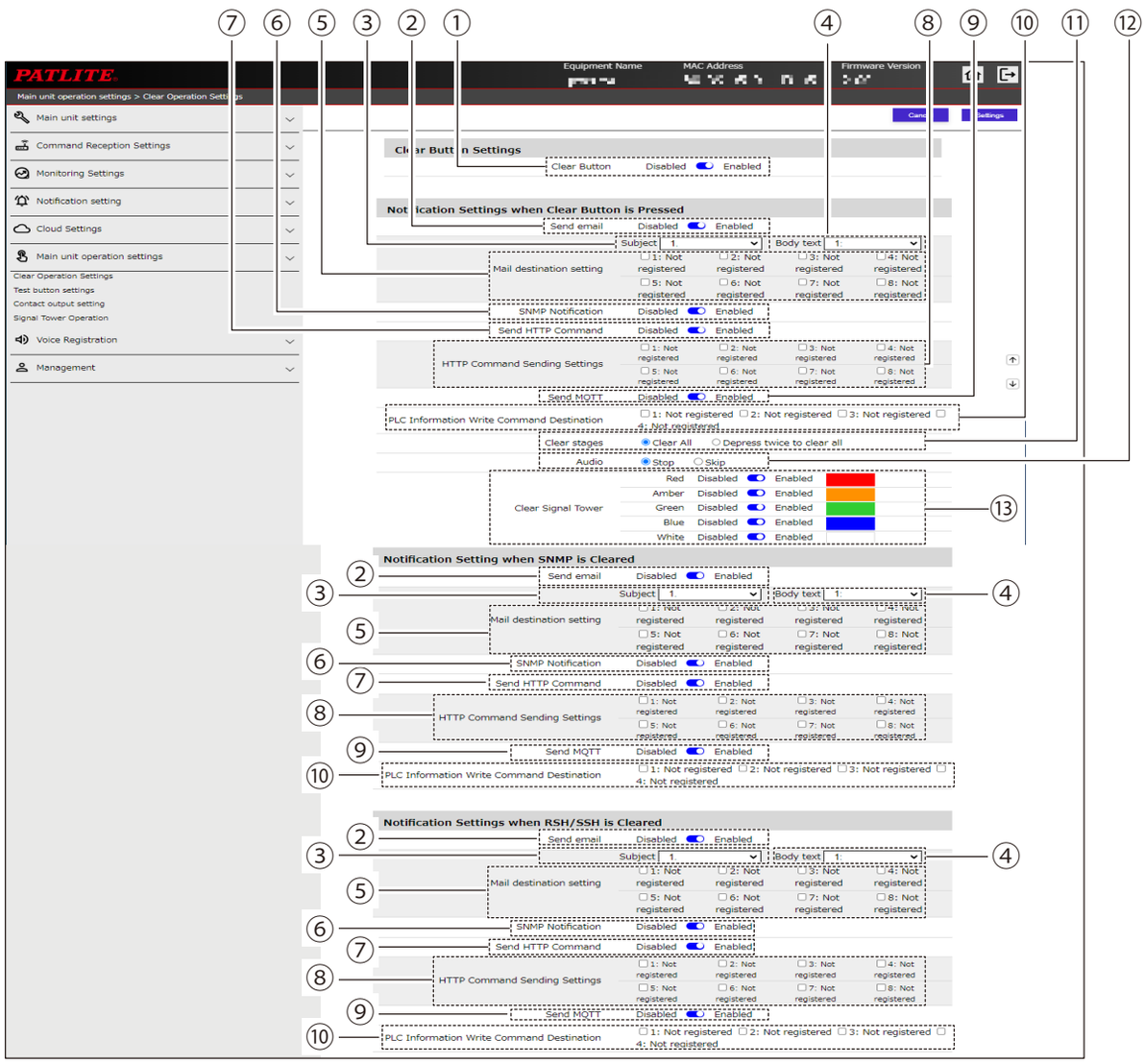


No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Host	(Blank)	511 single-byte characters	Enter the AWS IoT Core Device data endpoint.	●	●	●	●
②	Port number	8883	443 / 8883	Select the port number used to communicate with AWS IoT Core.	●	●	●	●
③	Client ID	(Blank)	127 single-byte characters	Register the ID name (the name of the thing).	●	●	●	●
④	Subscribe Topics	(Blank)	255 single-byte characters	Register topics to Subscribe for this product.	●	●	●	●
⑤	Publish Topics	(Blank)	255 single-byte characters	Topic is registered when you run Publish on this product.	●	●	●	●
⑥	Root CA certificate	–	–	Uploads the Root CA certificate.	●	●	●	●
⑦	Client Certificate	–	–	Uploads the Client Certificate.	●	●	●	●
⑧	Client Private Key	–	–	Uploads the Client Private Key.	●	●	●	●

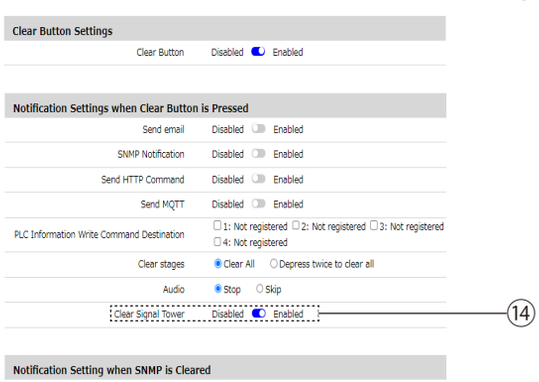
9.6. Main Unit Operation Settings

9.6.1. Clear Operation Settings

Configure email, TRAP, or HTTP Commands transmitted when the Clear button is pressed, or when a SNMP or RSH Command executes a clear operation.



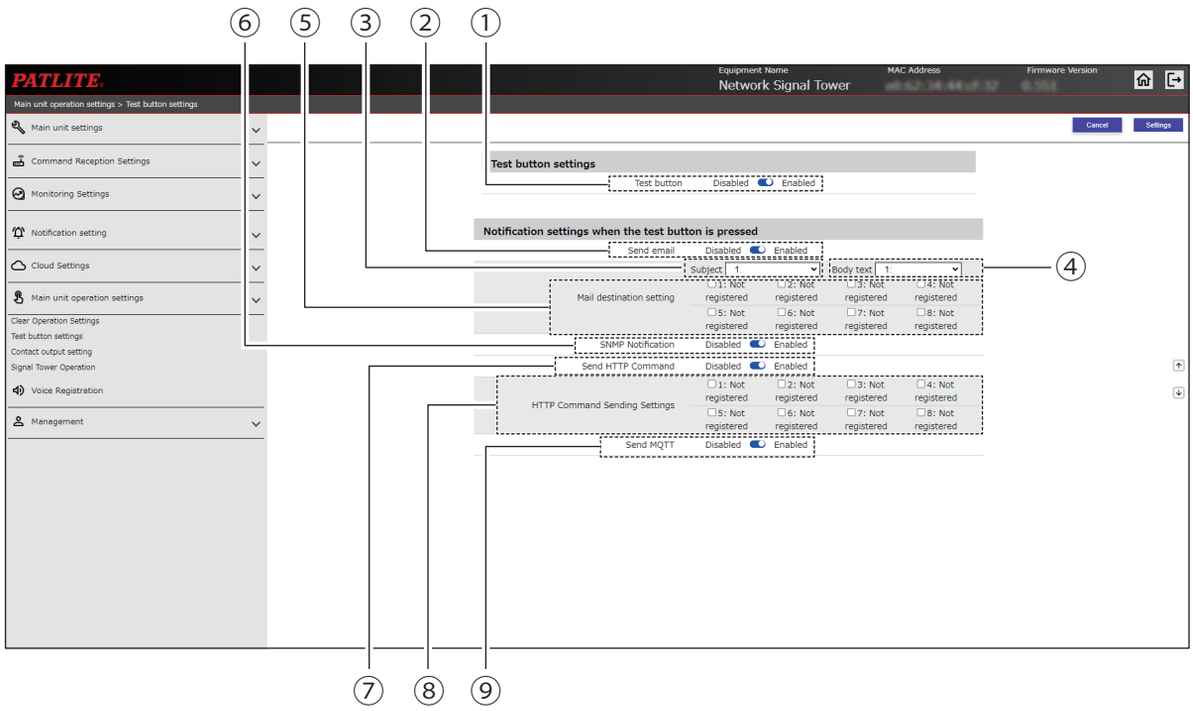
In Basic Setup Screen, from [Additional units] the [Multi-color unit] option is selected



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Clear Button	Enabled	Enabled / Disabled	Select either [Enabled] or [Disabled] for the Clear button.	●	●	●	●
②	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	●	●	●	●
③	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
④	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●
⑤	Mail destination setting	(Not selected)	–	Select the email recipient.	●	●	●	●
⑥	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP notification.	●	●	●	●
⑦	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	●	●	●	●
⑧	HTTP Command Sending Settings	(Not selected)	–	Select a HTTP Command.	●	●	●	●
⑨	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	●	●	●	●
⑩	Send PLC information write command	Disabled	Enabled / Disabled	Select [Enabled] or [Disabled] for the Send PLC Information Write Command.	●	●	●	●
⑪	Clear stages	Clear all	Clear all / Depress twice to clear all	Select the Clear button operation, [Clear all] or [Depress twice to clear all]	●	●	●	●
⑫	Audio (in [Basic Settings], when [Audio Playback Mode] is set to [Memory playback mode])	Stop	Stop / Skip	Select the clear operation ([Stop] or [Skip]) for the channel that is playing.	–	●	●	●
⑬	Clear Signal Tower (Red, Amber, Green, Blue, White)	Enabled	Enabled / Disabled	For when the Clear button is pressed, select either [Enabled] or [Disabled] for the Signal Tower's normal operation setting.	●	●	●	●
⑭	Clear Signal Tower	Enabled	Enabled / Disabled	For when the Clear button is pressed, select either [Enabled] or [Disabled] for the Signal Tower's normal operation setting.	●	●	●	●

9.6.2. Test Button Setting

You can set the operation for when the Test button is pressed.



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Test button	Enabled	Enabled / Disabled	Select either [Enabled] or [Disabled] for the Test button.	●	●	●	●
②	Send email	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send email.	●	●	●	●
③	Subject	1	1 to 17	Select a subject for the email.	●	●	●	●
④	Body text	1	1 to 17	Select the body text of the email.	●	●	●	●
⑤	Mail destination setting	(Not selected)	–	Select the email recipient.	●	●	●	●
⑥	SNMP Notification	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] SNMP notification.	●	●	●	●
⑦	Send HTTP Command	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send HTTP Command.	●	●	●	●
⑧	HTTP Command Sending Settings	(Not selected)	–	Select a HTTP Command.	●	●	●	●
⑨	Send MQTT	Disabled	Enabled / Disabled	Set to [Enabled] or [Disabled] Send MQTT.	●	●	●	●

9.6.3. Contact Output Setting NHV Series (D model)

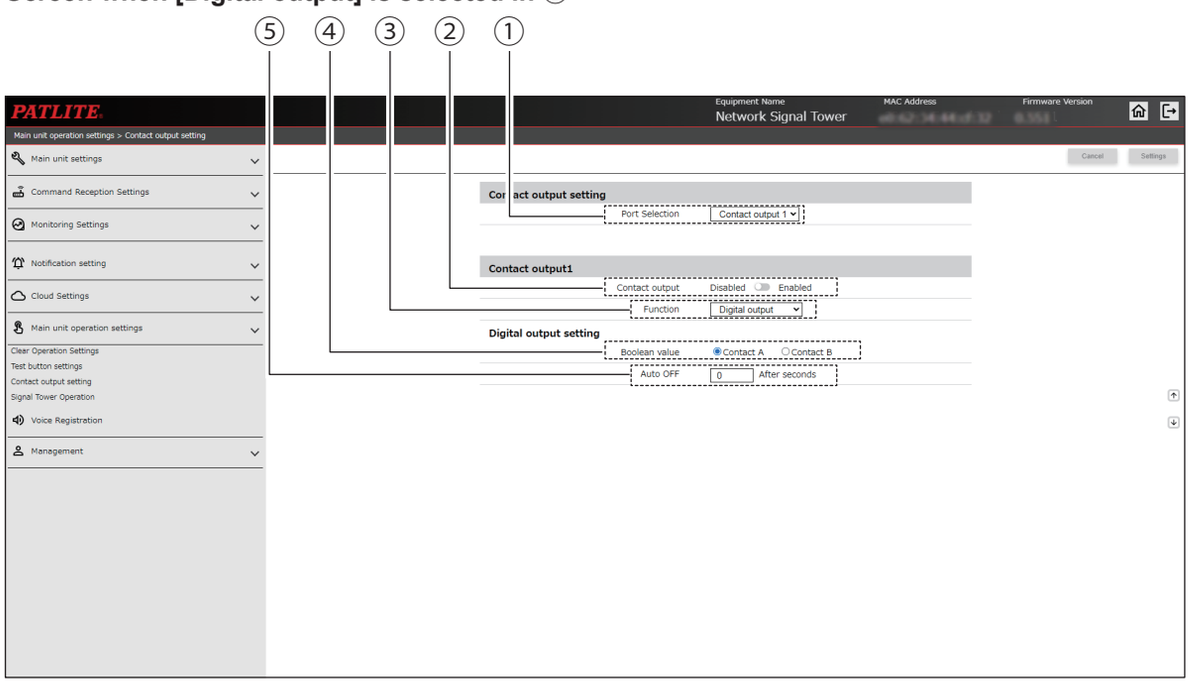
Set output settings for the contact output. Using this screen, you can set up and switch between [Digital output] and [Busy output].

⚠ CAUTION

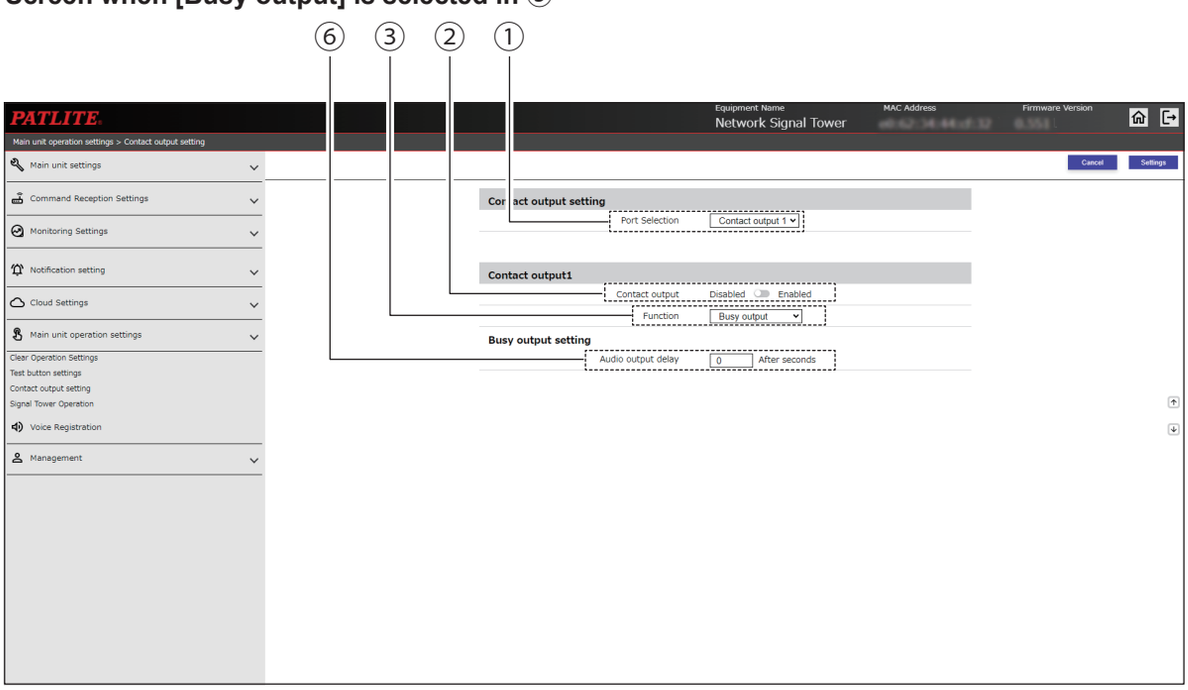
⚠ When changing the contact from [Digital output] to [Busy output], or from [Busy output] to [Digital output], the state of the contact is maintained.

The contact output operation starts by either using contact output or executing the clear operation.

Screen when [Digital output] is selected in ③



Screen when [Busy output] is selected in ③

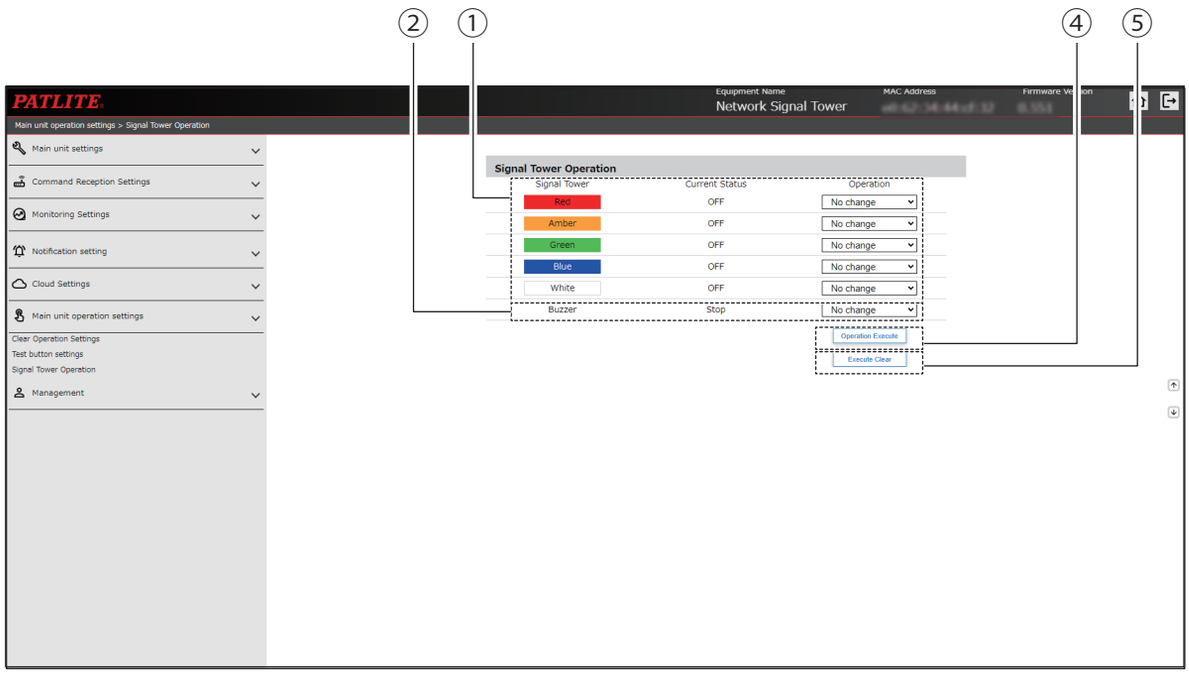


No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Port Selection	Contact output 1	Contact output 1 / Contact output 2	Select the contact output to set.	–	–	–	●
②	Contact output	Disabled	Enabled / Disabled	Select to either [Enabled] or [Disabled] the contact output.	–	–	–	●
③	Function	Digital output	Digital output / Busy output	Select either [Digital output] or [Busy output] for the contact output function. In [Port Selection], when [Contact output 2] is specified, this is fixed to [Digital output].	–	–	–	●
④	Boolean value	Contact A	Contact A / Contact B	Select the [Boolean value] as either [Contact A] or [Contact B].	–	–	–	●
⑤	Auto OFF (0 - 600) sec.	0	0 to 600	Enter the time for the [Auto OFF] function.	–	–	–	●
⑥	Audio output delay (0 - 10) sec.	0	0 to 10	Enter the delay time for Busy output.	–	–	–	●

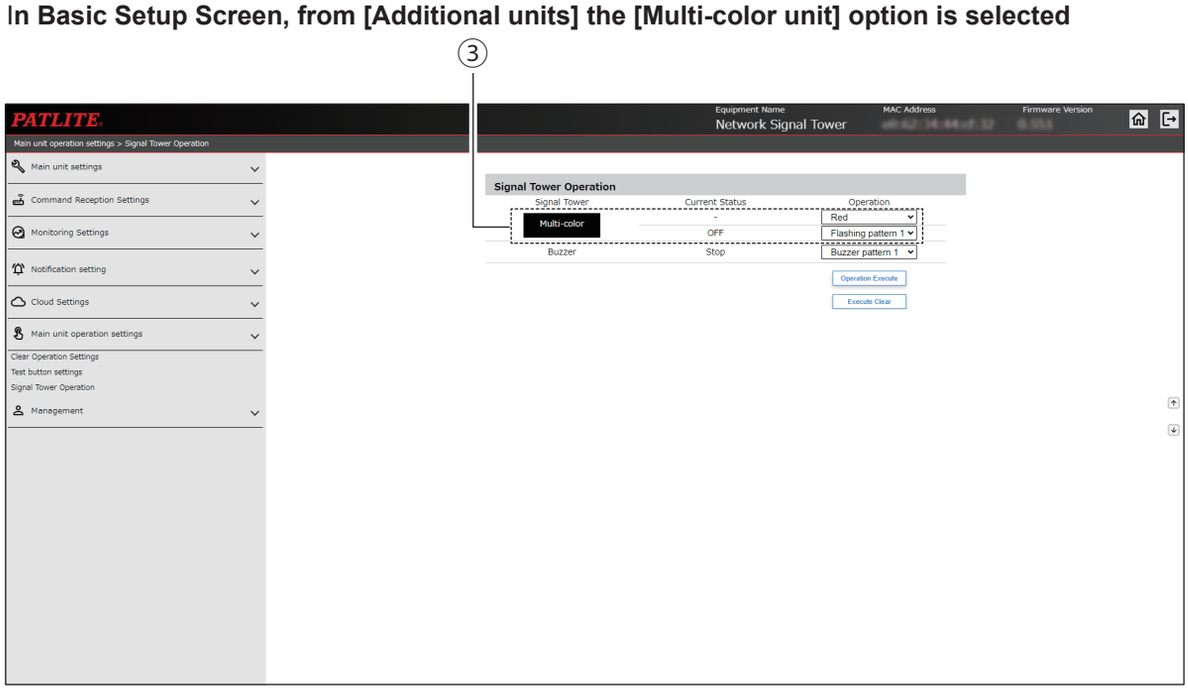
9.6.4. Signal Tower Operation

You can operate the Signal Tower lights from the Web Setup Screen.

In Basic Setup Screen, from [Additional units] the [Not use] option is selected



In Basic Setup Screen, from [Additional units] the [Multi-color unit] option is selected



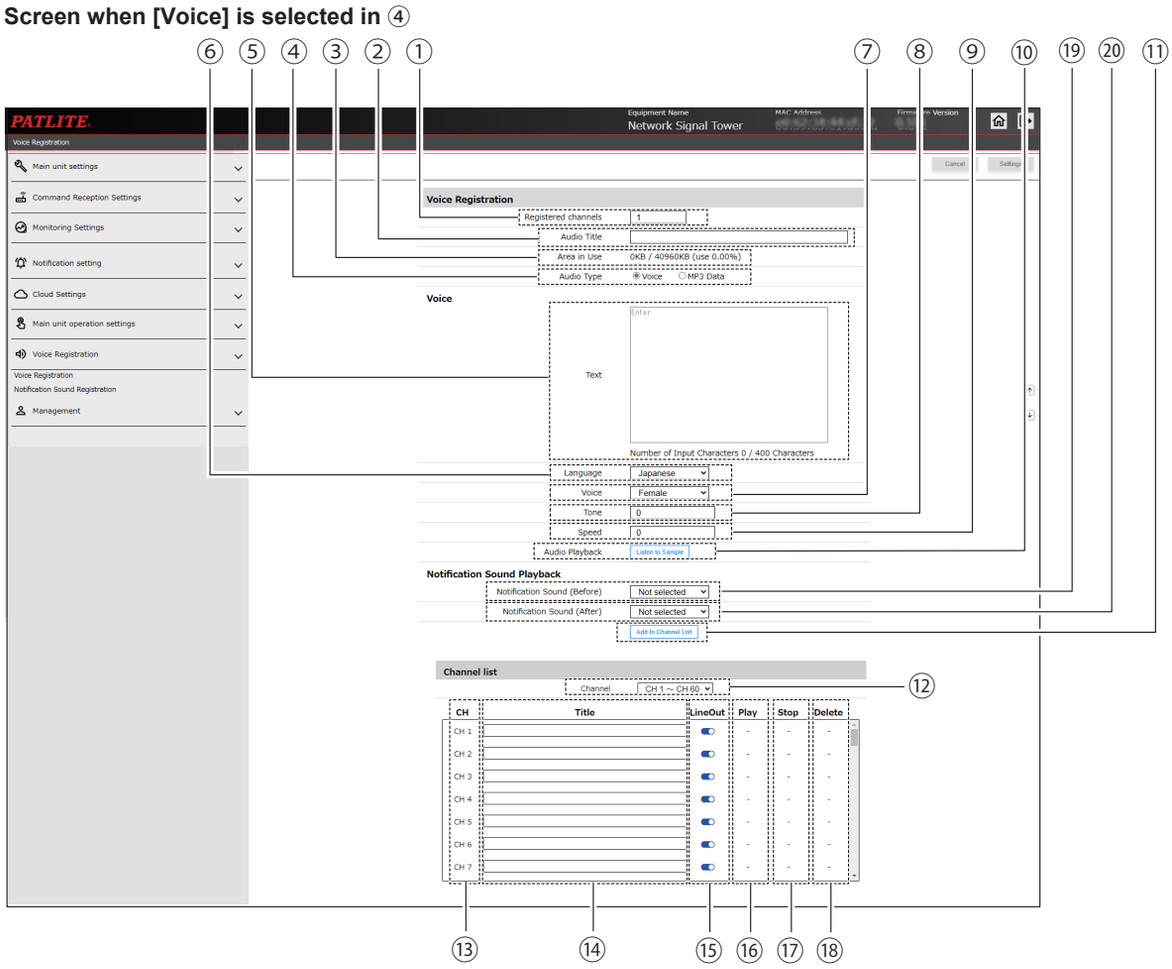
No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Red, Amber, Green, Blue, White	No change	OFF / Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4 / No change	Specifies the lighting pattern of LED units.	●	●	●	●
②	Buzzer	No change	Stop / Buzzer pattern 1 / Buzzer pattern 2 / Buzzer pattern 3 / Buzzer pattern 4 / Buzzer pattern 5 / No change	Specifies the buzzer pattern.	●	–	–	–
③	Multi color	Red	Red / Amber / Green / Blue / White / Purple / Light blue	Specifies the colors of the multi-color unit.	●	●	●	●
		OFF	OFF / Continuous ON / Flashing pattern 1 / Flashing pattern 2 / Flashing pattern 3 / Flashing pattern 4	Specifies the lighting pattern of the multi-color unit.	●	●	●	●
④	Operation Execute	–	–	Signal Tower lights up using the specified color and pattern.	●	●	●	●
⑤	Execute Clear	–	–	Signal Tower enters normal operating state.	●	●	●	●

9.7. Voice Registration NHV Series

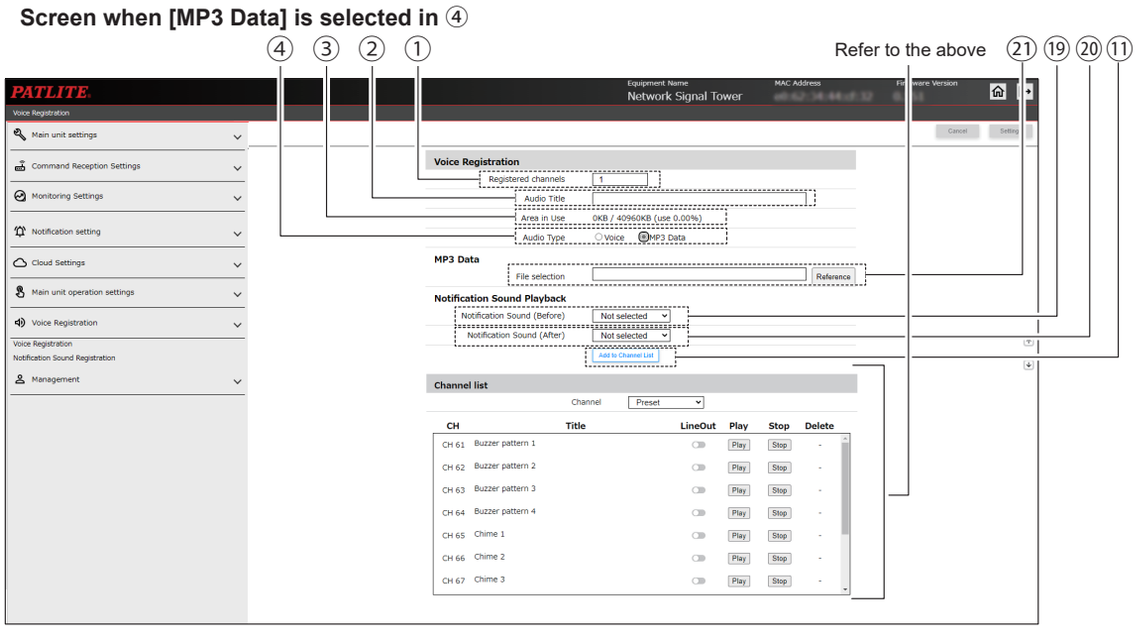
9.7.1. Voice Registration

- You can register MP3 files and titles to channels played by this product.
- You can use the voice synthesizer function to register audio to a channel. For confirmation, you can playback registered audio on this screen.

Screen when [Voice] is selected in ④



Screen when [MP3 Data] is selected in ④



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Registered channels	1	1 to 60	Select the channel to set.	–	●	●	●
②	Audio Title	(Blank)	128 single-byte or double-byte characters	Enter a title for the channel.	–	●	●	●
③	Area in Use	–	–	Displays the total capacity and percentage used by registered audio data.	–	●	●	●
④	Audio Type	Voice	Voice / MP3 Data	Select either [Voice] or [MP3 Data] for registered audio.	–	●	●	●
⑤	Text	(Blank)	400 single-byte or double-byte characters	Enter the text to convert to audio data.	–	●	●	●
⑥	Language	Japanese	Japanese / English / Chinese*6	Select either [Japanese] or [English] or [Chinese] for the playback language.	–	●	●	●
⑦	Voice	Female	Male / Female	Select either [Male] or [Female] for the voice used in playback.	–	●	●	●
⑧	Tone	0	-5 to 5	Set the tone of the audio playback.	–	●	●	●
⑨	Speed	0	-5 to 5	Set the speed of the audio playback.	–	●	●	●
⑩	Audio Playback*1	–	–	Play audio with the current settings.	–	●	●	●
⑪	Add to Channel List	–	–	Using the current settings, generates audio data and adds it to the channel list.	–	●	●	●
⑫	Channel	ch1~ch60	ch1~ch60 / Preset	Select the channels to display, either [ch1~ch60] or [Preset].	–	●	●	●
⑬	CH	–	–	Displays the channel number.	–	●	●	●
⑭	Title	(Blank)	128 characters	Displays the audio title of registered audio data. You can change the title of registered audio data.	–	●	●	●
⑮	LineOut	Disabled	Enabled / Disabled	Select to either [Enabled] or [Disabled] output to LineOut of registered audio.	–	●	●	●
⑯	Play*2 *3 *4 *5	–	–	Plays registered audio data.	–	●	●	●
⑰	Stop*2	–	–	Stops playing the registered audio data.	–	●	●	●
⑱	Delete*2	–	–	Deletes the registered audio data.	–	●	●	●
⑲	Notification Sound (Before)	(Not selected)	(Not selected), 1 to 10	Set a notification sound to play before the sound playback.	–	●	●	●
⑳	Notification Sound (After)	(Not selected)	(Not selected), 1 to 10	Set a notification sound to play after the sound playback.	–	●	●	●
㉑	File selection	(Blank)	MP3 Data	Browse and select the MP3 data to register.	–	●	●	●

*1 If there is no text, audio does not play.

*2 If there is no audio data registered to the channel, the buttons do not display.

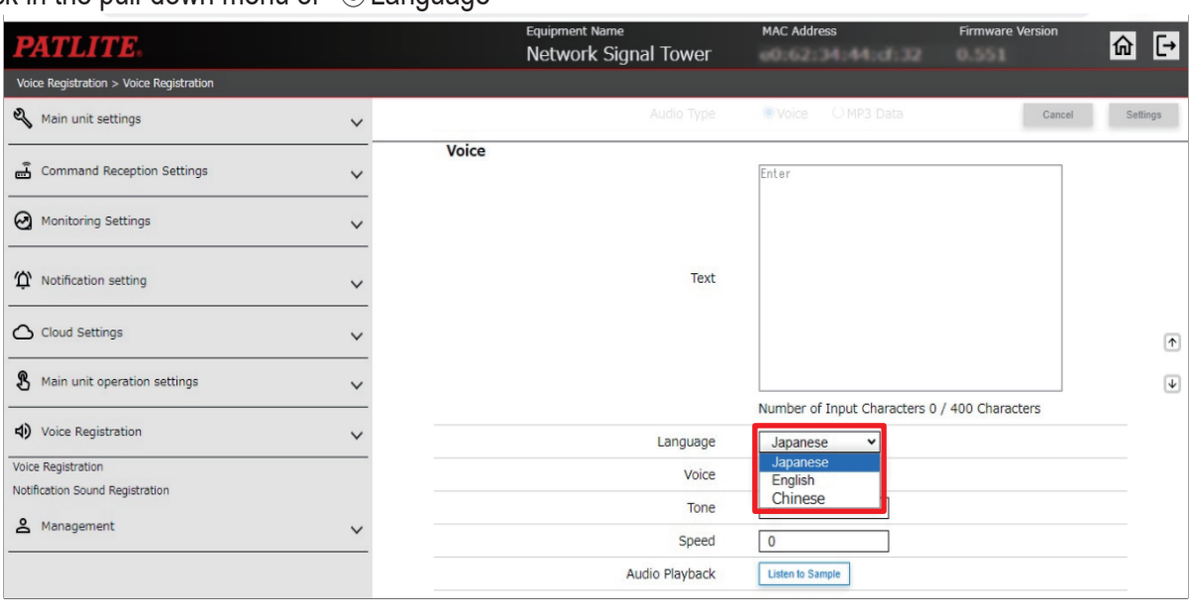
*3 During audio playback, when LineOut and Busy output are enabled, they operate as per their settings. Even if connected devices are operating, check that there are no problems.

*4 Running audio playback interrupts playback of the current channel.

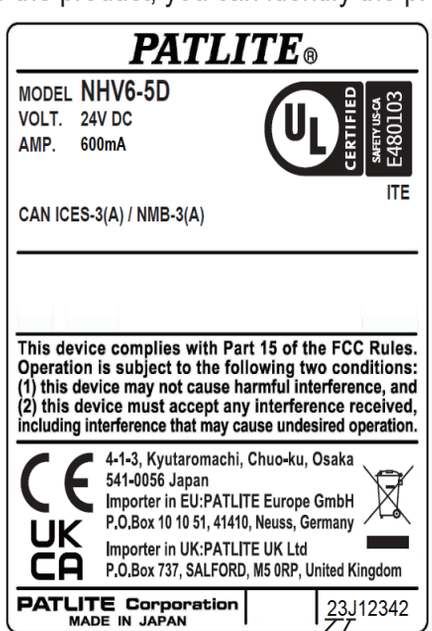
*5 When [Audio Playback Mode] is set to [Memory playback mode], if there is an event while audio from this screen is playing, only after audio playback is complete will audio for the event be played.

*6 "Chinese" will not be displayed for products that do not have the Voice Synthesizer of Chinese.

<how to check the supported languages of installed the Voice Synthesizer (Ver1.13 or later)>
Check in the pull-down menu of "⑥Language"



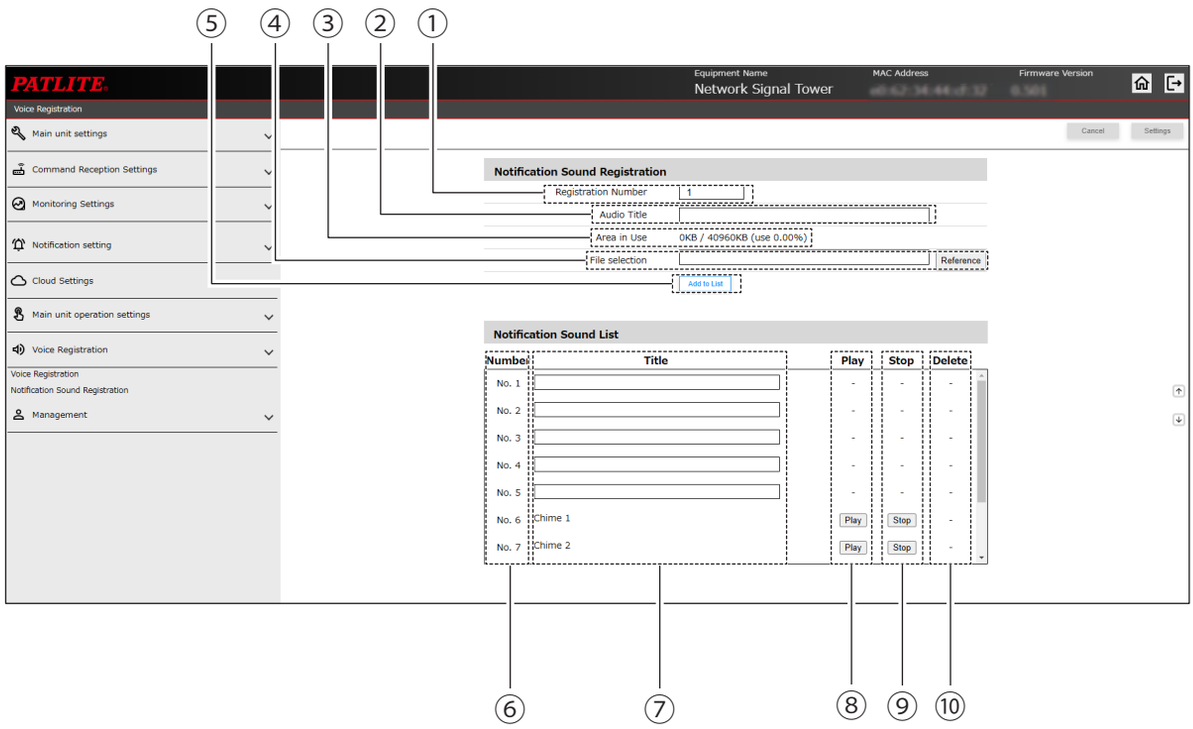
The Voice Synthesizer of Chinese will be available starting from October 2023 production.
By checking the nameplate affixed to the product, you can identify the production date.



Display	A	B	C	D	E	F	G	H	I	J	K	L
Month	1	2	3	4	5	6	7	8	9	10	11	12

9.7.2. Notification Sound Registration

- You can register MP3 files and titles for notification sounds played by this product.
- For confirmation, you can playback registered notification sounds on this screen.



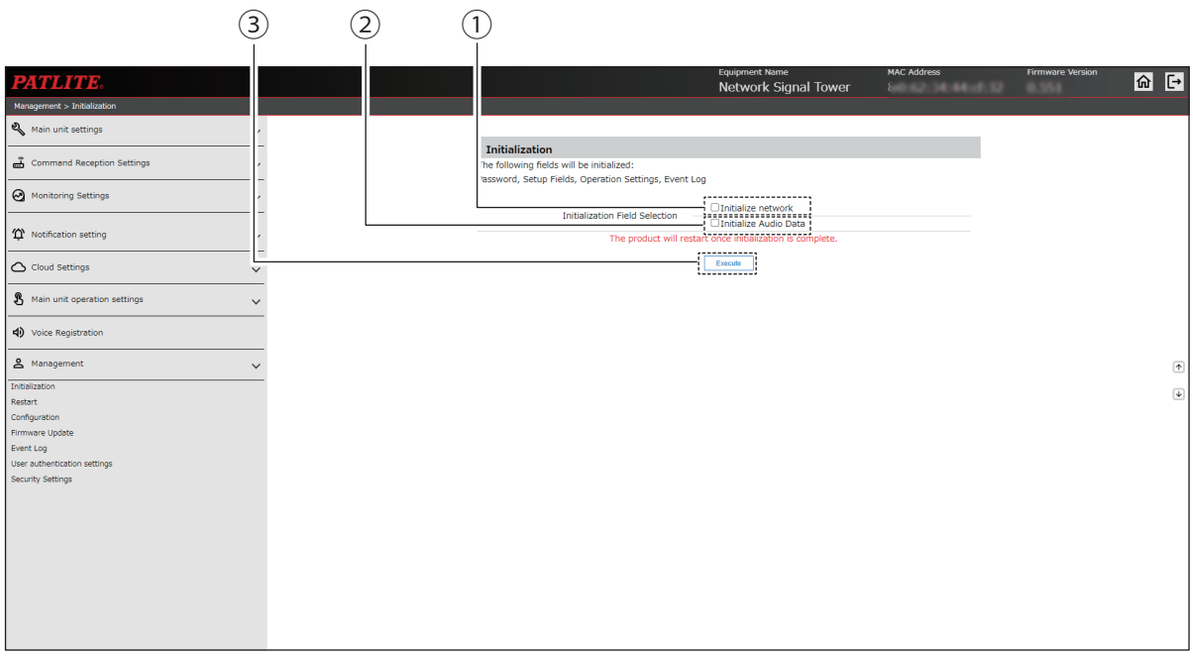
No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Registered numbers	1	1 to 5	Select the notification sound to set.	–	●	●	●
②	Audio Title	(Blank)	128 single-byte or double-byte characters	Enter a title for the notification sound,	–	●	●	●
③	Area in Use	–	–	Displays the total capacity and percentage used by registered sound data.	–	●	●	●
④	File selection	(Blank)	MP3 Data	Browse and select the MP3 data to register.	–	●	●	●
⑤	Add to List	–	–	Add the currently selected notification sound to the notification sound list.	–	●	●	●
⑥	Number	–	–	Displays the notification sound list number.	–	●	●	●
⑦	Title	(Blank)	128 single-byte or double-byte characters	Displays the titles of registered or provisionally registered notification sounds.	–	●	●	●
⑧	Play ※1	–	–	Plays the notification sound of each number.	–	●	●	●
⑨	Stop ※1	–	–	Stops playing the sound.	–	●	●	●
⑩	Delete ※1	–	–	Deletes the notification sound data registered for each number.	–	●	●	●

*1 If there is no sound data registered to the notification sound, the buttons do not display.

9.8. Management

9.8.1. Settings Initialization

You can initialize settings on this product.



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Initialize network*2	–	–	When initialization is performed, also initializes network settings*1.	●	●	●	●
②	Initialize Audio Data*3	–	–	When initialization is performed, also initializes audio data.	–	●	●	●
③	Execute	–	–	Executes initialization.	●	●	●	●

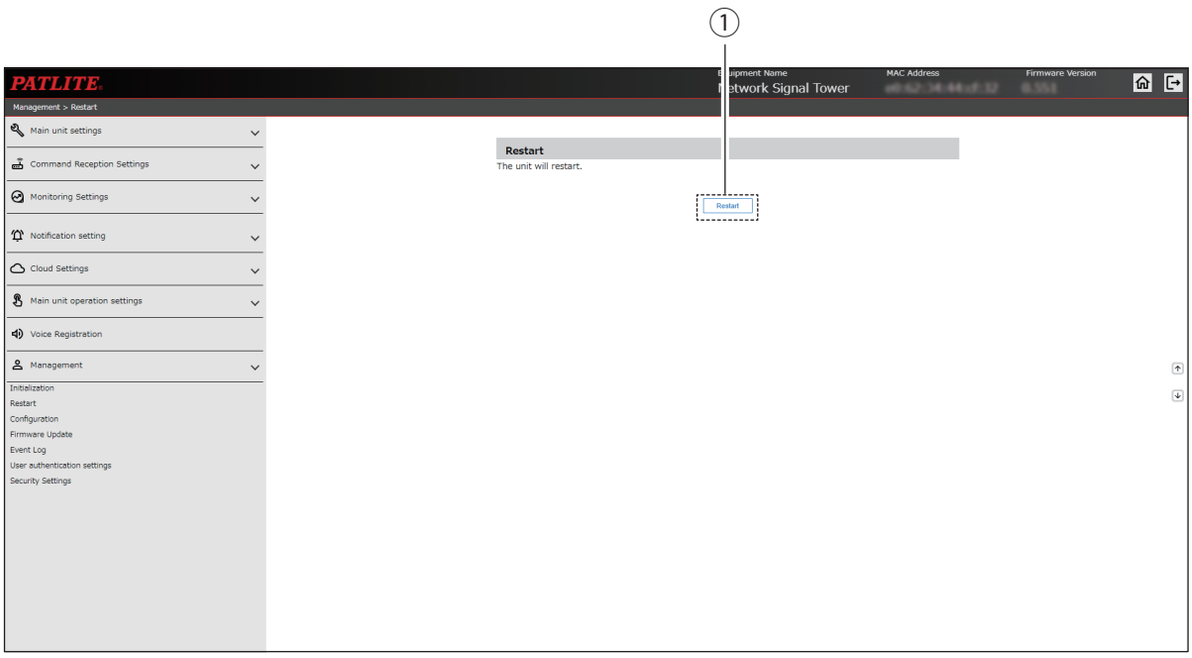
*1 [Network settings] refer to items in the network settings screen, such as [IP address], [Subnet mask], [Prefix length], [Default gateway], [DNS server address], and [Host name].

*2 When [Initialize network] is selected, the IP address is reset to the factory default. To use it again, you need to reconfigure the network.

*3 Even if [Initialize Audio Data] is selected, the preset channels are not deleted.

9.8.2. Restart

You can restart this product.



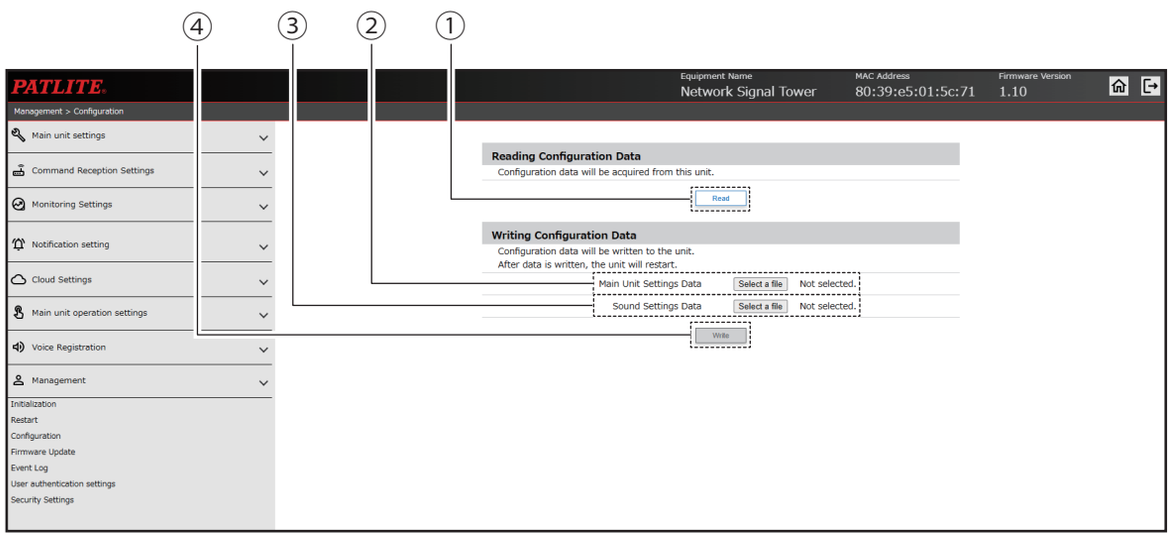
No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Restart	–	–	Restarts this product.	●	●	●	●

9.8.3. Configuration

- You can extract the product settings and save them to your computer as configuration data.
- Select configuration data extracted from the product for writing.

⚠ CAUTION

⚠ The configuration data consists of operation settings registered in the main unit.
⚠ The configuration data does not include network settings or authentication passwords.



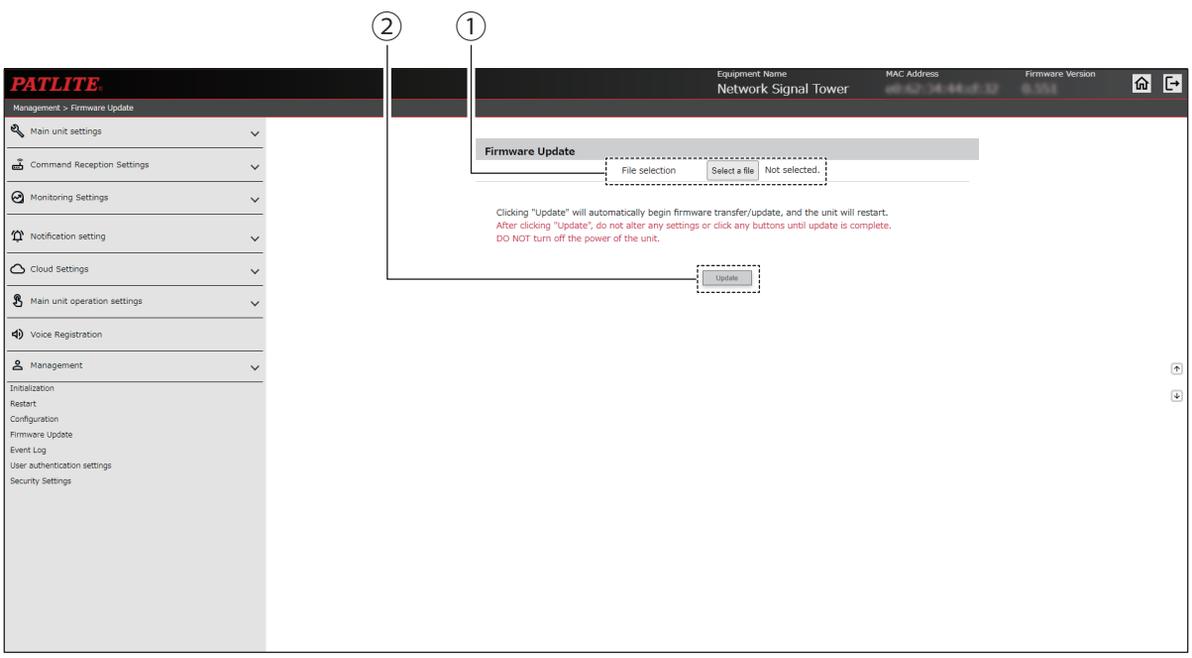
No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	M Model	D Model
①	Read	–	–	Read out configuration data from the product.	●	●	●	●
②	File selection (Configuration)	–	–	Select the configuration data stored on the computer.	●	●	●	●
③	File selection (Sound package)	–	–	Select the sound package data stored on the computer.	●	●	●	●
④	Write	–	–	Write contents of the selected configuration data to the product.	●	●	●	●

9.8.4. Updating Firmware

You can update the firmware on this product.

⚠ CAUTION

- While updating, do not disconnect the power or LAN cables. Failure to follow this instruction could result in product damage.
- Before updating, check the version and models supported by the firmware.
  Performing an update when an unsupported firmware is selected could result in equipment damage.
- ⚠ Adding supported languages for the Voice Synthesizer cannot be performed using this function.
  (The chinese of the Voice Synthesizer is not installed in products manufactured before September 2023 It cannot be added using this function.)



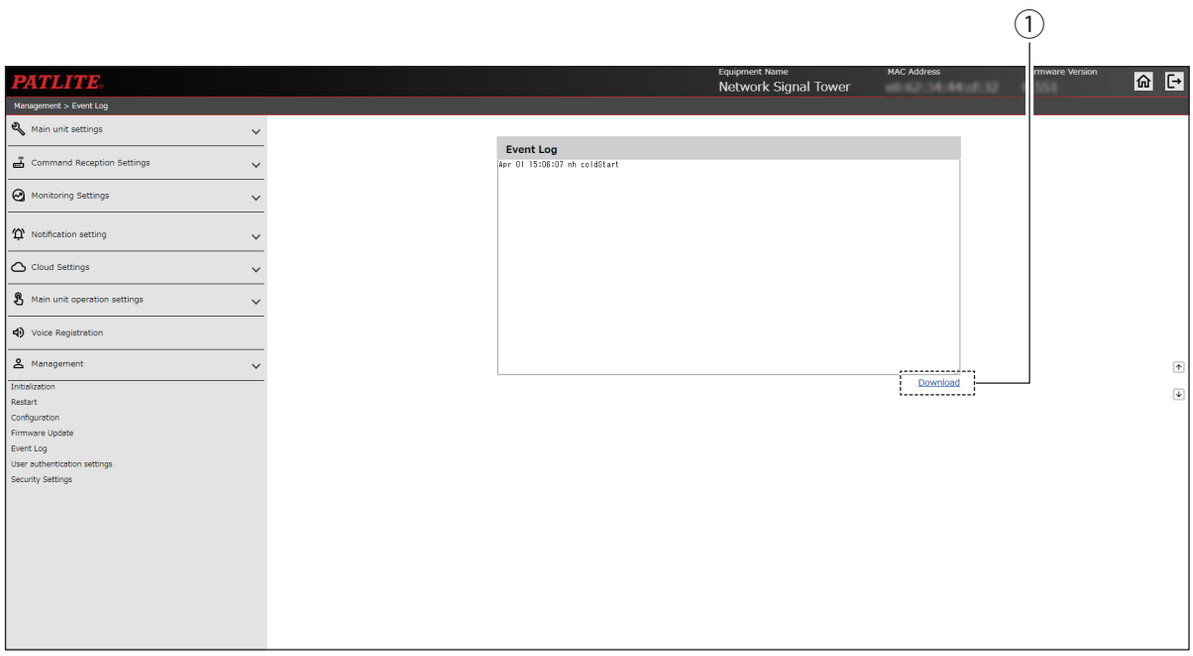
No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	M Model	D Model
①	File selection	–	Select File	Select the firmware to write to this product.	●	●	●	●
②	Execute	–	Button	Execute update.	●	●	●	●

9.8.5. Event Log

- Displays the product's event log.
- The event log displays the most recent 100 events.
- You can click [Download] to download the event log file.
- You can download up to 1000 events from the event log.

⚠ CAUTION

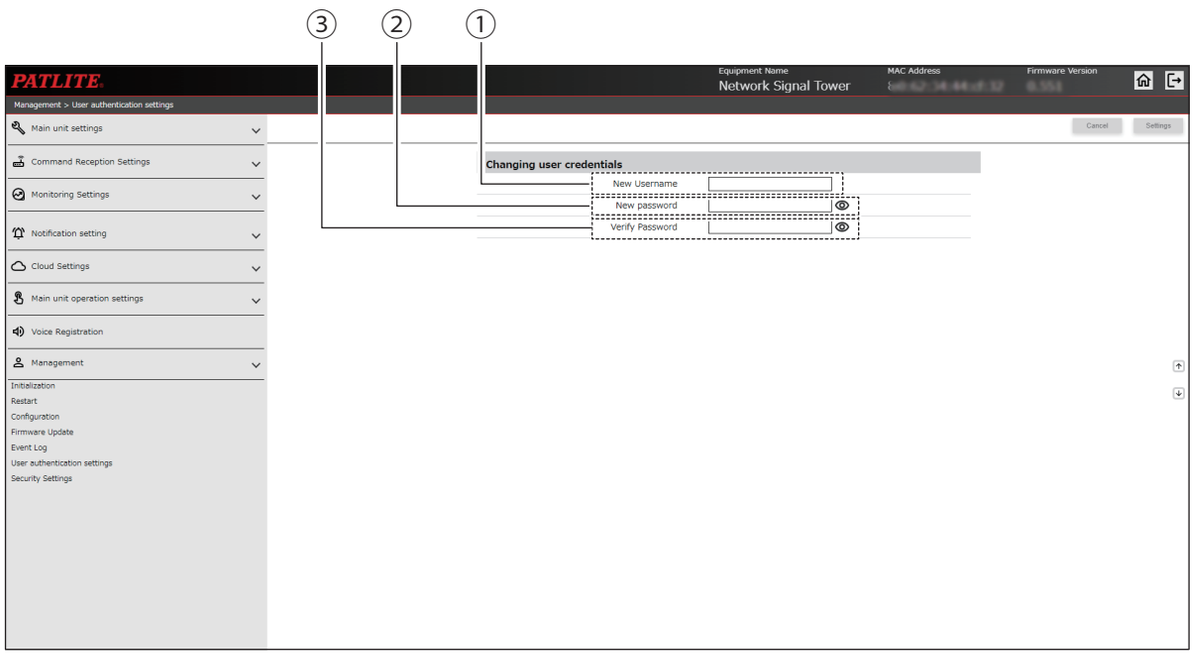
⚠ The event log is erased when initialization is executed from the [Initialization] screen.



No.	Item	Default Value	Input Range	Description	Setting (● : Yes – : No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	Download	–	–	Download the event log.	●	●	●	●

9.8.6. User Authentication Settings

- You can set the User Name and Password required for logging in to this product.
- The set password is enabled the next time you log in.



No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	Ⓜ Model	Ⓓ Model
①	New Username	(Blank)	16 characters	Set the new user name.	●	●	●	●
②	New password	(Blank)	16 characters	Set a new password.	●	●	●	●
③	Verify Password	(Blank)	16 characters	Set the new password (for confirmation).	●	●	●	●

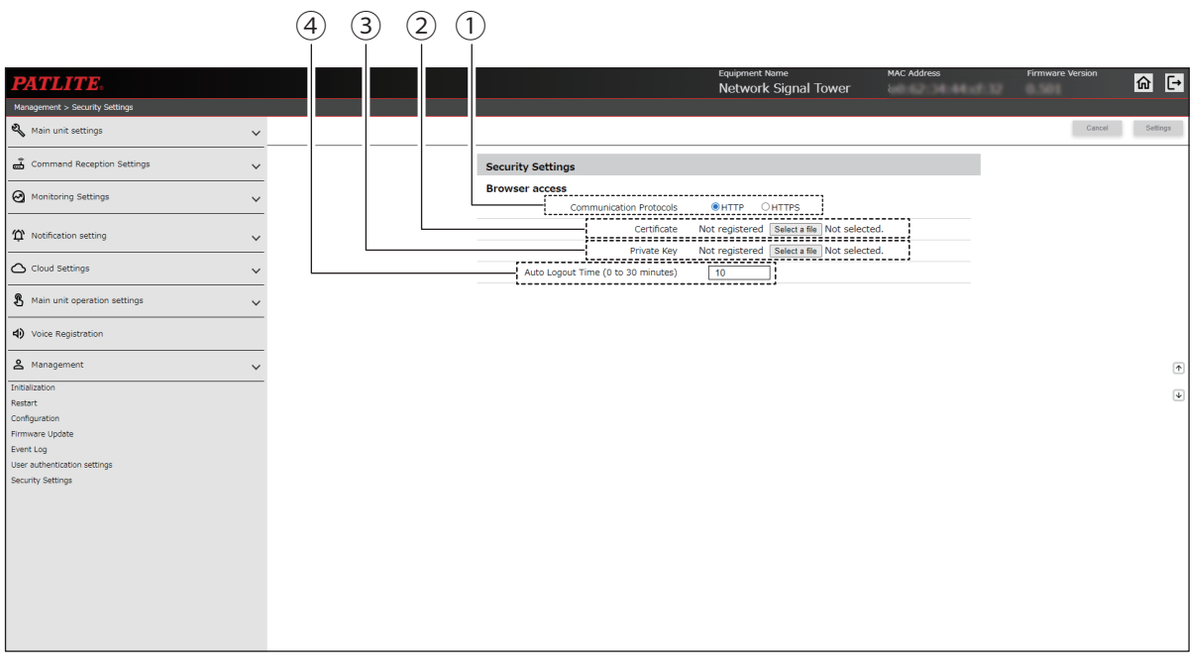
9.8.7. Security Settings

- You can select the protocol used for communication with the product's Web Setup Screen.
- You can set the amount of time before you are automatically logged out when there is no operation.

⚠ CAUTION

⚠ If you select HTTPS communication, when you access the Web Setup Screen or display a pop-up, sometimes an error screen with a message such as "This site is not secure" or "This connection does not protect privacy" will appear.

When the error screen is displayed, in the browser click the [Details] link, then click [Go to Web page] to access the Web Setup Screen. (The displayed text differs depending on your browser and browser version.)

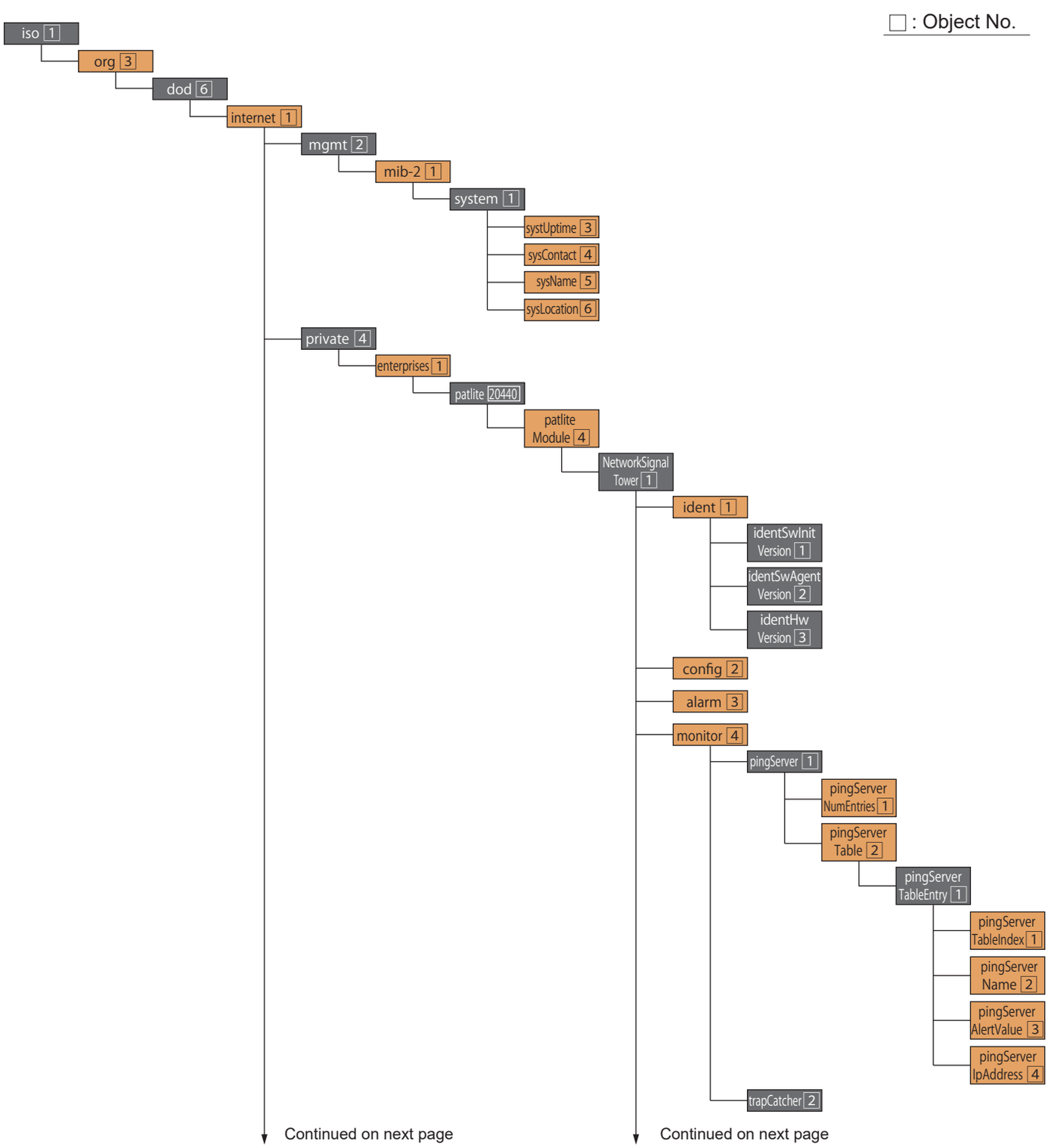


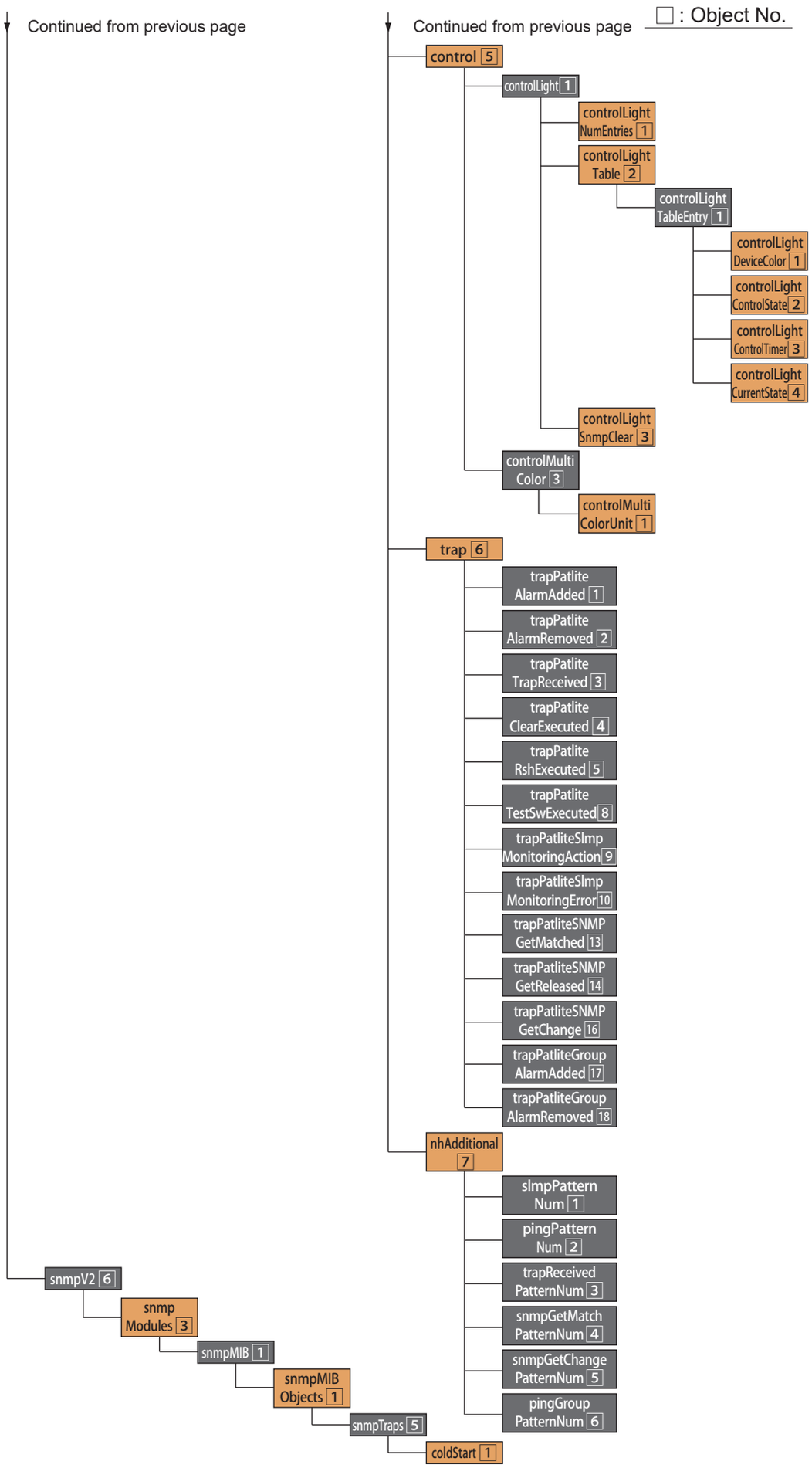
No.	Item	Default Value	Input Range	Description	Setting (● : Yes –: No)			
					NHB Series	NHV Series		
						(empty)	M Model	D Model
①	Communication Protocols	HTTP	HTTP / HTTPS	Select either [HTTP] or [HTTPS] for the communication protocol.	●	●	●	●
②	Certificate	–	–	Uploads the certificate which is used in communicating via HTTPS.	●	●	●	●
③	Private Key	–	–	Uploads the private key which is used in communicating via HTTPS.	●	●	●	●
④	Auto Logout Time	10	0 to 30	Set the time before you are automatically logged out. When "0" is specified, you are not automatically logged out.	●	●	●	●

10. MIB List

- This product has a dedicated MIB.
- This product is compatible with the NH series MIB, so you can use this product without changing existing designs.

10.1. NHB Series




Continued from previous page
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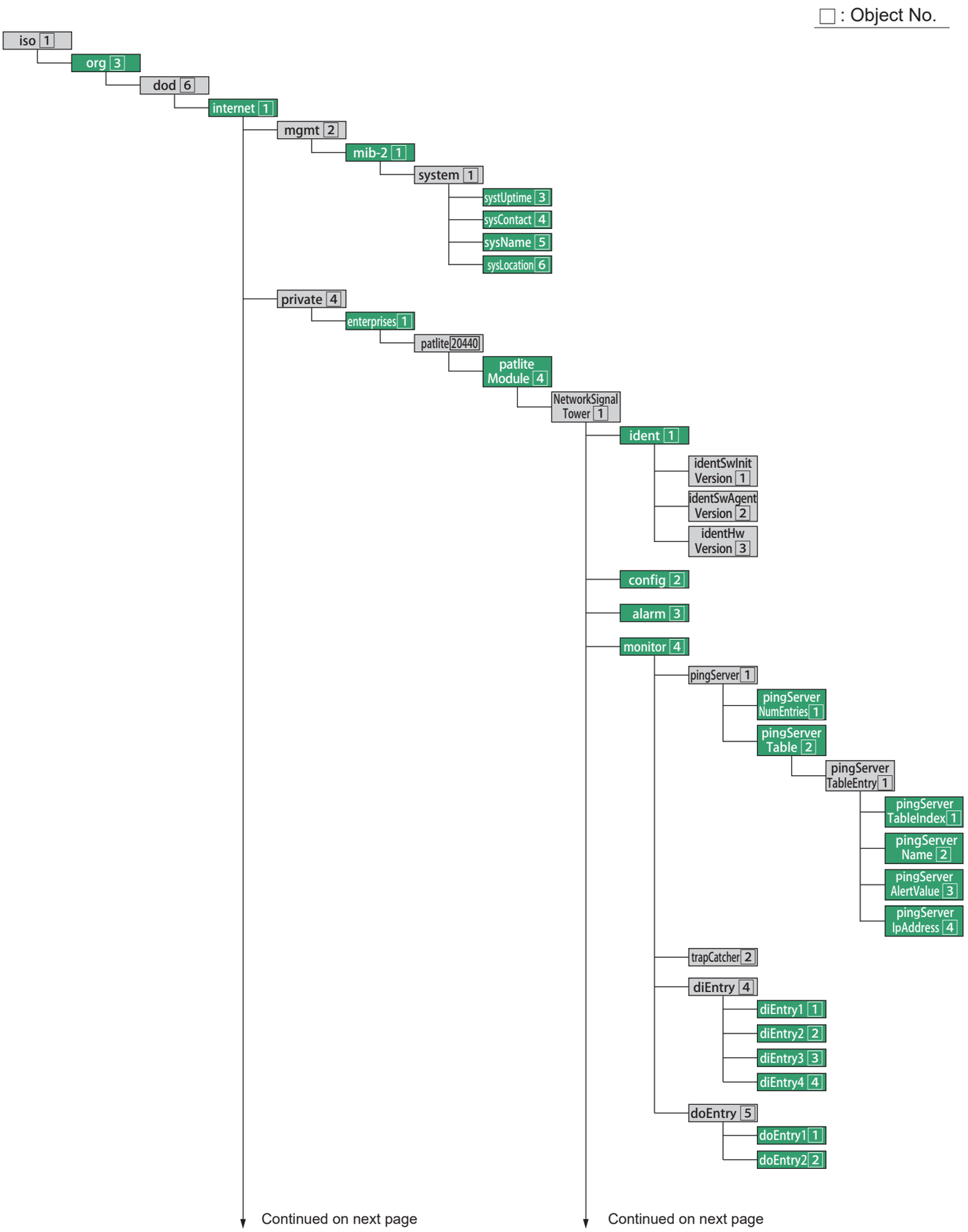
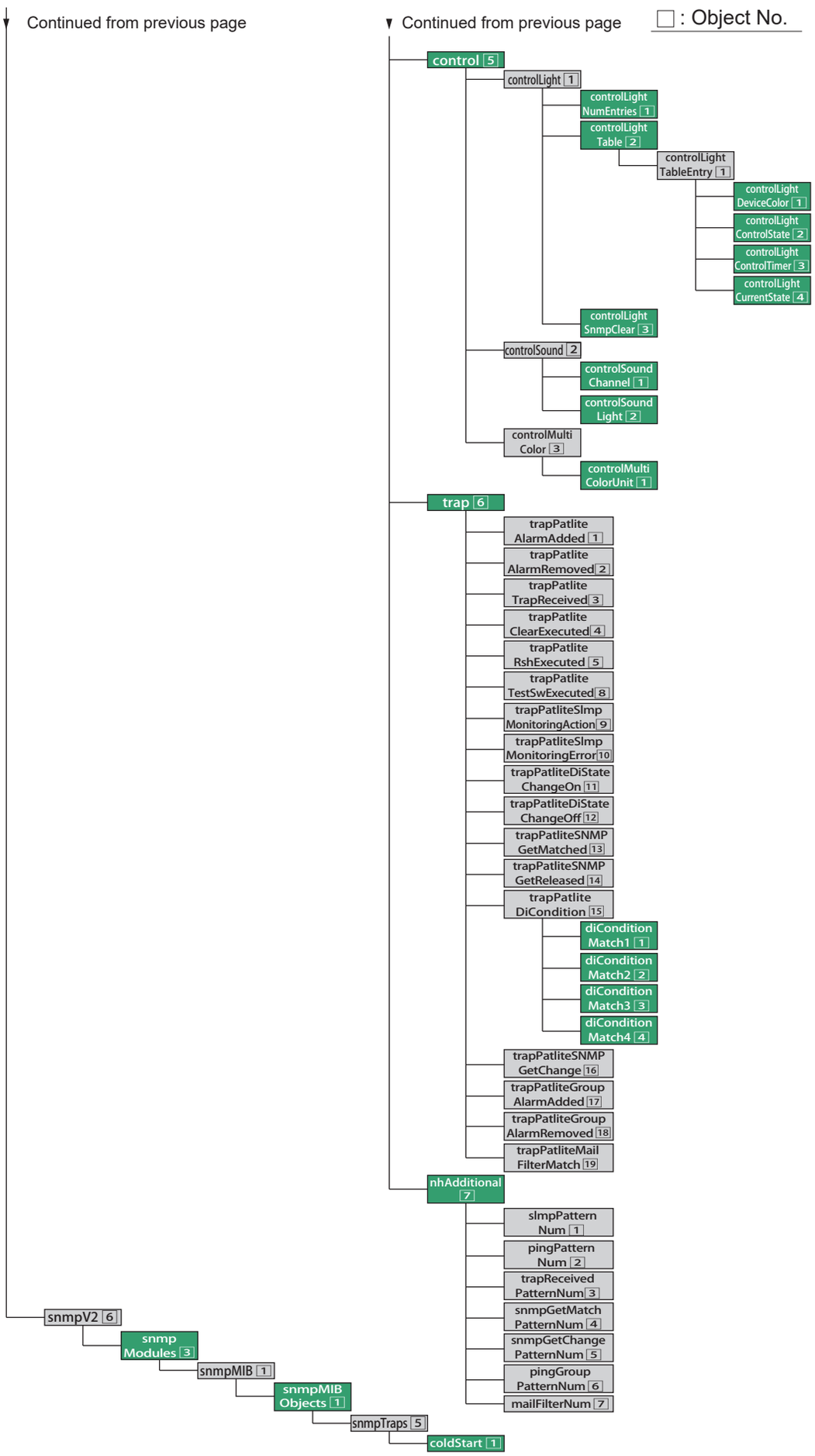
□ : Object No.
control 5
controlLight 1
controlLight NumEntries 1
controlLight Table 2
controlLight TableEntry 1
controlLight DeviceColor 1
controlLight ControlState 2
controlLight ControlTimer 3
controlLight CurrentState 4
controlLight SnmpClear 3
controlMulti Color 3
controlMulti ColorUnit 1
trap 6
trapPatlite AlarmAdded 1
trapPatlite AlarmRemoved 2
trapPatlite TrapReceived 3
trapPatlite ClearExecuted 4
trapPatlite RshExecuted 5
trapPatlite TestSwExecuted 8
trapPatliteSlmp MonitoringAction 9
trapPatliteSlmp MonitoringError 10
trapPatliteSNMP GetMatched 13
trapPatliteSNMP GetReleased 14
trapPatliteSNMP GetChange 16
trapPatliteGroup AlarmAdded 17
trapPatliteGroup AlarmRemoved 18
nhAdditional 7
slmpPattern Num 1
pingPattern Num 2
trapReceived PatternNum 3
snmpGetMatch PatternNum 4
snmpGetChange PatternNum 5
pingGroup PatternNum 6
snmpV2 6
snmp Modules 3
snmpMIB 1
snmpMIB Objects 1
snmpTraps 5
coldStart 1

10.2. NHV Series




Continued from previous page
Continued from previous page
□ : Object No.
control 5
controlLight 1
controlLight NumEntries 1
controlLight Table 2
controlLight TableEntry 1
controlLight DeviceColor 1
controlLight ControlState 2
controlLight ControlTimer 3
controlLight CurrentState 4
controlLight SnmpClear 3
controlSound 2
controlSound Channel 1
controlSound Light 2
controlMulti Color 3
controlMulti ColorUnit 1
trap 6
trapPatlite AlarmAdded 1
trapPatlite AlarmRemoved 2
trapPatlite TrapReceived 3
trapPatlite ClearExecuted 4
trapPatlite RshExecuted 5
trapPatlite TestSwExecuted 8
trapPatliteSlmp MonitoringAction 9
trapPatliteSlmp MonitoringError 10
trapPatliteDiState ChangeOn 11
trapPatliteDiState ChangeOff 12
trapPatliteSNMP GetMatched 13
trapPatliteSNMP GetReleased 14
trapPatlite DiCondition 15
diCondition Match1 1
diCondition Match2 2
diCondition Match3 3
diCondition Match4 4
trapPatliteSNMP GetChange 16
trapPatliteGroup AlarmAdded 17
trapPatliteGroup AlarmRemoved 18
trapPatliteMail FilterMatch 19
nhAdditional 7
slmpPattern Num 1
pingPattern Num 2
trapReceived PatternNum 3
snmpGetMatch PatternNum 4
snmpGetChange PatternNum 5
pingGroup PatternNum 6
mailFilterNum 7
snmpV2 6
snmp Modules 3
snmpMIB 1
snmpMIB Objects 1
snmpTraps 5
coldStart 1

10.3. MIB Description

Item No.	OID	Item Name	Type	MAX-ACCESS	Description
1	1.3.6.1.2.1.1.3	sysUptime	TimeTicks	read-only	Time that has elapsed (in hundredths of a second) since the SNMP management system was restarted
2	1.3.6.1.2.1.1.4	sysContact	DisplayString (SIZE (0..255))	read-only	Main unit settings - Basic Settings Contact Information
3	1.3.6.1.2.1.1.5	sysName	DisplayString (SIZE (0..255))	read-only	Main unit settings - Network Settings Host Name Information
4	1.3.6.1.2.1.1.6	sysLocation	DisplayString (SIZE (0..255))	read-only	Main unit settings - Basic Settings Installation Location Information
5	1.3.6.1.4.1.20440.4.1.1.1	identSwInitVersion	OCTET-STRING(2)	read-only	Operating System Version Information
6	1.3.6.1.4.1.20440.4.1.1.2	identSwAgentVersion	OCTET-STRING(3)	read-only	Application Version Information
7	1.3.6.1.4.1.20440.4.1.1.3	identHwVersion	OCTET-STRING(3)	read-only	Hardware Version Information
8	1.3.6.1.4.1.20440.4.1.4.1.1	pingServerNumEntries	INTEGER{0..24}	read-only	Number of Ping Monitoring
9	1.3.6.1.4.1.20440.4.1.4.1.2.1.1	pingServerTableIndex	INTEGER{0..24}	read-only	Setting Number for Ping Monitoring
10	1.3.6.1.4.1.20440.4.1.4.1.2.1.2	pingServerName	OCTET-STRING(31)	read-only	Unit name for Ping Monitoring
11	1.3.6.1.4.1.20440.4.1.4.1.2.1.3	pingServerAlertValue	INTEGER{normal(1), occurred(2)}	read-only	State of Ping Monitoring: Normal (1) / Ping Monitoring Error (2)
12	1.3.6.1.4.1.20440.4.1.4.1.2.1.4	pingServerIpAddress	OCTET-STRING(63)	read-only	IP Address for Ping Monitoring
13	1.3.6.1.4.1.20440.4.1.4.4.1	diEntry1	INTEGER {off(0),on(1)}	read-only	State of Digital Input 1: OFF (0) / ON (1)
14	1.3.6.1.4.1.20440.4.1.4.4.2	diEntry2	INTEGER {off(0),on(1)}	read-only	State of Digital Input 2: OFF (0) / ON (1)
15	1.3.6.1.4.1.20440.4.1.4.4.3	diEntry3	INTEGER {off(0),on(1)}	read-only	State of Digital Input 3: OFF (0) / ON (1)
16	1.3.6.1.4.1.20440.4.1.4.4.4	diEntry4	INTEGER {off(0),on(1)}	read-only	State of Digital Input 4: OFF (0) / ON (1)
17	1.3.6.1.4.1.20440.4.1.4.5.1	doEntry1	INTEGER {off(0),on(1)}	read-write	State of Digital output1: OFF (0) / ON (1)
18	1.3.6.1.4.1.20440.4.1.4.5.2	doEntry2	INTEGER {off(0),on(1)}	read-write	State of Digital output2: OFF (0) / ON (1)
19	1.3.6.1.4.1.20440.4.1.5.1.1	controlLightNumEntries	INTEGER {6}	read-only	Number of Signal Tower to Control
20	1.3.6.1.4.1.20440.4.1.5.1.2.1.1	controlLightDeviceColor	INTEGER{red(1), amber(2),green(3), blue(4),white(5), buzzer(6)}	read-only	Values of Signal Tower Color Information: Red (1) / Amber (2) / Green (3) / Blue (4) / White (5) / Buzzer (6)
21	1.3.6.1.4.1.20440.4.1.5.1.2.1.2 .(index)*	controlLightControlState	INTEGER{1..7}	read-write	State of Signal Tower Lights to Control: ・Color State: Light off (1) / Light on (2) / Flashing 1 (3) / No change (4) / Flashing 2 (5) / Flashing 3 (6) / Flashing 4 (7) / ・Buzzer: Buzzer stop (1) / Buzzer pattern 1 (2) / Buzzer pattern 2 (3) / No change (4) / Buzzer pattern 3 (5) / Buzzer pattern 4 (6) / Buzzer pattern 5 (7) ・Audio Playback: Stop Playback (1) / Channel 61 Playback (2) / Channel 62 Playback (3) / No change (4) / Channel 63 Playback (5) / Channel 64 Playback (6) / Channel 71 Playback (7)

Item No	OID	Item Name	Type	MAX-ACCESS	Description
22	1.3.6.1.4.1.20440.4.1.5.1.2.1.3 .(index)*	controlLightControlTimer	INTEGER {-1..99}	read-write	Number of seconds until control state is reflected: Disable control reflect (-1) / Time until control is reflected (0 to 99 seconds)
23	1.3.6.1.4.1.20440.4.1.5.1.2.1.4 .(index)*	controlLightCurrentState	INTEGER{1..6}	read-only	Current State of Signal Tower Lights: ・Color State: Light off (1) / Light on (2) / Flashing 1 (3) / Flashing 2 (4) / Flashing 3 (5) / Flashing 4 (6) / ・Buzzer: Buzzer stop (1) / Buzzer pattern 1 (2) / Buzzer pattern 2 (3) / Buzzer pattern 3 (4) / Buzzer pattern 4 (5) / Buzzer pattern 5 (6) ・Audio Playback: Stop Playback (1) / Channel 61 Playback (2) / Channel 62 Playback (3) / Channel 63 Playback (4) / Channel 64 Playback (5) / Channel 71 Playback (6)
24	1.3.6.1.4.1.20440.4.1.5.1.3	controlLightSnmpClear	INTEGER {nop(0),execute(1)}	read-write	Clear Control Status: Do Not Clear (0) / Execute Clear (1)
25	1.3.6.1.4.1.20440.4.1.5.2.1	controlSoundChannel	INTEGER{0..71, 200, 201}	read-write	Control Audio Channel, Current Status: Playback Stopped (0) / Playback Channel Number (1 to 71) / Text-to-speech playback by command (200, 201)
26	1.3.6.1.4.1.20440.4.1.5.2.2	controlSoundLight	OCTET-STRING (SIZE (12))	read-write	Control state of Signal Tower lights with 12-digit numbers: ・Color state: 1st to 5th digits - Light off (0) / Light on (1) / Flashing 1 (2) / Flashing 2 (3) / Flashing 3 (4) / Flashing 4 (5) / No change (9) ・Audio Playback: 6th digit - Stop (0) / Playback (1) ・Number of times to repeat audio: 7th to 9th digits - One-shot playback (000)/ Number of Times to Repeat (001 to 254)/ Endless Playback (255) ・Audio Playback Channel: 10th to 12th digits - Playback Channel (001 to 071)
27	1.3.6.1.4.1.20440.4.1.5.3.1	controlMultiColorUnit	OCTET-STRING (SIZE(2))	read-write	Control state of Multi-color unit with 2-digit numbers: ・Color: 1st digit - Light off (0) / Red (1) / Amber (2) / Green (3) / Blue (4) / White (5) / Purple (6) / Light blue (7) ・Lighting pattern: 2nd digit - Light off (0) / Light on (1) / Flashing 1 (2) / Flashing 2 (3) / Flashing 3 (4) / Flashing 4 (5) *Outputs "00" when the control status is not supported by the multi-color unit.
28	1.3.6.1.4.1.20440.4.1.6.1	trapPatliteAlarmAdded	OBJECT-IDENTIFIER	not-accessible	Indicates an error in the monitoring target that was specified in the Ping Monitoring Settings.
29	1.3.6.1.4.1.20440.4.1.6.2	trapPatliteAlarmRemoved	OBJECT-IDENTIFIER	not-accessible	Indicates the monitoring target specified by the Ping Monitoring Settings has recovered from the problem.
30	1.3.6.1.4.1.20440.4.1.6.3	trapPatliteTrapReceived	OBJECT-IDENTIFIER	not-accessible	Indicates that the TRAP specified in the TRAP Reception Settings has been received.
31	1.3.6.1.4.1.20440.4.1.6.4	trapPatliteClearExecuted	OBJECT-IDENTIFIER	not-accessible	Indicates the Clear button has been pressed.
32	1.3.6.1.4.1.20440.4.1.6.5	trapPatliteRshExecuted	OBJECT-IDENTIFIER	not-accessible	Indicates the RSH/SSH Command has been received.

Item No	OID	Item Name	Type	MAX-ACCESS	Description
33	1.3.6.1.4.1.20440.4.1.6.8	trapPatliteTestSwExecuted	OBJECT-IDENTIFIER	not-accessible	Indicates the Test button has been pressed.
34	1.3.6.1.4.1.20440.4.1.6.9	trapPatliteSlmpMonitoringAction	OBJECT-IDENTIFIER	not-accessible	Indicates that data matching the condition setting specified by the PLC Information Read Command has been acquired.
35	1.3.6.1.4.1.20440.4.1.6.10	trapPatliteSlmpMonitoringError	OBJECT-IDENTIFIER	not-accessible	Indicates that error data is obtained by the PLC Information Read Command.
36	1.3.6.1.4.1.20440.4.1.6.11	trapPatliteDiStateChangeOn	OBJECT-IDENTIFIER	not-accessible	Indicates digital input has been turned on.
37	1.3.6.1.4.1.20440.4.1.6.12	trapPatliteDiStateChangeOff	OBJECT-IDENTIFIER	not-accessible	Indicates digital input has been turned off.
38	1.3.6.1.4.1.20440.4.1.6.13	trapPatliteSNMPGetMatched	OBJECT-IDENTIFIER	not-accessible	Indicates the SNMP monitoring condition has been met.
39	1.3.6.1.4.1.20440.4.1.6.14	trapPatliteSNMPGetReleased	OBJECT-IDENTIFIER	not-accessible	Indicates the SNMP monitoring condition has been released.
40	1.3.6.1.4.1.20440.4.1.6.15.1	diConditionMatch1	OBJECT-IDENTIFIER	not-accessible	Indicates the condition specified in Digital Input Condition Setting 1 has been met.
41	1.3.6.1.4.1.20440.4.1.6.15.2	diConditionMatch2	OBJECT-IDENTIFIER	not-accessible	Indicates the condition specified in Digital Input Condition Setting 2 has been met.
42	1.3.6.1.4.1.20440.4.1.6.15.3	diConditionMatch3	OBJECT-IDENTIFIER	not-accessible	Indicates the condition specified in Digital Input Condition Setting 3 has been met.
43	1.3.6.1.4.1.20440.4.1.6.15.4	diConditionMatch4	OBJECT-IDENTIFIER	not-accessible	Indicates the condition specified in Digital Input Condition Setting 4 has been met.
44	1.3.6.1.4.1.20440.4.1.6.16	trapPatliteSNMPGetChange	OBJECT-IDENTIFIER	not-accessible	Indicates SNMP monitoring has detected a change.
45	1.3.6.1.4.1.20440.4.1.6.17	trapPatliteGroupAlarmAdded	OBJECT-IDENTIFIER	not-accessible	Indicates an error in the monitoring target group that was specified in the Ping Monitoring Settings - Group setting.
46	1.3.6.1.4.1.20440.4.1.6.18	trapPatliteGroupAlarmRemoved	OBJECT-IDENTIFIER	not-accessible	Indicates the monitoring target group specified by the Ping Monitoring Settings - Group setting has recovered from the problem.
47	1.3.6.1.4.1.20440.4.1.6.19	rapPatliteMailFilterMatch	OBJECT-IDENTIFIER	not-accessible	Indicates email has been detected.
48	1.3.6.1.4.1.20440.4.1.7.1	slmpPatternNum	INTEGER{1..16}	not-accessible	Indicates the condition setting number of the PLC Information Read Command. (1 to 16)
49	1.3.6.1.4.1.20440.4.1.7.2	pingPatternNum	INTEGER{1..24}	not-accessible	Indicates the ping monitoring target number. (1 to 24)
50	1.3.6.1.4.1.20440.4.1.7.3	trapReceivedPatternNum	INTEGER{1..16}	not-accessible	Indicates the TRAP Reception Setting number of the TRAP that was received. (1 to 16)
51	1.3.6.1.4.1.20440.4.1.7.4	snmpGetMatchPatternNum	INTEGER{1..20}	not-accessible	Indicates the SNMP monitoring (match detection) target's monitoring setting number. (1 to 20)
52	1.3.6.1.4.1.20440.4.1.7.5	snmpGetChangePatternNum	INTEGER{1..5}	not-accessible	Indicates the SNMP monitoring (change detection) target's monitoring setting number. (1 to 5)
53	1.3.6.1.4.1.20440.4.1.7.6	pingGroupPatternNum	INTEGER{1..3}	not-accessible	Indicates the ping group monitoring target number. (1 to 3)
54	1.3.6.1.4.1.20440.4.1.7.7	mailFilterNum	INTEGER{1..20}	not-accessible	Indicates the email detection number.
55	1.3.6.1.6.3.1.1.5.1	coldStart	OBJECT-IDENTIFIER	not-accessible	Starts up this product.

* The value to operate the Signal Tower or buzzer is entered into the (index).
  Red (1) / Yellow (2) / Green (3) / Blue (4) / White (5) / Buzzer (6)

11. Specifications

11.1. NHB Series

Model			5 tier	4 tier	3 tier	2 tier	1 tier	0 tier
			NHB ☐ -5 ☐	NHB ☐ -4 ☐	NHB ☐ -3 ☐	NHB ☐ -2 ☐	NHB ☐ -1 ☐	NHB ☐ -0 ☐
Rated Voltage	DC Power Jack		24 VDC					
	AC Adapter accessory*1		Input: 100 to 240 VAC (50Hz/60Hz), Output: 24 VDC					
Operating Voltage Range	DC Power Jack		21.6 to 26.4 VDC					
	AC Adapter accessory*1		90 to 264 VAC					
Rated Current Consumption		Main Unit*2	Standby: 110mA Maximum: 155mA (24VDC input)					
		Signal Tower	40mA (per Unit)					
Rated Power Consumption		Main Unit*2	Standby: 3.2W Maximum: 4.4W (with AC Adaptor, 100VAC input)					
		Signal Tower	1.0W (per Unit, with AC Adaptor, 100VAC input)					
Ambient Operating Temperature			0°C to 40°C (No Dew or Condensation)					
Ambient Operating Humidity			20% RH to 80% RH (No Dew or Condensation)					
Storage Ambient Temperature			-10°C - 60°C (No Dew or Condensation)					
Storage Ambient Humidity			20% RH to 80% RH (No Dew or Condensation)					
Mounting Location			Indoor Only					
Mounting Direction			Upright					
Protection Rating			IP20					
Insulation Resistance			More than 10Mohm at 500VDC between live part and non-current carrying metallic part					
Withstand Voltage			1500VAC applied for 1min (10mA or less) between live part and non-current carrying metallic part without breaking insulration					
Sound Pressure Level (Buzzer)			80 dB or more (at 25 °C)					
		Environmental Conditions	Front direction from the center, at 1m, Maximum volume setting					
Mass (Tolerance: ± 10%)		NHB6	645g + (60g) x Signal Tower Tiers (AC Adaptor not included)					
		NHB4	635g + (35g) x Signal Tower Tiers (AC Adaptor not included)					
Network Communication Format			Ethernet (IEEE 802.3 compliant) 10BASE-T / 100BASE-TX / 1000BASE-T (Auto MDI/MDI-X compatible)					
	IP Network		IPv4/IPv6 dual stack					
Interface		USB	USB2.0/1.1 Type-A 1ch					

Accessories		AC Adapter*1, Adhesive Sheet	
Compatible Unit (Optional)	NHB6	LED Unit	LR6-E-RZ, RY, RG, RB, C LR6-E-R, Y, G, B, MZ
		Wireless Data Acquisition System Transmitter	WDT-6LR-Z2
	NHB4	LED Unit	LR4-E-RZ, RY, RG, RB, C LR4-E-R, Y, G, B
		Wireless Data Acquisition System Transmitter	WDT-4LR-Z2
Optional Parts		Wall Mounting Bracket	NH-001
		Partition Mounting Bracket	NH-002
		AC Adapter	ADP-001
Remarks		*1 Except N model *2 Excluding USB current consumption	

11.2. NHV Series

Model		5 tier	4 tier	3 tier	2 tier	1 tier	0 tier
		NHV □ -5 □□□	NHV □ -4 □□□	NHV □ -3 □□□	NHV □ -2 □□□	NHV □ -1 □□□	NHV □ -0 □□□
Rated Voltage	DC Power Jack	24 VDC					
	PoE Power Supply*1	48VDC Conforms to IEEE802.3at (PoE+)*2					
	AC Adapter Accessory*3	Input: 100 to 240 VAC (50Hz/60Hz), Output: 24 VDC					
Voltage Operating Range	DC Power Jack	21.6 to 26.4 VDC					
	PoE Power Supply*1	42.5 to 57 VDC					
	AC Adapter Accessory*3	90 to 264 VAC					
Rating Current Consumption	Main Unit*4	Standby: 120mA Maximum: 210mA (24VDC input)					
		Standby: 115mA Maximum: 175mA (PoE 48VDC input)					
	Signal Tower	40mA (per Unit, 24VDC input) , 25mA (per Unit, PoE 48VDC input)					
Rating Power Consumption	Main Unit*4	Standby: 3.5W Maximum: 6W (AC Adaptor, 100VAC input)					
	Signal Tower	1.0W (per Unit, AC Adaptor, 100VAC input)					
Ambient Operating Temperature		0°C to 40°C (No Dew or Condensation)					
Ambient Operating Humidity		20% RH to 80% RH (No Dew or Condensation)					
Storage Ambient Temperature		-10 °C to 60 °C (No Dew or Condensation)					
Storage Ambient Humidity		20% RH to 80% RH (No Dew or Condensation)					
Mounting Location		Indoor Only					
Mounting Direction		Upright					
Protection Rating		IP20					
Insulation Resistance		More than 10Mohm at 500VDC between live part and non-current carrying metallic part					
Withstand Voltage		1500VAC applied for 1min (10mA or less) between live part and non-current carrying metallic part without breaking insulration					
Sound Pressure Level		88dB or more					
	Environmental Conditions	Front direction from the center, at 1m, 1.8kHz sine wave played back at -6dB MP3 data of the content and use of the environment, the sound pressure level will change.					
Audio Line Output		600 Ω 0dBV (Unbalanced, Monaural Mini-Jack)					

Mass (Tolerance: ± 10%)	NHV6	760g + (60g) x Signal Tower Tiers (AC Adaptor not included)	
	NHV4	750g + (35g) x Signal Tower Tiers (AC Adaptor not included)	
	NHV6-D	805g + (60g) x Signal Tower Tiers (AC Adaptor not included)	
	NHV4-D	795g + (35g) x Signal Tower Tiers (AC Adaptor not included)	
	NHV6-DP	850g + (60g) x Signal Tower Tiers	
	NHV4-DP	840g + (35g) x Signal Tower Tiers	
External Contact Output (D model only)		Non-Voltage Contact Relay	
	Number of Contacts	2	
	Contact Rating	(30VDC@3A) inrush current 5A or less (5VDC@1mA, Minimum, Reference)	
	Supported Wire Diameter	Solid Wire / Stranded Wire: φ 0.41 - 0.81mm (AWG26 - 20)	
	Wiring Method	Screwless Terminal Block	
External Contact Input (D model only)		Non-voltage contact input NPN Transistor	
	Number of Contacts	4	
	Contact Rating	"ON" output current @ 6mA or less per channel Terminal OFF condition Voltage: 24VDC	
	Supported Wire Diameter	Solid Wire / Stranded Wire: φ 0.41 - 0.81mm (AWG26 - 20)	
	Wiring Method	Screwless Terminal Block	
Network Communication Format		Ethernet (IEEE 802.3 compliant) 10BASE-T / 100BASE-TX / 1000BASE-T (Auto MDI/MDI-X compatible)	
	IP Network	IPv4/IPv6 dual stack	
Interface	USB	USB2.0/1.1 Type-A 1ch	
Accessories		AC Adapter*3, Adhesive Sheet	
Compatible Unit (Optional)	NHV6	LED Unit	LR6-E-RZ, RY, RG, RB, C LR6-E-R, Y, G, B, MZ
		Wireless Data Acquisition System Transmitter	WDT-6LR-Z2
	NHV4	LED Unit	LR4-E-RZ, RY, RG, RB, C LR4-E-R, Y, G, B
		Wireless Data Acquisition System Transmitter	WDT-4LR-Z2
Optional Parts		Wall Mounting Bracket	NH-001
		Partition Mounting Bracket	NH-002
		AC Adapter	ADP-001

Remarks	*1 [P] model only *2 PoE+ power supply HUB compliant with IEEE802.3at is required. *3 Except for [N] and [P] models *4 Excluding USB current consumption

12. Troubleshooting

12.1. Troubleshooting

12.1.1. Common to NHB and NHV Series NHB Series NHV Series

Issue	Check content	Reference
Power does not turn on	Is the power supply applied at the correct voltage? Check that the power supply is applied at the rated voltage.	"6.6. Power Supply Method" (☞ page 103)
	Is the AC adapter connected correctly? Connect the AC adapter properly.	
The adhesive strength of the adhesive sheet has been weakened	Is there dirt or oil on the adhesive sheet? Use a soft cloth, dampened with water and wrung tightly, to wash off the dirt, then dry thoroughly before use.	–
The status LED is flashing Red	Turn off the power on this product then turn the power back on. If this does not solve the problem, please contact the technical support center listed on the website as there may be some sort of failure.	–
Signal Tower lights are bright (blinding)	From [Basic Settings] - [Dimming], adjust the brightness of the Signal Tower.	"7.14. Setting Up LED Unit Brightness Adjustment" (☞ page 126)
Cannot automatically get IP address, does not start in DHCP mode	At startup, if access to the DHCP server is unavailable, this product uses its default value 192.168.10.1 in the network settings. Check if the environment supports connecting to the DHCP server.	–
	Is allocation of IP addresses set to [Manual Settings]? Change the setup method to [Automatic Settings].	"7.1. Enabling DHCP Function" (☞ page 106) "7.5. Setting Up Product Network Settings" (☞ page 114)
Unable to control using RSH/SSH Commands	• Are the [RSH/SSH Command Reception Settings] correct? • Confirm the [RSH Command Reception Function] or [SSH Command Reception Function] is set to [Enabled]. • If key authentication is selected for SSH, confirm the [Source IP address] and [Login name] are set correctly.	"8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)
	When you send commands without an account, confirm the correct account is registered.	
	Check the settings of the source equipment and of communication equipment on the transmission route to confirm communication is not blocked by a firewall, filtering, port blocking function, and so on.	–

Issue	Check content	Reference
The Web Setup Screen does not display or does not display correctly	Is the LAN cable connected? Check that the cable is connected properly.	"6.5. LAN Cable Wiring Method" (☞ page 102)
	Is the IP address for the product correct? Check the IP address of the product.	"7.4. Displaying the Web Setup Screen" (☞ page 111)
	Is the IP address for the product duplicated on other equipment? Check the IP address of the product.	
	Are you accessing the correct the IP address? Check the IP address of the product.	
	Is the IP address on the personal computer correct? Check the personal computer settings.	"7.2. Setting Up Network Settings on the PC" (☞ page 107)
	Check the browser you are using. Use either Google Chrome or Microsoft Edge.	–
	In the browser security settings, is JavaScript disabled? Enable running JavaScript in the browser.	–
	Check operation after deleting the browser history.	–
	You may be viewing browser cache data. Try one of the following method. • After logging out of the WEB Setup Screen, login again to check the displayed contents. • Clear the browser cache, refresh teh WEB Setup Screen, and check the displayed contents. *The method for cleaning the browser cache varies depending on the browser you are using. Please follow your browser's cleaning method.	–
The event log is not recording	The event log is erased when initialization is run from the Web Setup Screen and when using DIP switches to reset the product to its factory default.	–
Socket communication is not possible	Is the socket communication setting correct? Check if the [Socket Communication Function] is enabled, and check the [Port number] setting.	"8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)
	Is the communication command protocol correct? Check the communication command protocol you are using.	"5.3.11. PNS Command Function (product compatibility commands)" (☞ page 43) "5.3.12. PHN Command Function (product compatibility commands)" (☞ page 52)
	Are you sending to the product address? Check the IP address of the product.	"7.2. Setting Up Network Settings on the PC" (☞ page 107)
	Check the settings of the source equipment and of communication equipment on the transmission route to confirm communication is not blocked by a firewall, filtering, port blocking function, and so on.	–
	When [Sent-from address settings] is enabled, is the specified IP address registered correctly? Register IP addresses of equipment that will transmit commands.	"8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)

Issue	Check content	Reference
Even though I press the Clear button, Signal Tower lights do not turn off	Is the normal operation setting set with any option other than [Light off]? When the lighting color is specified, pressing the Clear button lights up the LED unit in the specified color.	"7.15. Setting Up Normal Status" (☞ page 127)
	In the [Clear Operation Settings], confirm [Clear Signal Tower] is not set to [Disabled].	"8.3.3. Operating the Product with the Clear Button" (☞ page 194)
Email notification is not executed	On the mail server, check the authentication method and its settings.	–
	If you use a host name, confirm the [DNS server address] is set.	"7.5. Setting Up Product Network Settings" (☞ page 114)
	• Are the operation settings of the function for which you want to send an email notification correct? • Confirm the [Send email] is set to [Enabled]. • Confirm the email destination is selected.	–
Unable to control using HTTP Commands	• Confirm the [HTTP Command Control Function] is set to [Enabled]. • Are you transmitting using the protocol (HTTP/HTTPS) specified in the security settings?	"8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)
Unable to SET / GET using SNMP Commands	• Are the [SNMP Command-reception Settings] correct? • Check if [SNMP Command-reception Function] is set to [Enabled]. • Check if an incorrect SNMP version is specified. • Check if the various settings for the SNMP version are correctly set.	"8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)
SNMP Device Monitoring does not run	• Is the SNMP Device Monitoring Settings correct? • Check if [SNMP Device Monitoring Function] is set to [Enabled]. • Check if an incorrect SNMP version is specified. • Check if the various settings for the SNMP version are correctly set.	"8.3.1.1. Setting Up the Command Main Unit Operation Settings" (☞ page 172)
	Confirm the target monitored address and Judgment conditions are correctly specified.	
	Confirm the monitoring cycle of condition settings that are not executed is not set to 0 seconds.	
Even though power is turned, the status LED does not turn Blue	Confirm the DIP switches are set to normal startup mode (all OFF).	"8.5.1.2. Using Status LED to Check the Status of this Product" (☞ page 247)
Volume buttons do not adjust the volume	In the Web Setup Screen, if [Volume Button] operation is set to [Disabled], the volume does not change even when using volume buttons.	"8.5.4.2. Adjusting the Volume with + / - Volume Control Buttons" (☞ page 254)
Turning on the power does not turn on Signal Tower	Confirm the LED unit is installed properly.	"6.1. Attaching and Detaching Additional Units" (☞ page 90)

Issue	Check content	Reference
LED unit does not work properly with the Cloud function	Check that the cloud connection settings are set correctly.	"8.2. Using the Cloud" (☞ page 144)
	Check if the [Field Name] and [Value] are set correctly.	
	For AWS connections, confirm the client ID is not duplicated with other equipment.	
Cannot connect to [Azure IoT Central]	In the Cloud Connection Settings, verify the [Scope ID], [Device ID], and [SAS Token] are set correctly.	
	Confirm the clock on this product is set correctly.	
Cannot connect to [Azure IoT Hub]	In the Cloud Connection Settings, verify values are not defined for the [Scope ID], [Device ID], and [SAS Token]. All fields must be blank.	
	Check if the connection string for the Cloud Connection Settings is set correctly.	
	Confirm the clock on this product is set correctly.	
Cannot connect to [AWS IoT Core]	Confirm the connection and client ID are set up correctly in the Amazon Web Services Setup Screen.	
	Confirm the Amazon Web Services Setup Screen's Root CA certificate, client certificate, and client private key are uploaded properly.	
	Confirm the certificate and policy are attached to the thing created in the AWS IoT console.	
	Confirm the clock on this product is set correctly.	
Certificate cannot be uploaded	Certificate file name may be too long. Shorten the file name and try uploading again.	
The match condition of the PLC Information Read Command does not work.	Check if the PLC settings such as the address and port to be connected are correct.	"5.3.25. PLC Linkage Function" (☞ page 83)
	If the protocol is set to TCP, provide one port for each setting number.	
	When setting the designated transmission port, please set a different port number for each setting number.	

12.1.2. NHB Series

NHB Series

Issue	Check content	Reference
There is no buzzer sound	Is the [Buzzer] set to [0(OFF)]? Disable [OFF] on the device, or adjust the volume using the speaker volume or the +/- volume buttons on the product.	"7.9. Setting Up the Buzzer" (☞ page 121) "8.5.4. Changing the Sound Volume" (☞ page 253)
The buzzer volume is low	Is the [Buzzer] volume low? Adjust the volume using the speaker volume or the +/- volume buttons on the product.	"7.9. Setting Up the Buzzer" (☞ page 121) "8.5.4. Changing the Sound Volume" (☞ page 253)

12.1.3. NHV Series NHV Series

Issue	Check content	Reference
Audio does not play	Is the [Speaker Volume] set to [Mute] or [Minimum]? Disable [Mute] on the device, or adjust the volume using the speaker volume or the +/- volume buttons on the product.	"7.10. Setting Up the Speaker Volume" on page 122 "8.5.4. Changing the Sound Volume" (☞ page 253)
	Confirm the audio is registered to the associated channel in the channel list.	–
The audio volume is low	Is the [Speaker Volume] low? Adjust the volume using the speaker volume or the +/- volume buttons on the product.	"7.10. Setting Up the Speaker Volume" on page 122 "8.5.4. Changing the Sound Volume" (☞ page 253)
Audio playback does not output to Line Out	Check if the MP3 file sound is monaural. When the file is stereo, the R channel of the MP3 file registered to the channel is output.	–
	Confirm Line Out in the channel list is set to [Enabled].	"7.16. Setting Up Voice Registration" (☞ page 128)
Line Out outputs sound on one side only	Line Out is a mono channel, so if you connect a stereo mini-plug, it plays on the L channel of line out.	–
Even though an event occurs, does not change from buzzer pattern 1 to 5 (in Memory playback mode)	Playback mode for the following channels is fixed to Repeat playback (endless): Channels 61 to 64 (buzzer patterns 1 to 4) and Channel 71 (buzzer pattern 5). To change to another channel, use a command or switch operation to stop the audio playback, and then specify a channel to play or skip a track.	–
Failed to upload MP3 file	The MP3 file was created in an unsupported format. The following formats are supported by this product. MPEG1 AudioLayer3 CBR 32, 64, 128 kbps	–
Speech synthesis fails.	Are there too many line breaks or symbols typed in? Reduce the number of line breaks and symbols. Reduce the number of characters to be registered.	–
Cannot give notification sound and register voice.	Are you registering MP3 files with long playback times? Shorten the playback time and re-register the file.	–
	Is the registration speed slowing down when there are a large number of text-to-speech characters? Reduce the number of characters or speed up the speed.	–
Cannot read Chinese	Check if the firmware version is 1.13 or higher. Check whether "Chinese" is displayed in the language setting of "Voice Registration". Products produced before the addition of Chinese speech synthesis will not display "Chinese".	"9.7.1. Voice Registration" (☞ page 356)
Chinese cannot be selected in voice registration		

12.1.4. NHV-D Series

NHV Series (D model)

Issue	Check content	Reference
Digital output and various transmissions do not run under the condition set in the digital input condition.	Check if there is a conflict in conditions. [Digital Input Condition Settings] are processed in order, starting from setting 1, and operations for settings processed later have priority.	–
	Set as the condition, is digital input set to [Disabled]? Set the digital input to [Enabled].	"8.4.4. Contact Input Status Monitoring" (☞ page 222)
Even though the Clear button is pressed, the relay contact output does not turn off	When the [Relay Contact Output] setting is set to [Busy output], while the channel is playing the relay contact output remains ON. When channel playback stops, the relay contact output turns OFF. You cannot turn it off using any variety of commands.	–
Digital output function does not operate as controlled by the relay contact	In the contact output setting, check if the contact output is set to [Enabled], or if the target port is set to the digital output.	"8.1.4. Setting Up Contact Output Settings" (☞ page 143)
	Check if there is a state change in a short period of time (within 100 ms). The output terminal block reflects the digital output state in 100 ms cycles. The state of digital output is updated as required in the order of received control elements (priority given to the last received control element). As a result, if the digital output state changes within 100 ms, only a part of the state change is reflected in the output terminal block. * The various command and email transmissions are reflected in the control content order.	–
	If a large amount of processing occurs in other functions, or if processing takes a long time, output terminal block operations may be delayed.	–
	Check if Digital Output Setting is set to [Auto OFF].	"8.1.4. Setting Up Contact Output Settings" (☞ page 143)
	There may be a problem with the contact. Contact the distributor from whom you purchased this product, or the technical support center listed on the website. Check that the rated current and inrush current of equipment connected to the terminal block do not exceed the ratings of the output terminal block.	–
Digital input does not work	Is the contact input setting correct? Check if [Contact Input] is set to [Enabled].	"8.4.4. Contact Input Status Monitoring" (☞ page 222)
	Check the input terminal block for cut or disconnected wires, short circuit, and so on.	–
	Check if the input signal is being transmitted properly to the input terminal block. The input signal must have a duration of 110 ms or longer.	–
Device-to-cloud Message does not notify there are changes to digital input.	Check the signal definition in the digital input settings. Notification is sent for changes to the defined content.	"8.2. Using the Cloud" (☞ page 144)
MQTT Publish function does not notify changes in digital input	Check the signal definition in the digital input settings. Notification is sent for changes to the defined content.	

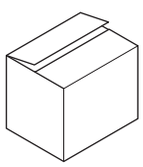
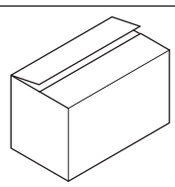
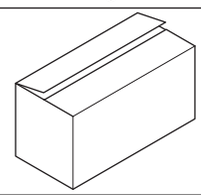
12.1.5. NHV-P Series NHV Series (P model)

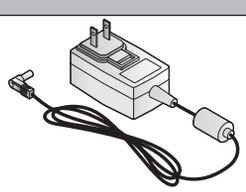
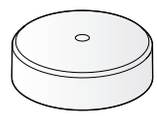
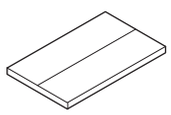
Issue	Check content	Reference
Power does not turn on	Is the product connected to the PoE power supply? Connect the product to the PoE power supply.	–

13. Replacement and Optional Parts

13.1. Replacement Parts

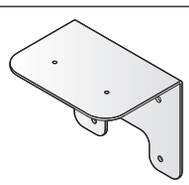
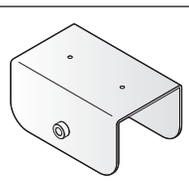
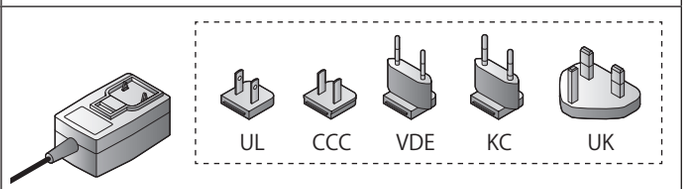
Various parts are available to the customer for exchange or replacement.

Individual Box		
Tier 0, 1 Signal Tower	Tier 2, 3 Signal Tower	Tier 4, 5 Signal Tower
		

AC Adapter	Head Cover	Head Cover	Adhesive Sheet
	ϕ40, off-White	ϕ60, off-White	
			

13.2. Optional Parts

The following options are available for this product.

Wall Mounting Bracket	Partition Mounting Bracket	Global AC adapter
NH-001	NH-002	ADP-001
		

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>
> <signature of Ty Coon>, 1 April 1989
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14.2.2.Version 3.0

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14.4. Python Software Foundation License

A. HISTORY OF THE SOFTWARE

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see http://www.cwi.nl) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see http://www.cnri.reston.va.us) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see https://www.python.org/psf/) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

All Python releases are Open Source (see http://www.opensource.org for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

Release	Derived from	Year	Owner	GPL-compatible? (1)
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1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
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2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
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2.2 and above	2.1.1	2001-now	PSF	yes

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Version 2, June 1991

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