

## NH Series User's Manual



This book corresponds to the current firmware version 1.31.

# Introduction

Thank you for purchasing the PATLITE "NH Series" (henceforth, written as "this product") Network Monitoring Signal Tower. Please read this NH Series instruction manual (henceforth, written as "this book") carefully before installation. In addition, please store this manual for future reference when performing maintenance, repairs or inspections. When performing maintenance and repairs, etc., please be sure to reread this book. After reading this book, if there are any questions regarding this product, please contact your PATLITE Sales Representative from the contact list indicated at the end of this book.

## Notice

- ▶ The copyrights of this book is owned by the PATLITE Company, Inc. (henceforth referred to as "our company"). Any reproduction, duplication, alteration, or extracting portions of this book, etc., without written permission from our company is forbidden.
- ▶ Specifications, the design, and other contents written in this book may be changed for improvements without prior notice and may result in differences from the actual product purchased.
- ▶ This product meets severe quality control and inspection requirements prior to shipment, but if some failure or defect is found, please contact the place of purchase, or your PATLITE Sales Representative (indicated on the last page) to solve the issue.
- ▶ This product (software is included) is for the use of general office work, home and for personal use, it has been developed, designed and manufactured for general applications, such as for industry, and it is not designed for applications which demands high safety requirements, such as medical application equipment or systems used in connection directly, or indirectly, with human life.  
Please understand prior to use that no responsibility is taken at our company for damages or other disadvantages, due to customers using this product beyond the scope of its general application, or from any claims from third parties.
  - When using this product for applications in which equipment of higher reliability than the general application demands, such as a computer system, etc., please use suitable safety design countermeasures against system failure, etc.
- ▶ Please understand that our company does not take any responsibility for damage and other disadvantages this product (software is included) has caused due to the customer using this product, or any claims from third parties.
- ▶ Due to the characteristics of the LED's, variations in brightness and color of the indicating lamps may occur.
- ▶ This product (Body only) conforms to EN standards and shows the CE Markings.
- ▶ The AC Adaptor included does not conform to the EN standards, therefore does not show CE Markings.
- ▶ To comply with UL certification for the main unit, An AC adaptor with a UL listing is required.

## FCC Compliance

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The antenna used for this transmitter is built-in, therefore, the transmitter must provide separation of at least 20cm from all persons.

## For safe application, observe the following:

The following symbols classifies the following into different categories and explains the level of harm inflicted if the cautions are disregarded.

	Warning	Indicates an imminently dangerous condition: Failure to follow the instructions may lead to death or serious injury.
	Caution	Indicates a potentially dangerous condition: Failure to follow the instructions may lead to slight injury or property damage.
	Prohibited	This symbol indicates "Prohibited", which should not be carried out by all means.
	Enforced	This symbol indicates "Enforced", which should be observed and carried out by all means.
	Please	Indicates something to observe before using this product.
	Note	Notice regarding supplementary information or convenient explanation is indicated.

## Cautionary Notes

Prior to installation, read all notes and use this product correctly.

 Warning	
 Prohibited	<ul style="list-style-type: none"> <li>Do not disassemble or alter the product. Failure to comply may result in fire, electric shock, or failure.</li> <li>The power supply rating is AC 100-240V. Do not allow the voltage to exceed the specified voltage tolerance. Failure to comply will result in internal circuitry damage. Moreover, there is fear of fire.</li> </ul>
 Enforced	<ul style="list-style-type: none"> <li>When plugging the power cord into the power receptacle, be sure to check there is no dust accumulation on the plug, and insert into the power receptacle completely. By allowing dust to adhere to the power supply terminal, it can be the result of fire or failure from short-circuiting.</li> <li>Since dust can accumulate after a long time, and with moisture, can cause the dust to become conductive, in order to prevent the phenomenon of ignition from dust accumulation, it is best to periodically wipe the transformer and socket terminal with a damp cloth. By allowing dust to adhere to the power supply terminal, it can be the result of fire or failure from short-circuiting.</li> <li>When replacing LED units, etc., please be sure to turn off the power first to prevent electric shock.</li> <li>When an unusual odor, sound or smoke comes out of the product, immediately disconnect the power, then contact your nearest PATLITE Sales Representative.</li> </ul>

 Caution	
 Enforced	<ul style="list-style-type: none"> <li>When moving this product, please do not grasp by the Signal Tower portion of this product. Be sure to carry it from the base of the unit, to prevent any cause of failure or trouble.</li> <li>Please place this product on a level surface, such as a desk etc.</li> <li>When installing it in high places, such as on top of a shelf, please use the rubber feet provided as an accessory, along with adhesive tape, and a support base for the bottom of the body to prevent it from falling.</li> </ul>
 Prohibited	<ul style="list-style-type: none"> <li>Do not expose it to high temperatures, such as near a fire and do not use it in humid places. Moreover, do not use this machine in locations where corrosive or combustible gas is present.</li> <li>If foreign substances, such as water, medicine; or metals, such as copper, low carbon steel wire, fall into this product, please do not use it. Possible cause of failure may occur.</li> <li>Do not disassemble or attempt to repair this product by any means. Failure to comply will result in equipment damage or fire.</li> <li>Do not bend the power supply cables or signal wires recklessly. Disconnection will result in this machine breaking down.</li> <li>Do not install or run wiring near, or where equipment (such as solenoids, etc.) generate strong electric or magnetic fields, or near any power lines. Failure to comply may result in malfunction due to inductive noise.</li> <li>Do not place any part of this product (Body, AC Adaptor, Rubber Feet) where infants can reach it. If it is swallowed accidentally, it could be detrimental. If it is suspected of being swallowed, please consult an emergency medical center immediately.</li> </ul>

## Regarding the Trademarks or Registered Trademarks

- Microsoft, Windows, and Internet Explorer are registered trademark of the Microsoft Corporation of America, Japan and other countries.
- Firefox is the trademark or registered trademark of the Mozilla Foundation of America and other countries.
- The company names and brand names written in this book are trademarks or registered trademarks of each company.

## Handling Cautions

This product is for indoor use only. Do not use it outdoors.

When installing this product, please avoid installation in the following places:

- Where its exposed to direct sunlight
- Where high temperatures, such as near fire, or in a humid place
- Where drastic temperature and humidity changes are present
- Where its exposed to an environment with poor ventilation
- Where its exposed to vibrations exceeding the specifications
- Where its exposed to corrosive gas
- Where its exposed to a salty air environment
- Where its exposed to dust, iron powder, etc.
- Where its exposed to high concentrations of chemicals or oil mist
- Where its exposed to rain, or other types of wet environments

## Maintenance and Inspection

### ► Cleaning

- When cleaning, be sure to disconnect the power before doing so.
- The cleaning of this product should be with a soft cloth and a neutral detergent (such as dish soap), diluted with water and should be wiped lightly. Since it is easy to crack the surface of the product when wiping with too much strength, please be careful.
- Do not wipe this product with volatile chemicals, or chemically treated dustcloth containing benzene, thinner etc.
- Please do not wipe with a cloth containing too much moisture. If moisture gets inside the product, it can cause short circuiting, electric shock, or fire.
- Periodically remove dust from the electric socket to prevent a fire hazard. By allowing dust to adhere to the power supply terminal, it can be the result of fire or failure from short-circuiting.

### ► Inspection

- Please check the following contents when inspecting this product.

Inspection Checklist		Inspection Contents
Supplied Power Source	Power Supply Voltage Tolerance	Tolerable Voltage Range should be from AC 100 to 240V
Surrounding Environment	Ambient Temperature	Operating Temperature Range should be from 0 to 40°C
	Ambient Humidity	Operating Humidity Range should be 20 to 80% RH
	Presence of Dust	No dust should be accumulated

## Product Checklist

Although our company takes all possible quality control measures to ensure proper packing of this product, if there should be any missing items, please refer to the last page to contact your nearest PATLITE Sales Representative.

- NH Series Main Unit (1 Body and 1 Stand)
  - Quick Start Operation Manual (1 Sheet)
  - Adhesive Seal (8 Sheets)
  - Rubber Feet (4 Pieces)
  - Support Base (1 Piece)
  - AC Adaptor (1 Unit)
- \*The AC Adaptor for NHL-3FB1N-RYG is not enclosed.

# Table of Contents

<b>1 Product Outline</b>	<b>10</b>
1.1 Outer Dimensional Drawing	10
1.2 Part Names and Functions	11
1.3 Model Number Configuration	11
1.4 General Specifications	12
1.5 AC Adaptor Specifications	12
1.6 Description of Functionality	13
1.6.1 Monitoring Function	13
1.6.2 Transmission Commands	13
1.6.3 Transmission Function Configuration	14
1.6.4 Setup and Updates	14
<b>2 Installation Procedure and Flowchart</b>	<b>15</b>
2.1 Network Signal Tower Flowchart	15
2.1.1 Manual Network Setup	15
2.1.2 Automatic Network Setup	16
2.2 Signal Tower Installation	17
2.3 Power Supply Input	18
2.4 LAN Connection	18
2.5 Network Setup	19
2.5.1 Logging In	19
2.5.2 Setting the IP Address	21
2.5.3 Setup Verification	22
2.6 Network Setup with the DHCP Function	22
2.6.1 Setup Method with the "TEST" Switch	22
2.6.2 Setup Method with the Web Setup Tool	22
2.7 Operation Settings	23
2.7.1 Setting the Clock	23
2.7.2 Normal Mode Setup	23

- 3.1 Signal Tower Control Functions ..... 24
- 3.2 Buzzer Control Functions ..... 24
- 3.3 Test Functions ..... 25
- 3.4 SNMP Function ..... 25
- 3.4 SNMP Function ..... 26
  - 3.4.1 SNMP SET Control Function for Signal-Tower ..... 26
  - 3.4.2 SNMP GET Status Acquisition Function for Signal-Tower ..... 26
  - 3.4.3 TRAP Reception Function ..... 26
  - 3.4.4 TRAP Transmission Function ..... 26
- 3.5 PHN Command Reception Function ..... 27
- 3.6 PNS Command Reception Function ..... 29
- 3.7 E-mail Sending Function ..... 31
  - 3.7.1 E-mail Message Contents ..... 31
- 3.8 RSH Command Function ..... 33
  - 3.8.1 RSH Commands ..... 33
  - 3.8.2 RSH Alert Timer Reset Function ..... 35
- 3.9 Ping Monitoring Function ..... 37
  - 3.9.1 Ping Monitoring Function (Nodes 1 to 12) ..... 37
  - 3.9.2 Ping Monitoring Function (Nodes 13 to 24) ..... 38
  - 3.9.3 Ping Monitoring Function ("Clear" Command Outside Sources) ..... 39
- 3.10 Application Monitoring Function ..... 40
- 3.11 "Clear" Control Function ..... 41
- 3.12 Normal Mode Settings ..... 41
- 3.13 Reinitialization Function ..... 41
- 3.14 Event Log Output Function ..... 42
- 3.15 Configuration Data Save/Load Setup ..... 43
- 3.16 Firmware Update Function ..... 43
- 3.17 SLMP Command Transceiver Function ..... 44
  - 3.17.1 SLMP Read Command Transceiver Process Flowchart ..... 45
  - 3.17.2 SLMP Read Command Transceiver Operation (During Acquisition Agreement) ..... 46
  - 3.17.3 SLMP Read Command Transceiver Operation (When Error Occurs) ..... 47
- 3.18 SLMP Write Command Transmission Function ..... 48
- 3.19 XML Data Output Function ..... 49

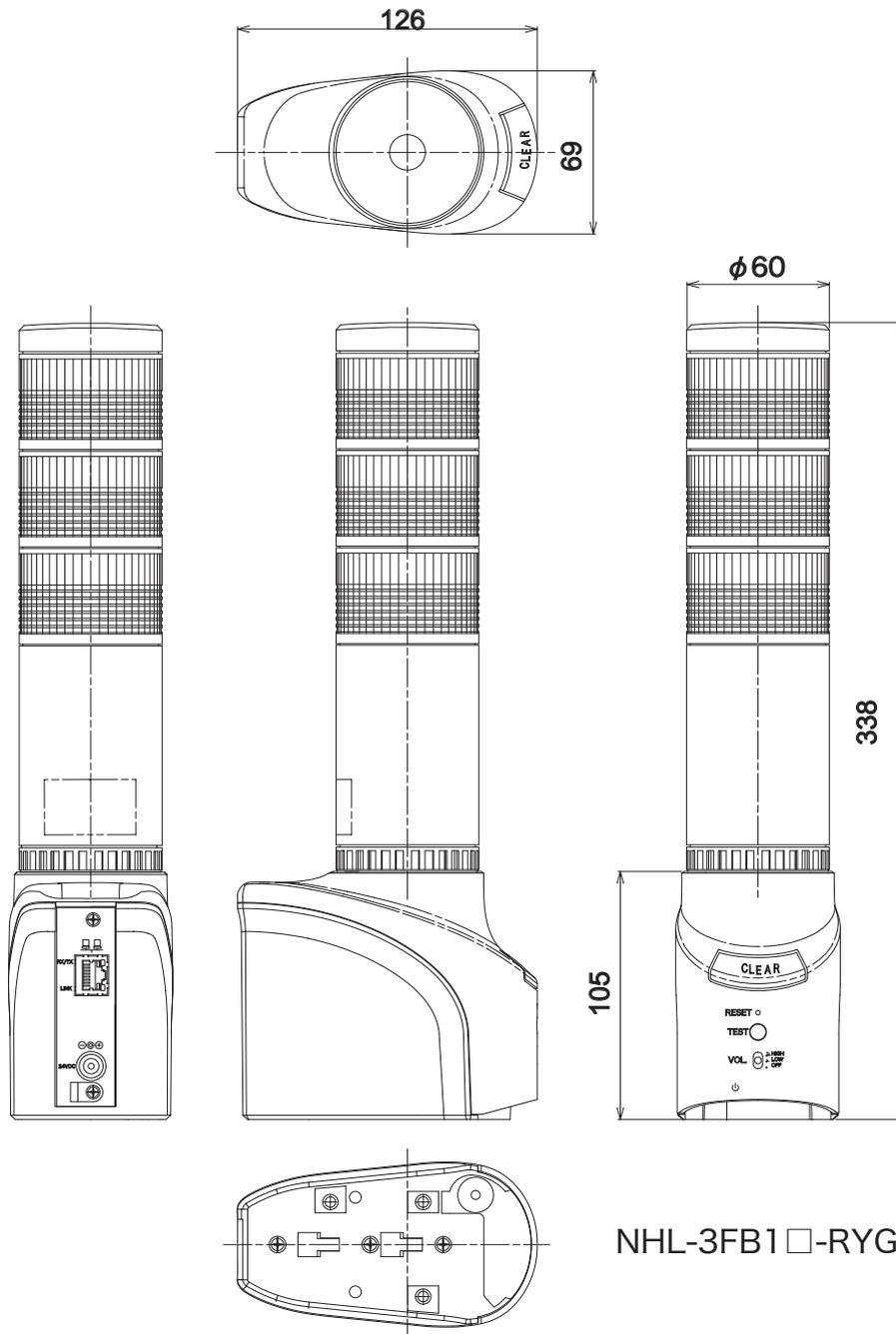
4.1 System Setup Screen	51
4.2 Clock Setup Screen	52
4.2.1 Synchronizing with the PC clock	53
4.2.2 Synchronizing with an NTP server	54
4.2.3 Setting Time Zone	54
4.3 User Authentication Configuration Screen	55
4.4 SNMP Setup Screen	56
4.4.1 SNMP SET/GET	56
4.4.2 SNMP TRAP Transmission	56
4.5 Socket Communication Setup Screen	57
4.6 Mail Transmission Setup Screen	58
4.7 Message Contents Setup Screen	60
4.8 RSH Command Setup Screen	61
4.9 TRAP Reception Setup Screen	64
4.10 Ping Monitor setup Screen	67
4.10.1 Ping Monitor Configuration (Screen Numbers 1 to 12)	67
4.10.2 Ping Monitor Configuration (Screen Numbers 13 to 24)	69
4.11 Application Monitor Setup Screen	71
4.12 "Clear" Control Setup Screen	74
4.13 Normal Mode Setup Screen	75
4.14 Test Button Setup Screen	76
4.15 SLMP Command Transmission Setting Screen	77
4.15.1 SLMP Command Transmission Setup	77
4.15.2 Common Operation Setting at Time of SLMP Error	79
4.15.2 Common Operation Setting at Time of SLMP Error	80
4.16 SLMP Write Command Setup Screen	81
4.17 Output Control Setting for Signal Tower Screen	83
4.18 Reinitialization Setup Screen	84
4.19 Reboot Screen	85
4.20 Event Log Screen	86
4.21 Configuration Setup Screen	87
4.22 XML Setup Screen	88
4.23 Firmware Update Screen	89
4.24 Setup Table Entry Screen	90

<b>5 MIB</b>	<b>92</b>
5.1 MIB Definition List	92
5.2 PATLITE MIB SPECIFICATIONS	93
<b>6 Replacement and Option Parts</b>	<b>95</b>
6.1 Replacement Parts	95
6.2 Signal Tower Unit Color Arrangement	96
6.2.1 NHL Signal Tower Unit (Color) Rearrangement Method	96
6.3 Option Parts	97
6.3.1 Wall Mount Bracket	97
6.3.2 Partition Mounting Bracket	98
<b>7 Troubleshooting</b>	<b>100</b>
<b>8 Freeware Terms of Agreement</b>	<b>101</b>
8.1 GNU GENERAL PUBLIC LICENCE	101
8.2 GNU LESSER GENERAL PUBLIC LICENSE	106
8.3 NET-SNMP	108
8.4 BSD LICENCE	111

# 1 Product Outline

## 1.1 Outer Dimensional Drawing

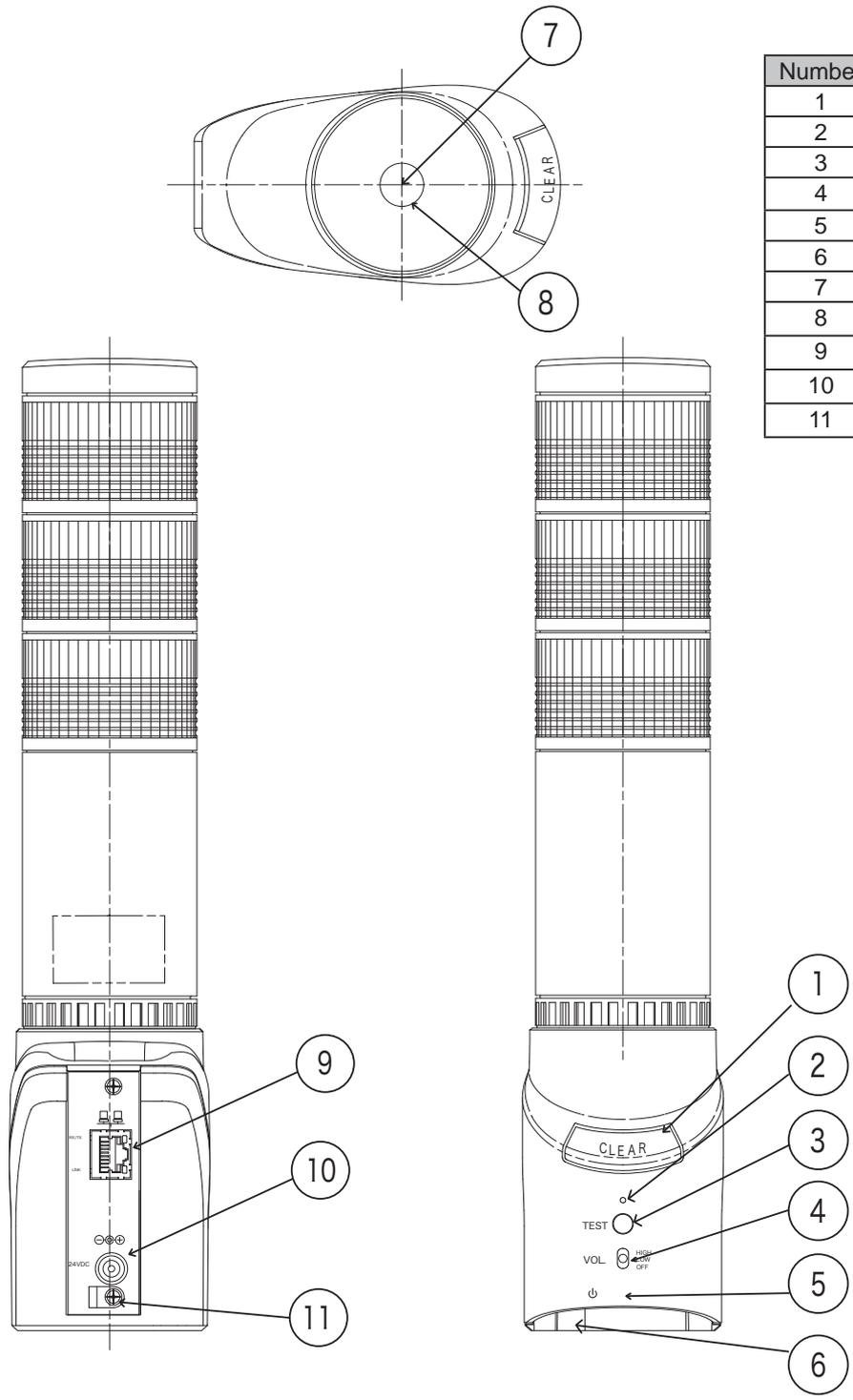
1



NHL-3FB1 □-RYG

Outer Dimensional Drawing

## 1.2 Part Names and Functions



Number	Name
1	CLEAR Switch
2	RESET Switch
3	TEST Switch
4	Volume Level Switch
5	Status LED
6	Buzzer Diaphragm
7	Center Shaft
8	Cover Seal
9	LAN Connector
10	Power Outlet
11	Power Cable Clamp

## 1.3 Model Number Configuration

NHL - 3FB1 - RYG

RYG: LED units are in order from top to bottom of red, yellow, and green  
 U: AC Adaptor Included      N: AC Adaptor not Included

## 1.4 General Specifications

Item		Specification						
Model		NHL-3FB1U-RYG				NHL-3FB1N-RYG		
Rated Voltage (Body)		DC24V						
AC Adaptor Rated Voltage		AC 100V to 240V				—		
AC Adaptor Operating Voltage Range		AC 90V to 264V				—		
Power Consumption		Body	Red	Amber	Green	Blue	White	Buzzer
		2.0W	1.5W	1.5W	0.8W	0.8W	0.8W	2.0W
Operating Temperature Range		0°C to 40°C (No Condensation)						
Storage Temperature Range		-10°C to 60°C (No Condensation)						
Relative Humidity		from 20 to 80% RH (No Condensation)						
Insulation Resistance		More than 1MΩ at DC500V between the terminals and the chassis						
Withstanding Voltage		AC1000V and less than 10mA applied for 1 minute between the terminals and chassis without breaking insulation						
EMI Noise Characteristics		AC1000Vp-p Pulse Width: 1μsec						
Vibration Resistance		19.6m/s <sup>2</sup>						
Sound Level		HIGH: 80dB or more / LOW: 70dB or less (Distance from buzzer diaphragm (Upright Position) of 1m and "A" balance)						
Buzzer Sound		Three-position adjustable switch for "HIGH", "LOW" and "OFF"						
Signal Tower		NHL: φ60 Type Clear Globe						
"CLEAR" Switch		Pushbutton Switch						
"RESET" Switch		Tact Switch						
"BUZZER" Switch		Slide Switch						
Communication Method	Ethernet	Physical Layer: 10BASE-T/100BASE-TX (Auto-negotiation/ Full Duplex/ Half Duplex)						
		Data Link Layer: CSMA/CD						
		Network Link Layer: IP/ ARP/ ICMP						
		Transport Layer: TCP/ UDP						
		Application Layer: HTTP/ RSH/ SMTP/ SNMP/ POP/ DNS/ Socket/ NTP/ DHCP/ SLMP						
Mounting	Location	Indoors Only						
	Direction	Desktop or wall-mount in the upright position						
Mass (AC Adaptor not included)		800g						
Protection Rating		IP2x						
Accessories		AC Adaptor, Rubber Feet, Adhesive Seal, Support Base				Rubber Feet, Adhesive Seal, Support Base		

**Please** When there is no "Auto-negotiation" on the HUB side, sometimes communication is inoperable.

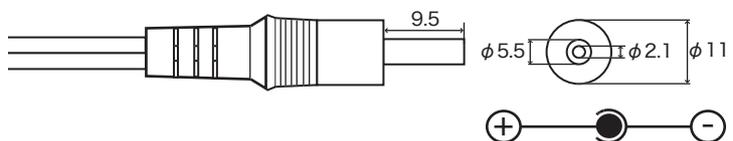
## 1.5 AC Adaptor Specifications

When ordering an AC Adaptor separately, use the following specifications. Since the voltage output of AC Adaptors drop when there is insufficient current (example: unregulated transformers, etc.), be sure to use an output current rating above the recommended rating. Failure to comply may result in failure of this product. Be sure to use AC Adaptors with built-in regulation systems to ensure a regulated output voltage (switching power supplies, etc.)

[Recommended AC Adaptor Specifications]

### DC Secondary Output

Voltage	: 24V DC ±5%
Current	: 0.75A or more
Plug Length	: 9.5mm
Plastic Housing	: 11mm dia.
Plug Connector Outer Diameter	: 5.5mm dia.
Plug Connector Inner Diameter	: 2.1mm dia.



## 1.6 Description of Functionality

The following explains the functionality featured in this product.

### 1.6.1 Monitoring Function

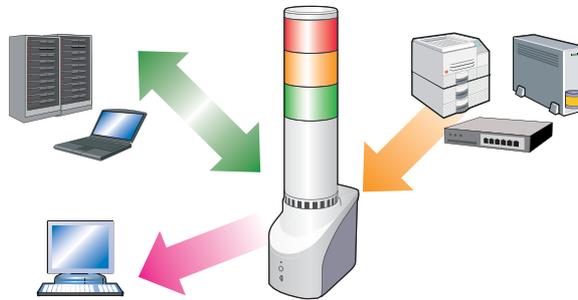
This product can monitor the connectivity of a network device.

#### PING MONITOR

##### Monitors "keepalive" Network/Device signals

The Ping Monitor can monitor the connectivity for a maximum of 24 nodes with this product. If the monitor cannot obtain a response due to an abnormality in the circuit or equipment in the node, it judges an abnormal state and the Signal Tower warns a supervisor with light and sound.

Among the 24 nodes, 12 nodes (13th to 24th) can be set up for more detailed monitoring parameters.



With a user's creation of adding an application utilizing the transmission command, monitoring of the operating circumstances is possible. (Maximum of 4 nodes)

#### SNMP v1 v2c

##### Low-cost Monitor networking equipment.

A network monitor Signal Tower can tell an administrator about generated abnormalities and hindrances promptly as an SNMP command to respond with light and sound to an SNMP TRAP from the equipment (UPS, a printer, a router, a switch, etc.) via the network.

- It can distinguish the variable bindings.
- The registration of 16 groups (4 nodes per group) is possible.

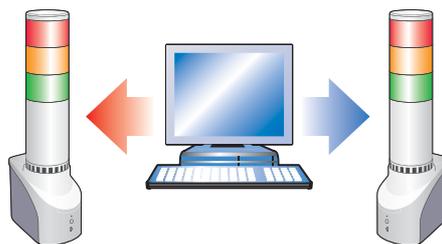
#### SELF DIAGNOSIS

It is possible without control from the network, to instead use the test switch on the front of the product to check the functions of the Signal Tower and buzzer.

### 1.6.2 Transmission Commands

#### RSH

It is controllable by the flexible RSH protocol. With network integrated management software and various event monitoring tools, it is possible to trigger lighting, flashing, buzzer sound, and buzzer sound synchronized with the Signal Tower lights.



Event Occurance: Command Execution (Lighting Tier, Sounding Buzzer)  
RSH Example: `rsh 192.168.10.1 -l root alert 111001`

#### SOCKET TRANSMISSION

##### Compatible with PHN Commands.

The Signal Tower and buzzer are controllable by a 2 byte command.

- \* Compatible with the NHE-3 FB, NHC-3 FB, NHM-3 FB and PHN-3FBE1.
- \* Some functions are limited.

Event Occurance: Command Execution (Flashing Tier Lights, Buzzer Sound)  
PHN Example Code: 57H,17H

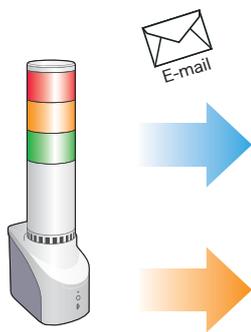
##### The commands are compatible with the new PNS.

The Signal Tower and buzzer are controllable through the PNS command. All the different patterns are controllable.

Event Occurance: Command Execution (Lighting Tier, Sounding Buzzer)  
PNS Example Code: 58H,58H,53H,00H,00H,06H,01H,01H,01H,00H,00H,01H

### 1.6.3 Transmission Function Configuration

An E-mail and TRAP transmission can be sent at the time of an event occurrence.



#### E-mail Transmission

Send to a maximum of 8 selectable addresses

A subject title and the text corresponding to the subject title can be created for the occurred event.

It uses the authentication protocol for POP and SMTP.

#### SNMP v2c

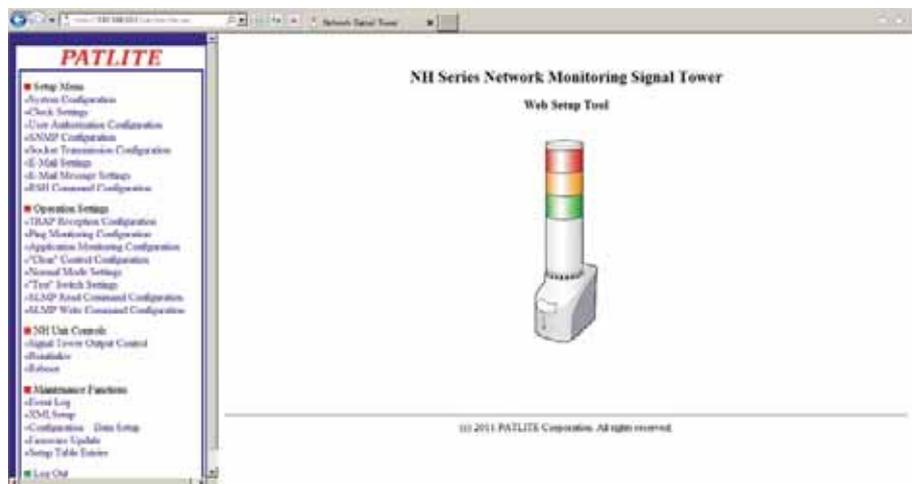
#### SNMP TRAP Transmission

The transmission can send an e-mail to a maximum of eight selectable addresses.

### 1.6.4 Setup and Updates

With a web setup tool, a detailed setup containing the IP Address of the product can be arranged. The firmware can also be upgraded remotely.

Fig. 1.6.1 Web Setup Tool Screen

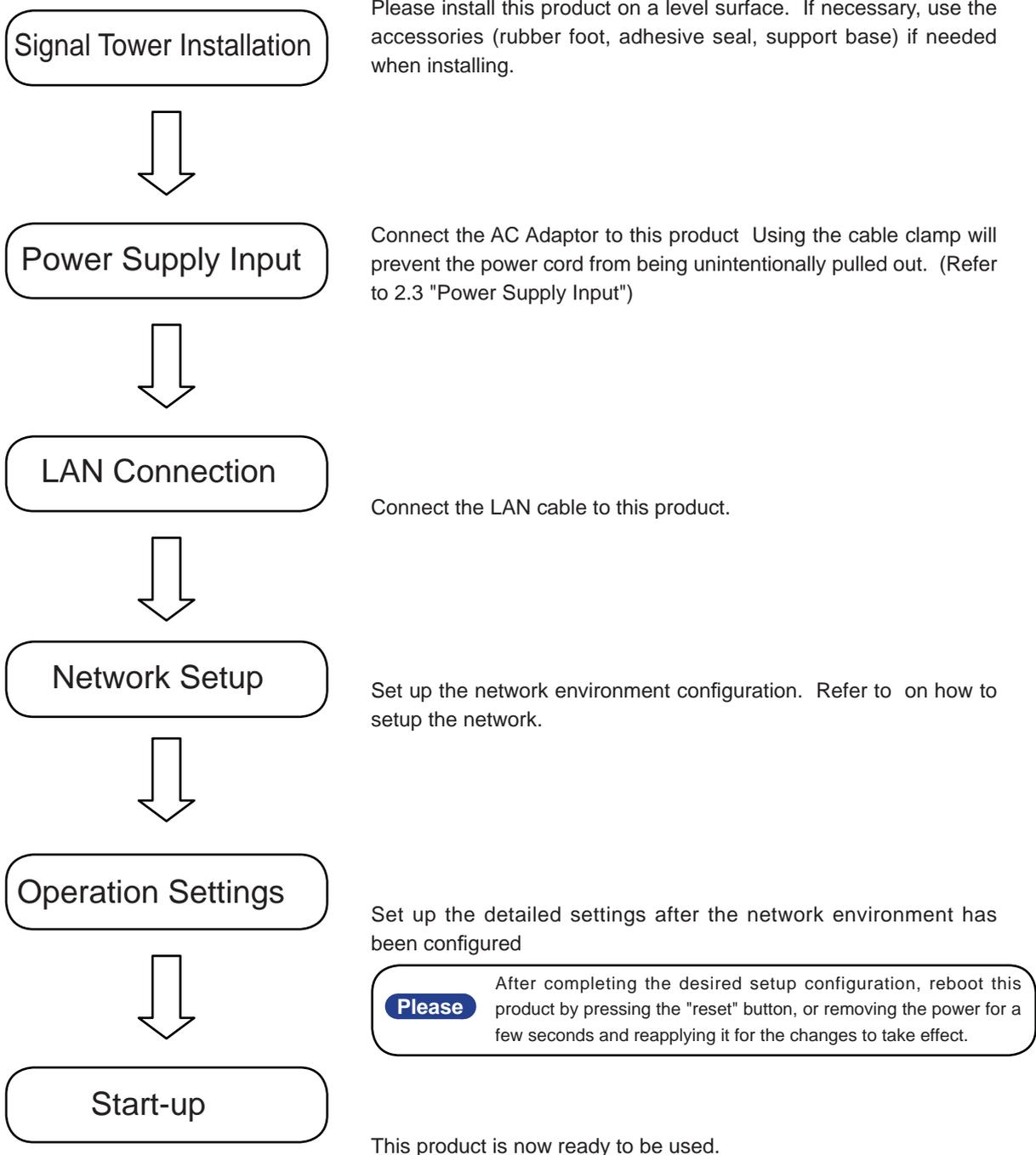


# 2 Installation Procedure and Flowchart

## 2.1 Network Signal Tower Flowchart

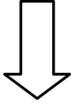
The Signal Tower offers two methods for configuring the network, "Manual Network Setup", and "Automatic Network Setup", which uses the DHCP server function.

### 2.1.1 Manual Network Setup

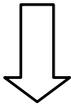


## 2.1.2 Automatic Network Setup

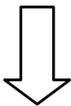
Signal Tower Installation



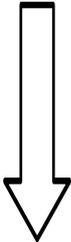
Power Supply Input



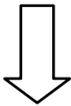
LAN Connection



DHCP Setup



Operation Settings



Start-up

Please install this product on a level surface. If necessary, use the accessories (rubber foot, adhesive seal, support base) if needed when installing.

Set the volume level switch to "LOW", then push the "TEST" switch while inserting the AC Adaptor plug into the power outlet. Use the cable clamp to prevent the power cord from being unintentionally pulled out. (Refer to 2.3 "Power Supply Input")

Connect the LAN cable to this product.

If this product is unable to connect with a DHCP Server, the Signal Tower status will start using the flashing pattern2 on all LED units, then will use the factory default network information set at the time of shipment. If that condition occurs, then either try again to connect with a DHCP Server, or manually set up the network. Refer to "2.5 Network Setup" on how to setup the network manually. If this product is able to connect to a DHCP Server, in order to know the network information, it is recommended to use Patlite's "PNS Manager" software for the NH Series.

Set up the detailed settings after the network environment has been configured

**Please**

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.

This product is now ready to be used.

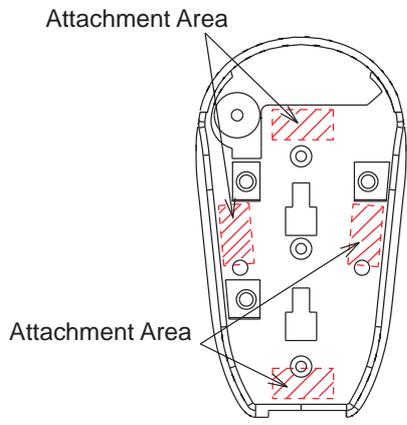
**Note**

Once the DHCP function is working, it will automatically start up the next time the product is turned on, or rebooted.

## 2.2 Signal Tower Installation

This product is to be installed on a level surface. Also, use the included accessories (rubber feet, adhesive seal, support base) when needed during installation.

### Installation Example 1: Rubber Feet to prevent from sliding on a flat and slippery surface

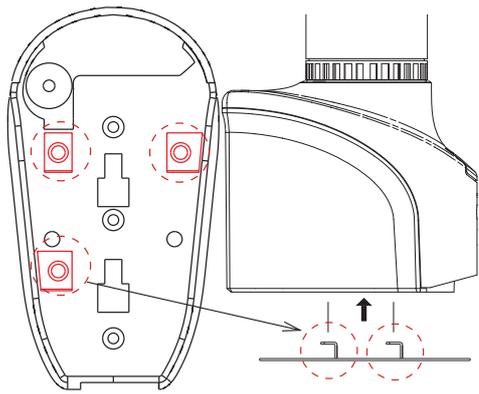


[Installation]

Strip off the adhesive backing and stick the adhesive seal or rubber feet in the shaded area, indicated on the figure to the left.

 Adhesive seal or rubber feet attachment area

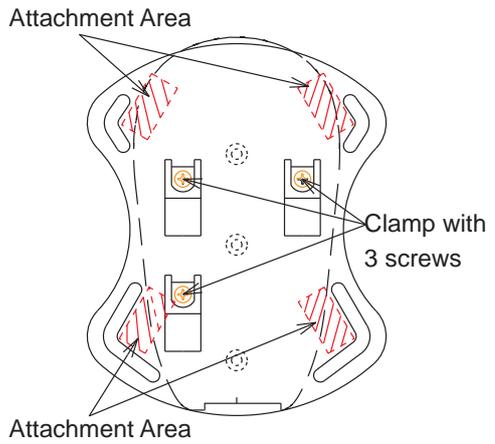
### Installation Example 2: Increasing surface area for a sturdy surface (before adding adhesive seals or rubber feet)



[Installation]

1. Support Base is attached to the part indicated by the circle "○".

 Support Base attachment area

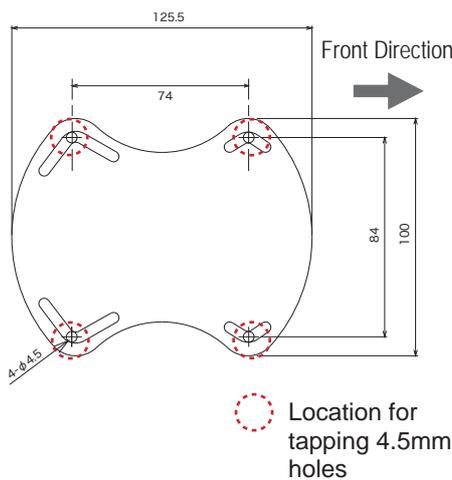


2. Secure the Support Base with screws.

3. Use an M4 screw (or M4 bolt, etc.) to attach the Support Base onto the installation surface and tighten it with M4 nuts.

 Adhesive seal or rubber feet attachment area

### Installation Example 3: Permanent Surface Installation (screw-support base)



#### [Installation]

1. Drill holes with a diameter of 4.5mm onto a flat surface to install.
2. Affix the Support Base accessory to this product.  
Please do not attach the rubber feet or adhesive seals when clamping the Support Base with screws.
3. Use an M4 screw (or M4 bolt, etc.) to attach the Support Base onto the installation surface and tighten it with M4 nuts.

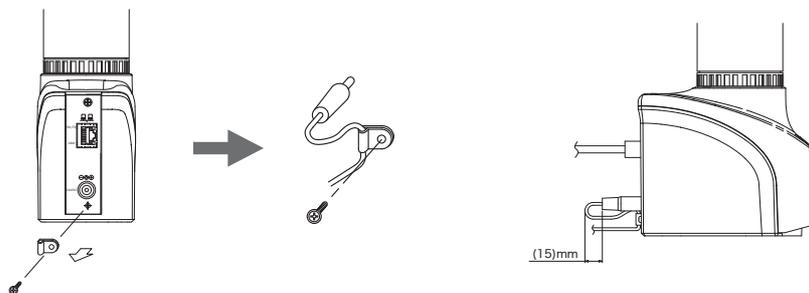
## 2.3 Power Supply Input

Attach the power plug for this product in accordance with the figure below. This product requires at least 30 seconds for the boot-up sequence to complete.

#### [Power Plug Mounting Instruction]

1. Remove the clamp for the power cable.
2. Pass the power cable through the clamp.
3. Insert the power plug into this product.
4. Screw the clamp down to tighten it, and ensure enough slack (about 15mm) has been given to the power cable.
5. When power is supplied to this product, the lights will all turn on for about 1 second.

Fig. 2.3.1 Power Cable Mounting Diagram



Warning

- Periodically check whether dust builds up on the electric socket and clean it if dust builds up. Ensure maintenance is performed to avoid dust build-up, because it may result in fire if too much dust is allowed to build up.
- Do not touch the electric socket with wet hands. Failure to comply will result in electric shock.

## 2.4 LAN Connection

Connect the LAN cable to this product. Use either a category 5 LAN cable, or twisted-pair cable (UTP or STP) for this application.

## 2.5 Network Setup

The IP address at the time of factory shipments for this product is 192.168.10.1.

To change the IP address, first log in from a personal computer (henceforth, written as "PC") web browser to access the settings for it.

**Note** The recommended browser should be equivalent to or higher than Internet Explorer 6 or Firefox 3.5.

### 2.5.1 Logging In

By logging in from a web browser, access can be made to various setups for this product.

In order to log in, the current IP address for this product needs to be entered into the address part of the web browser. (Refer to Fig. 2.5.1)

Fig. 2.5.1 Login Screen

<Web Browser Address Input> <http://192.168.10.1/index.htm>



When the login screen is displayed, go to the upper right of the screen where "Please Select Your Language" is located to select the preferred language. Enter "patlite" in the password field, then click the "Logging In" button. The default password is set to "patlite." Please be sure to change the password to prevent any security breaching.

**Please**

- If 10 minutes or more of no activity has elapsed after logging in, a time-out causes an automatic log out. When that occurs, please log in again.
- If garbled characters occur and the screen is not displayed normally, change the character code for Unicode (UTF-8) to correct it.
- To prevent from being setup in two or more places, this product does not support double-login capabilities. To log in from another location, be sure the last computer is logged out.

Select the preferred language from the pull down menu in the upper right of the login screen. (Refer to Fig. 2.5.2) The selectable languages available are "Japanese", "English", and "Chinese". Once selected, the language will be displayed on each screen in the Web setup tool. (Refer to Fig. 2.5.3 and Fig. 2.5.4)

When the login screen is displayed, go to the upper right of the screen where "Please Select Your Language" is located to select the preferred language. Enter "patlite" in the password field, then click the "Logging In" button. The default password is set to "patlite." Please be sure to change the password to prevent any security breaching.

Fig. 2.5.2 Login Screen



Fig. 2.5.2 Login Screen (With "Japanese" Selected)



Fig. 2.5.2 Login Screen (With "Chinese" Selected)

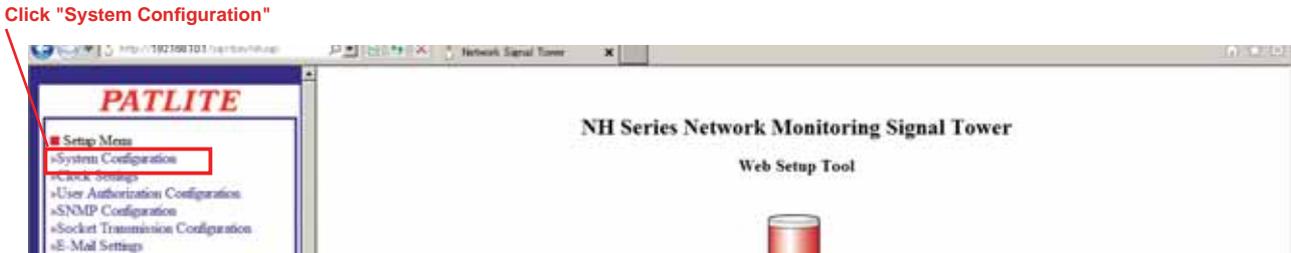


## 2.5.2 Setting the IP Address

After logging in, a web setup tool screen will be displayed (Refer to Fig. 2.5.2). The set up item list is displayed on the left-hand side of the screen.

Click "System Configuration" to display the system setup screen.

Fig. 2.5.2 Web Setup Tool Screen



2

The network protocol can be changed on the system setup screen.  
[Setting Method]

- Please enter the new IP address for this product.
- Set up the net mask, default gateway, etc. if needed.
- After the changes are completed, click the "Set" button for the changes to take effect.

Fig. 2.5.3 System Setup Screen (for Manual Setup)

System Configuration	
Firmware Version	Ver 1.31
System Name	Signal Tower
System Location	
Contact Address	nh@patlite.jp
IP Address Configuration Method	
	<input checked="" type="radio"/> Setup Manually <input type="radio"/> Setup Automatically
IP Address	192.168.10.1
Net Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server Address	0.0.0.0
Host Name	nh.patlite.jp
Set	

- After the "Set" button has been clicked, then when the Network Reboot Screen is displayed, click the "Network Reboot" button for the changes to take effect (Refer to Fig. 2.5.4).
- The execution of the network setup changes takes about 20 seconds. After the waiting time elapses, click "To the Login screen" to log back in (Refer to Fig. 2.5.1).

Fig. 2.5.4 Network Reboot Screen

## 2.5.3 Setup Verification

If the web browser address is reflecting the changed value of the IP address after clicking "To the Login screen", the setup of the new IP address has been successful. However, in cases where the preset value of other networks had been changed, be sure to enter the proper IP Address value where it was moved to in order to verify it in the system setup screen.

## 2.6 Network Setup with the DHCP Function

This product can access a DHCP Server to acquire network information.

### 2.6.1 Setup Method with the "TEST" Switch

- First, connect this product with the network environment to be used. (Refer to Fig. 2.5.3)
- Set the volume level switch to "LOW" before applying power to this product.
- Push the "TEST" Switch while inserting the power connector into the power outlet.
- The DHCP function takes effect when this product starts up.

#### Please

If this product is unable to access a DHCP Server, it will return to the factory default network information. When the DHCP function is used, any future connections are started after the DHCP function setup is activated. When it is necessary to use the manual settings, please use the Web Setup Tool and our PNS Manager software tool.

### 2.6.2 Setup Method with the Web Setup Tool

- Select the IP Address Setup Method in the "System Configuration" screen as "Setup Automatically." (Refer to Fig. 2.6.1)
- Setup the device and host name, etc. as needed.
- Click the "Set" button to save all changes and to activate them.
- After the "Set" button is clicked, the Web Setup Tool changes to another screen to reboot the product; click the "Network Reboot" icon to continue. (Refer back to Fig. 2.5.4)
- Rebooting the network takes about 20 seconds.

Fig. 2.6.1 System Setup Screen (for DHCP Automatic Setup)

System Configuration	
Firmware Version	Ver 1.31
System Name	Signal Tower
System Location	
Contact Address	nh@patlite.jp
IP Address Configuration Method	<input type="radio"/> Setup Manually <input checked="" type="radio"/> Setup Automatically
IP Address	
Net Mask	
Default Gateway	
DNS Server Address	
Host Name	nh.patlite.jp
<input type="button" value="Set"/>	

## 2.7 Operation Settings

### 2.7.1 Setting the Clock

The clock for this product can be set up. For setting the clock on this product, the following are two methods.

- ▶ Communicates with the PC clock to adjust the time when logging in.
- ▶ Communicates with an NTP server to adjust the time for this product.

Refer to "4.2 Time Setup Screen" for details on setting the time.

**Please**

If the power supply is not applied for more than a day and a half, the generated time may be cleared or delayed, and the clock should be reset again.

2

### 2.7.2 Normal Mode Setup

The normal state of operation of this product can be displayed by using the "Normal Mode" setup. When this product is in its normal state of operation, the condition, such as the Green LED in the "ON" condition, can be indicated on the Signal Tower, once the setup is complete.

Refer to "4.13 Normal Mode Setup Screen" for setting up the "Normal Mode" operating status of this product."

**Note**

If the normal operating condition does not require any status lights to stay on, then there is no need to set this parameter up.

# 3 Functionality Details

This section explains the available functions of this product, and their differences by the timing charts indicated below.

## 3.1 Signal Tower Control Functions

Three kind of operating patterns for the LED Signal Tower is available, such as continuous lighting, flashing pattern1, and flashing pattern2.

Continuous "ON"



Flashing Pattern1 [Repetitive 500ms "ON"; 500ms "OFF"]



Flashing Pattern2 [Repetitive 80ms "ON", 170ms "OFF", 80ms "ON", 170ms "OFF"; 500ms "OFF"]



3

## 3.2 Buzzer Control Functions

Four kind of buzzer sounds, such as; buzzer pattern1, buzzer pattern2, buzzer pattern3, and buzzer pattern4, are available to distinguish a variety of conditions with the use of audible and visual warnings.

Buzzer Pattern1 [Repetitive 250ms "ON"; 250ms "OFF"]



Buzzer Pattern2 [Repetitive 500ms "ON"; 500ms "OFF"]



Buzzer Pattern3 [Repetitive 200ms "ON", 50ms "OFF", 200ms "ON"; 550ms "OFF"]



Buzzer Pattern4 [Continuous "ON"]



### 3.3 Test Functions

The test function does a sequential check of the Signal Tower and buzzer, as well as checking other operations. The test operation lights up the tower lights and buzzer every second in steps; in the order of red, yellow, green, blue, white, and buzzer. When only a three-tiered Signal Tower is in use, a time delay between the third tier and buzzer sound will occur. Stopping the test operation can be performed 7 seconds after execution, when the buzzer test is complete (it takes about 1 second).

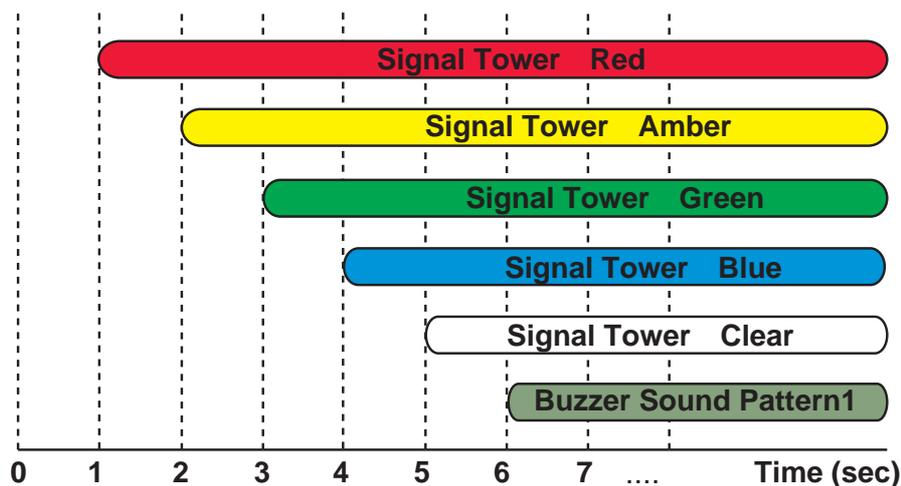
[Test Function Starting Method]

- When the Test Button is Depressed
- When the "test" or "dotest" Commands are Received by the RSH

[Test Function Stopping Method]

- When the CLEAR Switch is Depressed
- When the RSH receives a "Clear" or "Doclear" Command
- From an SNMP "Clear" Command
- From the Web Setup Tool of the Signal Tower Operation Screen
- From a PNS Command sending a Clear Command Transmission

Fig. 4.3.1 Detailed View of Test Operation



**Please**

During the test operation, this product stops receiving everything else except the Ping monitoring application.

### 3.4 SNMP Function

This product can control the Signal Tower, and acquisition the status and TRAP reception using the SNMP functions. For customers who purchased this product, Please download the MIB file for use with the SNMP functions. Furthermore, for details on the setting method of this product, refer to "4.4 SNMP Setting Screen".

## 3.4 SNMP Function

This product can control the Signal Tower, and acquisition the status and TRAP reception using the SNMP functions. For customers who purchased this product, Please download the MIB file for use with the SNMP functions. Furthermore, for details on the setting method of this product, refer to “4.4 SNMP Setting Screen”.

### 3.4.1 SNMP SET Control Function for Signal-Tower

The Signal Tower and buzzer are controllable through the SNMPSET command.

The following is an example to control the “on” and “off” for the Signal Tower lighting and buzzer.

**[Application Example 1]** Turning the red unit on. Set it up as followed:

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	0

**[Application Example 2]** Operating the flashing pattern1 for the amber unit. Set it up as followed:

Object	Object ID	Value
controlLightControlState	1.3.6.1.4.1.20440.4.1.5.1.2.1.2.2	3
controlLightControlTimer	1.3.6.1.4.1.20440.4.1.5.1.2.1.3.2	0

**[Application Example 3]** With the red unit flashing pattern2, and amber flashing pattern1, after 5 seconds, the green turns on with the buzzer synchronized with light pattern2. Set it up as followed:

Object	Object ID	Value
controlLightControlState	1.3.6.1.4.1.20440.4.1.5.1.2.1.2.1	5
controlLightControlTimer	1.3.6.1.4.1.20440.4.1.5.1.2.1.3.1	0
controlLightControlState	1.3.6.1.4.1.20440.4.1.5.1.2.1.2.2	3
controlLightControlTimer	1.3.6.1.4.1.20440.4.1.5.1.2.1.3.2	0
controlLightControlState	1.3.6.1.4.1.20440.4.1.5.1.2.1.2.3	2
controlLightControlTimer	1.3.6.1.4.1.20440.4.1.5.1.2.1.3.3	5
controlLightControlState	1.3.6.1.4.1.20440.4.1.5.1.2.1.2.6	3
controlLightControlTimer	1.3.6.1.4.1.20440.4.1.5.1.2.1.3.6	0

### 3.4.2 SNMP GET Status Acquisition Function for Signal-Tower

The Signal Tower status is acquisitioned through the SNMP GET command. The following is an example of a Signal Tower status acquisition.

**[Application Example 1]** The red is lighting, the amber is flashing pattern1, green is off, blue is flashing pattern2 and white is on. The buzzer sound pattern3 is an example of acquisitioning the Signal Tower status.

Object	Object ID	GET Value
controlLightCurrentState	1.3.6.1.4.1.20440.4.1.5.1.2.1.4.1	2
controlLightCurrentState	1.3.6.1.4.1.20440.4.1.5.1.2.1.4.2	3
controlLightCurrentState	1.3.6.1.4.1.20440.4.1.5.1.2.1.4.3	1
controlLightCurrentState	1.3.6.1.4.1.20440.4.1.5.1.2.1.4.4	4
controlLightCurrentState	1.3.6.1.4.1.20440.4.1.5.1.2.1.4.5	2
controlLightCurrentState	1.3.6.1.4.1.20440.4.1.5.1.2.1.4.6	4

### 3.4.3 TRAP Reception Function

With the set-up containing the designated sender or with the OID included, the TRAP is received. When the TRAP transmission is sent, the information, e-mail transmission and time of reception according to the Signal Tower can be included. For further details on the setting method, refer to “4.9 TRAP Reception Setting Screen”.

### 3.4.4 TRAP Transmission Function

The TRAP is sent to the designated sender when the TRAP Reception setup for this product is done. For further details on the setting method, refer to “4.4 The SNMP Configuration Screen”.

**Please**

Set the community name for the TRAP transmission of this product to "public."

## 3.5 PHN Command Reception Function

The socket communication control protocol used with the PHN Series (ex. PHN-3FBE1) is being used to control this product. The socket communications protocol can be selected from either "TCP" or "UDP", and a port number from "10000" to "65535" can be set. The following explains the PHN commands used by the socket communication function. For further details of the setting method, refer to "4.5 Socket Communication Configuration Screen".

### Writing Command

Transmitting the following data controls the Signal Tower and buzzer.

"W" (57H)								Operation Data 8 Bits							
0	1	0	1	0	1	1	1	Reference of Operation Data Contents							

Details of Operation Data

Signal Tower Flashing			Buzzer		Signal Tower Lighting		
Green	Amber	Red	Pattern2	Pattern1	Green	Amber	Red

[Example of sending the writing command transmission]

To operate the Signal Tower with a "red lighting, amber flashing, green lighting, and buzzer pattern2", enter into the operation data a "1" bit to make it turn ON and a "0" bit to make it turn OFF.

[Command]

"W" (57H)								Operation Data (55H)							
0	1	0	1	0	1	1	1	0	1	0	1	0	1	0	1

Response from this product

Normal response (output response)

"A" (41H)	"C" (43H)	"K" (4BH)
1 Byte	1 Byte	1 Byte

Response Error (output failed)

"N" (4EH)	"A" (41H)	"K" (4BH)
1 Byte	1 Byte	1 Byte

**Please**

In case lighting and flashing are simultaneously turned on by a PHN command, priority is given to the lighting command.

In case buzzer patterns are turned on simultaneously, priority is given to the pattern1 command.

For further details regarding the PHN Series, please contact your nearest PATLITE Sales Representative.

## Reading Command

The current operating status of this product is requested.

"R" (52H) 8 Bit							
0	1	0	1	0	0	1	0

Response from this product

- Normal response (output response)

"R" (52H) 8 Bit								Signal Tower Flashing			Buzzer		Signal Tower Lighting		
0	0	0	0	0	0	0	0	Green	Yellow	Red	Pattern 1	Pattern 2	Green	Yellow	Red

Response from this product

Signal Tower Flashing			Buzzer		Signal Tower Lighting		
Green	Amber	Red	Pattern2	Pattern1	Green	Amber	Red

[Example for a data acquisition response]

Signal Tower with Red/Amber Lighting:

Response Data: 0000 0011 = 03H

Responding Data (03H) 8 bit							
0	0	0	0	0	0	1	1

Signal Tower with Green Flashing and Buzzer Pattern1

Response Data: 1000 1000 = 88H

Responding Data (88H) 8 bit							
1	0	0	0	1	0	0	0

**Please**

The PHN command is not capable of controlling Flashing Pattern2, Buzzer Pattern3, or Buzzer Pattern4.

- Response Error (output failed)

"N"	"A"	"K"
4Eh	41h	4Bh
1 byte	1 byte	1 byte

## 3.6 PNS Command Reception Function

The PNS command is an exclusive PATLITE command protocol, which controls the Patlite NHL Series Signal Tower and buzzer. The socket communications protocol can be selected between "TCP" and "UDP", and the communication ports are available from "10000" to "65535".

The following explains the PNS commands being used with a socket communication setup.

(\*) This function is not available for the NHC/NHE/NHM-3FB Models.

### Writing Command

The following is the protocol used to transmit data to control the Signal Tower and buzzer.

By entering the proper data, the buzzer and LED unit operation from the Signal Tower can be controlled.

Product Classification "XX"		Identifier "S"	(Empty)	Data Size		Data Control Bits 6 bit (Refer to table below)					
58H	58H	53H	00H	00H	06H	Signal Tower					Buzzer
						Red	Amber	Green	Blue	White	

Product Classification

Product classification of this product is fixed at "XX".

Identifier

"S" is used.

Data Size

Capacity of data control bits (data to transmit)

Data Transmission Configuration

Data Control Bits 6 bit					
Signal Tower					Buzzer
Red	Amber	Green	Blue	White	

[Signal Tower]

Non-flashing	00H
Flashing	01H
Flashing Pattern1	02H
Flashing Pattern2	03H
No Change	09H

[Buzzer]

Stop	00H
Buzzer Pattern1	01H
Buzzer Pattern2	02H
Buzzer Pattern3	03H
Buzzer Pattern4	04H
No Change	09H

[Example of sending the writing command transmission]

When writing a command for the Signal Tower to operate with "Red Lighting + Amber Flashing Pattern1+ Green Flashing Pattern2+ Buzzer Pattern4"

[Command]

Product Classification "XX"		Identifier "S"	(Empty)	Data Size		Data Control Bits 6 bit					
58H	58H	53H	00H	00H	06H	01H	02H	03H	00H	00H	04H

Response from this product

Normal response (output response)

ACK
06H

Response Error (output failed)

NAK
15H

### **Reading Command**

Transmitting the following data will execute the status of the Signal Tower and buzzer.

Product Classification "XX"	Identifier "G"	(Empty)	Data Size		
58H	58H	47H	00H	00H	00H

### **Response from the Read Command**

Data Control Bits 6 bit
Refer to "Capacity of Data Control Bits"

[Example for a data acquisition response]

Signal Tower "Red: Flashing Pattern1, Amber: Flashing Pattern2, Green: Lighting with no buzzer" is read, and the response from this product is indicated in the following table after the command transmission.

Data Control Bits 6 bit					
Red	Amber	Green	Blue	White	Buzzer
02H	03H	01H	00H	00H	00H

### **Status Condition "Clear" Command**

The change in the operating state for this product is made when setting up the "Normal Mode Setup".

Product Classification "XX"	Identifier "C"	(Empty)	Data Size		
58H	58H	43H	00H	00H	00H

## 3.7 E-mail Sending Function

It can transmit up to eight registered e-mail addresses. The subject and message of the transmitting mail can be registered for 16 different situations per subject title to be transmitted via e-mail to the 8 registered addresses. The user authentication method during transmission can be selected from either "SMTP Authentication", "POP Authentication", or "No Authentication". Refer to "4.6 E-mail Sending Setup Screen" and "4.7 E-mail Message Setup Screen" for further details of the setting method.

### 3.7.1 E-mail Message Contents

The registration of 16 subjects and 16 messages for transmitting mail can be selected in combination when sending an alert message of up to 8 registered E-mail addresses. The e-mail text would include the equipment name, its location, the sender, the message, and supplementary information indicated in table 3.7.1 below. The contents of the registered subject is indicated.

If the 17th fixed e-mail subject title "NH-ORIGINAL" is selected, the equipment location, message transmission time stamp, and event contents is indicated. If the 17th e-mail subject text is selected as "None", nothing is indicated in the text.

[Registered subject title when selecting No. 17 is "NH-ORIGINAL"]

System Location: YY/MM/DD hh:mm Contents of the event: Name

Table 3.7.1 Fixed Written Subject Contents

Generated Event	Indicated Event Contents	Indicated Name
TRAP Reception	Blank	TRAP Monitor Setup Registered Group Name
Execute "Clear" by pushbutton	": CLEAR-Switch"	Blank
Execute "Clear SNMP"	": CLEAR-SNMP"	Blank
Execute "Clear RSH"	": CLEAR-RSH"	Blank
Ping Monitor Abnormality Detection	": PING-Error"	The equipment name registered in the Ping Monitor setup
Ping Monitor Recovery Detection	": PING-Recover"	The equipment name registered in the Ping Monitor setup
Application Monitor Abnormality Detection	": APP-Error"	The equipment name registered in the Application Monitor setup
Application Monitor Recovery Detection	": APP-Recover"	The equipment name registered in the Application Monitor setup
Execute "RSH Command"	": RSH-Executes"	Blank
"TEST" button pressed	": TEST-Switch"	Blank
SLMP Operation	"SLMP-Action"	Blank
SLMP Error Response	"SLMP-Error"	Blank

Table 3.7.2 Mail Subject Event Contents

Generated Event	Indicated Event Contents	Supplementary Information Displayed
TRAP Reception	TRAP was Received	Group Name and Designated Sender IP Address <Group Name:> "IP Address"
Execute "Clear" by pushbutton	"CLEAR " switch was pushed	None
Execute "Clear SNMP"	"CLEAR" was executed by SNMP	None
Execute "Clear RSH"	"CLEAR" was executed by RSH	Sender's IP Address "IP Address"
Ping Monitor Abnormality Detection	Ping Monitor Abnormality was detected	Detected device name and registration <Device Name:>"Registration Address"
Ping Monitor Recovery Detection	Ping Monitor Recovery was detected	Detected device name and registration <Device Name:>"Registration Address"
Application Monitor Abnormality Detection	Application Monitor Abnormality was detected	Detected device name IP Address and port number <Device Name:>"Registration Address: Port Number"
Application Monitor Recovery Detection	Application Monitor Recovery was detected	Detected device name IP Address and port number <Device Name:>"Registration Address: Port Number"
Execute "RSH Command"	An "RSH Command" was executed	Sender's IP Address "IP Address"
"TEST" button pressed	The "TEST" button was pressed	None
SLMP Operation	The SLMP Operation was executed	Concurring Device name and address registration <Device Name:>"Registration Address"
SLMP Error Response	An SLMP Error was detected	Device name and address registration of source <Device Name:>"Registration Address"

## 3.8 RSH Command Function

### 3.8.1 RSH Commands

RSH (remote shell) is a CUI program which executes a shell command from one computer to another computer via a computer network. The following explains how to control the Signal Tower via the RSH command.

The command syntax which this product can receive is indicated below. For the setting method of the "RSH Command Connection Authentication /Operation after Reception", refer to "4.8 RSH Command Reception Setup Screen".

Table 3.8.1 Receivable Commands

Command	Contents
alert	Controls Signal Tower/Buzzer
clear/doclear	Returns to Normal Mode
status	Acquisitions the Signal Tower Status
test/dotest	Executes a Self-test

Using the RSH Commands

Command Input Method

`rsh IP address [-l Login Name ] Command [Option]`

Command Input Method (when the designated sender address is inactive)

`rsh IP address -l Common login name when designated sender address is inactive Command [Option]`

**Note**

: indicates a space. [ ]: indicates an option.

The use of login abbreviations for the login name is limited to when the account name and the PC are registered (in half-width alphanumeric characters) on the command reception screen which transmits the RSH command.

#### **alert Command**

- Contents : To control the Signal Tower and buzzer.
- Syntax : alert rygbcz [sec]
- Return Value : Status after command is executed
- Option : Refer to Table 3.8.2.

Table 3.8.2 RSH Command Option Explanation

Type	Explanation						
rygbc	Turning on and off of the Signal Tower LED Units and Buzzer Alarms						
r	r: Red	(0) Light Off	(1) Lighting	(2) Flashing Pattern1	(3) Flashing Pattern2	(9) No Change	
y	y: Amber	(0) Light Off	(1) Lighting	(2) Flashing Pattern1	(3) Flashing Pattern2	(9) No Change	
g	g: Green	(0) Light Off	(1) Lighting	(2) Flashing Pattern1	(3) Flashing Pattern2	(9) No Change	
b	b: Blue	(0) Light Off	(1) Lighting	(2) Flashing Pattern1	(3) Flashing Pattern2	(9) No Change	
c	c: White	(0) Light Off	(1) Lighting	(2) Flashing Pattern1	(3) Flashing Pattern2	(9) No Change	
z	z: Buzzer Alarm	(0) Buzzer Off	(1) Pattern1	(2) Pattern2	(3) Pattern3	(4) Pattern4	(9) No Change
sec	Restores the Signal Tower to its previous command status. When the time exceeds the set value, it returns to the previous Signal Tower condition. The time can be set from zero to 99. The status will not return if no input or a zero has been entered.						

[Command Transmission Example]

**Ex. 1)** A product with an IP address of [192.168.10.10] and designated sender user name of "root", with Red Lighting, Green Lighting and Buzzer Pattern2 On:

```
rsh 192.168.10.10 -l root alert 101002
```

**Ex. 2)** A product with an IP address of [192.168.10.10] and a common login name of "patlite", with Red Lighting and White Flashing Pattern2:

```
rsh 192.168.10.10 -l patlite alert 100020
```

[Command Transmission Example - cont.]

**Ex. 3)** A product with an IP address of [192.168.10.10] and a designated sender user name of "root", with the Red Lighting, Amber Flashing Pattern2, Green Lighting and Buzzer Pattern3, all on for 20 seconds:

```
rsh 192.168.10.10 -l root alert 131003 20
```

**Ex. 4)** A product with an IP address of [192.168.10.10] with Red Lighting, Amber Flashing Pattern2, Green Lighting, Buzzer Pattern3, all on for 20 seconds (no login name)

```
rsh 192.168.10.10 alert 131003 20
```

### **clear/doclear Command**

Contents : To clear the Signal Tower and Buzzer, returning to the Normal Mode.  
Syntax : clear [-p] [-z] , doclear [-p] [-z]  
Return Value : Status after command is executed  
Option : Refer to Table 3.8.3.

Table 3.8.3 clear/doclear Command Option Explanation

Type	Explanation
-p	Turn off all Signal Tower Lights
-z	Turn off Buzzer Alarm
None	Return to Normal Mode

[Command Transmission Example]

**Ex. 1)** A product with an IP address of [192.168.10.10] and a common login name of "patlite", with all the Signal Tower Lights turned off:

```
rsh 192.168.10.10 -l patlite clear -p
```

with all the Signal Tower Lights turned off (no login name):

```
rsh 192.168.10.10 clear -p
```

**Ex. 2)** A product with an IP address of [192.168.10.10] and a designated sender user name of "root", with the Buzzer alarm turned off:

```
rsh 192.168.10.10 -l root doclear -z
```

with the Buzzer alarm turned off (no login name):

```
rsh 192.168.10.10 clear -z
```

**Ex. 3)** A product with an IP address of [192.168.10.10] and a designated sender user name of "root", with all the Signal Tower Lights and Buzzer returned to the Normal Mode:

```
rsh 192.168.10.10 -l root clear
```

with all the Signal Tower Lights and Buzzer returned to the Normal Mode (no login name):

```
rsh 192.168.10.10 clear
```

### **status Command**

Contents : Return the present status of the Signal Tower and buzzer to Normal Mode.  
Syntax : status  
Return Value : Current Condition rygbcz

[Command Transmission Example]

**Ex. 1)** A product with an IP address of [192.168.10.10] acquires the operating state of the Signal Tower. The designated sender user name for the Signal Tower status acquisition is "patlite".

```
rsh 192.168.10.10 -l patlite status
```

Response: 201003

**Ex. 2)** The login name was omitted for status acquisition of the Signal Tower.

```
rsh 192.168.10.10 status
```

Response: 201003

## **test/dotest Command**

Contents : Executes confirmation of the Signal Tower and buzzer operation in sequence order of Red, Amber, Green, Blue, White and Buzzer Pattern1.  
Syntax : test , dotest  
Return Value : None

[Command Transmission Example]

**Ex. 1)** A product with an IP address of [192.168.10.10] can verify operation of the Signal Tower. The common login name for the Signal Tower status confirmation is "patlite".

```
rsh 192.168.10.10 -l patlite test  
rsh 192.168.10.10 -l patlite dotest
```

Signal Tower status confirmation is executed (no Login Name):

```
rsh 192.168.10.10 test  
rsh 192.168.10.10 dotest
```

**Ex. 2)** A product with an IP address of [192.168.10.100] can verify operation of the Signal Tower. The designated sender user name for the Signal Tower status confirmation is "root"

```
rsh 192.168.10.100 -l root test  
rsh 192.168.10.100 -l root dotest
```

Signal Tower status confirmation is executed (no Login Name):

```
rsh 192.168.10.100 test  
rsh 192.168.10.100 dotest
```

### **3.8.2 RSH Alert Timer Reset Function**

The RSH alert timer reset function is capable of being selected for "Shared" or "Individual" when setting up the timer function for the Signal Tower lights and buzzer control.

(Refer to 3.8.2 "Timer Reset Function")

Shared : Each Signal Tower tier and buzzer are controlled by a common timer.  
Individual: Each Signal Tower tier and buzzer are controlled by individual timers.

The following explains the difference in operation between the "Shared" and "Individual" selection for this product when setting up the alert timer reset function.

[Procedure]

**Ex. 1)** Transmit the command to the products IP address [192.168.10.10]. Use the login name [root], then execute the following commands of [Red Lighting; other colors no status change; no buzzer status change] for 10 seconds.

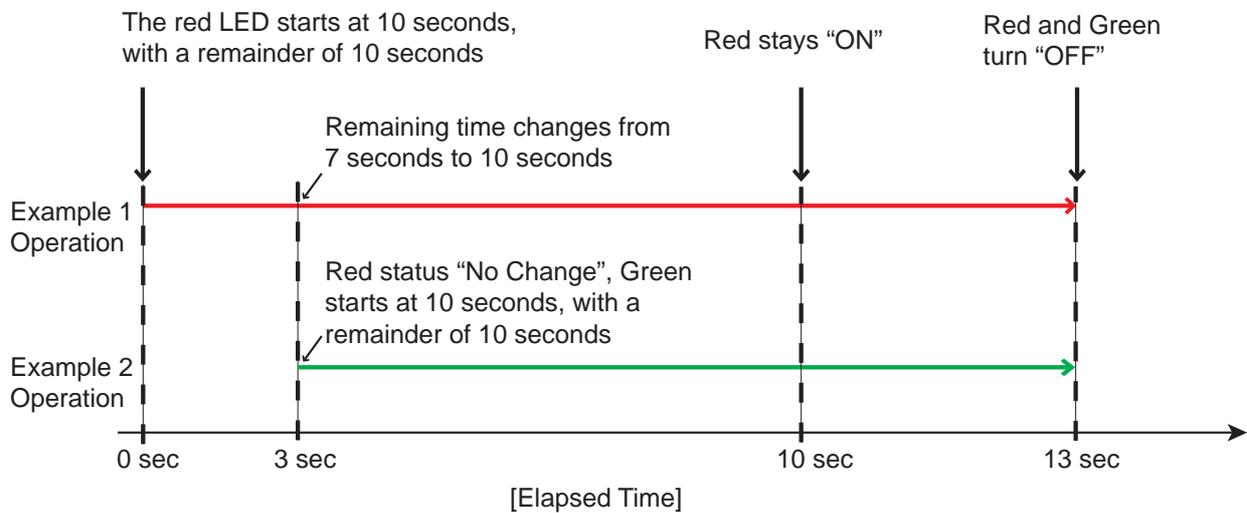
```
rsh 192.168.10.10 -l root alert 199999 10
```

**Ex. 2)** 3 seconds after "Ex.1)", transmit the command to the products IP address [192.168.10.10]. Use the login name [root], then execute the following commands of [Green Lighting; other colors no status change; no buzzer status change] for 10 seconds.

```
rsh 192.168.10.10 -l root alert 991999 10
```

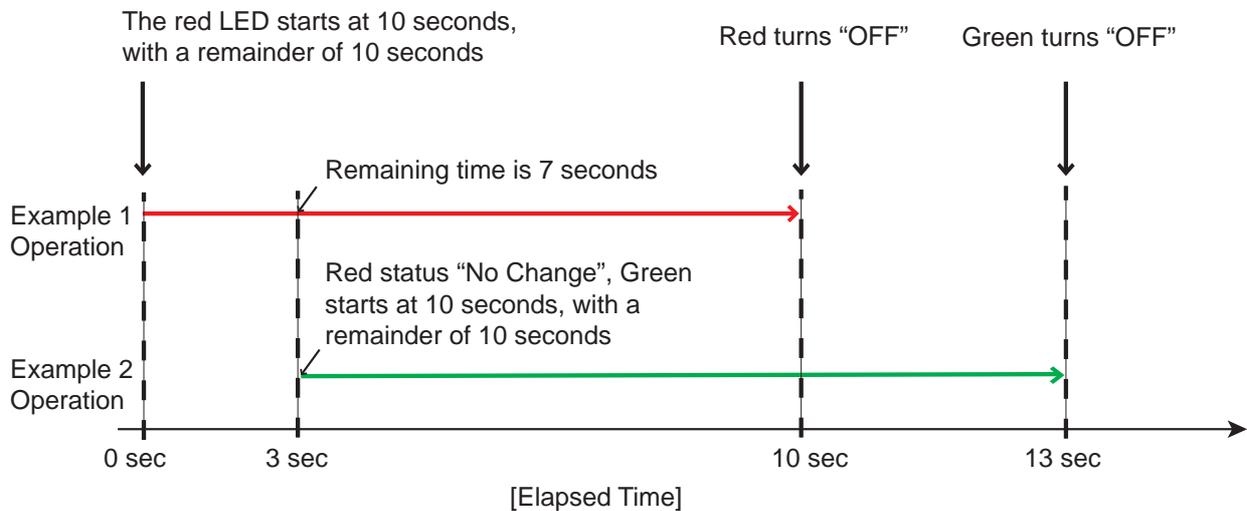
### Alert Timer Reset Function set for "Shared"

The execution affects the influence of the timer when the command is sent.



### Alert Timer Reset Function set for "Individual"

The execution does not affect the influence of the timer when the command is sent.



## 3.9 Ping Monitoring Function

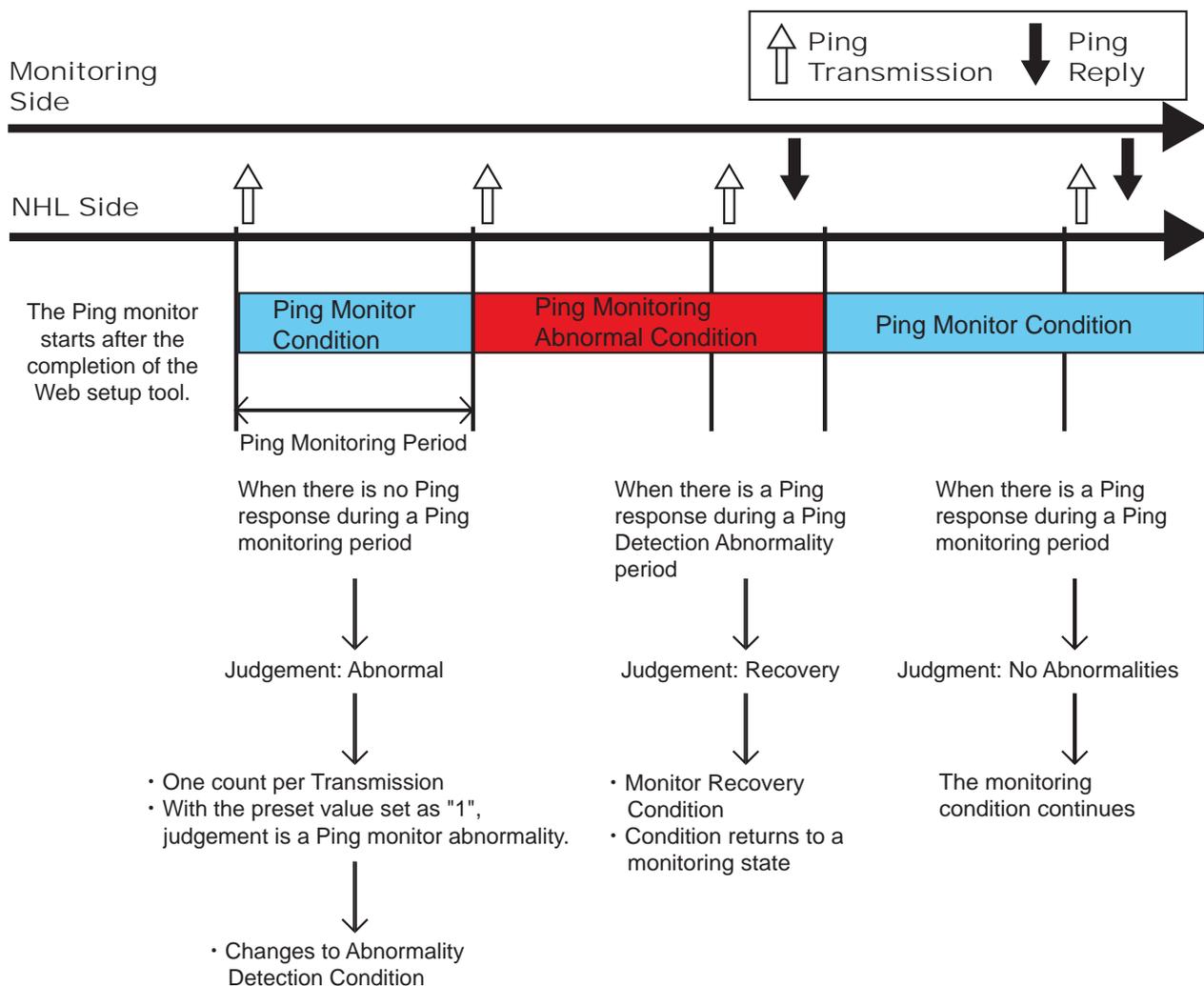
The Ping transmission is used to monitor the response of a device in a network. A maximum of 24 nodes can be monitored and the control of abnormality detection and abnormality recovery can be set up separately. The Ping monitor setup for No's. 13 to 24 has a few more adjustable parameters. Refer to "4.10 Ping Monitoring Setup Screen" for details on the setting method.

### 3.9.1 Ping Monitoring Function (Nodes 1 to 12)

The monitoring period is fixed at 60 seconds for numbers 1 through 12 of the Ping Monitor to transmit one Ping per device to monitor for every period. The Ping Monitor function starts soon after the completion of the Ping Monitor setting. When there is no Ping response during the monitoring period, a judgement for the number of times the abnormalities in a Ping response is counted, and when the number of times for transmission is compared with the setup value for judgment, the decision is made as to whether an abnormality has occurred or not, and the result causes a status change based on the Ping Monitor Settings.

Example) When the number of times for transmission is set to "1".

Fig. 3.9.1 Ping Monitoring Function (For Ping Monitor Setting Screen No. 1 to 12)



**Please**

If a "Clear" operation (Refer to 3.11 "Clear Control Function") is executed when a monitoring detection is active, it will return to the monitoring condition from the abnormality detection status.

Even with the double-push clear setting, once the clear button is pressed, the status will return to the monitoring condition.

For other functions outside the "Clear" operation, because they do not control the abnormality detection condition, the Ping monitor abnormality status will remain uncleared. Any operations outside a "Clear" command may be due to the Ping Monitoring Function which continues to remain active when it is in operation.

### 3.9.2 Ping Monitoring Function (Nodes 13 to 24)

The following explains the function of operation for setting up the frequency of transmissions and the number of transmissions within the frequency number. The Ping monitor period can be set up from 1 to 600 seconds for nodes 13 to 24.

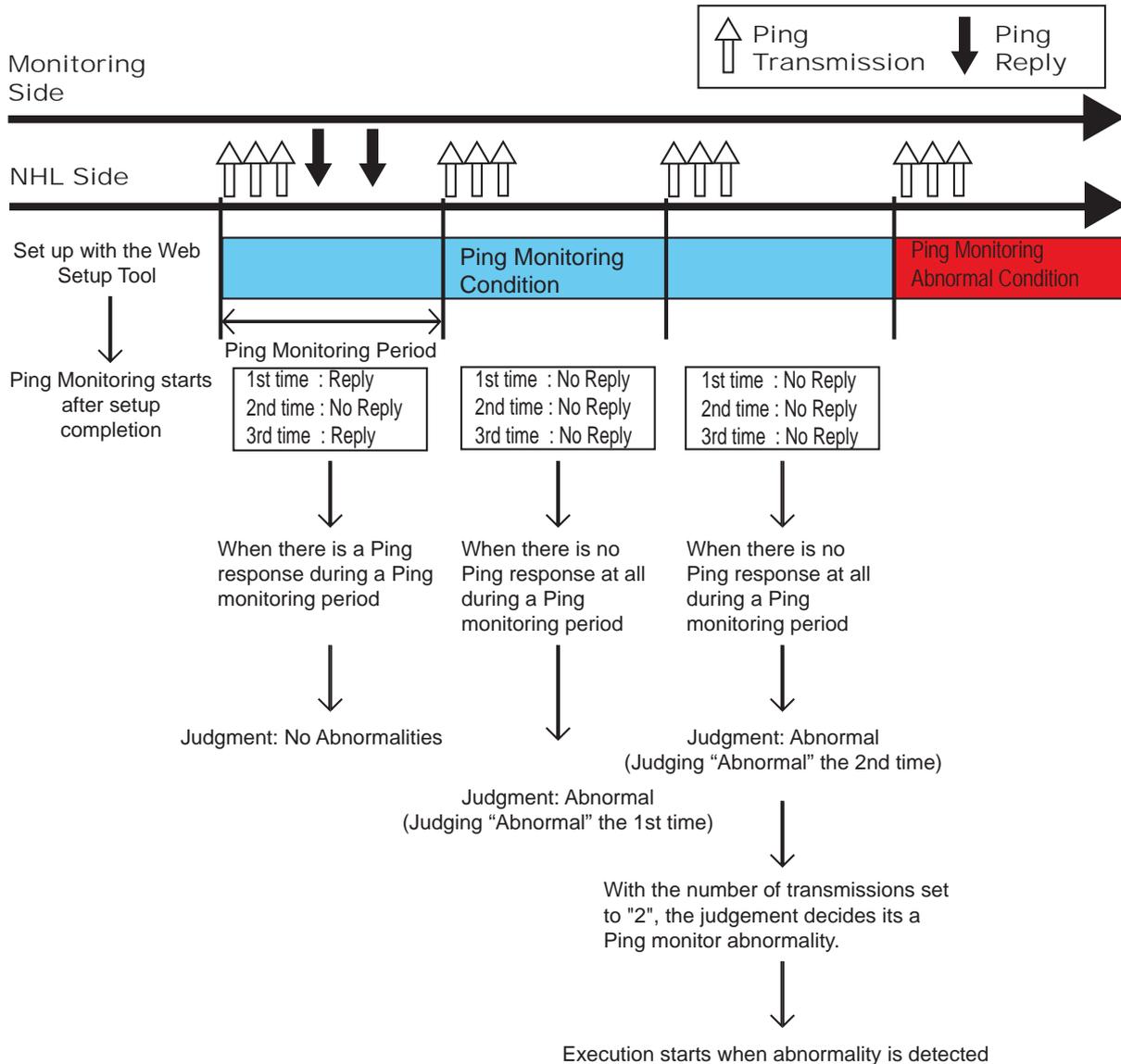
The following is an example of setting the number of times to transmit with a value of "2" and "3". With the number set for "2", the transmission will send two "packets", and if judgement of an abnormal condition continues to be generated twice, the Ping Monitor Condition detects an abnormality. If the transmission number is set to "3", then the transmission will send three "packets" during the Ping monitoring period. (Refer to the following figure)

A judgement of abnormality is detected at the time of the following monitoring periods.

1. If one ping response out of three "packets" is received, then judgement of no abnormality is detected.
2. If all three ping responses were not answered among the three "packets", it counts as one time for judging that an abnormality is occurring.
3. Even in the following time period, if there is no ping response, the number of times to count an abnormality is counted as one time. The total number of transmission times is set to "2", and the Ping Monitoring Abnormality Condition is executed.

**Note** When the Abnormality Judgement Value is set as a "1", if the next Ping Monitoring Abnormality Condition is judged as "no abnormality", then the number of judging abnormality is cleared (back to "0").

3.9.2 Ping Monitoring Function (For Ping Monitor Setting Screen No. 13 to 24)



**Please** If a "Clear" operation (Refer to 3.11 "Clear Control Function") is executed when a monitoring detection is active, it will return to the monitoring condition. With the double-push clear setting, the status will return to the monitoring condition on the first press of the "CLEAR" button.

### 3.9.3 Ping Monitoring Function (“Clear” Command Outside Sources)

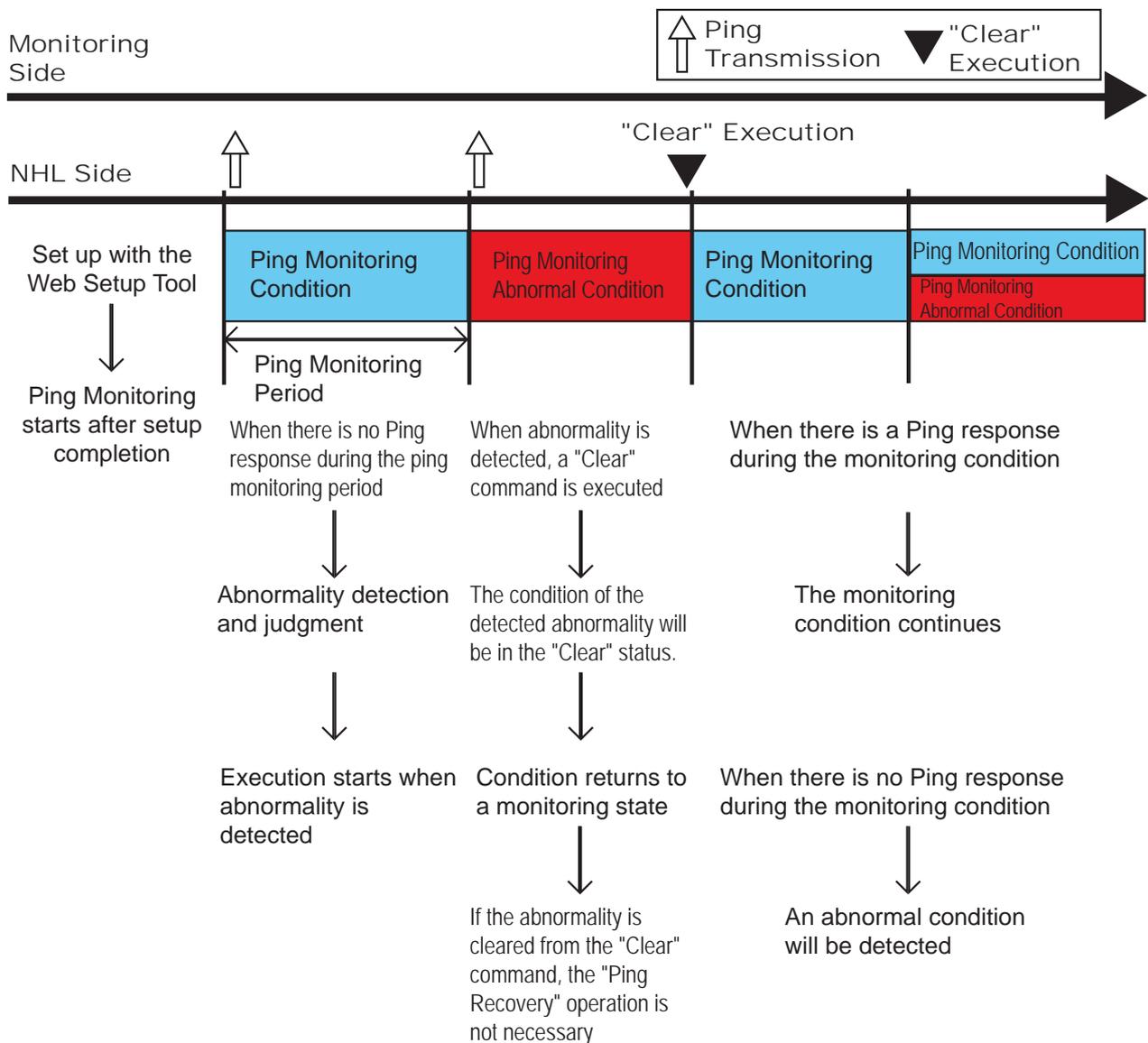
(When a "Clear" execution from an outside source is requested at the time of abnormality detection)

The following is an example for the procedure when an executed "Clear" command is received from an outside source while the Ping Monitoring function detects an abnormality ("Clear" command executed via the "Clear" switch, RSH "Clear" Command, PNS "Clear" command, SNMP "Clear" Command, or a "Clear" Command from the Web Setup Tool).

Example) When a "Clear" command is transmitted from an outside source at the time an abnormality is detected by the Ping Monitor.

1. From the monitoring condition, when a monitoring abnormality occurs, the condition of the Signal Tower changes at the time of detecting the abnormality.
2. If a "Clear" command is received during the abnormality detection, the status of abnormality detection will be cleared and it will return to its normal mode.
3. If there is a Ping response from the next Ping monitor execution, the monitoring condition will continue as normal. If there is no response, the condition will immediately return to the abnormality detection mode.

Fig. 3.9.3 Setting screen 21 to 24 operation flow-chart example



**Please** In cases where it returns to a monitoring condition from a "Clear" command, it will not branch to the "Ping Recovery" operation from an abnormal detection.

## 3.10 Application Monitoring Function

By creating an additional transmission command for a customer's application, this product can monitor the response of the application by receiving the data from it.

If data is not received within the monitoring period, it makes a judgement that the communication has become abnormal, and at the time of the abnormality, sends a status change to the Signal Tower. After a generated event, if data is received from the monitored candidate, it will detect a recovery from the abnormal operation. Refer to "4.11 Application Monitoring Configuration Screen" for details on the setting method.

As an example, with a monitoring period of 30 seconds, the received data from the application is monitored.

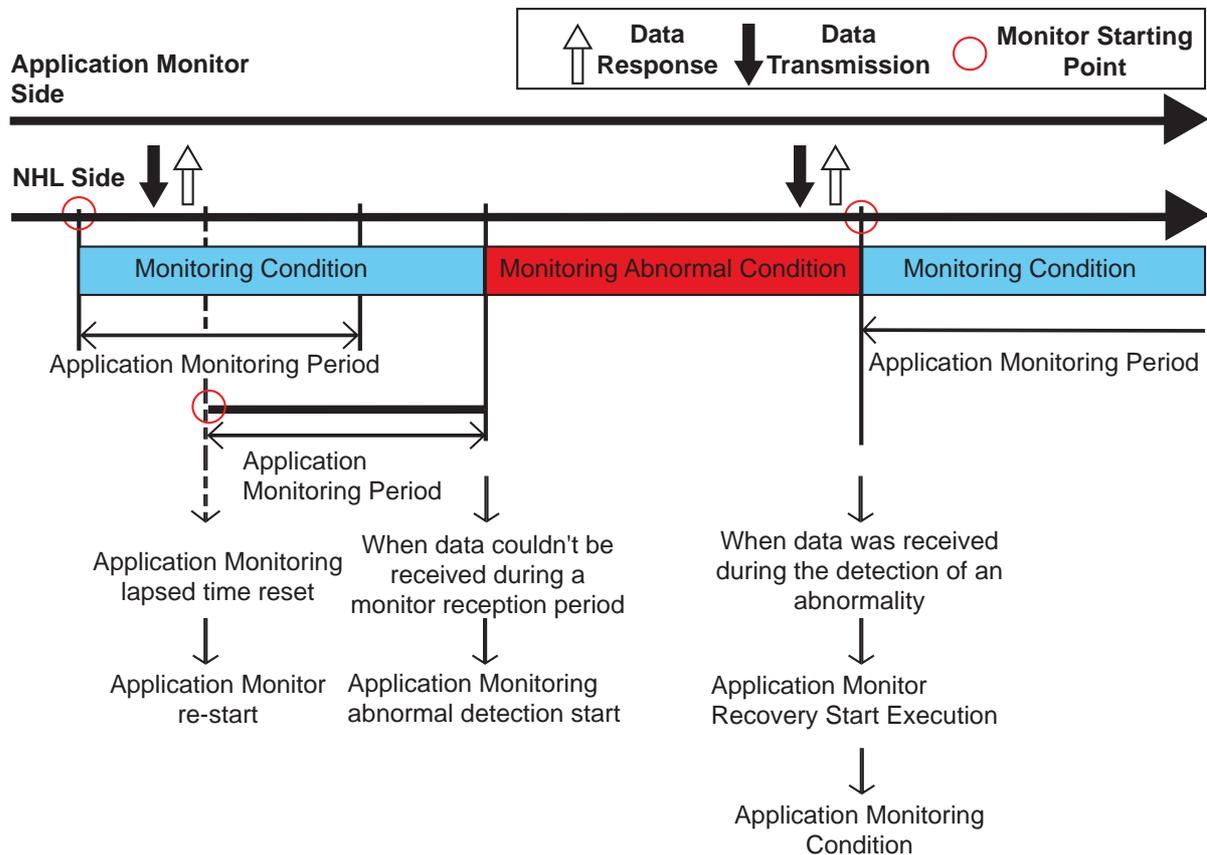
1. After the setup is complete and it receives data from the address monitoring point, the monitoring will commence.
2. If data is received within the monitoring period of 30 seconds, it will be judged as having no abnormalities.
3. However, if the data is not able to be received within the allotted period (30 seconds in this example), it makes a judgment of abnormality.

Once judged as abnormal, the operation at the time of the detected abnormality is carried out.

4. If data is received from the application after detecting a generated event of abnormality, it will detect a recovery from the abnormality.

The operation at the time of recovery from the abnormal condition will return to its monitoring condition again.

Fig. 3.10.1 Detailed Example of Application Monitoring



**Please**

Monitoring starts as soon as data is received.  
Monitoring stops when the connection is interrupted.  
The recovery from an abnormal operation can only occur when the condition monitored is detected as abnormal.

### 3.11 "Clear" Control Function

The "Clear" operation is accessible from the following commands; "Clear" command executed via the "Clear" switch, RSH "Clear" Command, PNS "Clear" command, SNMP "Clear" Command, or a "Clear" Command from the Web Setup Tool.

Refer to "4.12 'Clear' Control Setup Screen" for details on the setting method.

### 3.12 Normal Mode Settings

The Signal Tower can be set up to display its "normal state of operation", based on the user's preference for lights and buzzers to be on when no warning conditions occur. Refer to "4.13 Normal Mode Setup Screen" for details on setting it up via the Web Setup Tool.

### 3.13 Reinitialization Function

From the Web Setup Tool, this unit can be reinitialized to revert all settings back to the default (factory) settings, while leaving the network settings as is when resetting the other settings. Refer to "4.16 Reinitialization Setup Screen" for details on the setting method.

Also, it can initialize the network settings of this product to its default settings in addition to returning the other settings to their default settings.

**【Method for full initialization, including the network setup】**

1. Set the volume level switch to the "HIGH" position.
2. Turn on the power supply while simultaneously pushing the "TEST" switch.
3. After the Signal Tower does an all-point lighting test, the Signal Tower lights go out. Release the switch after all the Signal-Tower lights are out.
4. The Signal Tower will light up again about 1 minute after. The Signal Tower will then flash Pattern1 afterward to indicate the initialization is complete.
5. Push the clear button to stop the flashing.

If the Ping monitor etc. are set up, an abnormal operation detection may occur.

**【Method for initialization to revert the network settings back to the factory default value】**

1. Set the volume level switch to the "OFF" position.
2. Turn on the power supply while simultaneously pushing the "CLEAR" and "TEST" switch.
3. After the Signal Tower does an all-point lighting test, the buzzer will make an audible sound. Release the switch after the buzzer sounds.
4. When the Signal Tower goes out, it indicates the completion of initialization.

Table 3.13.1 Setting after default function executed

Item	Execution Method			
	Web Setup Tool		NH Unit Controls	
	"Network Reinitialized and checked	"Network Reinitialized without being checked	Only Network Settings Reinitialized	Factory Default Conditions
Network Setting	Set to default value	Setting is Saved	Set to default value	Set to default value
Password	Set to "patlite"	Set to "patlite"	Set to "patlite"	Set to "patlite"
Setup Menu (excluding Password & Network menu)	Set to default value	Set to default value	Setting is Saved	Set to default value
Function	Set to default value	Set to default value	Setting is Saved	Set to default value
Status/Operation Log	Erased	Erased	Erased	Erased

**Please**

Do not overexert pressure to the "CLEAR" switch, "TEST" switch and volume level switch. Failure to comply may damage the unit.

## 3.14 Event Log Output Function

The Web Setup Tool displays an event log. Moreover, it is possible to download it as a text file. The following is the description of the recording mode labels for the event log.

Event Name	coldStart	Event Contents	No Display
Event Details	Records at the moment of start up.		
Event Name	ACCESS	Event Contents	No Display
Event Details	Records at the moment of authentication failure. Records at the moment of Web login failure.		
Event Name	MAIL	Event Contents	E-mail Transmission
Event Details	Records at the moment of an e-mail transmission.		
Event Name	TRAP	Event Contents	Trap reception IP address and the designated sender
Event Details	When a registered Trap is received, it is recorded with the IP address of the designated sender.		
Event Name	PING	Event Contents	Ping monitor abnormalities and the IP address object Ping abnormality response and the IP address object
Event Details	It records when the Ping monitor status changes. "Ping Monitoring Error": When an abnormality event in the Ping monitor occurs, it records it with the target IP address. "Ping Recovery": When an abnormality in the Ping monitor is restored, it records it with the target IP address.		
Event Name	APL	Event Contents	Application Monitoring Error Applicaton Recovery
Event Details	It records when an abnormality in the application monitor is detected. "Application Monitoring Error": It records when the abnormalities in an application monitor occurs. "Applicaton Recovery": It records when the abnormality in the application monitor is restored.		
Event Name	CLEAR	Event Contents	"RSH" IP address and designated sender Web Setup Tool "Clear" "PNS" Command
Event Details	The Signal Tower is returned to its normal operating status during operation. "CLEAR" Switch": It records when the clear switch to this product is pushed. "SNMP": It records when a "CLEAR" has been executed by the SNMP Command (controlLightSnmpClear). "RSH": 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.		
Event Name	RSH	Event Contents	IP address, command argument, and the "alert" designated sender. "Status" "Test"
Event Details	It records when the RSH 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. An IP address is not written in cases where the designated sender address is inactivated. "Status": The status command is recorded at the time of execution. "Test": The test command records at the time of execution.		
Event Name	SNMP	Event Contents	"CONTROL"
Event Details	When this product is operated by the SNMP Set Commands, the Signal-Tower color and buzzer conditions are recorded. The applicable command is "controlLightControlState".		

Event Name	SLMP	Event Contents	"SLMP-Action" "SLMP-Error"
Event Details	An output occurs when an SLMP trap is detected. "SLMP Action Execute_": Records when an operation based on the setup conditions is detected. "SLMP Error_": Records event when an error is detected.		

Event Name	SRC_PORT	Event Contents	"Designated sending port ERROR:SLMP-READ" "SLMP-Error"
Event Details	When the designated sender port is established when the SLMPcommand transmission can not be read, it is recorded with a preset number.		

\* "" is not recognized in the log.

## 3.15 Configuration Data Save/Load Setup

The setting menu for this product is read and can be saved as configuration data on the PC. Also, configuration data which was read can be selected to be written in. The config setup is done from the Web Setup Tool. Refer to "4.19 Configuration Data Save/Load Setup Screen" for the setting method.

**Please**

Confirm that the firmware version of the Main Unit with the firmware version to overwrite with. If the firmware version in the Main Unit is too old, it cannot be overwritten.

Please acquire a prior firmware version to overwrite with before overwriting with the latest firmware.

## 3.16 Firmware Update Function

The firmware for this product can be updated. The firmware is updated via the Web Setup Tool. Refer to "4.20 Firmware Update Screen" for the setting method.

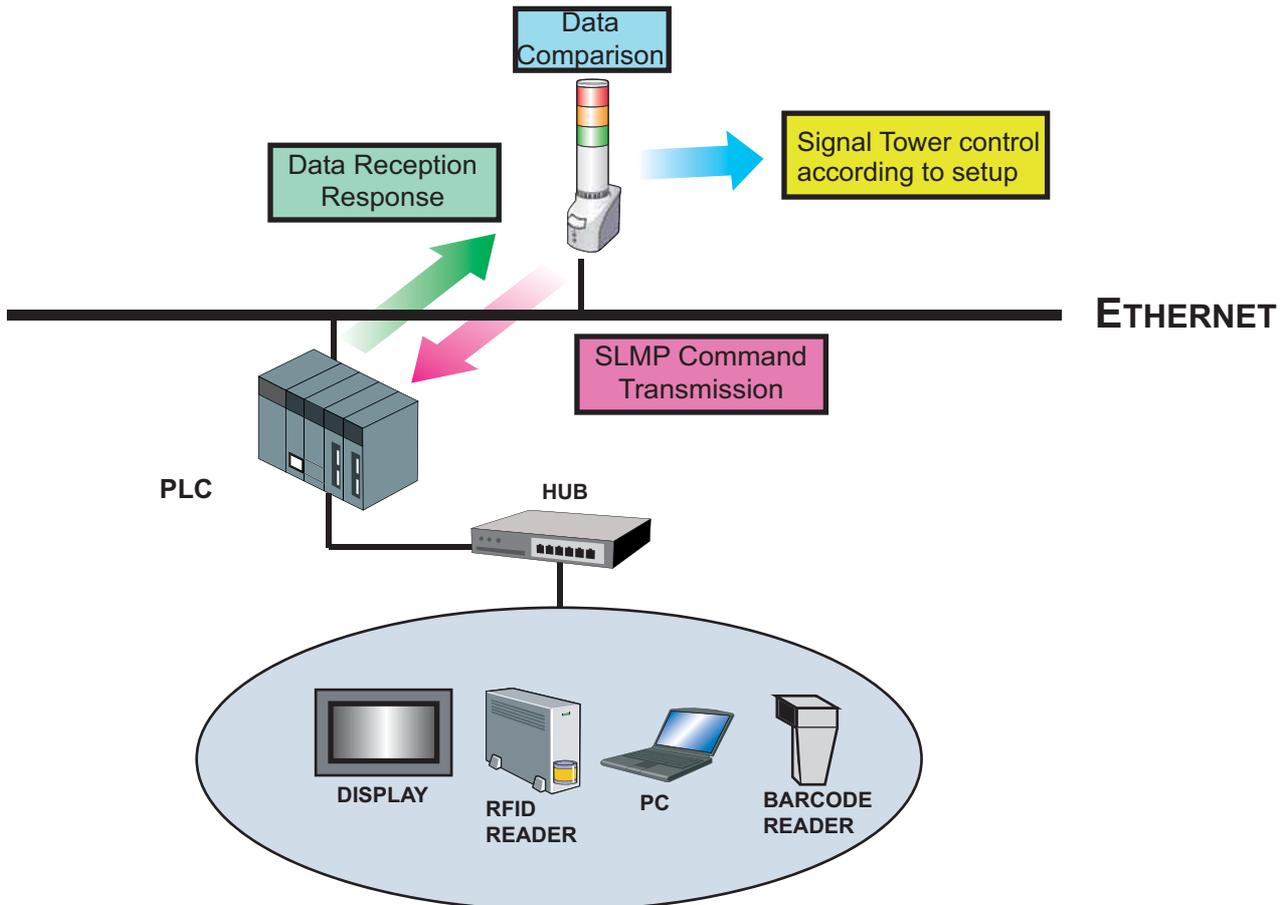
### 3.17 SLMP Command Transceiver Function

The device on the equipment designated for SLMP uses the command to acquire information from the device with periodic transmissions. When comparing the conditions based on the agreement conditions, if the acquired information agrees, the operation set for the condition is executed. In addition, if error data is received, the operation specified at the time of an error is executed. The operation based on a condition agreement can be set up for every device acquiring data.

When an error occurs, the operation to handle an error can have a common setup for each device.

Only one point for a device can be acquisitioned. For a bit device, it would be 1 bit; a word device, would be 1 word to acquire device information. For further details on the setting method, refer to "4.15 SLMP Command Transmission Configuration Screen".

The PLC device data is periodically checked.  
The NH Series operates according to the acquisitioned value.



It is possible to use SLMP to acquire the device information on the equipment connected to CC-LinkIE or CC-Link.

**Please**

Prior to using this product, refer to the manual on instructions to setup connections for a master station, local broadcasting station, and intelligent device station.

When a reset or reboot are done on equipment corresponding to SLMP and this product , it should also be rebooted.

### 3.17.1 SLMP Read Command Transceiver Process Flowchart

The process for the Command Transceiver is in the order from number 1 to 16. When the protocol is set as TCP, connection processing is started from the first command transmission, and only the command transceiver process is performed afterward.

If changed into the following status, the established transmission interval is opened and the following number for the command transceiver process is executed.

- The response data of the command which was transmitted was received.
- The response data was not able to be received within the established timeout limit.
- The command addressee was not established.

The next number of the command transceiver process after No. 16 is No. 1. If a timeout occurs, the cut-off process will occur and re-connection will proceed within the set transmission interval. The transmission interval can be selected from 10 ms, 50 ms, and 100 ms.

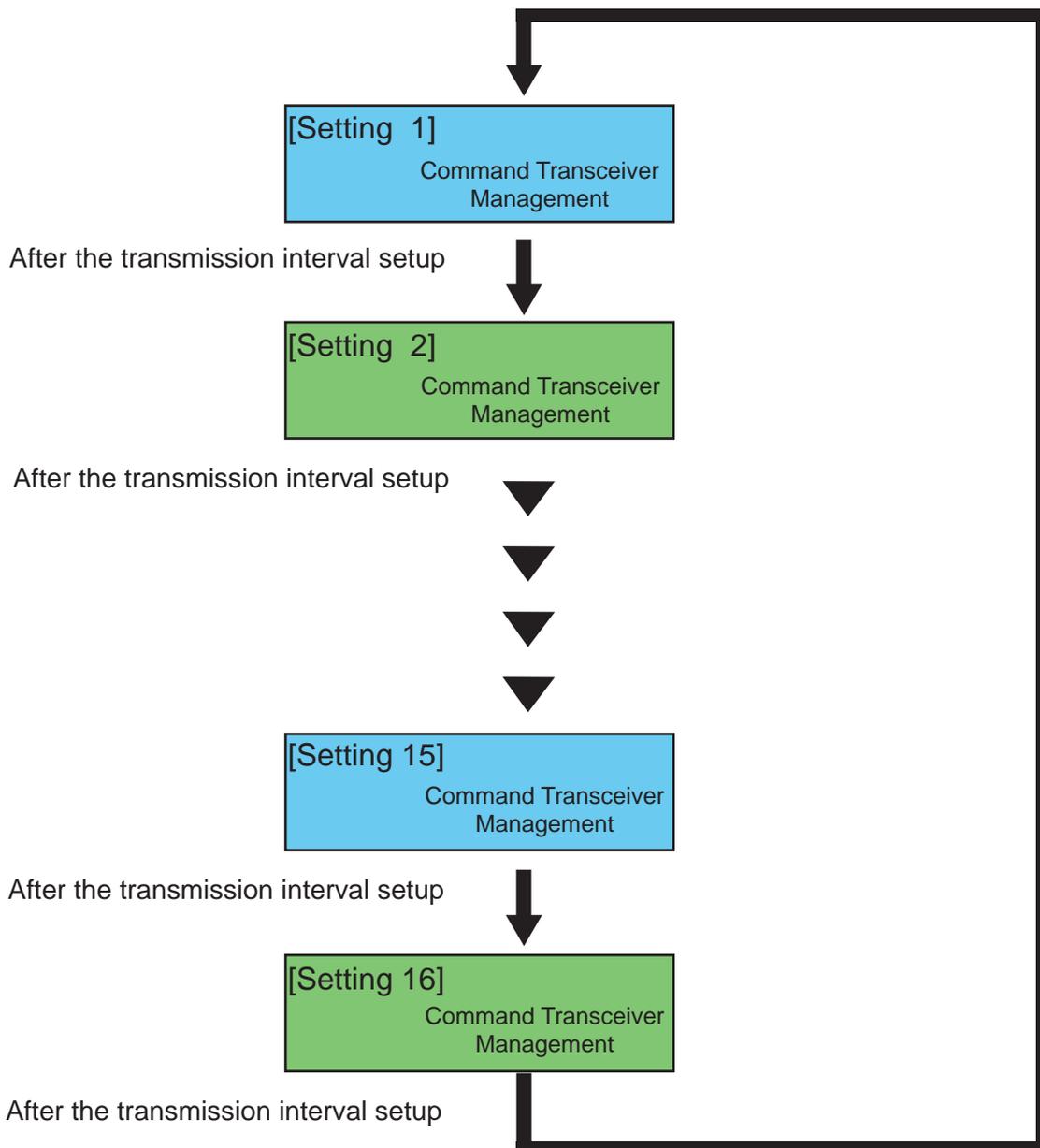


Fig. 3.17.1 SLMP Command Transceiver Function Operational Details 1

**Please**

- Do not send a command transmission when the addressee and the address port number is not established.
- The shortest number of seconds for the transmission interval is set.

### 3.17.2 SLMP Read Command Transceiver Operation (During Acquisition Agreement)

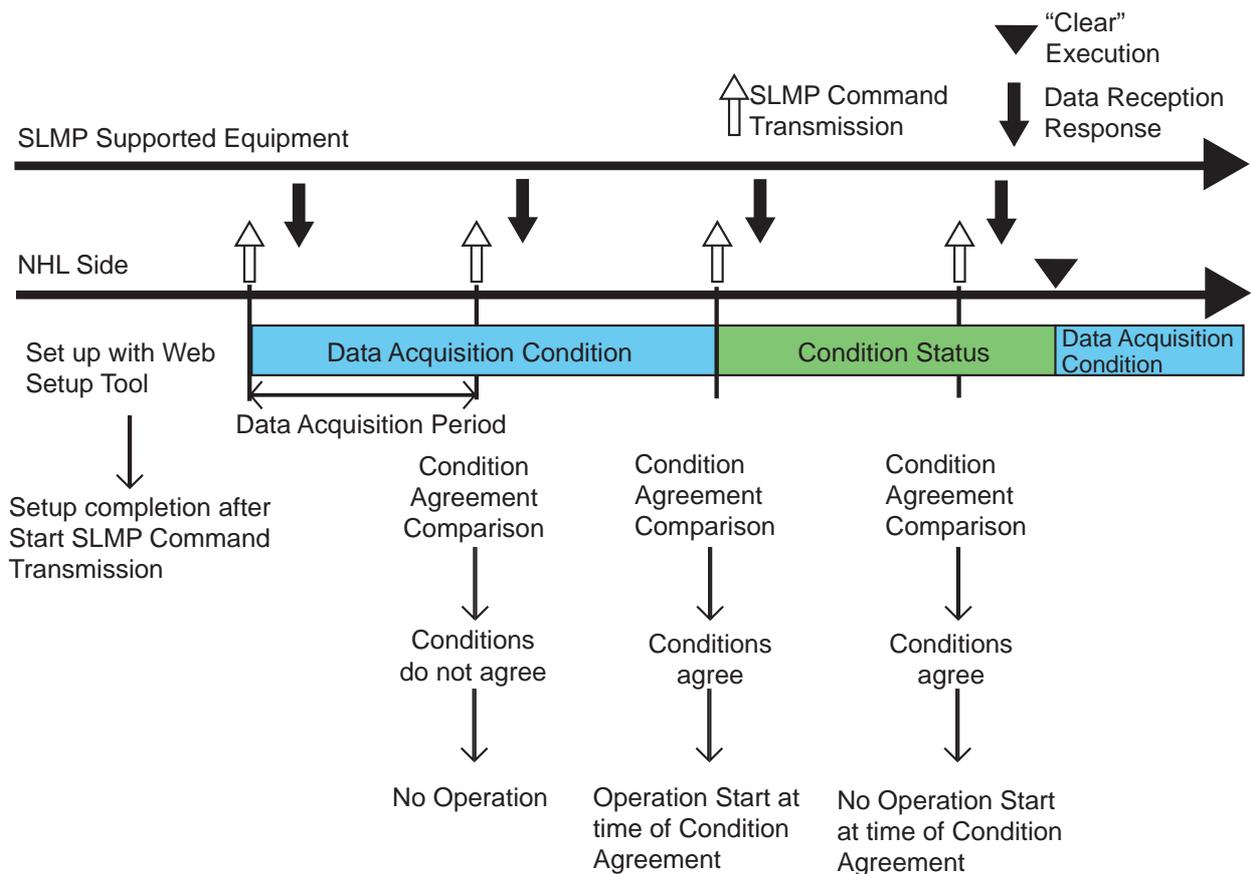
Device information from SLMP corresponding equipment can be acquisitioned. The comparison of the set agreement conditions for the acquired information is made and the operation of the Signal Tower occurs when the condition agreement is explained.

If the conditions set up are in agreement, a condition agreement status is recognized. If the conditions in the acquired data agree in the condition agreement status, the Signal Tower does not operate. The condition agreement status is cleared when entering a "Clear" operation.

Example: When it acquires device information from the equipment corresponding to SLMP and the condition is in agreement

1. If the contents is set for when the data acquired from the equipment corresponding to SLMP and product are in agreement, the Signal Tower performs its operation at the time of agreement.
  2. If it agrees with the data acquired in the condition agreement status, the Signal Tower does not operate.
  3. If a "Clear" operation is received in the condition agreement status, the condition agreement status will be cleared and it will return to its monitoring condition.
- If the data acquired does not agree on its conditions, it is cleared.

Fig. 3.17.2 SLMP Read Acquisition Command Transceiver Function Operation Flow



3

### 3.17.3 SLMP Read Command Transceiver Operation (When Error Occurs)

The following explains the operation at the time of receiving error data from the equipment corresponding to SLMP.

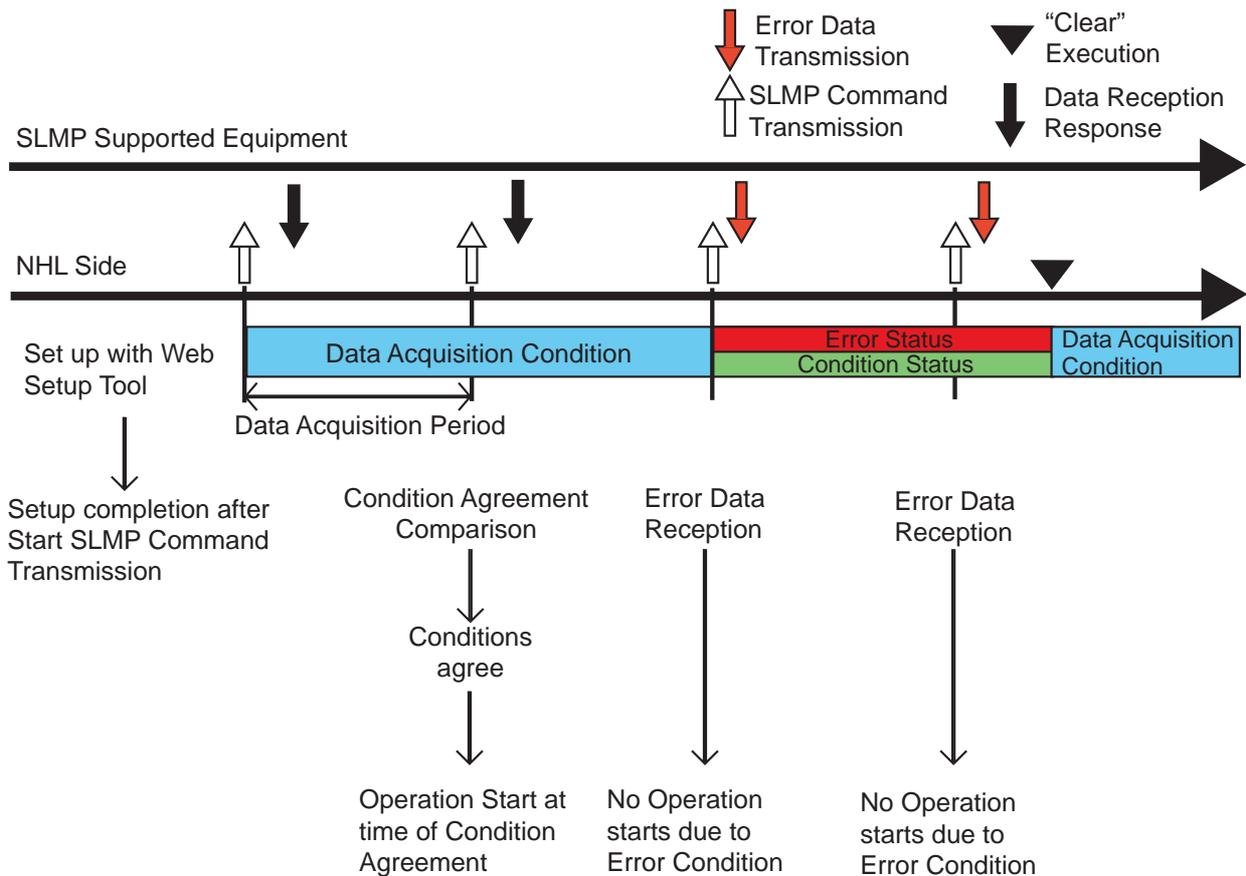
When acquired data information is errored, the operation of a Signal Tower can be set when the data error is received.

If error data is received once, it is recognized as an error condition. If error data is acquired again in a data error status, the Signal Tower does not operate. An error condition is cleared by entering a "Clear" operation.

Example: When acquiring error data from the equipment corresponding to SLMP

1. If the data acquired from the equipment corresponding to SLMP has error data, the Signal Tower operates at the time of error-data reception.
2. If the error data is acquired again in a data error status, the Signal Tower does not operate.
3. If a "Clear" command is received during a data error status, the data error status will be cleared and it will return to the data acquisition status. In addition, if normal data is received during an error condition, the error condition is cleared and it returns to the data acquisition status.

Fig. 3.17.3 SLMP Read Error Command Transceiver Operation Flow



### 3.18 SLMP Write Command Transmission Function

A SLMP write command can be transmitted when generating a "Clear" event. The addressee can register a maximum of four places, and can transmit individual command contents to each. The device can be selected to transmit from one or two points, and if the device is writing in bits, it would be a 1 or 2 bit value, and if set as a word device, one or 2 words of data can be transmitted.

Refer to "4.16 The SLMP write command set screen" for the setup method.

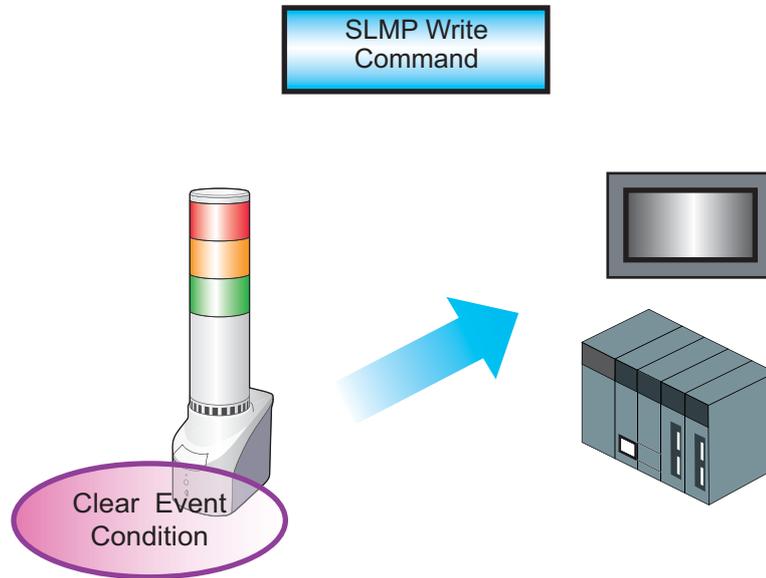


Table 3.18.1 XML Data Item Explanation

The "Clear" event used as a transmission opportunity
- When the "Clear" switch is pushed
- When a "Clear" from SNMP is done
- When a "Clear" command from RSH is executed

**Please**

If two or more addressees are established, the command transmission management selects one at a time from the low-priority in number order.

## 3.19 XML Data Output Function

The Signal Tower and buzzer status for this product is acquirable from an XML data format. Refer to "4.21 XML Setup Screen" for the setting method.

XML data can be obtained in the format shown below:

Fig. 3.19.1 XML Data Format for Signal Tower and Buzzer Status

```
<?xml version="1.0" encoding="utf-8"?>
<signaltower>
  <color/>
  <color name="LED1" value="0"/>
  <color name="LED2" value="1"/>
  <color name="LED3" value="2"/>
  <color name="LED4" value="3"/>
  <color name="LED5" value="0"/>
  <color/>
  <buzzer/>
  <buzzer name="BUZZER" value="4"/>
  </buzzer>
</signaltower>
```

Table 3.19.1 XML Data Item Explanation

Classification	Description
color name	The Signal Tower color is shown. The corresponding color is as follows. LED1: Red, LED2: Yellow, LED3: Green, LED4: Blue, LED5: White
buzzer name	The buzzer is shown.
color value	The Signal Tower status is shown. The corresponding status is as follows. 0: Lights Out, 1: Lighting, 2: Flashing Pattern 1, 3: Flashing Pattern 2
buzzer value	The buzzer status is shown. The corresponding status is as follows. 0: Stop, 1: Ringing Pattern1, 2: Ringing Pattern2, 3: Ringing Pattern3, 4: Ringing Pattern4

# 4 Function Setup

The function setup is available in order to take advantage of the various functions. To access the settings, click the setup items on the left-hand side of the Web Setup Tool to open the set up screen for the various functions.

Setup Category	Setup Screen	Setup Contents
Setup Menu	System Configuration	Sets up the network parameters.
	Clock Setup	Sets up the time for this product.
	User Authorization Configuration	Sets up the login password for this product.
	SNMP Configuration	Sets up the functions for the SNMP SET/GET and TRAP transmission.
	Socket Transmission Configuration	Sets up the ports to control the PHN Command and PNS Command outputs.
	E-mail Settings	Setup for sending E-mail notifications.
	E-Mail Message Settings	Setup for writing the message contents to be transmitted by E-mail.
	RSH Command Configuration	Setup for receiving the rsh command and to send the E-mail when an rsh reception and TRAP transmission are executed.
Operation Settings	TRAP Reception Configuration	The setup which controls the status condition when a TRAP or TRAP reception is received.
	Ping Monitor Configuration	The setup of the address for the monitored equipment and the management when an abnormality is detected.
	Application Monitoring Configuration	The setup is to verify whether data can be received from the monitored object.
	"Clear" Control Configuration	The setup for sending an E-mail when the "Clear" switch is pressed, and for the TRAP transmission setup.
	Normal Mode Settings	A setting, such as turning on a Green LED Unit, to indicate a normal condition.
	"Test" Switch Settings	The setup for sending an E-mail when the "Test" switch is pressed, and for the TRAP transmission setup.
	SLMP Read Command Setting	Device information for the equipment supporting SLMP is set to for a condition agreement to operate when an error occurs.
	SLMP Write Command Setting	Set up contents of the write command for when transmitting to the SLMP equipment.
NH Unit Controls	Signal Tower Output Control	The Signal Tower status is controlled from the browser.
	Reinitialization	The settings return to factory default values.
	XML Setting	Set up the XML Data Output
	Reboot	Reboots this product after settings have been changed to put them into effect.
Maintenance Functions	Event Log	The event log is displayed and can be downloaded.
	Configuration Setup	The setup items can be saved as config data and reloaded at any time.
	XML Setup	Set up the XML Data Output.
	Firmware Update	The Firmware update function can be done from this screen.
	Setup Table Entries	The list of items, their setup and operation contents, and the current firmware version is displayed.

**Please**

After the desired setup is completed, reboot this product by pressing the "reset" switch or by disconnecting the power and reconnecting it.

# 4.1 System Setup Screen

The network parameters for this product can be setup through a browser. The default IP address is "192.168.10.1".

The parameters can be setup from the System Setup Screen (Fig. 4.1.1 System Setup Screen) from the default values as shown in Table 4.1.1.

Fig. 4.1.1 System Setup Screen

System Configuration	
Firmware Version	Ver 1.31
System Name	Signal Tower
System Location	
Contact Address	nh@patlite.jp
IP Address Configuration Method	<input checked="" type="radio"/> Setup Manually <input type="radio"/> Setup Automatically
IP Address	192.168.10.1
Net Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server Address	0.0.0.0
Host Name	nh.patlite.jp

Table 4.1.1 System Setup Parameters

Item	Contents	Default Value	Input Parameter	Setting Option
Firmware Version	The current Firmware version is indicated	—	—	—
System Name	The name for this product can be set.	Signal Tower	Full/Half-width Characters Maximum 31 Characters	O
System Location	The setup location of this product can be entered.	Blank	Half-width alphanumeric characters and underscore “_” Maximum 31 Characters	O
Contact Address	Setup the contact address.	nh@patlite.jp	Mail address format Maximum 63 Characters	O
IP Address Configuration Method	Select between Manual or Automatic IP address configuration.	Setup Manually	Select Radio Button	X
IP Address	Setup the IP address of this product.	192.168.10.1	IP address format	X
Netmask	Setup the subnet mask of this product.	255.255.255.0	IP address format	X
Default Gateway	Setup the default gateway of this product.	0.0.0.0	IP address format	O
DNS Server Address	Setup the DNS server of this product.	0.0.0.0	IP address format	O
Host Name	Setup a host name	nh.patlite.jp	Enter a legitimate host name Maximum 63 Characters	—

The values for "Setting Option" in this manual has to have a valid entry, or can be left blank.

**Please**

- O Indicates the entry can be omissible, or any entry within the set parameters.
- X Indicates the entry cannot be omissible. Enter a valid parameter.
- Indicates an entry which cannot be omitted, or abbreviated. The value has to be entered in accordance to the customer's environment.

## 4.2 Clock Setup Screen

The clock setup for this product can be done through a browser. The clock setup can be accessed through the System Setup Screen (Fig. 4.2.1 Clock Setup Screen) from the default values as shown in Table 4.2.1.

Fig. 4.2.1 "Clock Setup" Screen

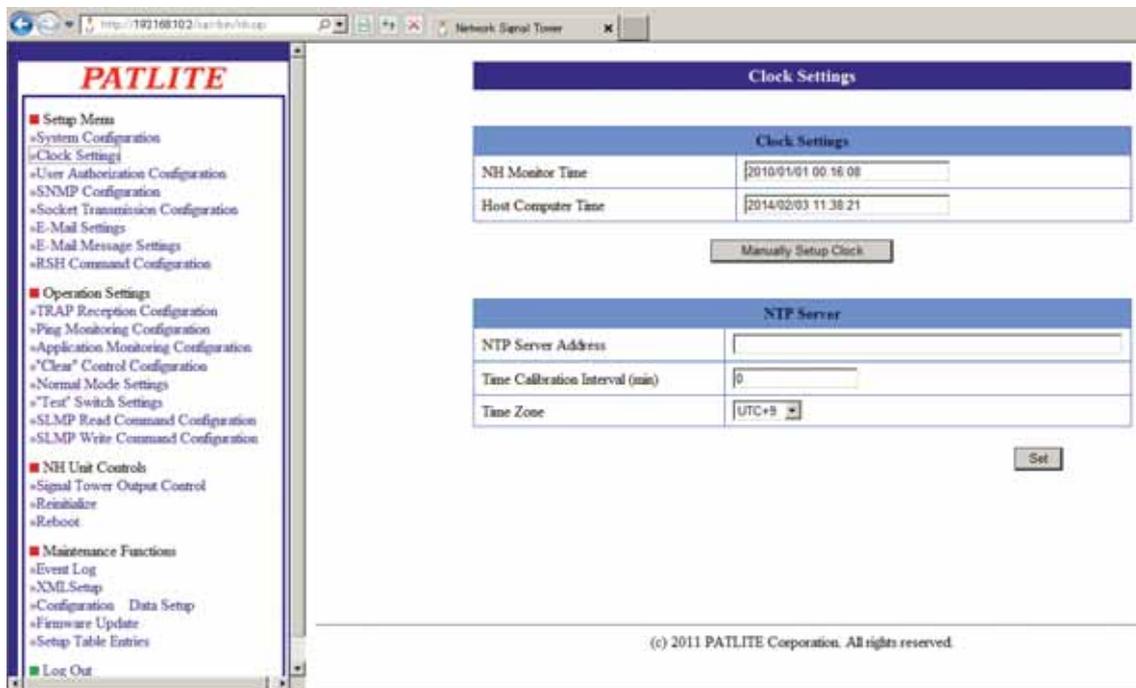


Table 4.2.1 Clock Setup Parameters

Item	Contents	Default Value	Input Parameter	Setting Option
NTP Server Address	Setup the NTP server address.	Blank	Server's Host Name or IP address Maximum of 63 characters	○
Time Calibration Interval	Setup the interval to communicate with an NTP server.	0	Half-width numbers from 0 to 1440 (minutes)	○
Time Zone	Setup the time zone.	UTC+9	—	—

Two kind of clock setup methods are indicated below:

- Synchronizing with the PC clock time when logging in.
- Adjusting clock of this product when communicating with an NTP server.

## 4.2.1 Synchronizing with the PC clock

Clicking the "Manually Setup Clock" button will synchronize with the time on the PC which has been logged into this product.

[Setup Method]

1. Compare the columns between the "NH Monitor Time" and the "Host Computer Time".
2. Click the "Manually Setup Clock" button to synchronize the time with the PC which is logged in.

**Please**

Due to the reading delay in the software, this product may not reflect the exact time down to the second to match the PC, so there may be a few seconds of a delay.  
When not using an NTP server, please check the time of this product periodically.  
If power to this unit is disconnected for about a day and a half, it may result in an offset of the time, so it is highly recommended that the customer who uses this product to resynchronize the time.

Fig. 4.2.2 "Manually Setup Clock" Setup Screen Before

Clock Settings	
Clock Settings	
NH Monitor Time	<input type="text" value="2010/01/01 00:16:08"/>
Host Computer Time	<input type="text" value="2014/02/03 11:38:21"/>
<input type="button" value="Manually Setup Clock"/>	

NTP Server	
NTP Server Address	<input type="text"/>
Time Calibration Interval (min)	<input type="text" value="0"/>
Time Zone	UTC+9
<input type="button" value="Set"/>	

①  
②

Fig. 4.2.3 "Manually Setup Clock" Setup Screen After

Clock Settings	
Clock Settings	
NH Monitor Time	<input type="text" value="2014/02/03 11:40:13"/>
Host Computer Time	<input type="text" value="2014/02/03 11:40:15"/>
<input type="button" value="Manually Setup Clock"/>	

NTP Server	
NTP Server Address	<input type="text"/>
Time Calibration Interval (min)	<input type="text" value="0"/>
Time Zone	UTC+9
<input type="button" value="Set"/>	

①

## 4.2.2 Synchronizing with an NTP server

An NTP server can be linked by entering the NTP server address to synchronize with the clock in this product, and the time updated by sending a request for time adjustment to that NTP server.

[Setup Method]

- Enter the NTP server address in the "NTP Server Address" column.
- Enter a value for the interval to communicate with the NTP server in the "Time Calibration Interval" column.
- Click the "Set" button to activate the setup.

Fig. 4.2.4 NTP server Clock Setup Screen

Clock Settings	
NH Monitor Time	2014/02/03 11:40:13
Host Computer Time	2014/02/03 11:40:15

Manually Setup Clock

NTP Server	
NTP Server Address	
Time Calibration Interval (min)	0
Time Zone	UTC+9

Set

## 4.2.3 Setting Time Zone

Determine the area to be used when setting the time zone.

[Setup Method]

- Select from the "time zone" column and click to set.
- Click the "Set" button to activate the setup.

Fig. 4.2.5 Time Zone Setup Screen

Clock Settings	
NH Monitor Time	2014/02/03 11:40:36
Host Computer Time	2014/02/03 11:40:38

Manually Setup Clock

NTP Server	
NTP Server Address	
Time Calibration Interval (min)	
Time Zone	UTC+9

Set

## 4.3 User Authentication Configuration Screen

Setup a password to log into the Setup Screen for this product.

Enter a password, then re-enter the password to verify its entry, then click the "Set" button to activate it. The next time for logging in will ask for the new password. The password entry will allow up to 16 half-width alphanumeric characters and a period.

[Setup Method]

- . Enter the password to be changed into the "Password" column.
- . Enter the same password to be changed into the "Re-enter Password" column to verify the entry.
- . Click the "Set" button to activate the setup.

Log in with the new password the next time the login screen appears.

Fig. 4.3.1 User Authentication Setup Screen

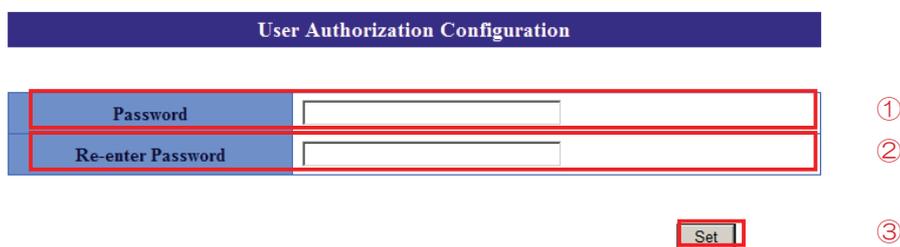


Table 4.3.1 User Authentication Setup Parameters

Item	Contents	Default Value	Input Parameter	Setting Option
Password	Setup a new password.	Blank	Half-width alphanumeric character and period "." Maximum 16 Characters	X
Re-enter Password	Confirm the new password	Blank	Half-width alphanumeric character and period "." Maximum 16 Characters	X

## 4.4 SNMP Setup Screen

With an SNMP, this product can communicate outside the community name for the notification of a TRAP, using the SNMP SET/GET in reference to each item for this product, and generate the event with this product.

### 4.4.1 SNMP SET/GET

An SNMP SET/GET can be setup.

[Setup Method]

- Select the "Active" radio button to enable the SNMP function.
- Enter the SET/GET community parameter.

### 4.4.2 SNMP TRAP Transmission

An SNMP TRAP Transmission can be setup.

[Setup Method]

- Select the "Active" radio button to enable the TRAP transmission function.
- Enter the TRAP Transmission community parameter and the TRAP transmission frequency.
- Enter in the TRAP Address column, the IP address for sending the TRAP notification to.
- Click the "Set" button to activate the setup.

#### **TRAP command which is transmitted when the TRAP is active**

OID: 1.3.6.1.4.1.20440.4.1.6.3  
Name: trapPatliteTrapReceived

Fig. 4.4.1 SNMP Setup Screen

SNMP Configuration	
<b>Community Name</b>	
SNMP Function	<input checked="" type="radio"/> Active <input type="radio"/> Inactive
SET Community	private
GET Community	public
<b>TRAP Transmission</b>	
TRAP Transmission Function	<input type="radio"/> Active <input checked="" type="radio"/> Inactive
TRAP Transmission Community	public
Number of Trap Transmissions	1
<b>TRAP Address of Receiver</b>	
1	
2	
3	
4	
5	
6	
7	
8	
Set	

Table 4.4.1 SNMP Setup Parameters

Item	Contents	Default Value	Input Parameter	Setting Option
SNMP Function	Setup to Activate/Inactivate the SNMP function.	Active	—	—
SET Community Name	Setup the name to use when reading an SNMP setup value.	private	Half-width alphanumeric character and underscore “_” Maximum 32 Characters	—
GET Community Name	Setup the name to use when writing an SNMP setup value.	public	Half-width alphanumeric character and underscore “_” Maximum 32 Characters	—
TRAP Transmission Function	Setup to Activate/Inactivate the trap transmission function.	Inactive	—	—
TRAP Transmission Community Name	Setup the community name for the trap which is transmitting.	public	Half-width alphanumeric character and underscore “_” Maximum 32 Characters	—
TRAP Transmission Frequency	Setup for the number of times a trap can be transmitted	1	Half-width numbers from 1 to 10	—
TRAP IP Address to Receiver	IP address format for the destination of sending a TRAP transmission to.	Blank	Characters which can be used for a server address Maximum 63 Characters	0

## 4.5 Socket Communication Setup Screen

Set up for the use of the PHN Command and PNS Command with Socket Communication.

[Setup Method]

- Select either "TCP" or "UDP" in the "Protocol" field for the communication method.
- Enter the port to be used in the "Port Number" field.
- Click the "Set" button to save all entries.

Fig. 4.5.1 Socket Communication Setup Screen

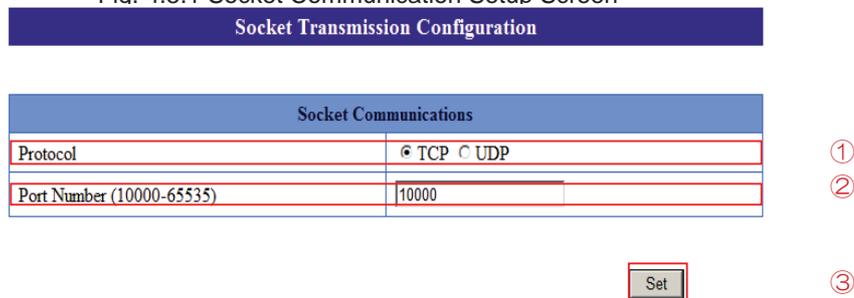


Table 4.5.1 Socket Communication Setup Parameters

Item	Contents	Default Value	Input Parameter	Setting Option
Protocol	Select from TCP or UDP	TCP	—	—
Port Number	Set the reception port number	10000	Half-width numbers from 10000 to 65535	—

**Note** Refer to 3.5 "PHN Command Reception Function" for PHN Commands.  
Refer to 3.6 "PNS Command Reception Function" for PNS Commands.

## 4.6 Mail Transmission Setup Screen

This product can be set up to send E-mail messages. The following are events which will transmit E-mail messages.

When transmitting an E-mail, it is transmitted in sequence from the smaller address number to the larger address number of the recipient.

### E-mail Transmitting Event

- At the time of an RSH command reception
- At the time of a TRAP reception
- At the time when the "CLEAR" button is pressed.
- At the time when a "Clear SNMP" command is executed.
- At the time when an SLMP Write Command Condition occurs.
- At the time when an SLMP Write Command Condition Error occurs.
- At the time of a Ping monitoring abnormality and Ping recovery event.
- At the time of an application monitoring abnormality and recovery event.

[Setup Method]

- Set up the SMTP mail server address and port number.
- When using the SMTP authentication, set up the account name and SMTP authentication password.
- When using the POP authentication, set up the POP account name and POP authentication password.
- Select "None" for when authentication is not necessary.
- Set up in the designated sender address column the E-mail address of the designated sender.
- Set up the address of the recipient.
- Click the "Set" button to save all settings.

Fig. 4.6.1 Mail Transmission Setup Screen

E-Mail Settings			
Server Configuration			
SMTP Server Address	<input type="text" value="0.0.0.0"/>		
SMTP Port Number	<input type="text" value="25"/>		
Method	Encrypted Connection	<input type="radio"/> SSL <input type="radio"/> TLS <input type="radio"/> None	
	<input type="radio"/> SMTP Authentication	SMTP Account Name	<input type="text"/>
		SMTP Authentication Password	<input type="text"/>
	<input type="radio"/> POP Authentication	POP Server Address	<input type="text"/>
		POP Port Number	<input type="text" value="110"/>
		POP Account Name	<input type="text"/>
		POP Authentication Password	<input type="text"/>
<input type="radio"/> No Authentication			
Transmission Settings			
Source Address	<input type="text"/>		
Address of Receiver	1	<input type="text"/>	
	2	<input type="text"/>	
	3	<input type="text"/>	
	4	<input type="text"/>	
	5	<input type="text"/>	
	6	<input type="text"/>	
	7	<input type="text"/>	
	8	<input type="text"/>	
<input type="button" value="Set"/>			

(c) 2011 PATLITE Corporation. All rights reserved.

Table 4.6.1 E-mail Transmission Setup Protocol

Item	Contents	Default Value	Input Parameter	Setting Option
SMTP Server Address	Set the IP Address of the SMTP Server	0.0.0.0	Characters which can be used for a server address Maximum 63 Characters	—
SMTP Port Number	Set the port number of the SMTP Server	25	Half-width numbers from 1 to 65535	—
Authentication Protocol	Select among "SMTP Authentication/POP Authentication/No Authentication".	No Authentication	—	—
Encrypted Connection	Select between "SSL", "TLS" or "None".	None	—	—
SMTP Account Name	Set the user name for SMTP Authentication.	Blank	Half-width alphanumeric characters, characters which can be used for E-mail addresses Maximum 32 characters	○
SMTP Authentication Password	Set up the password for SMTP Authentication.	Blank	Half-width alphanumeric characters Maximum 32 characters	○
POP3 Server Address	Set up the POP3 server IP Address.	Blank	Characters which can be used for a server address Maximum 63 Characters	○
POP3 Port Number	Set up the port number for the POP3 server.	110	Half-width numbers from 1 to 65535	—
Account Name	Set up the user name of the POP Authentication.	Blank	Half-width alphanumeric characters, characters which can be used for E-mail addresses Maximum 32 characters	○
Password	Set up the password for POP Authentication	Blank	Half-width alphanumeric characters Maximum 32 characters	○
Source Address	Set up the E-mail address for the designated sender.	Blank	Characters which can be used for an E-mail address Maximum 63 Characters	○
Destination Addresses 1 through 8	Set up the destination addresses for the E-mail to be sent to.	Blank	Characters which can be used for an E-mail address Maximum 63 Characters	○

## 4.7 Message Contents Setup Screen

The following is the setup of E-mail subject titles and message contents for E-mail Sending. When sending E-mails, the contents can be personalized to match the coinciding mail notifications by entering a subject title and message content to transmit.

[Setup Method]

- . Enter in the "Subject" field a subject title to transmit by e-mail.  
(Use full or half-width alphanumeric characters of up to 31 characters)
- . Enter in the "Message" field a text message to transmit by e-mail.  
(Use full or half-width alphanumeric characters of up to 63 characters)
- . Click the "Set" icon button to save all entries.

Fig. 4.7.1 Message Contents Setup Screen

**E-Mail Message Settings**

Subject			
1	<input type="text" value="Message from Signal Tower"/>	9	<input type="text" value="Message from Signal Tower"/>
2	<input type="text" value="Message from Signal Tower"/>	10	<input type="text" value="Message from Signal Tower"/>
3	<input type="text" value="Message from Signal Tower"/>	11	<input type="text" value="Message from Signal Tower"/>
4	<input type="text" value="Message from Signal Tower"/>	12	<input type="text" value="Message from Signal Tower"/>
5	<input type="text" value="Message from Signal Tower"/>	13	<input type="text" value="Message from Signal Tower"/>
6	<input type="text" value="Message from Signal Tower"/>	14	<input type="text" value="Message from Signal Tower"/>
7	<input type="text" value="Message from Signal Tower"/>	15	<input type="text" value="Message from Signal Tower"/>
8	<input type="text" value="Message from Signal Tower"/>	16	<input type="text" value="Message from Signal Tower"/>

Message	
1	<input type="text"/>
2	<input type="text"/>
3	<input type="text"/>
4	<input type="text"/>
5	<input type="text"/>
6	<input type="text"/>
7	<input type="text"/>
8	<input type="text"/>
9	<input type="text"/>
10	<input type="text"/>
11	<input type="text"/>
12	<input type="text"/>
13	<input type="text"/>
14	<input type="text"/>
15	<input type="text"/>
16	<input type="text"/>

(c) 2011 PATLITE Corporation. All rights reserved.

Item	Contents	Default Value	Input Parameter	Setting Option
Subject 1 to 16	Subject titles from 1 to 16 can be entered	Message from Signal Tower	Full or half-width alphanumeric characters Maximum 31 Characters	○
Message 1 to 16	Messages from 1 to 16 can be entered	Blank	Full or half-width alphanumeric characters Maximum 63 Characters	○

## 4.8 RSH Command Setup Screen

RSH (remote shell) Commands can control the Signal Tower and buzzer on this product. The following explains the setup to be able to receive the RSH Commands.

[Setup Method]

### **RSH Server Function**

- . When receiving the RSH Commands, first turn on the RSH Server function by selecting "Active."

### **RSH Alert Timer Reset Function**

- . A timer can be implemented to control the operating timing of each tier and the buzzer with an RSH command sent to the Signal Tower.  
If the "Shared" function is selected, the timing control for each color can be in common.  
If the "Separate" function is selected, the timing control for each color is controlled individually.

### **E-mail Transmission**

- . To have E-mail Sending when an RSH Command has been received, and for it to make a report, select "Active".  
Select "Inactive" to prevent any E-mail Sending.

### **When E-mail Sending is selected for "Active"**

- . Select the desired E-mail contents to transmit from the registered subject titles and the text messages after the E-mail Sending is activated.  
After the E-mail contents are selected, choose the E-mail recipients.

### **TRAP Transmission**

- . To have a trap transmission sent after an RSH Command, select "Active" for TRAP transmission to transmit the TRAP.  
If the TRAP Transmission is not utilized, select "Inactive".

### **The "TRAP Command" for this product to receive when the TRAP condition occurs**

OID: 1.3.6.1.4.1.20440.4.1.6.5  
Name: trapPatliteRshExecuted

### **Designated E-mail Sender Address Setup**

- . If address restrictions are made for sending an RSH Command to a designated recipient, select "Active" for the designated sender address.  
If no restrictions have been made, select "Inactive".

### **When "Inactive" is selected for designated sender addressing**

- . Enter a common login name while the designated sender IP address is invalid.  
Click the "Set" button on the lower right side of the screen for the settings to be saved.

### **When "Active" is selected for designated sender addressing**

- . Enter the IP address into the designated sender IP address column to allow command execution. A maximum of 16 accounts can be registered.  
To allow activation for command execution, enter a login name.  
. Click the "Set" icon button to initiate the setup.

**Please**

When using this product with the internal timer function, if the RSH Alert Timer Reset Function is changed, the timers for all the LEDs and buzzer is canceled.

Fig. 4.8.1 RSH Command Setup Screen

RSH Command Configuration		
<b>RSH Server</b>		
RSH Server Function	<input checked="" type="radio"/> Active <input type="radio"/> Inactive	①
RSH alert timer reset function	<input checked="" type="radio"/> Shared <input type="radio"/> Separate	②
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive Subject: 1.Message Message: 1:	③ ④
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned	⑤
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive	⑥
<b>Connection Permission Configuration</b>		
Designate Sender Address	<input type="radio"/> Active <input checked="" type="radio"/> Inactive	⑦
Common login name when designated sender address is inactive. patlite		
Sender IP Address	Login Name	
1		
2		
3		
4		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
<input type="button" value="Set"/>		⑧ ⑨

Table 4.8.1 RSH Command Setup Parameters

Item	Contents	Default Value	Input Parameter	Setting Option
RSH Server Function	Select Active/Inactive for the RSH server function.	Active	—	—
RSH Alert Timer Reset Function	Select “Shared” or “Separate” to control the Signal Tower lights and buzzer		—	—
E-mail Transmission	Select Active/Inactive for sending an E-mail when a command is received.	Inactive	—	—
Subject	Select the subject title for the mail to be transmitted.	1. Message	—	—
Message	Select the message text for the mail to be transmitted.	1:	—	—
E-mail Receiver	Select the recipient to send E-mail to.	Undefined	—	—
TRAP Transmission	Select Active/Inactive for the TRAP transmission when an RSH Command is received.	Inactive	—	—
Designated Sender Address	Setup a designated address for a sender when an RSH Command is received.	Active	—	—
Invalid Designated Sender Address/ Common Login Name IP Address	When the designated sender address setup is not active, up to 16 accounts can be used to notify senders when an RSH Command is received.	Blank	IP Address Format	○
Sender IP Address	The designated IP address used when a command is executed.	Blank	Half-width alphanumeric character, period “.”, hyphen “-” Maximum 16 Characters	○
Login Name	The login name used is entered to allow command execution.	Blank	Half-width alphanumeric character, period “.”, hyphen “-” Maximum 16 Characters	○

## 4.9 TRAP Reception Setup Screen

Setup for permitting a TRAP reception and its operation after the TRAP communication is received.

[Setup Method]

- . Enter a group name.
- . Enter an address name for the TRAP designated sender\*.
- . Enter the OID of the TRAP received in the TRAP number column.
- . Enter the OID into the variable-bindings column\*.
- . Refer to the following **Please** **Note** below:
- . Set up the operation for the Signal Tower when a TRAP is received.
- . Select the E-mail Sending configuration when receiving a TRAP.

### When the E-mail Sending is "Active"

Select the subject title and message after the E-mail Sending is activated.

- . Select "Active" when using the TRAP transmission.

### "TRAP Command" received when a TRAP condition occurs

OID: 1.3.6.1.4.1.20440.4.1.6.3

Name: trapPatliteTrapReceived

- . Click the "Set" button to save the settings.

#### **Please**

A TRAP number cannot be omitted if a TRAP designated sender address name is omitted. When a TRAP number has been duplicated and is registered into the group, the least significant setup number in the group is used. The following group number after that number is not used.

#### **Note**

- If the TRAP designated address is entered, then the TRAP number column and variable bindings can be omitted. When the TRAP number column and variable bindings are omitted, then all operations will be received by the TRAP transmission address which was setup for the TRAP designated sender.
- When a TRAP designated sender address name is omitted, the operation is determined only by the TRAP number.
- Among two existing variable binding registrations, the first registration is also possible.
- If the TRAP designated sender address name and TRAP number is omitted, it will not operate, even with variable bindings registered.
- Judgement can be made by the reception function with the number of variable-bindings as 8 with one per trap. To receive nine or more variable bindings, the traps 1-8 must first be set to operate in the OID at the time of reception. Be aware that the OID after the 9th piece does not operate, even after it is set.

Fig. 4.9.1 TRAP Reception Setup Screen

TRAP Reception Configuration	
<div style="display: flex; justify-content: space-between; margin-bottom: 0;"> <span>1</span> <span>2</span> <span>3</span> <span>4</span> <span>5</span> <span>6</span> <span>7</span> <span>8</span> <span>9</span> <span>10</span> <span>11</span> <span>12</span> <span>13</span> <span>14</span> <span>15</span> <span>16</span> </div>	
TRAP Reception Configuration Group1	
Group Name1	<input type="text"/>
TRAP Source Address	<input type="text"/>
TRAP OID	<input type="text"/>
variable-bindings1	OID: <input type="text"/> Type: integer Value: 0
variable-bindings2	OID: <input type="text"/> Type: integer Value: 0
2	TRAP Source Address
	TRAP OID
	variable-bindings1
	variable-bindings2
3	TRAP Source Address
	TRAP OID
	variable-bindings1
	variable-bindings2
4	TRAP Source Address
	TRAP OID
	variable-bindings1
	variable-bindings2

Output Control Setting for TRAP Reception1	
RED	<input type="text" value="No Change"/>
AMBER	<input type="text" value="No Change"/>
GREEN	<input type="text" value="No Change"/>
BLUE	<input type="text" value="No Change"/>
WHITE	<input type="text" value="No Change"/>
BUZZER	<input type="text" value="No Change"/>
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive                 Subject: 1.Message <input type="text"/> Message: 1: <input type="text"/>
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive

Table 4.9.1 TRAP Reception Setup Parameters

Item	Contents	Default Value	Input Parameter	Setup Option
Group Name	Setup a group name	Blank	Full/Half-size Characters Maximum 32 Characters	○
Trap Designated Sender Addresses 1 to 4	Setup the designated TRAP sender addresses from 1 to 4 for a group	Blank	IP Address Format	○
Trap Number Items 1 to 4	Setup the Object ID TRAP numbers to receive trap commands from 1 to 4 for the group	Blank	Integers and Period "." Maximum 127 Characters	○
OID Items 1 to 4 (variable bindings)	Setup the TRAP command object ID with variable bindings for items 1 to 4	Blank	Integers and Period "." Maximum 127 Characters	○
Model Items 1 to 4 (variable bindings)	Setup the variable bindings object ID model to receive TRAP commands. Only integer types can be selected	Integer	—	—
Value Items 1 to 4 (variable bindings)	Setup the variable binding's object ID to receive traps.	0	Integer (0 to 65535)	—
Red	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Amber	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Green	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Blue	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
White	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Buzzer	Select from: Pattern1- Pattern2- Pattern3- Pattern4- Stop- No Change	No Change	—	—
E-mail Transmission	Set Active or Inactive for sending E-mail.	Inactive	—	—
Subject	Select the E-mail subject title contents	1. Message	—	—
Message	Select the E-mail text message contents	1:	—	—
TRAP Transmission	Set Active or Inactive for the trap transmission.	Inactive	—	—

## 4.10 Ping Monitor setup Screen

By setting an IP address or a host name to the address column, the Ping monitor can be used.

When the Ping monitor detects an abnormality, it generates a monitor abnormality condition as a result. After a monitor abnormality is generated, if there is a response from a Ping request, it will then determine a recovery from the abnormal condition, and will continue its normal operation after restoration.

A maximum number of 24 Ping monitors can be registered. Although, screen numbers from 1 to 12 have a fixed Ping monitoring period of 60 seconds, screen numbers 13 to 24 have adjustable Ping monitoring periods.

### 4.10.1 Ping Monitor Configuration (Screen Numbers 1 to 12)

[Setup Method]

- Select the screen number (No. 1-12) to setup the Ping monitoring parameters.
- Enter the IP address for a target to monitor in the "Monitoring Target Address" field.
- Enter the device name for a target to monitor in the "Equipment Name" field.
- Set up the Transmission Frequency (number of times a Ping request is sent to determine a Ping abnormality).
- Setup the status change for the Signal Tower when a monitor abnormality is detected.
- To send an E-mail when a monitor abnormality occurs, set the E-mail Sending to "Active".

When the E-mail Sending is activated:

Register the subject and the message text to transmit.

#### **When the E-mail Sending is activated**

Register the subject and the message text to transmit. Then, select the recipient for the E-mail Sending.

- Select the E-mail Sending configuration when receiving a TRAP.

#### **TRAP command transmitted when the TRAP is active**

OID: 1.3.6.1.4.1.20440.4.1.6.1

Name: trapPatliteAlarmAdded

Fig. 4.10.1 Ping Monitor Setup Screen

Ping Monitoring Configuration	
<div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="border: 1px solid red; padding: 2px; margin: 2px;">1</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">2</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">3</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">4</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">5</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">6</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">7</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">8</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">9</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">10</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">11</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">12</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">13</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">14</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">15</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">16</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">17</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">18</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">19</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">20</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">21</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">22</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">23</div> <div style="border: 1px solid red; padding: 2px; margin: 2px;">24</div> </div>	
<b>Monitoring Targeted Equipment1</b>	
Monitoring Target Address	<input type="text"/>
Equipment Name	<input type="text"/>
Transmission Frequency (0-30)	<input type="text" value="0"/> (Set the number of pings within the monitoring period.)
<b>Operation Setting for Ping Monitoring Abnormality1</b>	
RED	<input type="text" value="No Change"/>
AMBER	<input type="text" value="No Change"/>
GREEN	<input type="text" value="No Change"/>
BLUE	<input type="text" value="No Change"/>
WHITE	<input type="text" value="No Change"/>
BUZZER	<input type="text" value="No Change"/>
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive Subject <input type="text" value="1.Message"/> Message <input type="text" value="1:"/>
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned

[Setup Method Continued]

- Setup for Signal-Tower operation when a recovery from a monitor abnormality occurs.
- To send an E-mail when a monitor abnormality recovery occurs, set the E-mail Sending to "Active".

**When the E-mail Sending is activated**

Register the subject and the message text to transmit. Then, select the recipient for the E-mail Sending.

- When using the TRAP transmission, set to "Active".
- Click the "Set" button to activate the setup.

**TRAP Command received when TRAP condition occurs**

OID: 1.3.6.1.4.1.20440.4.1.6.2  
 Name: trapPatliteAlarmRemoved

Fig. 4.10.2 Ping Monitor Setup Screen 2

Output Control Setting for Recovery from Ping Monitoring Error1	
RED	No Change
AMBER	No Change
GREEN	No Change
BLUE	No Change
WHITE	No Change
BUZZER	No Change
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive Subject 1.Message Message 1:
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive

(c) 2011 PATLITE Corporation. All rights reserved.

Table 4.10.1 Ping Monitor Setup Parameters

Item	Contents	Default Value	Input Parameter	Setup Option
Monitoring Target Address	Setup the IP address or host name for the monitoring ping.	Blank	IP Address or Host Name Maximum 63 Characters	○
Equipment Name	Setup the name of the equipment to send a transmission monitoring ping destination.	Blank	Full/Half-size Characters Maximum 32 Characters	○
TRAP Transmission Frequency	Setup the periodic number of Ping requests to be made.	0	Half-size Integers 0 to 30	—
Red	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Amber	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Green	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Blue	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
White	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Buzzer	Select from: Pattern1- Pattern2- Pattern3- Pattern4- Stop- No Change	No Change	—	—
Email Transmission	Select the Active/Inactive condition for the E-mail Sending.	Inactive	—	—
Subject	Select the E-mail subject title	1. Message	—	—
Message	Select the E-mail message to text	1:	—	—
TRAP Transmission	Select the Active/Inactive condition for the trap transmission.	Inactive	—	—

## 4.10.2 Ping Monitor Configuration (Screen Numbers 13 to 24)

The following explains the Ping monitor setting method. A maximum number of 24 Ping monitors can be registered.

Although the monitoring periods for screen numbers 1 through 12 is fixed at 60 seconds, the transmission number in columns 13 through 24 can be changed (1 to 600 seconds).

[Setup Method]

- . Select the screen number between 13 to 24 to setup the Ping monitoring parameters.
- . Enter the IP address for a target to monitor.
- . Enter the device name for a target to monitor.
- . Set up the number of transmission times. (Number of Pings to send:0-30 pings)
- . Set up the monitoring duration. (Duration to monitor Ping response: 1-600 seconds)
- . Set up the number of Ping requests within the duration. (Number of Pings per period: 1-3 times)
- . Setup the condition for the Signal Tower when a monitor abnormality is detected.
- . To send an E-mail when a monitor abnormality occurs, set the E-mail Sending to "Active".

### When the E-mail Sending is activated

Register the subject and the message text to transmit. Then, select the recipient for the E-mail Sending.

- . When using the TRAP transmission, set to "Active".

TRAP command transmitted when the TRAP is active

OID: 1.3.6.1.4.1.20440.4.1.6.1

Name: trapPatliteAlarmAdded

Fig. 4.10.3 Ping Monitor Setup Screen (Screen Number No. 21)

**Ping Monitoring Configuration**

①

Monitoring Targeted Equipment21	
Monitoring Target Address	
Equipment Name	
Transmission Frequency (0-30)	0 (Set the number of pings within the monitoring period)
Monitoring Interval (1-600)	60 (Set the sending period for the Ping)
Number of Transmissions (1-3)	1 (Set the number of Pings per period)

②  
③  
④  
⑤  
⑥

Operation Setting for Ping Monitoring Abnormality21	
RED	No Change
AMBER	No Change
GREEN	No Change
BLUE	No Change
WHITE	No Change
BUZZER	No Change
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive Subject 1.Message Message 1:
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive

⑦  
⑧  
⑨

- . Setup the condition for the Signal Tower when a monitor abnormality recovery is detected.
- . To send an E-mail when a monitor abnormality recovery occurs, set the E-mail Sending to "Active".

**When the E-mail Sending is activated**

Register the subject and the message text to transmit. Then, select the recipient for the E-mail Sending.

- . When using the TRAP transmission, set to "Active".

TRAP Command received when TRAP condition occurs

OID: 1.3.6.1.4.1.20440.4.1.6.2

Name: trapPatliteAlarmRemoved

- . Click the "Set" button to save the settings.

Fig. 4.10.4 Ping Monitor Setup Screen 2 (Screen Numbers 21 through 24)

Output Control Setting for Recovery from Ping Monitoring Error21	
RED	No Change ▾
AMBER	No Change ▾
GREEN	No Change ▾
BLUE	No Change ▾
WHITE	No Change ▾
BUZZER	No Change ▾
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive Subject 1.Message ▾ Message 1: ▾
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive

Table 4.10.2 Ping Monitor Setup Parameters ( Screen Numbers 21 to 24)

Item	Contents	Default Value	Input Parameter	Setup Option
Transmission Frequency	Number of pings to send within the duration	0	0 to 30 (Pings)	—
Monitoring Duration	The time duration for sending a Ping response.	60	1 to 600 (sec)	—
Number of Transmissions	The number of Pings to transmit within the monitoring duration	1	1 to 3 (times)	—

# 4.11 Application Monitor Setup Screen

Setup for monitoring an application. The data reception of the target is monitored. If data is not received within the monitoring period, it detects the communication as being abnormal, and generates an abnormality event. After a generated event, if data is received from the monitored candidate, it will detect a recovery from the abnormal operation.

[Setup Method]

- . Select from screen number 1 to 4 to setup an application monitor.
- . Enter the address for the targeted monitor.
- . Enter the receiving port number.
- . Enter a device name.
- . Set up the monitoring period.

### Operation Setting for Monitoring Abnormality

- . Setup the condition for the Signal Tower when a monitor abnormality is detected.
- . To send an E-mail when a monitor abnormality occurs, set the E-mail Sending to "Active".

### When the E-mail Sending is activated

Register the subject and the message text to transmit. Then, select the recipient for the E-mail Sending.

- . When using the TRAP transmission, set to "Active".

Fig. 4.11.1 Application Monitor Setup Screen

Application Monitoring Configuration

1
2
3
4

Monitoring Target Application1	
Monitoring Target Address	<input style="width: 90%;" type="text"/>
Reception Port Number (9000-9999)	<input style="width: 90%;" type="text" value="0"/>
Equipment Name	<input style="width: 90%;" type="text"/>
Monitoring Interval (0-60000)	<input style="width: 90%;" type="text" value="0"/>

---

Operation Setting for Application Monitoring Abnormality1	
RED	No Change ▾
AMBER	No Change ▾
GREEN	No Change ▾
BLUE	No Change ▾
WHITE	No Change ▾
BUZZER	No Change ▾
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive                     Subject 1: <input style="width: 100px;" type="text"/> Message 1: <input style="width: 100px;" type="text"/>
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive

①
②
③
④
⑤
  
⑥
⑦
⑧

**TRAP Command received when TRAP condition occurs**

OID: 1.3.6.1.4.1.20440.4.1.6.6  
Name: trapPatliteMonitorAppAlarmAdded

**Output Control Setting for Monitoring Error Recovery**

- . Setup the condition for the Signal Tower when a monitor abnormality recovery is detected.
- . To send an E-mail when a monitor abnormality recovery occurs, set the E-mail Sending to "Active".

**When the E-mail Sending is activated**

Register the subject and the message text to transmit. Then, select the recipient for the E-mail Sending.  
. When using the TRAP transmission, set to "Active".

**TRAP Command received when TRAP Transmission condition occurs**

OID: 1.3.6.1.4.1.20440.4.1.6.7  
Name: trapPatliteMonitorAppAlarmRemoved

- . Click the "Set" icon button to initiate the setup.

Fig. 4.11.2 Application Monitor Setup Screen

Output Control Setting for Recovery from Application Monitoring Error 1	
RED	No Change ▾
AMBER	No Change ▾
GREEN	No Change ▾
BLUE	No Change ▾
WHITE	No Change ▾
BUZZER	No Change ▾
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive Subject 1.Message ▾ Message 1: ▾
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive

Table 4.11.1 Application Monitor Setup Parameters

Item	Contents	Default Value	Input Parameter	Setup Option
Monitoring Target Address	Setup the IP address for transmission monitoring.	Blank	IP Address Format	○
Reception Port Number	Set up the reception port used for the application monitoring.	0	Half-width numbers 9000-9999 (When the address column for the monitor is blank, it is 0)	—
Equipment Name	Setup the name for the Ping transmission monitoring.	Blank	Full/Half-width Characters Maximum 31 Characters	○
Monitoring Duration	Setup the duration for monitoring the application software.	0	Half-width alphanumeric 1 through 60000(sec)	○
Red	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Amber	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Green	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Blue	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
White	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	No Change	—	—
Buzzer	Select from: Pattern1- Pattern2- Pattern3- Pattern4- Stop- No Change	No Change	—	—
Email Transmission	Select the Active/Inactive condition for the E-mail Sending.	Inactive	—	—
Subject	Select the E-mail subject title	1. Message	—	—
Message	Select the E-mail message to text	1:	—	—
TRAP Transmission	Select the Active/Inactive condition for the trap transmission.	Inactive	—	—

## 4.12 "Clear" Control Setup Screen

Setup the operation to clear the status with the "CLEAR" button, or to combine with other commands to clear the Signal Tower status.

Clear All : A function to clear both the Signal Tower and buzzer status and return to its normal mode of operation.

Depress twice to clear all : One press of the "CLEAR" button to stop the buzzer sound. Pressing the "CLEAR" button a second time returns it to its normal mode of operation.

[Setup Method]

- When using the "CLEAR" button to return to its normal mode after an E-mail Sending and TRAP transmission are received, select the "Active" radio button.
- When using the "CLEAR" command from an SNMP clear execution to return to its normal mode after an E-mail Sending and TRAP transmission are received, select the "Active" radio button.
- When using the "CLEAR" from an RSH command execution to return to its normal mode after an E-mail Sending and TRAP transmission are received, select the "Active" radio button.

### When selecting "Active" for E-mail Sending

Select the preferred E-mail subject title and text.

Select the Receiver for the E-mail to be sent to.

- Select the clear switch setup for either "Clear All" or "Depress twice to clear all".
- Select the clear switch setup for either "Clear All" or "Depress twice to clear all".
- Click the "Set" button to save the settings.

### "TRAP Command" received when a TRAP condition occurs

OID: 1.3.6.1.4.1.20440.4.1.6.4

Name: trapPatliteClearExecuted

Fig. 4.12.1 "Clear" Control Setup Screen

The screenshot shows the "Clear" Control Configuration screen with the following sections and settings:

- "CLEAR" Button:**
  - E-mail Sending:  Active  Inactive Subject: 1:Message Message: 1:
  - E-mail Receiver:  1 Unassigned  2 Unassigned  3 Unassigned  4 Unassigned  5 Unassigned  6 Unassigned  7 Unassigned  8 Unassigned
  - Trap Transmission:  Active  Inactive
  - SNMP Write Command Receiver:  1 Unassigned  2 Unassigned  3 Unassigned  4 Unassigned
- SNMP Clear:**
  - E-mail Sending:  Active  Inactive Subject: 1:Message Message: 1:
  - E-mail Receiver:  1 Unassigned  2 Unassigned  3 Unassigned  4 Unassigned  5 Unassigned  6 Unassigned  7 Unassigned  8 Unassigned
  - Trap Transmission:  Active  Inactive
  - SNMP Write Command Receiver:  1 Unassigned  2 Unassigned  3 Unassigned  4 Unassigned
- RSH Clear:**
  - E-mail Sending:  Active  Inactive Subject: 1:Message Message: 1:
  - E-mail Receiver:  1 Unassigned  2 Unassigned  3 Unassigned  4 Unassigned  5 Unassigned  6 Unassigned  7 Unassigned  8 Unassigned
  - Trap Transmission:  Active  Inactive
  - SNMP Write Command Receiver:  1 Unassigned  2 Unassigned  3 Unassigned  4 Unassigned
- "CLEAR" Button Setting:**
  - Active  Inactive
  - Clear All  Depress twice to clear all
- Set** button

Table 4.12.1 "Clear" Control Setup Parameters

Item	Contents	Default Value	Input Parameter	Setup Option
E-mail Sending	Select the Active/Inactive condition for the E-mail Sending.	Inactive	—	—
Subject	Select the E-mail subject title	1. Message	—	—
Message	Select the E-mail message to text	1:	—	—
Unassigned 1 to 8	Select from 1 to 8 Addresses to send E-mail to.	Unassigned	—	—
TRAP Transmission	Select the Active/Inactive condition for the TRAP Transmission.	Inactive	—	—
"CLEAR" Button Setting	Select the setup conditions for when the "CLEAR" button is pressed.	Clear All	—	—

## 4.13 Normal Mode Setup Screen

Set up the status of the Signal Tower for its normal operating condition.

[Setup Method]

- . Select the desired status for the Signal Tower to be at its normal operating condition.
- . Click the "Set" icon button to initiate the setup.
- . After the setup is complete, press the "Clear" switch on the body for the normal operating condition to be displayed.

Fig. 4.13.1 Normal Mode Setup Screen

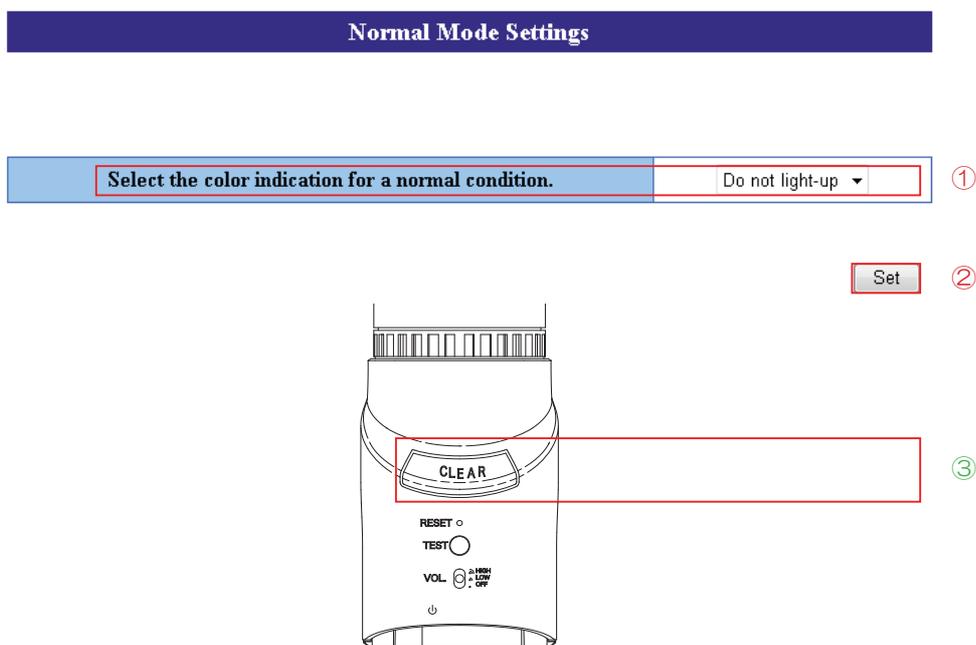


Table 4.13.1 Normal Mode Setup Parameters

Item	Contents						Default Value	Input Parameter	Setup Option
Signal Tower	Select from:	Red Lighting	Amber Lighting	Green Lighting	Blue Lighting	White Lighting	Do not light-up	—	—

## 4.14 Test Button Setup Screen

The following settings can be used to output an operation when the "TEST" button is pressed.

[Setup Method]

To output an E-mail Sending and TRAP transmission when the "TEST" button is pressed, select the "Active" radio button.

### **When sending an E-mail, select the "Active" radio button**

- . Select the preferred E-mail subject title and text.  
Select the Receiver for the E-mail to be sent to.

### **The "TRAP Command" for this product to receive when the TRAP condition occurs**

OID: 1.3.6.1.4.1.20440.4.1.6.8  
Name: trapPatliteTestSwExecuted

- . Click the "Set" button to activate the setup.

Fig. 4.14.1 Test Switch Setup Screen

		E-mail Sending				E-mail Receiver				TRAP Transmission
Press the "TEST" button.	<input type="radio"/> Active <input checked="" type="radio"/> Inactive	Subject 1:Message		Message 1:						<input type="radio"/> Active <input checked="" type="radio"/> Inactive
	<input type="checkbox"/> 1 Unassigned		<input type="checkbox"/> 2 Unassigned		<input type="checkbox"/> 3 Unassigned		<input type="checkbox"/> 4 Unassigned			
	<input type="checkbox"/> 5 Unassigned		<input type="checkbox"/> 6 Unassigned		<input type="checkbox"/> 7 Unassigned		<input type="checkbox"/> 8 Unassigned			

Table 4.14.1 Test Switch Setup Parameters

Item	Contents	Default Value	Input Parameter	Setup Option
E-mail Sending	Select the Active/Inactive condition for the E-mail Sending.	Inactive	—	—
Subject	Select the E-mail subject title	1: Message	—	—
Message	Select the E-mail message to text	1:	—	—
Unassigned 1 to 8	Select from 1 to 8 Addresses to send E-mail to.	Unassigned	—	—
Receiver	Select the Address to send E-mail to	Unused	—	—
TRAP Transmission	Select the Active/Inactive condition for the TRAP Transmission	Inactive	—	—

**Note**

Refer to "3.3 Test Functions" for more information on the test operation.

## 4.15 SLMP Command Transmission Setting Screen

The SLMP command transmission can be set up. The set-up value and SLMP command transmitting the data received from the corresponding equipment are compared. Operation of the Signal Tower when set-up conditions of the compared data agrees.

Set up the operation for the Signal Tower when error data is received.

### 4.15.1 SLMP Command Transmission Setup

[Setup Method]

- . Select from screen number 1 to 16 to setup an SLMP command transmission.
- . Enter a monitoring object device name.
- . Enter the address of the connection destination.
- . Enter a connection destination port.
- . Enter a designated sender port.
- . Select the protocol to be used.
- . Establish for a time-out.
- . Enter a monitoring object device data acquisition point.
- . Set up the conditions for comparison.
- . Establish the transmission interval for a command.

Fig. 4.15.1 SLMP Read Command Transmission Setup Screen

#### Operation Setting for Condition Agreement

- . Set up the Signal Tower operation for the condition agreement.
  - . If using the E-mail Sending option at the time of the condition agreement, set it to "Active."
- << When the "E-mail Sending" is activated >>
- . Register the subject and the message text to transmit. Then, select the recipient for the E-mail Sending.
  - . When using the TRAP transmission, set to "Active".

#### TRAP Command received when TRAP Transmission condition occurs

OID: "1.3.6.1.4.1.20440.4.1.6.9"

Name: "trapPatliteSlmpAction"

- . Click the "Set" icon button to initiate the setup.

Fig. 4.15.2 SLMP Read Command Transmission Setup Screen

RED	No Change
AMBER	No Change
GREEN	No Change
BLUE	No Change
WHITE	No Change
BUZZER	No Change
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive Subject 1.Message Message 1:
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive
Set	
(c) 2011 PATLITE Corporation. All rights reserved.	

- ⑨
- ⑩
- ⑪
- ⑫
- ⑬

Table 4.15.1 SLMP Command Transmission Setup Items

Item	Contents	Default Value	Input Parameter	Setup Option
Device Name	Set up the name of a SLMP Command Transmission object.	Blank	Half width and full width of 31 Characters	○
Connection Destination Address	Set up the registration address for the SLMP Command Transmission object.	Blank	Enter in the format of an IP Address and host name with a maximum of 63 characters.	
Connection Destination Port	Set up the receiving port to be used.	0	Use half-width numbers from 0-65535	
Designated Transmission Port	Set up the designated transmission port for when sending the Command Transmission. If the setting is 0, the designated transmission port selects an arbitrary value.	0	Use half-width numbers from 01025-65535	
Protocol	Set up the protocol to be used.	TCP	TCP-UDP	
Timeout	A Timeout is the duration which allows a time limit until it receives a response.	1	1-10 Seconds	
Serial Number	Set up the serial number if necessary.	Don't Add	Add/ Don't Add	
Network Number	Set up the network number for the access location.	0	00: Own-Station 01 - EFH : Other Stations	
Station Number	Set up the access location station number.	1	FFH: Own-Station 01-78H : Code No. 7DH: Appointed Management Station 7EH: Current Management Station	
Unit I/O Number Request	The CPU unit for the access location is selected.	Own-Station		
Device	Select the type of device to read.	Blank	* Refer to Table 4.15.2	
Reading Device	Select the first number of the device to read. Enter in accordance to the form currently displayed.	Blank	* Refer to Table 4.15.2	
Reading Quantity	The number of devices to read is selected.	1	1 / 2	
Conditions (Value)	The acquisitioned device value (response data) compares its set-up value and operates the device for that value. Enter with 16 bit numbers.	Blank	0000h - FFFFh	
Conditions (conditional expression)	The acquisitioned device value (response data) compares its set-up conditions and operates the device for that condition.	Equal	"equal" - "not equal" - "equal or greater than" - "equal or less than" - "greater than" - "less than"	
Conditions (Value)	The acquisitioned device value (response data) compares its set-up value and operates the device for that value. Enter with 16 bit numbers.	Blank	0000h - FFFFh	
Red	Selects from lighting, flashing 1, flashing 2, off, change.	No Change		
Amber	Selects from lighting, flashing 1, flashing 2, off, change.	No Change		
Green	Selects from lighting, flashing 1, flashing 2, off, change.	No Change		
Blue	Selects from lighting, flashing 1, flashing 2, off, change.	No Change		
White	Selects from lighting, flashing 1, flashing 2, off, change.	No Change		
Buzzer	Selects from pattern 1, pattern 2, pattern 3, pattern 4, stop, and no change	No Change		
E-mail Transmission	Select Active or Inactive for E-mail Sending.	Inactive		
Subject	Select the E-mail title	1.Message		
Message	Select the E-mail text	1:		
TRAP Transmission	Select Active or Inactive for trap transmission.	Inactive		

Table 4.15.2 List of Devices which can be set-up

Device	Binary Code Device (ASCII)	Classification	Range Specification	
Input	9CH(X*)	Bit	base 16	0000 - FFFFH
Output	9DH(Y*)		base 16	0000 - FFFFH
Internal Relay	90H(M*)		base 10	0-65535
Latch Relays	92H(L*)		base 10	0-65535
Annunciator	93H(F*)		base 10	0-65535
Edge Relay	94H(V*)		base 10	0-65535
Link Relay	A0H(B*)		base 16	0000 - FFFFH
Data Register	ABH(D*)	Word	base 10	0-65535
Link Register	B4H(W*)		base 16	0000 - FFFFH
Timer	C2H(TN)		base 10	0-65535
Addition Timer	C8H(SN)		base 10	0-65535
Counter	C5H(CN)	base 10	0-65535	
Link Special Relay	A1H(SB)	Bit	base 16	0000 - FFFFH
Link Special Register	B5H(SW)	Word	base 16	0000 - FFFFH
Direct Input	A2H(DX)	Bit	base 16	0000 - FFFFH
Direct Output	A3H(DY)		base 16	0000 - FFFFH
Index Register	CCH (Z*)	Word	base 10	0-65535

For base 10, enter values from 0-65535.  
For base 16, enter values from 0000 - FFFFh.  
Designate the range number of the device which the unit will access.

### 4.15.2 Common Operation Setting at Time of SLMP Error

[Setup Method]

- Select from the screen setup the common operation setting from the SLMP command transmission at the time of an error.

Fig. 4.15.3 SLMP Read Command Transmission Setup Screen

**SLMP Read Command Configuration**

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

**Monitoring Device**

Device Name: \_\_\_\_\_

Destination Address: \_\_\_\_\_

Destination Port: [0]

Source Port: [0]

Protocol:  TCP  UDP

TimeOut (1-10sec): [1]

**Command Configuration**

Serial No.	Network No.	Station No.
<input type="radio"/> Add <input checked="" type="radio"/> Not Add	[0]	[1]
Unit No.	Device	Read Device/Number of Device Points
[Local Station]	[Input (X*)]	[0] (Hexadecimal) [1]

**Output Control Setting for matching Conditions**

\_\_\_\_\_ [Equal (=)]

**Transmission Interval** [100ms]

①

➔ Output Control Setting for Error

## 4.15.2 Common Operation Setting at Time of SLMP Error

[Setup Method]

- Set up the Signal Tower operation at the time of an error.
- When using the E-mail Sending option at the time of an error, please set it to "Active".

### **When "E-mail Sending" is activated**

- Register the subject and the message text to transmit. Then, select the recipient for the E-mail Sending.
- When using the TRAP transmission, set to "Active".

### **TRAP Command received when TRAP Transmission condition occurs**

OID: 1.3.6.1.4.1.20440.4.1.6.10

Name: trapPatliteSlmpError

- Click the "Set" icon button to initiate the setup.

Fig. 4.15.4 Common Operation Setting screen at Time of SLMP Error.

Output Control Setting for matching Conditions1	
RED	No Change
AMBER	No Change
GREEN	No Change
BLUE	No Change
WHITE	No Change
BUZZER	No Change
E-mail Sending	<input type="radio"/> Active <input checked="" type="radio"/> Inactive Subject 1.Message Message 1:
E-mail Receiver	<input type="checkbox"/> 1 Unassigned <input type="checkbox"/> 2 Unassigned <input type="checkbox"/> 3 Unassigned <input type="checkbox"/> 4 Unassigned <input type="checkbox"/> 5 Unassigned <input type="checkbox"/> 6 Unassigned <input type="checkbox"/> 7 Unassigned <input type="checkbox"/> 8 Unassigned
Trap Transmission	<input type="radio"/> Active <input checked="" type="radio"/> Inactive

②  
③  
④  
⑤  
⑥

Table 4.15.3 "Clear" Control Setup Parameters

Item	Contents	Default Value	Input Parameter	Setup Option
E-mail Transmission	Select Active or Inactive for sending E-mail.	Inactive	—	—
Subject	Select the subject title for the mail to be transmitted.	1.Message	—	—
Message	Select the message text for the mail to be transmitted.	1:	—	—
E-mail Sending Locations 1-8	Set up the addressee parameters to send an E-mail.	Unassigned	—	—
TRAP Transmission	Select Active or Inactive for Trap Transmission.	Inactive	—	—

## 4.16 SLMP Write Command Setup Screen

The following shows how an SLMP Write Command can be set up.

[Setup Method]

- . Select a screen number from 1 to 4 for the SLMP write command setting.
- . Enter a device name.
- . Enter the address of the connection destination.
- . Enter a connection destination port.
- . Select the protocol to be used.
- . Designate the device to write to.
- . Set up the Write data.
- . Push the "Set" button.

Fig. 4.16.1 SLMP Write Command Setup Screen

The screenshot shows the 'SLMP Write Command Configuration' interface. At the top, there are four numbered tabs (1-4). Below them is the 'Target device of Writing' section with fields for Device Name, Destination Address, Destination Port, and Protocol (radio buttons for TCP and UDP). The 'WriteCommand Configuration' section contains a table with columns for Serial No., Network No., and Station No., and a section for Write Data. A 'Set' button is at the bottom right. Red boxes and numbers 1-8 are overlaid on the screen to indicate the setup steps.

Table 4.16.1 SLMP Write Command Setup Items

Item	Contents	Default Value	Input Parameter	Setup Option
Device Name	Set up the name of a Command Transmission object.	Blank	Column half/full width Character31	0
Destination Address	Set up to connect the target address for the command transmission.	Blank	Enter in the format of an IP Address and host name with a maximum of 63 characters.	—
Destination Port	Set up an addressee port to connect with.	0	Use half-width numbers from 0-65535	—
Protocol	Set up the protocol to be used.	TCP	—	—
Serial Number	Set up the serial number if necessary.	Don't add	Add/Don't add	—
Network Number	Set up the network number for the access location.	0	00: Auto-access, 01 - EFH: Set access	—
Station Number	Set up the access location station number.	1	FFH: Auto-access, 01-78H : Code No. 7DH: Appointed Management Station 7EH: Current Management Station	—
Unit I/O Request Number	The CPU unit for the access location is selected.	Own Station	—	—
Device	Select the device from the pull-down menu.	Blank	* Refer to Table 4.16.2	—
Write Device	Set up the first number for the device's writing location.	Blank	* Refer to Table 4.16.2	—
Writing Quantity	The number for the device to write is selected.	1	1/2	—
Write Data	Set up the data to write.	Blank	* Refer to Table 4.16.3	—

The following shows how an SLMP Write Command can be set up.

Table 4.16.2 SLMP Device Write Command Setup

Device	Binary Code Device (ASCII)	Classification	Range Specification		
Internal Relay	90H(M*)	Bit	base 10	0-65535	For base 10, enter values from 0-65535.
Latch Relays	92H(L*)		base 10	0-65535	
Annunciator	93H(F*)		base 10	0-65535	
Edge Relay	94H(V*)		base 10	0-65535	
Link Relay	A0H(B*)		base 16	0000 - FFFFH	
Data Register	ABH(D*)	base 10	0-65535		
Link Register	B4H(W*)	Word	base 16	0000 - FFFFH	Designate the range number of the device which the unit will access.
Timer	C2H(TN)		base 10	0-65535	
Addition Timer	C8H(SN)		base 10	0-65535	
Counter	C5H(CN)		base 10	0-65535	
Link Special Relay	A1H(SB)		Bit	base 16	
Link Special Register	B5H(SW)	Word	base 16	0000 - FFFFH	
Index Register	CCH (Z*)	Word	base 10	0-65535	

Table 4.16.3 Data Write Setup Range

Device Classification	Writing Quantity	Data Writing Range
Bit	1 Time (1 bit)	0, 1
	2 Times (2 Bit)	0, 1, 2, 3
Word	1 Time (1 Word)	0- FFFFh
	2 Times (2 Word)	0 - FFFFFFFFh

**Note** Set the limit for the device and data to write to with the device number for access to the unit location.

## 4.17 Output Control Setting for Signal Tower Screen

Verify the current operating status, and output a condition status for the Signal Tower.

[Setup Method]

- Check the current operating condition of the Signal Tower.
- Select the desired outputs for the Signal Tower status in the "Output Control" column to operate it.
- Click the "Execute Output" button. The Signal Tower output will reflect the setup performed in .
- If the "Execute Clear" button is clicked, it will return to the "Normal Mode" status.

Fig. 4.17.1 Signal Tower Output Control Screen

Signal Tower Output Control	
	Current Condition
RED	OFF
AMBER	OFF
GREEN	OFF
BLUE	OFF
WHITE	OFF
BUZZER	Stop

	Output Control
	No Change

Execute Output

Execute Clear

Table 4.17.1 Signal Tower Output Control Setup Parameters

Item	Contents	Default Value	Input Parameter	Setup Option
Red	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	—	—	—
Amber	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	—	—	—
Green	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	—	—	—
Blue	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	—	—	—
White	Select from: OFF- ON- Lighting- Flashing1- Flashing2- No Flashing- No Change	—	—	—
Buzzer	Select from:Pattern1- Pattern2- Pattern3- Pattern4- Stop	—	—	—

## 4.18 Reinitialization Setup Screen

The setup parameters can be reset to their default values by initializing this product. The network setup can be selected to be excluded from initialization.

If the network setup is also required to be reset to its factory defaults, it can be selected to be initialized with the rest of the setup parameters.

If the "Reinitialize Network Settings" is not checked, all but the network setup is initialized.

**Note**

"Network Setup" refers to the "IP address for this product, Net Mask, Default Gateway, DNS server address and Host Name" parameters in the System Setup Screen.

[Setup Method]

**When the initialization does not require the network setup to be included**

- . Put a "Check" in the box for "Network Reboot".
- . Click the "Reinitialize Execute" button.

**When the network setup also needs to be reinitialized**

- . Just click the "Reinitialize Execute" button.

Fig. 4.18.1 Reinitialization Screen

**Please**

If the network setup is also initialized, since the IP address will return to its factory default value of "192.168.10.1", the network has to be setup again.

### Reinitialize

The settings return to factory default values.

To set the Network Configuration (IP address, net mask, default gateway, DNS server address, host name) to the default settings, enter a checkmark in the box next to the "Reinitialize Network Settings".

When the "Reinitialize" button is depressed, the system will automatically reboot.

Reinitialize Network Settings.

①

ReinitializeExecute

②

## 4.19 Reboot Screen

This product can be rebooted just by clicking the "Reboot" button.

- Once the "Reboot" button is clicked, a new screen will display a message indicating it is rebooting.
- Click "To the Login screen" on the new screen to log back in.

Fig. 4.19.1 Reboot Screen

**Please** If this product is rebooted, because all of the event log data will be erased, it is recommended to download the event log prior to rebooting, for reloading afterwards.

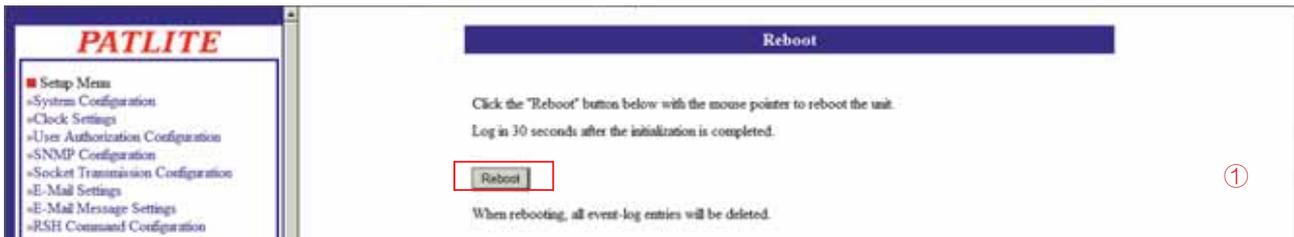


Fig. 4.19.2 Login after Reboot Screen



## 4.20 Event Log Screen

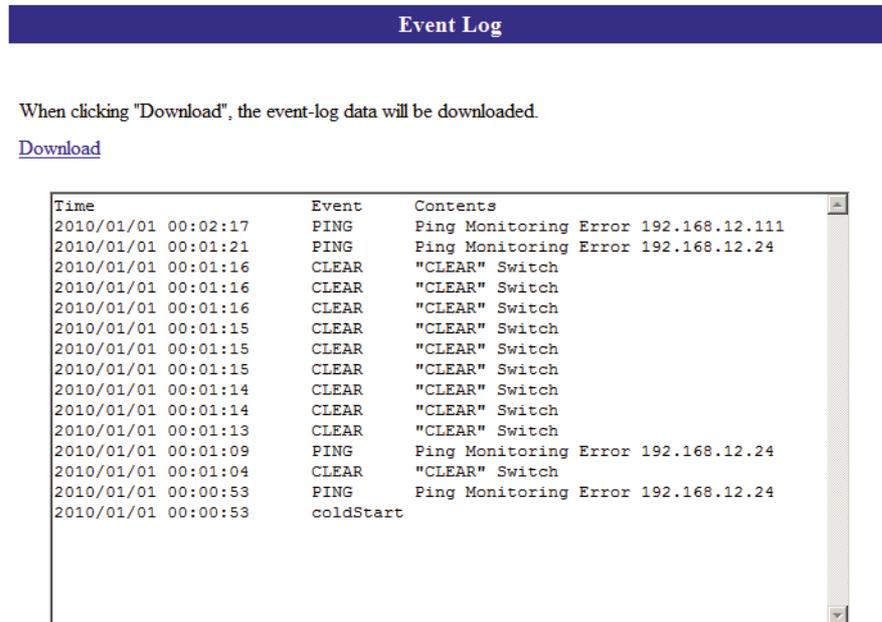
Events from this product are logged and is shown in the event log.  
By clicking the "Event Log Download", an event log file can be downloaded.  
A maximum of 255 logged events are acquirable.

**Please**

The event log data will be erased if either of the following operations are executed.

- Turning the power supply "OFF"
- Reinitializing this product from the initialization screen.
- Rebooting this product from the "Reboot Screen".
- Updating the firmware.

Fig. 4.20.1 Event Log Screen



(c) 2011 PATLITE Corporation. All rights reserved.

## 4.21 Configuration Setup Screen

The configuration for this product can be read, and saved as config data on the PC. Moreover, the configuration file read off of this product can be selected and uploaded.

**Please** The network setup and user information is not included in the config data.

[Setup Method]

### Reading Configuration Data

- . Click the "Read" button to save the config data onto the logged in PC.

### Writing Configuration Data

- . Click the "Browse..." button to select the config data to write into this product.
- . Click the "Write" button to start the uploading of the config data.
- . After the config data is uploaded, this product will automatically reboot.

Fig. 4.21.1 Configuration Save/Load Setup Screen

The screenshot displays the 'Configuration Data Setup' interface. It is divided into two main sections:

- Reading Configuration Data:** This section contains the text 'Pressing the "Read" button will start acquisitionning the Configdata.' and a 'Read' button. A red box highlights the 'Read' button, and a circled '1' is placed to its right.
- Writing ConfigurationData:** This section features a 'File Name' input field with a '参照...' (Reference) button next to it. Below the input field, it says 'Pressing the "Read" button will execute an automatic reboot.' and a 'Write' button. A red box highlights the 'Write' button, and a circled '3' is placed to its right. A circled '2' is placed to the right of the '参照...' button.

## 4.22 XML Setup Screen

This product can be setup for XML parsing.

[Setup Method]

- When using the XML data output, set it to “Active.” If not using the XML data output, then set it to “Inactive.”
- Select the authentication method for when designating the URL directly for acquiring data.
- The XML data is downloadable when clicking “download”. This option is only available when the XML data output is set for “Active”.
- Click the “Set” button to activate the setup.

Table 4.22.1 "Clear" Control Setup Parameters

XML Setup		
XML Data Output	<input checked="" type="radio"/> Active <input type="radio"/> Inactive	①
Authentication Method	<input checked="" type="radio"/> Login Authentication <input type="radio"/> No Authentication	②
XML Download	<a href="#">Download</a>	③
<input type="button" value="Set"/>		④

### Please

If the authentication method is set for “No Authentication”, the XML data can be acquired without logging in for authentication of a Web setup tool.

When setting up the "login certification" for XML data acquisition, login certification of a Web setup tool is needed.

### Note

Only if the XML data output is set as “Active”, the downloading of an XML file is possible.

## 4.23 Firmware Update Screen

The firmware for this product can be updated.

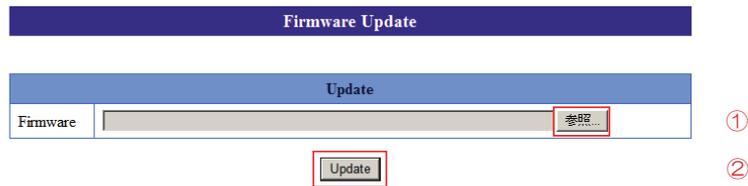
After the firmware has been updated, this product automatically reboots.

[Setup Method]

- Click the "reference" button to designate the firmware to rewrite for this product.
- Clicking the "update" button will start the firmware update.

Fig. 4.23.1 Firmware Update Setup Screen

**Please** Do not disconnect the power cable or LAN cable during the update. Possible cause of failure may occur. Updating the firmware does not affect the current setup parameters, however, it does affect the Event Log. Therefore, it is recommended to backup the "Event Log" prior to updating the firmware.



Press the "Update" button to automatically upload and install the firmware.

After pressing the "Update" button, do not change the screen until the process has been completed.

Furthermore, absolutely do not disconnect the unit's power during the process.

Fig. 4.23.2 Firmware Update Failure Screen

### NH Series Network Monitoring Signal Tower

#### Web Setup Tool



Firmware update error has occurred. Please repeat update procedure.

**Please** Fig. 4.23.2 shows the type of screen in case an error occurs during the firmware update. If an error occurs during the firmware update, please try again. If an error repeatedly occurs during the firmware update process, please contact your nearest Patlite Sales Representative.

## 4.24 Setup Table Entry Screen

The "Setup Table Entry" screen lists and displays the contents of settings, operation functions, such as application monitor abnormality and abnormality restoration; Ping monitor abnormality and abnormality restoration; TRAP reception setup operations, as well as the firmware version of this product.

The solid circle indicates when the E-mail Sending and TRAP transmission are activated. The dash lines display where items selected are not changed.

[Display]

- Current firmware version.
- "TRAP Output Control Setting for Reception" table entries (1-16) to indicate setup conditions.
- "PING Operation Setting for Monitoring Abnormality" table entries (1-16) to indicate setup conditions.

Fig. 4.24.1 Setup Table Entry Screen

Setup Table Entries									
Firmware Version						Ver 1.31			①
TRAP Output Control Setting for Reception									②
Name	RED	AMBER	GREEN	BLUE	WHITE	BUZZER	E-mail Sending	TRAP Transmission	
1:	-	-	-	-	-	-			
2:	-	-	-	-	-	-			
3:	-	-	-	-	-	-			
PING Operation Setting for Monitoring Abnormality									③
Name	RED	AMBER	GREEN	BLUE	WHITE	BUZZER	E-mail Sending	TRAP Transmission	
1:	-	-	-	-	-	-			
2:	-	-	-	-	-	-			
3:	-	-	-	-	-	-			

Fig. 4.24.2 Full Setup Table Entry Screen

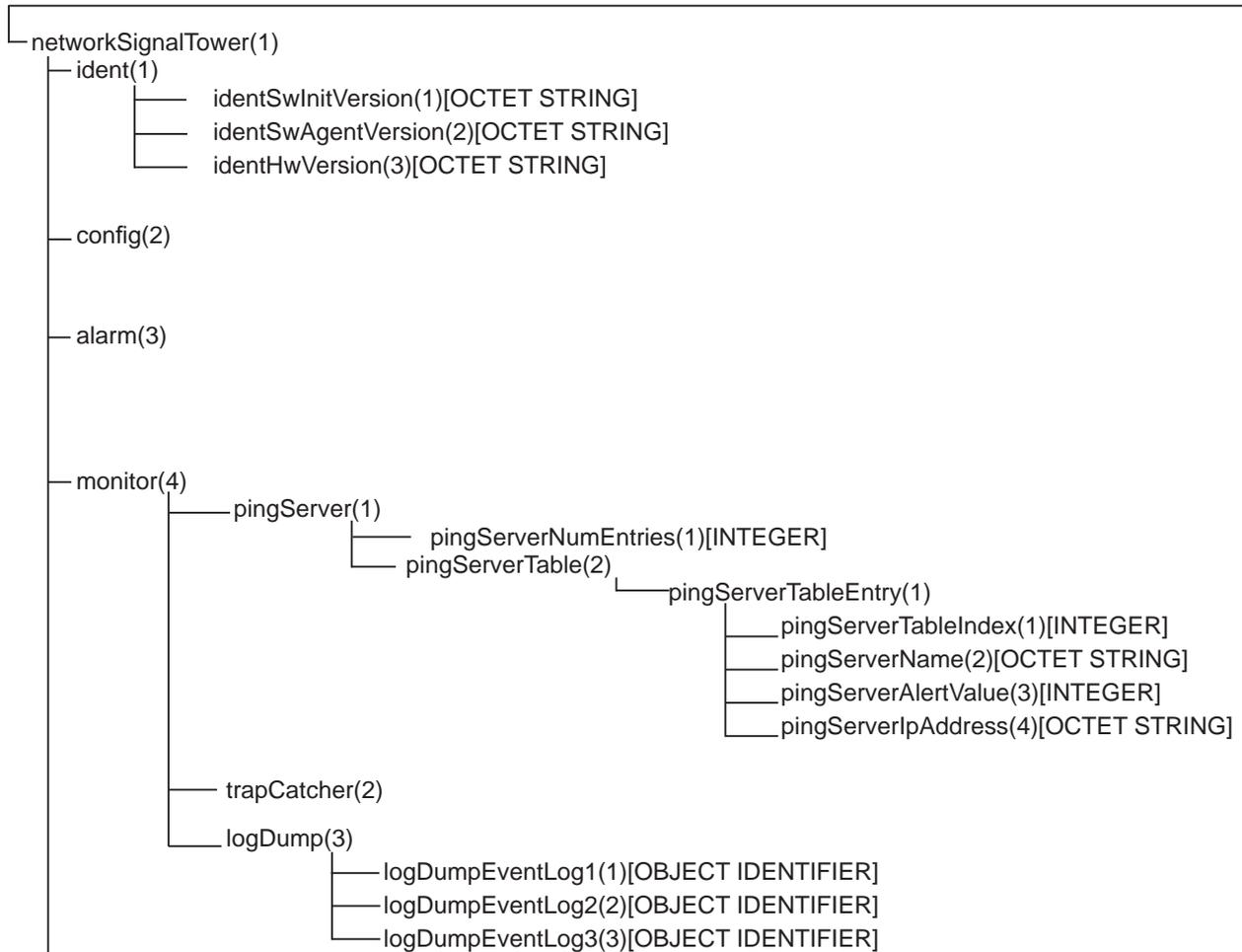
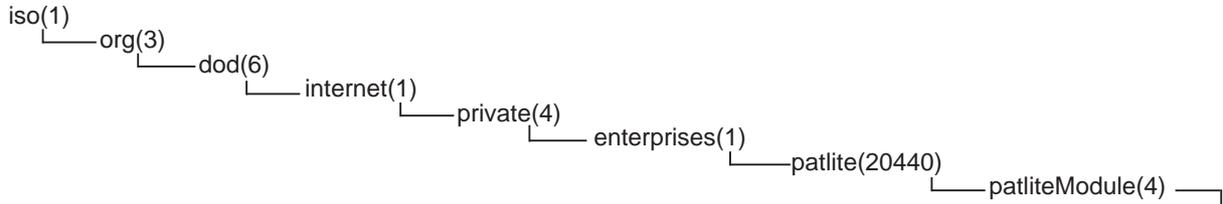
Setup Table Entries								
Firmware Version						Ver 1.31		
<b>TRAP Output Control Setting for Reception</b>								
Name	RED	AMBER	GREEN	BLUE	WHITE	BUZZER	E-mail Sending	TRAP Transmission
1:	-	-	-	-	-	-		
2:	-	-	-	-	-	-		
3:	-	-	-	-	-	-		
4:	-	-	-	-	-	-		
5:	-	-	-	-	-	-		
6:	-	-	-	-	-	-		
7:	-	-	-	-	-	-		
8:	-	-	-	-	-	-		
9:	-	-	-	-	-	-		
10:	-	-	-	-	-	-		
11:	-	-	-	-	-	-		
12:	-	-	-	-	-	-		
13:	-	-	-	-	-	-		
14:	-	-	-	-	-	-		
15:	-	-	-	-	-	-		
16:	-	-	-	-	-	-		
<b>PING Operation Setting for Monitoring Abnormality</b>								
Name	RED	AMBER	GREEN	BLUE	WHITE	BUZZER	E-mail Sending	TRAP Transmission
1:	-	-	-	-	-	-		
2:	-	-	-	-	-	-		
3:	-	-	-	-	-	-		
4:	-	-	-	-	-	-		
5:	-	-	-	-	-	-		
6:	-	-	-	-	-	-		
7:	-	-	-	-	-	-		
8:	-	-	-	-	-	-		
9:	-	-	-	-	-	-		
10:	-	-	-	-	-	-		
11:	-	-	-	-	-	-		
12:	-	-	-	-	-	-		
13:	-	-	-	-	-	-		
14:	-	-	-	-	-	-		
15:	-	-	-	-	-	-		
16:	-	-	-	-	-	-		
17:	-	-	-	-	-	-		
18:	-	-	-	-	-	-		
19:	-	-	-	-	-	-		
20:	-	-	-	-	-	-		
21:	-	-	-	-	-	-		
22:	-	-	-	-	-	-		
23:	-	-	-	-	-	-		
24:	-	-	-	-	-	-		
<b>PING Output Control Setting for Recovery from Monitoring Error</b>								
Name	RED	AMBER	GREEN	BLUE	WHITE	BUZZER	E-mail Sending	TRAP Transmission
1:	-	-	-	-	-	-		
2:	-	-	-	-	-	-		
3:	-	-	-	-	-	-		
4:	-	-	-	-	-	-		
5:	-	-	-	-	-	-		
6:	-	-	-	-	-	-		
7:	-	-	-	-	-	-		
8:	-	-	-	-	-	-		
9:	-	-	-	-	-	-		
10:	-	-	-	-	-	-		
11:	-	-	-	-	-	-		
12:	-	-	-	-	-	-		
13:	-	-	-	-	-	-		
14:	-	-	-	-	-	-		
15:	-	-	-	-	-	-		
16:	-	-	-	-	-	-		
17:	-	-	-	-	-	-		
18:	-	-	-	-	-	-		
19:	-	-	-	-	-	-		
20:	-	-	-	-	-	-		
21:	-	-	-	-	-	-		
22:	-	-	-	-	-	-		
23:	-	-	-	-	-	-		
24:	-	-	-	-	-	-		
<b>Application Operation Setting for Monitoring Abnormality</b>								
Name	RED	AMBER	GREEN	BLUE	WHITE	BUZZER	E-mail Sending	TRAP Transmission
1:	-	-	-	-	-	-		
2:	-	-	-	-	-	-		
3:	-	-	-	-	-	-		
4:	-	-	-	-	-	-		
<b>Application Output Control Setting for Recovery from Monitoring Error</b>								
Name	RED	AMBER	GREEN	BLUE	WHITE	BUZZER	E-mail Sending	TRAP Transmission
1:	-	-	-	-	-	-		
2:	-	-	-	-	-	-		
3:	-	-	-	-	-	-		
4:	-	-	-	-	-	-		

When the "No Change" is set, a hyphen ("-") will be displayed.

# 5 MIB

With this product, there is an exclusive MIB (Management Information Base) for the NH Series, and the monitor controls can be operated by the SNMP manager, etc.

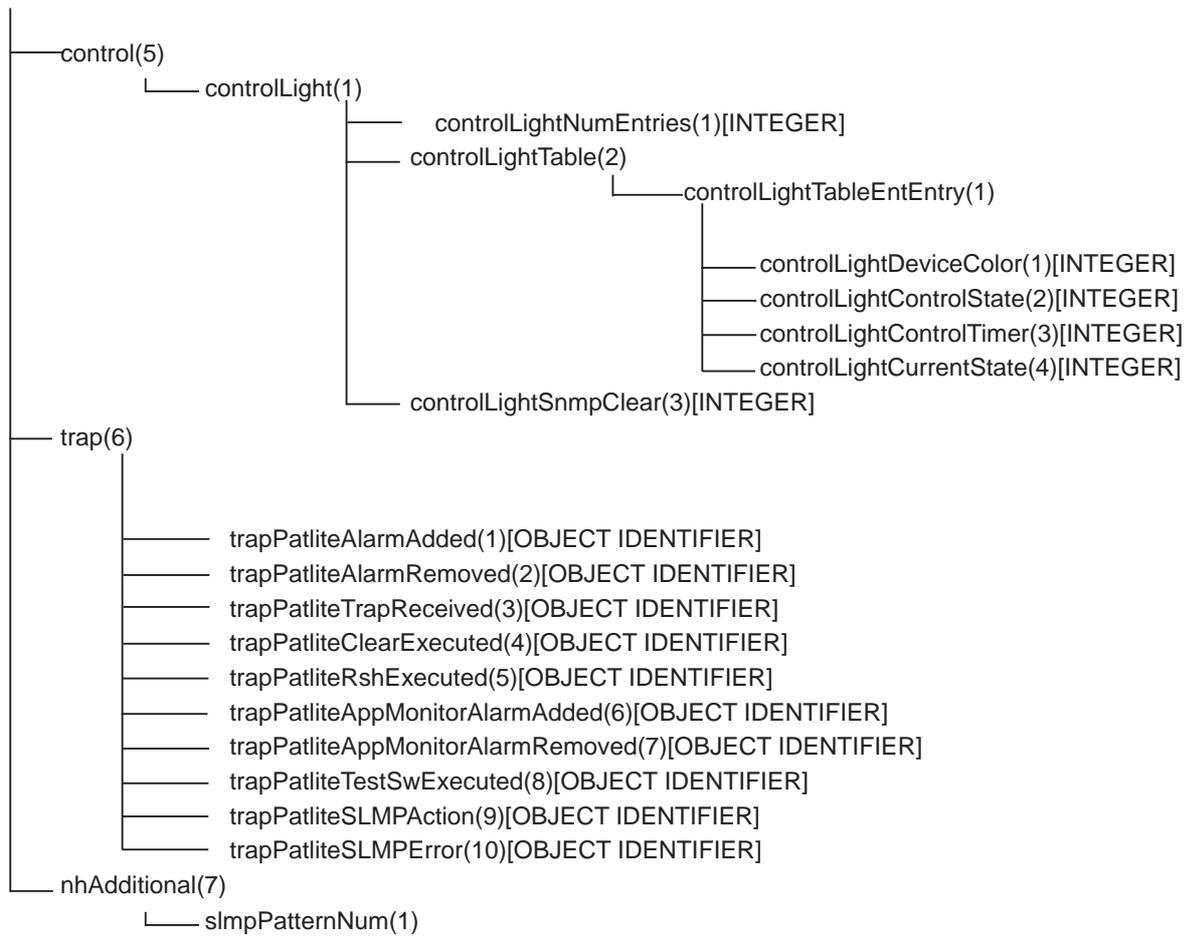
## 5.1 MIB Definition List



**Note**

Please use the PRHS when acquisitioning a SNMP data log dump.

5



## 5.2 PATLITE MIB SPECIFICATIONS

The following explains the MIB Specification for the NH Series Monitoring Tower.

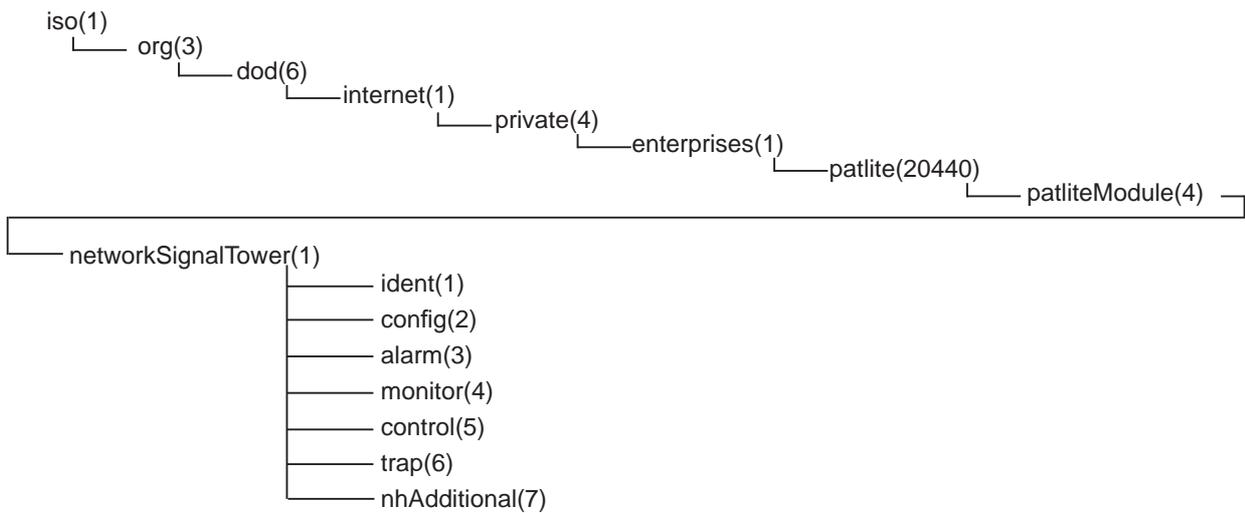


Table 5.2.1 MIB Specifications

OID	Name	Model	MAX-ACCESS	Comment
1	ident	—	—	ID Group
1.1.0	identSWinitVersion	String(2)	read-only	OS Version
1.2.0	identSWAgentVersion	String(3)	read-only	Application Version
1.3.0	identsHWVersion	String(3)	read-only	Hardware Version
4	monitor	—	—	Monitor Group
4.1	pingServer	—	—	ping monitoring setting
4.1.1.0	pingServerNumEntries	INTEGER	read-only	Ping monitoring count
4.1.2.0	pingServerTable	—	not-accessible	ping monitoring table
4.1.2.1.0	pingServerTableEntry	—	not-accessible	
4.1.2.1.1.(index)	pingServerTableIndex	INTEGER	read-only	ping monitoring index
4.1.2.1.2.(index)	pingServerName	STRING(31)	read-only	ping monitor name
4.1.2.1.3.(index)	pingServerAlertValue	INTEGER{ normal(1), occurred(2) }	read-only	ping monitor condition normal(1), event occurred(2)
4.1.2.1.4.(index)	pingServerIpAddress	STRING(63)	read-only	ping monitoring address
4.3	logDump	—	—	log setting
4.3.1.0	logDumpEventlog1	OBJECT IDENTIFIER	read-only	event log from 1 to 85
4.3.2.0	logDumpEventlog2	OBJECT IDENTIFIER	read-only	event log from 86 to 170
4.3.3.0	logDumpEventlog3	OBJECT IDENTIFIER	read-only	event log from 171 to 255
5.1	controllLight	—	—	signal tower control
5.1.1.0	controllLightNumEntries	INTEGER	read-only	count of control entries
5.1.2.0	controllLightTable	—	not-accessible	signal tower table
5.1.2.1.0	controllLightTableEntry	—	not-accessible	—
5.1.2.1.1.(index)	controllLightDeviceColor	INTEGER { red(1), amber(2), green(3), blue(4), clear(5), buzzer(6) }	read-only	signal tower color R(1)/Y(2)/G(3)/B(4)/C(5)/Buz(6)
5.1.2.1.2.(index)	controllLightControlState	INTEGER { turn-off(1), turn-ON(2), blinking-pattern(3), nop(4), blinking-patern2(5), sound-pattern4(6) }	read-write	Signal Tower Status: lights and buzzer off(1)/lighting and buzzer synchronized with light pattern1(2)/flashing pattern1 and buzzer synchronized with light pattern2(3)/no change(4)/flashing pattern2 and buzzer synchronized with light pattern3(5)/buzzer synchronized with light pattern 4(6). controllLightControlTimer is set by entering values above zero.
5.1.2.1.3.(index)	controllLightControlTimer	INTEGER(-1,99)	read-write	A preset value is decremented for every second until it is 0, then it changes to the status designated by the controllLightControlState.
5.1.2.1.4.(index)	controllLightCurrentState	INTEGER { off(1), on(2), blinking-pattern1(3), blinking-pattern2(4), sound-pattern4(5) }	read-only	The present status is displayed. lights and buzzer off(1)/lighting and buzzer synchronized with light pattern1(2)/flashing pattern1 and buzzer synchronized with light pattern2(3)/flashing pattern2 and buzzer synchronized with light pattern3(4)/buzzer synchronized with light pattern4(5)
5.1.3.0	controllLightSnmpClear	INTEGER{ execute(1), nop(0) }	read-write	execute(1) setup will clear the Signal Tower operation.
6	Trap	—	—	—
6.1	trapPatliteAlarmAdded	OBJECT-IDENTIFIER	not-accessible	When an abnormality in the PING occurs
6.2	trapPatliteAlarmRemoved	OBJECT-IDENTIFIER	not-accessible	When an abnormality in the PING is restored
6.3	trapPatliteTrapReceived	OBJECT-IDENTIFIER	not-accessible	When a trap is received
6.4	trapPatliteClearExecuted	OBJECT-IDENTIFIER	not-accessible	When the clear button is pushed
6.5	trapPatliteRshExecuted	OBJECT-IDENTIFIER	not-accessible	When an RSH command is executed
6.6	trapPatliteAppMonitorAlarmAdded	OBJECT-IDENTIFIER	not-accessible	When an abnormality in the application occurs
6.7	trapPatliteAppMonitorAlarm-Removed	OBJECT-IDENTIFIER	not-accessible	When an abnormality in the application is restored
6.8	trapPatliteTestSwExecuted	OBJECT-IDENTIFIER	not-accessible	When the test switch is pushed
6.9	trapPatliteSLMPError	OBJECT-IDENTIFIER	not-accessible	When data corresponding to the SLMP condition is received
6.10	trapPatliteSLMPError	OBJECT-IDENTIFIER	not-accessible	When the SLMP error data is received
7	nhAdditional	—	—	—
7.1	slmpPatternNum	INTEGER(1,16)	not-accessible	Stores the number corresponding to the SLMP conditions.

# 6 Replacement and Option Parts

The following explains the repair and maintenance parts of this product. Signal Tower tiers can be increased or decreased by the customer by purchasing the necessary parts.

## 6.1 Replacement Parts

The following is the replacement part list for the NHL, NHP and NHS Series. When inquiring, please ask the store where you purchased this product. Rubber feet, AC Adaptor, and adhesive seal are common accessories.

Table 6.1.1 NH Series Replacement Parts

Model Name	Part Name	Part Number
NHL (φ60 Type)	Head Cover	B32310027-1F1
	Center Shaft 5 Tier	S33552120-04225F1
	Center Shaft 4 Tier	S33552120-04180F1
	Center Shaft 3 Tier	S33552120-04140F1
	Center Shaft 2 Tier	S33552120-04100F1
	Center Shaft 1 Tier	S33552120-0455F1
	LED Unit Red	B72100168-1F1
	LED Unit Amber	B72100168-2F1
	LED Unit Green	B72100168-3F1
	LED Unit Blue	B72100168-4F1
LED Unit White	B72100167-7F1	

Table 6.1.2 Compatible Replacement Parts

Part Name	Part Number
Cover Seal	T93190007-1F1
Rubber Feet	T81800007-F1
Bottom Seal	T93130009-F1
Support Base (Screws Included)	T81800019-F1

## 6.2 Signal Tower Unit Color Arrangement

The following explains the method when rearranging or repairing the LED units from customer purchased parts.

### 6.2.1 NHL Signal Tower Unit (Color) Rearrangement Method

1. Turn the power off before changing the color sequence.
2. Carefully peel off the cover sticker, then loosen the center shaft and remove the head cover and shaft. Because the upper and lower LED units are secured to each other by two snaps, carefully remove the LED unit by gently pushing the snaps inward.
3. When increasing or decreasing tiers, be sure to replace the center shaft with the proper length to match the number of tiers when changing.
4. After the center shaft is properly fixed, place the static-free cover sticker back on.

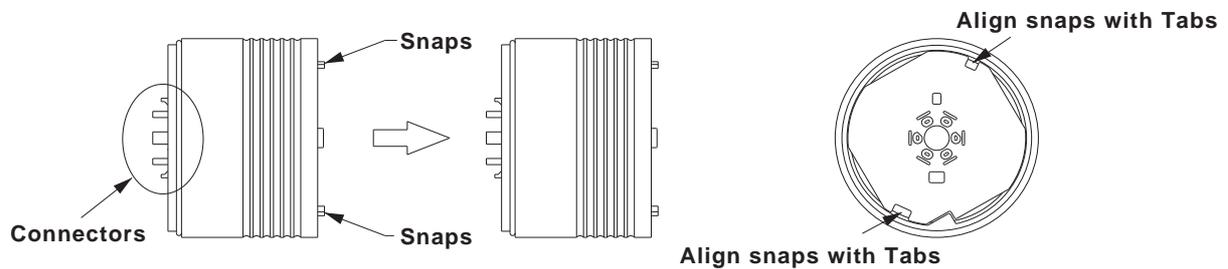


Fig. 6.2.1 NHL Signal Tower Unit (Color) Rearrangement Figure

**Please**

- Do not attempt to forcibly detach an LED unit. Failure to comply may damage the unit.
- The LED unit falling and breaking may result if the center shaft is not properly tightened.
- Overtightening the center shaft may cause damage to the threads or tapping hole, causing possible malfunction or damage to the LED units.
- Be sure to torque the center screw no more than 0.68 N-m. Failure to do so may cause damage to the unit
- Be careful of the contact pins when handling the LED unit, they may be sharp.

## 6.3 Option Parts

The following explains the mounting instructions of this product for the option parts available that customers had purchased.

### 6.3.1 Wall Mount Bracket

This product can be attached to a wall with the wall mount bracket. One wall mount bracket can be used to attach this product on either the left-side or right-side of the wall.

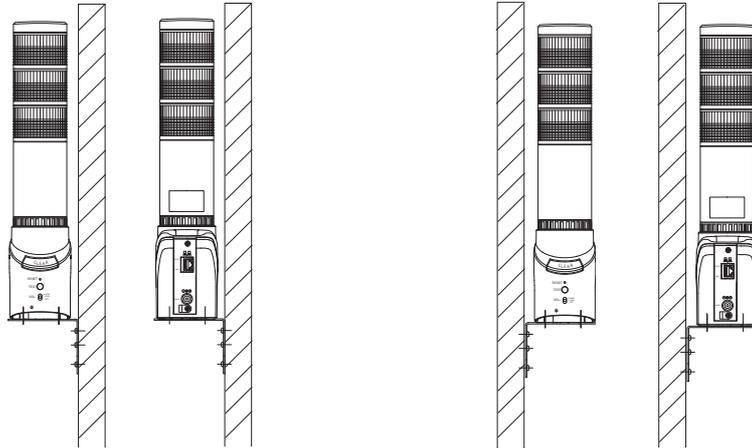


Fig. 6.3.1 Wall Mount Surface Bracket Figure

(Figure to the left indicates the left-sided attachment; figure to the right indicates the right-sided attachment)

**Please**

The installation direction for this product is only for the front attachment direction.

[Installation Method]

1. After deciding on the attachment direction of the wall mount bracket, assemble this product to the bracket. (Use the same installation screw enclosed for assembling the Support Base).

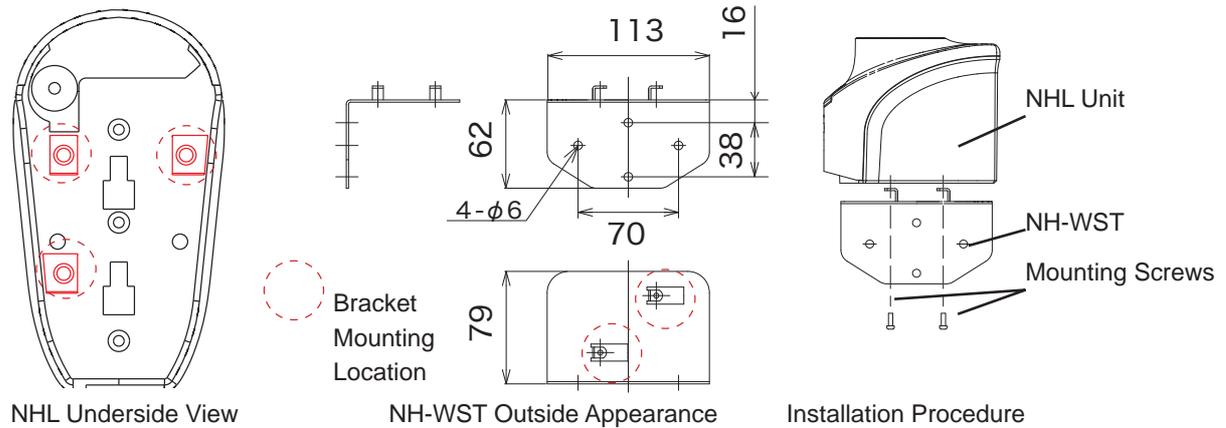


Fig. 6.3.2 Wall Mount Bracket Installation Diagram

2. Fix the wall mount bracket to the wall surface. Please select the proper screw when installing the wall mount bracket to the customer's wall in accordance to the quality of the wall material to be mounted upon.

**Please**

Tighten the screws between this product and the bracket with a torque of about 0.39 N-m. Failure to do so may cause damage to the unit. Verify the installation is securely clamped to ensure there is no fear of detachment and falling after installation. Apply the power after checking that it has been installed correctly.

6

Option Name	Part Number
Wall Mounting Bracket	NH-WST

### 6.3.2 Partition Mounting Bracket

The partition mounting bracket is an optional item for attaching to partition walls in environments which cannot be attached to walls or other positions. The partition mounting bracket is designed to be attached with the front of this product facing to the right or left when fastening it to the partition.

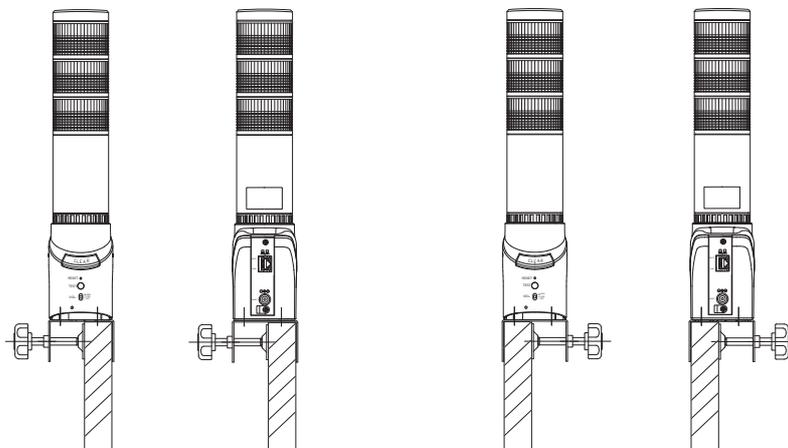


Fig. 6.3.3 Partition mounting bracket installation example  
(Left image is for the left-side and the right image is for the right-side installations)

**Please**

The installation direction for this product is only for the front attachment direction.

[Installation Method]

1. After deciding on the attachment direction of the partition mounting bracket, assemble this product to the bracket. (Use the screws include when assembling).

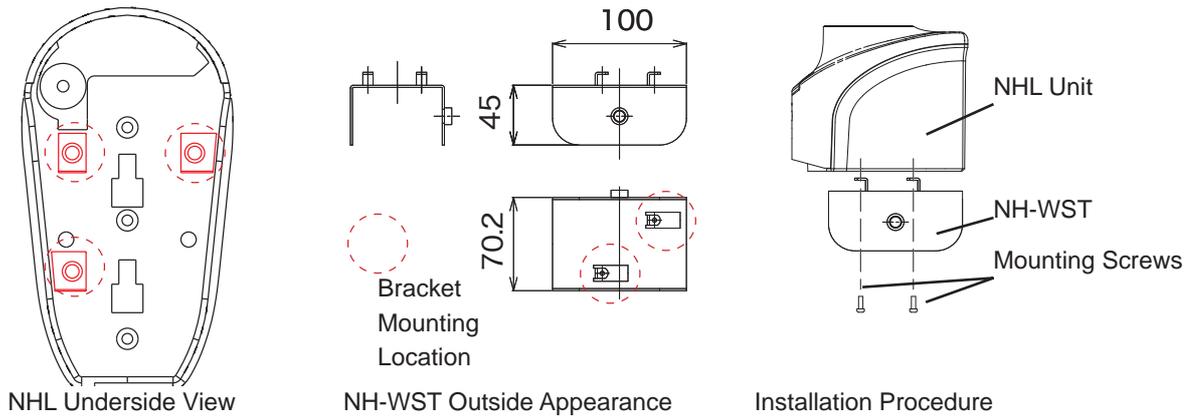


Fig. 6.3.4 Partition mounting bracket installation method

**Please** Tighten the screws between this product and the partition mounting bracket with a torque of about 0.39 N-m. Failure to do so may cause damage to the unit.

2. Check the width of the partition, then select the proper clamping screw to thread through the bracket. Attach the pressure plate and fittings.

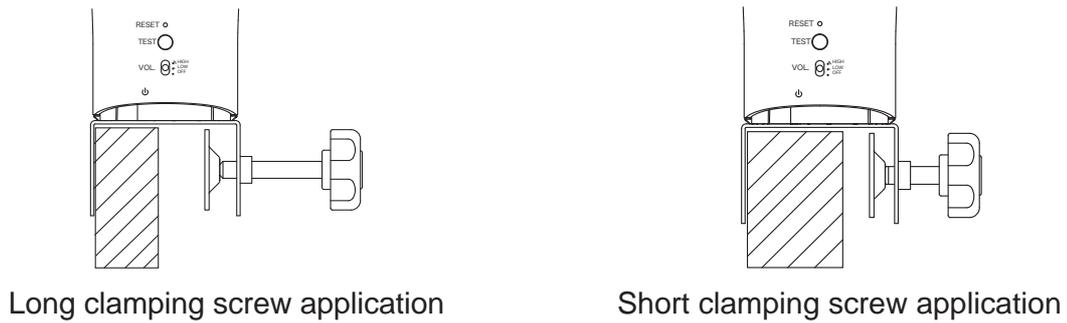


Fig. 6.3.5 Installation Method 1

3. Turn the clamping screw clockwise to tighten.

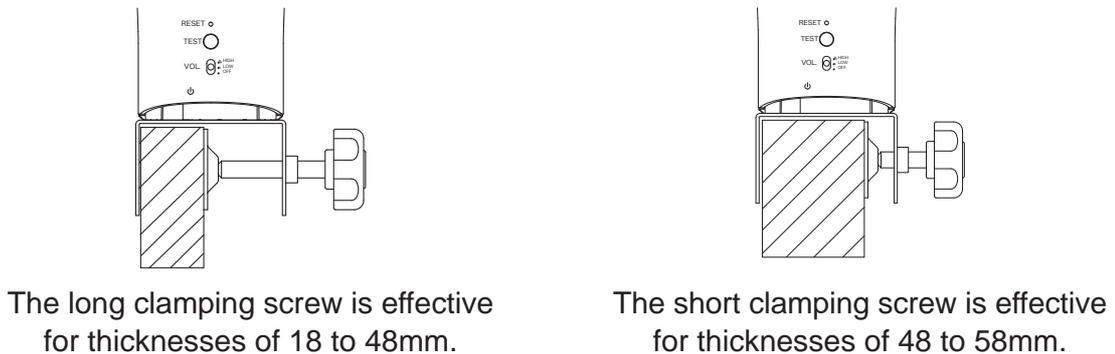


Fig. 6.3.6 Installation Method 2

Option Name	Part Number
Partition Mounting Bracket	NH-PST

**Please** The partition mounting bracket may break if too much torque is applied.

# 7 Troubleshooting

Problem	Check the following
The power does not turn on.	<ul style="list-style-type: none"> <li>• Check whether the AC Adaptor is connected correctly.</li> </ul>
The Web setup tool does not display.	<ul style="list-style-type: none"> <li>• Check whether the LAN connector is connected correctly.</li> <li>• Check the setup for the IP address on this product.</li> <li>• Check the setup for the IP address on the PC side.</li> <li>• Refer to 2.5 "Network Setup" for the IP address set up procedure.</li> </ul>
The Web setup tool does not display correctly.	<ul style="list-style-type: none"> <li>• Make sure the browser information has been recently updated.</li> </ul>
The Signal Tower does not turn on.	<ul style="list-style-type: none"> <li>• Check whether the AC Adaptor is connected correctly.</li> <li>• Check the setup of the Signal Tower operation with the Web setup tool. Refer to "4.13 Normal Mode Setting Screen" for the procedure to set up for the normal operation mode.</li> <li>• After any recombination of tiers to the Signal Tower has been done, check whether the Signal Tower lights up by accessing the Signal-Tower Output Control screen. If the light does not turn on, it may not be installed correctly. Refer to "4.15 Signal-Tower Output Control Screen" for the procedure to control the Signal-Tower output.</li> </ul>
The buzzer does not sound.	<ul style="list-style-type: none"> <li>• Check whether the volume switch has been set in the "OFF" position.</li> <li>• After each setup, check the buzzer operation. Refer to "4.15 Signal-Tower Output Control Screen" for the procedure to setup the buzzer output.</li> </ul>
Socket communication does not work.	<ul style="list-style-type: none"> <li>• Check whether the correct communication port has been set. Refer to "4.5 Socket Communication Configuration Screen" for the setup procedure of the Socket Communication.</li> <li>• Check whether the data had been sent correctly. For data transmitted by the Socket Communication, refer to "3.5 PHN Command Reception Function" and "3.6 PNS Command Reception Function".</li> </ul>
The RSH command data is unreceivable.	<ul style="list-style-type: none"> <li>• Check the command reception setup. Refer to "4.8 Command Reception Configuration Screen" for the setup procedure of the command reception.</li> <li>• Check whether the security settings for the PC has granted permission.</li> </ul>
I want to return it to the factory settings.,	<ul style="list-style-type: none"> <li>• Refer to "3.13 Reinitialization".</li> </ul>
The E-mail transmission cannot be sent.	<ul style="list-style-type: none"> <li>• Check whether the setup for the server is correct.</li> </ul>
The SNMP SET/GET does not work.	<ul style="list-style-type: none"> <li>• Check the SET Community name and GET Community name.</li> </ul>
The status LED is flashing.	<ul style="list-style-type: none"> <li>• It may be in the factory-shipment inspection mode. Please reboot this product.</li> </ul>

# 8 Freeware Terms of Agreement

The following chapter clearly outlines the copyrights for the freeware software used with this product.

## 8.1 GNU GENERAL PUBLIC LICENCE

### GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

675 Mass Ave, Cambridge, MA 02139, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

#### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps:

- (1) copyright the software, and
- (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

GNU GENERAL PUBLIC LICENSE  
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
  - a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
  - b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
  - c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.  
Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and “any later version”, you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.
10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM “AS IS” WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## END OF TERMS AND CONDITIONS

### Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) 19yy <name of author>
```

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:  
Gnomovision version 69, Copyright (C) 19yy name of author  
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

```
Yoyodyne, Inc., hereby disclaims all copyright interest in the program  
`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989  
Ty Coon, President of Vice
```

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

## 8.2 GNU LESSER GENERAL PUBLIC LICENSE

### GNU LESSER GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc. <<http://fsf.org/>>

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below.

#### 0. Additional Definitions.

As used herein, “this License” refers to version 3 of the GNU Lesser General Public License, and the “GNU GPL” refers to version 3 of the GNU General Public License.

“The Library” refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An “Application” is any work that makes use of an interface provided by the Library, but which is not otherwise based on the Library. Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library.

A “Combined Work” is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the “Linked Version”.

The “Minimal Corresponding Source” for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The “Corresponding Application Code” for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

#### 1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

#### 2. Conveying Modified Versions.

If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

- a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or
- b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

#### 3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

- a) Give prominent notice with each copy of the object code that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the object code with a copy of the GNU GPL and this license document.

#### 4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

- a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.
- b) Accompany the Combined Work with a copy of the GNU GPL and this license document.
- c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.
- d) Do one of the following:
  - 0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.
  - 1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.
- e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

#### 5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.
- b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

#### 6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License “or any later version” applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

## 8.3 NET-SNMP

Various copyrights apply to this package, listed in various separate parts below. Please make sure that you read all the parts.

---- Part 1: CMU/UCD copyright notice: (BSD like) ----

Copyright 1989, 1991, 1992 by Carnegie Mellon University

Derivative Work - 1996, 1998-2000

Copyright 1996, 1998-2000 The Regents of the University of California

All Rights Reserved

Permission to use, copy, modify and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appears in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of CMU and The Regents of the University of California not be used in advertising or publicity pertaining to distribution of the software without specific written permission.

CMU AND THE REGENTS OF THE UNIVERSITY OF CALIFORNIA DISCLAIM ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL CMU OR THE REGENTS OF THE UNIVERSITY OF CALIFORNIA BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM THE LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

---- Part 2: Networks Associates Technology, Inc copyright notice (BSD) ----

Copyright (c) 2001-2003, Networks Associates Technology, Inc

All Rights Reserved

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of the Networks Associates Technology, Inc nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 3: Cambridge Broadband Ltd. copyright notice (BSD) ----  
Portions of this code are copyright (c) 2001-2003, Cambridge Broadband Ltd.  
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* The name of Cambridge Broadband Ltd. may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDER ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 4: Sun Microsystems, Inc. copyright notice (BSD) ----  
Copyright <A9> 2003 Sun Microsystems, Inc., 4150 Network Circle, Santa Clara,  
California 95054, U.S.A. All rights reserved.  
Use is subject to license terms below.

This distribution may include materials developed by third parties.

Sun, Sun Microsystems, the Sun logo and Solaris are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of the Sun Microsystems, Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 5: Sparta, Inc copyright notice (BSD) ----  
Copyright (c) 2003-2008, Sparta, Inc  
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of Sparta, Inc nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 6: Cisco/BUPTNIC copyright notice (BSD) ----  
Copyright (c) 2004, Cisco, Inc and Information Network  
Center of Beijing University of Posts and Telecommunications.  
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of Cisco, Inc, Beijing University of Posts and Telecommunications, nor the names of their contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDERS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---- Part 7: Fabasoft R&D Software GmbH & Co KG copyright notice (BSD) -----  
Copyright (c) Fabasoft R&D Software GmbH & Co KG, 2003  
oss@fabasoft.com  
Author: Bernhard Penz <bernhard.penz@fabasoft.com>

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* The name of Fabasoft R&D Software GmbH & Co KG or any of its subsidiaries, brand or product names may not be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDER ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

## 8.4 BSD LICENCE

Copyright (c) 1989 The Regents of the University of California.  
All rights reserved.

This code is derived from software contributed to Berkeley by Mike Muuss.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement: This product includes software developed by the University of California, Berkeley and its contributors.
4. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.



# PATLITE

## PATLITE Corporation

G1E

**International Division Sales & Marketing Department**  
Inaba Building 4-11-14 Itachibori Nishi-ku Osaka 550-0012 Japan

**PATLITE (U.S.A.) Corporation**  
20130 S. Western Avenue, Torrance, CA 90501 U.S.A.

**PATLITE Europe GmbH**  
Am Soeldnermoos 8, D-85399 Hallbergmoos, Germany

**PATLITE (SINGAPORE) PTE LTD**  
No.2 Leng Kee Road, #05-01 Thye Hong Centre, Singapore 159086

**PATLITE (CHINA) Corporation**  
Room 512, Jufeng Business Building, No.697-3 Lingshi Road, Shanghai 200072, China

**PATLITE KOREA CO., LTD.**  
A-2603, Daesung D-POLIS, 543-1 Gasan-dong, Geumcheon-gu, Seoul, 153-719 Korea

**PATLITE Japan Representative Office in Taiwan**  
7F. No. 91, Huayin St, Datong District Taipei, Taiwan R.O.C

TEL. +81-6-7688-5400

FAX. +81-6-7688-5401

TEL. +1-310-328-3222

FAX. +1-310-328-2676

TEL. +49-811-99819770-0

FAX. +49-811-99819770-9

TEL. +65-6226-1111

FAX. +65-6324-1411

TEL. +86-21-6630-8969

FAX. +86-21-6630-8938

TEL. +82-2-523-6636

FAX. +82-2-861-9919

TEL. +886-2-2555-1611

FAX. +886-2-2555-1621

<http://www.patlite.com/>

## PATLITE Corporation

T95100146	D
2014.2. Web	