# ESC/VP.net SOFTWARE DEVELOPMENT MANUAL SEIKO EPSON

## REVISION HISTORY

All pages	NY.
_	New
13,36,37-39,	Add the new command corresponded to EMP/PL-745/835 and modifying the expression of models.
44-53,	
14	Adds new type to IM-Type list
47	Adds new parameter to parameter list for security system setting command.
49-51	Adds new commands.
56, 57	Corrects command list.
14	Adds new type to IM-Type list
57,58	Adds new models
14	Adds new type to IM-Type list
57,58	Adds new models (Type L)
58	Adds new models(EB-450Wi/Brigh/tLink450Wi/450W/460i/460/460e/84H/84He/84+/84L/85H/85/825H/825+/826WH/826W+)
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#### 1. INTRODUCTION

#### 1.1 Purpose of This Manual

This manual describes the ESC/VP.net protocol specifications and ESC/VP.net command specifications to develop software using ESC/VP.net.

This document provides specifications of ESC/VP.net protocol and its command to develop a software to use ESC/VP.net.

#### 1.2 Scope of application

This protocol applies to the SEIKO EPSON projectors which sapport networking and ESC/VP21.

#### 2. OVERVIEW

ESC/VP.net uses the ESC/VP21 commands to provide the functions to control and monitor a projector via a network (LAN).

#### 2.1 Projector Control

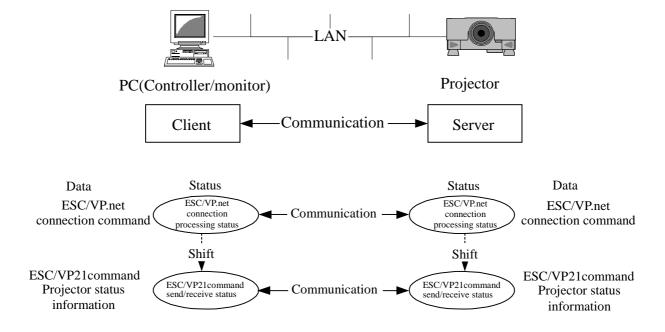
The ESC/VP21 commands are sent to the projector from the controller (example: PC) connected to the network to control the projector.

#### 2.2 Projector Monitoring

The projector connected to the network gives the projector status information, such as an alarm status, to the monitor (example: PC) to monitor the projector status in real time.

#### 3. DETAILS

#### 3.1 System Configuration



ESC/VP.net uses a client-server system, in which the projector side is defined as a server and the controller/monitor side as a client.

In communication between the server and client, ESC/VP.net connection processing is performed, and then the ESC/VP21 commands are sent/received.

#### 3.2 Projector Control

This function controls the projector using the ESC/VP21 commands after completion of ESC/VP.net connection processing. Therefore, it achieves the same function as the projector control using the ESC/VP21 commands with RS-232C or USB.

#### 3.3 Projector Monitoring

This function gives the projector status information from the server to the client to monitor the projector status on the client side. At this time, the projector status information is as described below.

Projector status : Standby, warm-up, normal, cool-down

Warning : Lamp life, no signal, unsupported signal, air filter, high temperature

Alarm: : Lamp ON failure, lamp lid open, lamp burnout (ON, then OFF), fan, temperature sensor, high temperature, interior

(system)

The data format is as follows:

#### IMEVENT W XX YYYY ZZZZ<CR>:

For the settings of the parameter W, X, Y, Z, refer to the ESC/VP21 command IMEVENT? (refer to 7. Appendix A: COMMAND TO GET PROJECTOR STATUS INFORMATION).

When giving the above information during processing of the command sent from the client on the server side (return a response to the client as the ESC/VP21 command), give it after command processing.

#### 4. PROTOCOLS

#### 4.1 ESC/VP.net Protocol (ESC/VP.net connection processing)

The ESC/VP.net protocol is defined in "5. ESC/VP.net PROTOCOL SPECIFICATIONS".

#### **4.2 ESC/VP.net Communication (after session establishment)**

The ESC/VP.net communication protocol shall comply with ESC/VP21.

#### 4.3 ESC/VP.net Commands

The ESC/VP.net commands shall comply with the ESC/VP21 commands.

However, the following commands are defined as the ESC/VP.net dedicated commands.

(Refer to 6. ESC/VP.net COMMAND SPECIFICATIONS.)

<sup>\*</sup>The warning and alarm definitions change depending on the model.

#### 5. ESC/VP.net PROTOCOL SPECIFICATIONS

#### 5.1 Glossary

Session	Logical communication from the start to the end of communication between applications.		
Client	Program that issues a request to the server.		
	The PC application (EMPMonitor, etc.) is a client.		
Server	Program that responds to a request from the client.		
	The projector application is a server.		
Message	Datagram that is the basic unit of communication.		
Request	Message that describes a request to the target of communication.		
Response	Message that describes a response to the request.		

#### **5.2 About Notation**

#### 5.2.1 About data types

The data types used in this specification are defined as follows.

The byte order shall be the network byte order (big endian).

STR	Fixed-length character string. A character string in excess of the specified byte length cannot be			
	stored.			
	When the character string to be stored is less than the byte length, the storage of the character string			
	starts from the beginning of the area, and the remaining area is filled with 0x00. When the character			
	string is blank, all the area is filled with 0x00.			
	Unless otherwise specified, the character code is US-ASCII.			
BYTE	8-bit data sequence			
CHAR	8-bit signed value (-128 to +127)			
UCHAR	8-bit unsigned value (0 to 255)			
SHORT	16-bit signed value (-32768 to +32767)			
USHORT	16-bit unsigned value (0 to 65535)			

#### **5.2.2** Other notations

Reserved values are unused for such reasons as to maintain future matching. In the installation of the current version, reserved values must not be used.

The part enclosed in double quotation marks represents a character string without the double quotation marks. When there are only double quotation marks, they represent a null character string.

a..b represents the specified range (from a to b).

Values beginning with 0x are hexadecimal numbers, and others are decimal numbers.

#### **5.3 Protocol Specifications Outline**

#### 5.3.1 Range of protocol specifications

This protocol realizes non-procedural communication on TCP/IP to achieve projector control using ESC/VP21. This is the protocol corresponding to the session layer of the OSI reference model.

	Serial Connection TCP/IP Connection		
Application layer	ESC/VP21		
Presentation layer			
Session layer		ESC/VP.net	
Transport layer	N	TCP, UDP	
Network layer	Non-procedural	IP	
Data link layer		Edward	
Physical layer	RS-232C	Ethernet, etc.	

#### **5.3.2 Protocol features**

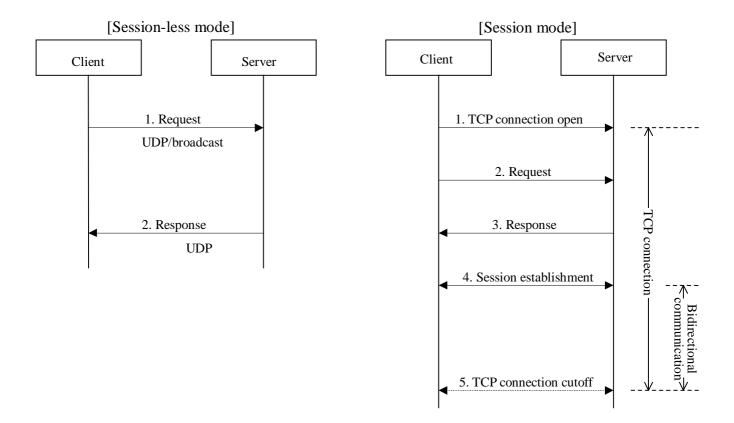
This protocol has the following features.

- Achieves non-procedural communication on TCP/IP.
- Small enough to be installed on a microcomputer of a few resources.
- On the other hand, consideration is given to future extensibility.
- Has a kind of directory service function to grasp the projectors existing on the network if they have not been pre-registered.
- Compatibility with the conventional protocol (ESC/VP over TCP/IP version 1.0) is not taken into consideration.
   EMPMonitor runs the conventional protocol and new protocol on different ports and different threads independently to hold downward compatibility.
- The purpose is projector control, and no consideration is given to use in presentation support applications, etc.

## **5.4 Entire Operation**

This protocol has two communication modes, session-less mode and session mode. Both modes are for communication made by client/server models.

The TCP/UDP port 3629 is used. This is a default value, and changing the settings of both the client and server enables use of the other port.



## **5.4.1** Format common to request and response

The part common to the request and response are defied as follows.

The size of the common part is a 16-byte fixed length.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
			4 high-order bits indicate a major version, and 4 low-order bits a minor version.
1	UCHAR	03	Type identifier
			0: NULL (reserved) 1:HELLO 2:PASSWORD 3:CONNECT
2	USHORT		(Reserved) Reserved area for the sequence number. Always set 0 in the current stage.
1	BYTE		Always set 0x00 for a request.
			Set the status code for a response.
1	UCHAR		Specify the number of headers that will follow.
			Set 0 when not using headers.
This is followed	This is followed by the specified number of headers.		

#### The status code is defined as follows.

1110 500	The states code is defined as follows.			
0x20	OK Normal termination			
0x40	0 Bad Request Request cannot be understood as its grammar is wrong.			
0x41 Unauthorized		Password is required.  (The client issues a request again with the recovered added.)		
		(The client issues a request again with the password added.)		
0x43	Forbidden	Password is wrong.		
0x45	Request not allowed	Disallowed type request.		
0x53	Service Unavailable	The projector is BUSY, etc.		
0x55	Protocol Version Not	I Vancous auto-december		
	Supported	Unsupported version.		

#### 5.4.2 Header

The structure of one header is defined as follows.

The size of one header is 18-byte fixed length. This is repeated by the specified number of times.

Byte Length	Type	Value	Meaning
1	UCHAR	05	Header identifier
			0:NULL (reserved) 1:Password 2:New-Password
			3:Projector-Name 4:IM-Type 5:Projector-Command-Type
1	UCHAR		Header attribute value
			0:NULL 1255: Meaning changes depending on the identifier.
16	STR		Header information

#### Password header

In the Password header, describe a password as the header information.

As the attribute value, specify the encoding format of the password.

The currently defined attribute values are as follows.

Attribute Value	Meaning	
0	NULL means "no password".	
	At this time, the header information must be a null character string.	
1	Plain (no encoding)	
	The password is stored into the header information unchanged in plain text.	
	The characters that can be used as a password are printable ASCII characters.	

#### **New-Password header**

In the New-Password header, describe projector name as the header information.

The attribute values are the same as those of the password header.

## Projector-Name header

In the Projector-Name header, describe a new password as the header information.

As the attribute value, specify the character code used to describe the projector name.

The currently defined attribute values are as follows.

Attribute Value	Meaning	
0	NULL means "no prokector name".	
	At this time, the header information must be a null character string.	
1	US-ASCII	
2	Shift-JIS (Reserved)	
3	EUC-JP (Reserved)	

#### **IM-Type header**

In the IM-Type header, specify the IM type as the attribute value. The projector types are listed in Chapter 7.1 The header information cannot be described. (Set 0x00 to all.)

The currently defined attribute values are as follows.

Attribute Value	Meaning		
10-15	(Reserved)		
16-19	Type A		
17-19	(Reserved)		
0C	Type D		
20	Initial model of EMP/PL-735		
21	Type C, Type E		
22	Type F		
23	Type G		
24-29	(Reserved)		
30	Type B		
31-39	(Reserved)		
40	Type H		
41	Type I		
42	Type J		
43-49	(Reserved)		
50	Type K		
51-59	(Reserved)		

### **Projector-Command-Type header**

In the Projector-Command-Type header, specify the type of the projector command system as the attribute value. The header information cannot be described. (Set 0x00 to all.)

The currently defined attribute values are as follows.

Attribute Value	Meaning
22 (0x16)	ESC/VP Level6 (Reserved)
33 (0x21)	ESC/VP21 Ver1.0

<sup>4</sup> high-order bits indicate a command system type, and 4 low-order bits a command system version.

#### 5.5 Communication in Session-less Mode

In the session-less mode, a request and response are exchanged without a session being established. Communication in the session-less mode is made in the following procedure.

1. The client sends a request to all servers.

The request is sent to the UDP port 3629 of the broadcast address.

2. The server that received the request sends a response to the client that sent the request.

The response is sent to the UDP port 3629 of the address of the client that sent the request .

A "HELLO" request can be used in the session-less mode.

#### 5.5.1 HELLO request/response

A HELLO request/response confirms the server existence and type.

The request header cannot be used in the HELLO request.

The server must not demand a password for the HELLO request.

The response header of the response in reply to the HELLO request must include all of Projector-Name, IM-Type and Projector-Command-Type.

The IP address of the projector that returned the response is not included in the response since it can be gotten from the UDP packet.

The following indicates an example of HELLO request/response communication.

#### Request

(Request: Sent to the broadcast address and UDP port 55799 (changeable).)

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	1	Type identifier: HELLO
2	USHORT	0	(Reserved)
1	BYTE	0x00	Status code: Always set 0x00 since it is a
			request.
1	UCHAR	0	Number of headers: No headers

#### Response

(Response: Sent to the address of the client that sent the request and UDP port 3629.)

Byte Length	Туре	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	1	Type identifier: HELLO
2	USHORT	0	(Reserved)
1	BYTE	0x20	Status code: OK
1	UCHAR	3	Number of headers: 3
1	UCHAR	3	Header 1 identifier: Projector-Name
1	UCHAR	1	Header 1 attribute value: US-ASCII
16	STR	"Room 1"	Header 1 information: Projector name
1	UCHAR	4	Header 2 identifier: IM-Type
1	UCHAR	10	Header 2 attribute value: IM-M
16	STR	""	Header 2 information: None
1	UCHAR	5	Header 3 identifier: Projector-Command-Type
1	UCHAR	33	Header 3 attribute value: ESC/VP21 Ver1.0
16	STR	""	Header 3 information: None

Note: the response size of the following projector types is 72Byte.

Type A and D: EMP/PL-830/7800/7900/8300/9300/TW500

(Response: Error response)

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	1	Type identifier: HELLO
2	USHORT	0	(Reserved)
1	BYTE	0x40	Status code: Bad Request
1	UCHAR	0	Number of headers: 0

#### 5.6 Communication in Session Mode

In the session mode, a request and response are exchanged to establish a session, and non-procedural communication is made after establishment of the session.

Communication in the session mode is made in the following procedure.

- 1. The server stands by at the TCP port 3629.
- 2. The client demands a TCP connection for the server address and TCP port 55799 (changeable).
- 3. When the TCP connection is established, the client sends a request to the server.
- 4. The server sends a response to the client.
  - (a) When the server has returned an error response, it cuts off the TCP connection.
  - (b) When a normal termination response is returned
    - 1) CONNECT request

The bidirectional communication session of the projector commands starts, with the TCP connection maintained.

2) Other request

The TCP connection is cut off.

Communication in the session mode is always started by the client (PC). Communication cannot be started by the server (projector).

When the TCP connection cannot be established as the server is BUSY, etc., the server rejects the TCP connection.

The cut of the TCP connection can be executed by either the client or server.

The requests that can be used in the session mode are "CONNECT" and "PASSWORD".

#### 5.6.1 About bidirectional communication session

The following rules have been set forth to detect the abnormal termination of the communication target or the cutoff of the communication path after a bidirectional communication session has started.

- If a no-communication status continues for longer than 10 minutes (changeable) in the bidirectional communication session, it is regarded as a communication cutoff, the TCP connection is cut off, and the bidirectional communication session is terminated.
- To maintain the session, a null communication is made when half of the above time-out period has elapsed after the last data is received or sent from the client to the server.

In ESC/VP21, a null command (null line) is sent from the client to the server. In response to this, the server returns ':'. When the server does not return ':', the client judges that the server is BUSY and sends a null command again one minute later. When ':' is not returned after this has been repeated until the end of the time-out period, communication with the server is judged as cut off, the TCP connection is cut off, and the bidirectional communication session is terminated.

#### 5.6.2 PASSWORD request/response

A PASSWORD request/response confirms and changes the password.

The request headers that can be used in the PASSWORD request are Password and New-Password.

The response header is not used in the PASSWORD response.

The following indicates an example of PASSWORD request/response communication.

#### Request

(Request to confirm the presence/absence of password setting)

After the TCP connection is opened, the following datagram is sent.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	2	Type identifier: PASSWORD
2	USHORT	0	(Reserved)
1	BYTE	0x00	Status code: Always set 0x00 since it is a request.
1	UCHAR	0	Number of headers: 0

The server returns the status code 0x20 (OK) when the password has not been set, or the status code 0x41 (Unauthorized) when the password has been set.

#### (Request to confirm the password)

After the TCP connection is opened, the following datagram is sent.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	2	Type identifier: PASSWORD
2	USHORT	0	(Reserved)
1	BYTE	0x00	Status code: Always set 0x00 since it is a request.
1	UCHAR	1	Number of headers: 1
1	UCHAR	1	Header 1 identifier: Password
1	UCHAR	1	Header 1 attribute value: Plain
16	STR	"AbCdEfGhIjk"	Header 1 information: Password character string

The server returns the status code 0x20 (OK) when the password is correct, or the status code 0x43 (Forbidden) when the password is wrong.

#### (Request to change the password)

After the TCP connection is opened, the following datagram is sent.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	2	Type identifier: PASSWORD
2	USHORT	0	(Reserved)
1	BYTE	0x00	Status code: Always set 0x00 since it is a request.
1	UCHAR	2	Number of headers: 2
1	UCHAR	1	Header 1 identifier: Password
1	UCHAR	1	Header 1 attribute value: Plain
16	STR	"AbCdEfGhIjk"	Header 1 information: Password character string
1	UCHAR	2	Header 2 identifier: New-Password
1	UCHAR	1	Header 2 attribute value: Plain
16	STR	"FooBar"	Header 2 information: New password character string

(Request to erase the password setting)

After the TCP connection is opened, the following datagram is sent.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	2	Type identifier: PASSWORD
2	USHORT	0	(Reserved)
1	BYTE	0x00	Status code: Always set 0x00 since it is a request.
1	UCHAR	2	Number of headers: 2
1	UCHAR	1	Header 1 identifier: Password
1	UCHAR	1	Header 1 attribute value: Plain
16	STR	"AbCdEfGhIjk"	Header 1 information: Password character string
1	UCHAR	2	Header 2 identifier: New-Password
1	UCHAR	0	Header 2 attribute value: NULL
16	STR	""	Header 2 information: Blank character string

(Request to set a password to the server where no password is currently set)

After the TCP connection is opened, the following datagram is sent.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	2	Type identifier: PASSWORD
2	USHORT	0	(Reserved)
1	BYTE	0x00	Status code: Always set 0x00 since it is a request.
1	UCHAR	2	Number of headers: 2
1	UCHAR	1	Header 1 identifier: Password
1	UCHAR	0	Header 1 attribute value: NULL
16	STR	""	Header 1 information: Blank character string
1	UCHAR	2	Header 2 identifier: New-Password
1	UCHAR	1	Header 2 attribute value: Plain
16	STR	"AbCdEfGhIjk"	Header 2 information: Newly set password

### Response

(Response to a success in password confirmation or change)

After the following datagram is sent, the TCP connection is cut off.

Byte Length	Туре	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	2	Type identifier: PASSWORD
2	USHORT	0	(Reserved)
1	BYTE	0x20	Status code: OK
1	UCHAR	0	Number of headers: 0

(Response to a failure due to an authentication error)

After the following datagram is sent, the TCP connection is cut off.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	2	Type identifier: PASSWORD
2	USHORT	0	(Reserved)
1	BYTE	0x43	Status code: Forbidden
1	UCHAR	0	Number of headers: 0

#### 5.6.3 CONNECT request/response

A session of bidirectional communication with the projector is demanded.

When the server cannot establish a new session, the error code 0x53 is returned.

In a CONNECT request, the request header Password can be used.

In a CONNECT response, the server information can be returned using the response header, but the response header is not used in the current installation.

The following indicates an example of CONNECT request/response communication.

#### Request

(Request not to use the password)

After the TCP connection is opened, the following datagram is sent.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	3	Type identifier: CONNECT
2	USHORT	0	(Reserved)
1	BYTE	0x00	Status code: Always set 0x00 since it is a request.
1	UCHAR	0	Number of headers: 0

## (Request to use the password)

After the TCP connection is opened, the following datagram is sent.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	3	Type identifier: CONNECT
2	USHORT	0	(Reserved)
1	BYTE	0x00	Status code: Always set 0x00 since it is a request.
1	UCHAR	1	Number of headers: 1
1	UCHAR	1	Header 1 identifier: Password
1	UCHAR	1	Header 1 attribute value: Plain
16	STR	"AbCdEfGhIjk"	Header 1 information: Password character string

#### Response

(Response to a success in session start)

After the following datagram is sent, the bidirectional session of ESC/VP21 starts with the TCP connection maintained.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	3	Type identifier: CONNECT
2	USHORT	0	(Reserved)
1	BYTE	0x20	Status code: OK
1	UCHAR	0	Number of headers: 0

After the bidirectional session has started, the ESC/VP21 commands are transferred directly since direct communication is made with the projector.

The bidirectional session is continued until the TCP connection is cut off from either the server or client.

(Response to a failure in connection due to a BUSY status)

After the following datagram is sent, the TCP connection is closed.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	3	Type identifier: CONNECT
2	USHORT	0	(Reserved)
1	BYTE	0x53	Status code: Service Unavailable
1	UCHAR	0	Number of headers: 0

#### (Response to the necessity of a password)

After the following datagram is sent, the TCP connection is closed.

Byte Length	Туре	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	3	Type identifier: CONNECT
2	USHORT	0	(Reserved)
1	BYTE	0x41	Status code: Unauthorized
1	UCHAR	0	Number of headers: 0

When receiving this response, the client can retry a connection using the password.

## (Response to a wrong password)

After the following datagram is sent, the TCP connection is closed.

Byte Length	Type	Value	Meaning
10	STR	"ESC/VP.net"	Protocol identifier
1	BYTE	0x10	Version identifier
1	UCHAR	3	Type identifier: CONNECT
2	USHORT	0	(Reserved)
1	BYTE	0x43	Status code: Forbidden
1	UCHAR	0	Number of headers: 0

## 5.7 Error Processing

## (Common error processing)

Error Definition	Processing Method
Rquest data is illegal.	
• Protocol identifier is not "ESC/VP.net".	
Type identifier is outside the defined range.	The server returns the error code 0x40 (Bad Request) in a response.
• Status code is not 0x00.	After that, in the case of the session mode, the server cuts off the
• Sequence number (reserved area) is not 0.	TCP connection and waits for the next request.
Header identifier is outside the defined range.	
Header attribute value is outside the defined range.	
	The server returns the error code 0x55 (Protocol Version Not
Version identifier is not 0x10.	Supported) in a response. After that, in the case of the session
version identifier is not 0x10.	mode, the server cuts off the TCP connection and waits for the next
	request.

#### (Error processing specific to session-less mode)

Error Definition	Processing Method
Type identifier is not 1 (HELLO).	The server returns the error code 0x45 (Request not allowed) in a
Type identifier is not 1 (TELLO).	response.

## (Error processing specific to session mode)

Error Definition	Processing Method
Type identifier is not 2 (PASSWORD) or 3 (CONNECT).	The server returns the error code 0x45 (Request not allowed) in a response. After that, the server cuts off the TCP connection and waits for the next request.

## (Error processing specific to HELLO request)

Error Definition	Processing Method
In spite of the HELLO request, the request header is used.	The server returns the error code 0x40 (Bad Request) in a response.

## (Error processing specific to PASSWORD request)

Error Definition	Processing Method
In spite of the PASSWORD request, the header other than	
Password/New-Password is used.	
The password or new password includes any character that	The server returns the error code 0x40 (Bad Request) in a
cannot be printed or that deviates from the US-ASCII code.	response, cuts off the TCP connection, and waits for the next
(0-31 and 127 or more)	request.
Though the Password/New-Password header identifier is	
not NULL, the password is a blank character string.	
Though the password is set to the server, the password is not included in the request.	The server returns the error code 0x41 (Unauthorized) in a response, cuts off the TCP connection, and waits for the next request.
Though the password is not set to the server, the password	The server ignores the password in the request. An error does not
is included in the request.	occur.
The password set to the server differs from the password	The server returns the error code 0x43 (Forbidden) in a response,
included in the request.	cuts off the TCP connection, and waits for the next request.
The server cannot respond immediately since it is processing the other request, for example.	The server returns the error code 0x53 (Service Unavailable) in a response, cuts off the TCP connection, and waits for the next request.

(Error processing specific to CONNECT request)

Error Definition	Processing Method
Though the password is set to the server, the password	The server returns the error code 0x41 (Unauthorized) in a response,
is not included in the request.	cuts off the TCP connection, and waits for the next request.
Though the password is not set to the server, the	The server ignores the password in the request. An error does not
password is included in the request.	occur.
The password set to the server differs from the	The server returns the error code 0x43 (Forbidden) in a response,
password included in the request.	cuts off the TCP connection, and waits for the next request.
The server cannot respond immediately since it is	
processing the other request, for example.	The server returns the error code 0x53 (Service Unavailable) in a
The server cannot start a new ESC/VP21 bidirectional	response, cuts off the TCP connection, and waits for the next request.
session.	

## **5.8 Restrictions**

This protocol does not assume use beyond the firewall.

It does not consider the security for connection to the Internet, either.

## **6.ESC/VP.net COMMAND SPECIFICATIONS**

The following commands are defined as the ESC/VP.net dedicated commands.

Set SNMP trap destination address 1

i trap destination address i							
Command	NWTRAF	NWTRAPIP1 xxx.xxx.xxx (xxx indicates the IP address parameter)					
	Specify th	e address with	an ASCII cha	racter string, v	whose 3 signif	icant digits are	e 0 to 255,
Parameter	and a deli	miter '.'.					
	The field	of less than 3 d	igits need not	be filled with	0.		
	Specify 0.	0.0.0 when set	ting the SNM	P trap destinat	ion address 1	invalid.	
Function	Set up the	trap destination	n IP address	of SNMP in	the projector i	nain unit.	
Return code	Absence	Absence					
Status	'ERR'	. Normal termination.					
Disclosed/non-disclosed	Non-discl	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Remarks	Setting ex	Setting example:NWTRAPIP1 163.152.67.1					

Get SNMP trap destination address 1

vii trap destiliation address							
Command	NWTRAP	NWTRAPIP1?					
Parameter	Absence						
Function	Return the trap destination IP address 1 of set SNMP.						
Function	A return of	f 0.0.0.0 indicat	es that the SN	MP trap destina	ation address 1	is set invalid.	
	Return the	Return the trap destination IP address 1 set with the ASCII character string whose 3					
	significant	t digits are 0 to	255.				
Return code							
	Return example:NWTRAPIP1?						
		NWTRAPIF	P1=163.152.6	7.1			
	1:1	Normal termin	ation.				
Status	'ERR'	Abnormal tern	nination. (Retu	irned when the	e command ter	rmination is ot	her than a
		normal termina	ation.)				
Disclosed/non-disclosed	Non-discle	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Remarks	Absence						

Set SNMP trap destination address 2

Command	NWTRAP	IP2 xxx.xxx.x	xx.xxx (xxx ii	ndicates the IP	address parar	neter)	
Parameter	Specify the and a deline The field of	NWTRAPIP2 xxx.xxx.xxx (xxx indicates the IP address parameter)  Specify the address with an ASCII character string, whose 3 significant digits are 0 to 255, and a delimiter '.'.  The field of less than 3 digits need not be filled with 0.  Specify 0.0.0.0 when setting the SNMP trap destination address 2 invalid.					
Function	Set up the	trap destinatio	n IP address 2	2 of SNMP in	the projector i	nain unit.	
Return code	Absence	Absence					
Status	'ERR'	. Normal termination.					
Disclosed/non-disclosed	Non-discle	osed					
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence	
Remarks	Setting ex	Setting example:NWTRAPIP2 163.152.67.1					

Get SNMP trap destination address 2

Command	NWTRAP	NWTRAPIP2?					
Parameter	Absence						
Function		Return the trap destination IP address 2 of set SNMP.					
	A return o	f 0.0.0.0 indica	ates that the S	NMP trap dest	tination addre	ss 2 is set inva	lid.
	Return the	Return the trap destination IP address 2 set with the ASCII character string whose 3					
	significant	significant digits are 0 to 255.					
Return code							
	Return example:NWTRAPIP2?						
		NWTRAPII	TRAPIP2=163.152.67.1				
	':'	Normal termin	nation.				
Status	'ERR'	Abnormal tern	nination. (Retu	urned when the	e command te	rmination is ot	her than a
		normal termina	ation.)				
Disclosed/non-disclosed	Non-discle	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Remarks	Absence						

Set projector name

ector name							
Command		NWPNAME xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx					
Parameter	Specify an	Specify an ASCII character string (alphanumeric characters) of up to 15 effective characters.  Characters effective for projector name: Refer to "Character Restrictions".					
Function	Set up the	projector nam	e (computer n	ame) in the pro	ojector main u	ınit.	
Return code	Absence	Absence					
Status	'ERR'	. Normal termination.					
Disclosed/non-disclosed	Non-discle	osed					
Parameter presence/absence	INIT	INIT Absence INC Absence DEC Absence					
Remarks	Setting ex	ample:NWPN	AME PROJ01				

Get projector name

jector name	1						
Command	NWPNAI	NWPNAME?					
Parameter	Absence						
Function	Return the	e set projector i	name (comput	er name).			
	Return the projector name (computer name) set with the ASCII character string						
Return code	(alphanun	neric characters	s).				
Return code	Return example:NWPNAME?						
	NWPNAME=PROJ01						
	':'	Normal termin	nation.				
Status	'ERR'	'ERR' Abnormal termination. (Returned when the command termination is other than a					
	normal termination.)						
Disclosed/non-disclosed	Non-discl	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Remarks	Absence		·		·		

Set community name

Command		NWCNAME xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx					
	(xxx indic	cates the comm	unity name ch	aracter string)			
Parameter	Specify an	n ASCII charac	ter string of u	p to 8 effective	e characters.		
Farameter	Character	s effective for o	community na	me: Refer to "	Character Res	trictions".	
Function	Set up the	SNMP comm	unity name in	the projector i	nain unit.		
Return code	Absence						
	':' Normal termination.						
Status	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment						
	cannot be made with the input value, or the command termination is other than a						
	normal termination.)						
Disclosed/non-disclosed	Non-discl	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Remarks	Setting ex	ample:NWCN	AME ABCDE	EF			

Get community name

mumity mame							
Command	NWCNA	NWCNAME?					
Parameter	Absence						
Function	Return the	e set SNMP co	mmunity nam	e.			
	Return the	Return the SNMP community name set with the ASCII character string (alphanumeric					
	characters	characters).					
Return code							
	Return example:NWCNAME?						
		NWCNAMI	E=ABCDEF				
	':'	Normal termin	nation.				
Status	'ERR'	Abnormal tern	nination. (Ret	urned when the	e command te	rmination is ot	her than a
		normal termina	ation.)				
Disclosed/non-disclosed	Non-discl	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Remarks	Absence						

## Get MAC address (wired LAN)

Command	NWMAC	NWMAC?					
Parameter	Absence						
Function	Return th	e network adap	tor address of	the network p	rojector.		
	Return th	Return the MAC address with the ASCII character string of 12 characters (hexadecimal					
	representa	representation).					
Return code							
	Return example:NWMAC?						
		NWMAC=0	040B412345	5			
	':'	Normal termin	ation.				
Status	'ERR'	Abnormal term	nination. (Retu	arned when the	e command te	rmination is ot	her than a
		normal termina	ation.)				
Disclosed/non-disclosed	Non-disc	losed		•			
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Remarks	Absence						

## Get MAC address (wireless LAN)

Command	NWMAC'	NWMAC?					
Parameter	Absence						
Function	Return the	network adap	tor address of	the network p	rojector.		
		Return the MAC address with the ASCII character string of 12 characters (hexadecimal representation).					
Return code	Return example:NWMAC?  NWMAC=0040B4123456						
	':'	Normal termin	ation.				
Status	'ERR'	Abnormal tern	nination. (Retu	arned when the	e command te	rmination is ot	her than a
		normal termina	ation.)				
Disclosed/non-disclosed	Non-discle	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Remarks	Absence						

#### Set mail destination address 1

Command	NWSMTPTO1 x						
	x: Mail destination address 1 sent by SMTP.						
Parameter	The number of characters is up to 64.						
1 arameter	0 characters set no destination address.						
	Refer to the "Character Restrictions" for the effective characters.						
Function	Set the mail destination address 1 used by the mail send function.						
Tunetion	Set the send source mail address used by the mail send function.						
Return code	Absence						
	':' Normal termination.						
	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment						
Status	cannot be made with the input value, or the command termination is other than a						
	normal termination, or returned when data is received via external USB or						
	RS-232C.)						
Disclosed/non-disclosed	Non-disclosed						
Parameter	INIT Absence INC Absence DEC Absence						
presence/absence							
	Setting example 1: Example of setting epson@exc.co.jp as the destination address						
	:NWSMTPTO1 epson@exc.co.jp						
	:						
Remarks							
	Setting example 2: Example of setting no destination address						
	:NWSMTPTO1						
	]:						

## Get mail destination address 1

Command	NWSMT	NWSMTPTO1?						
Parameter	Absence	Absence						
Function	Return the	Return the mail destination address 1 used by the mail send function.						
Tunetion	Return the	e send source n	nail address us	sed by the mai	l send function	on.		
Return code	Return the	e mail destinati	on address 1 o	of up to 64 cha	aracters.			
Return code	0 characte	ers indicate that	t the mail dest	ination addres	s 1 (send sou	rce mail addres	s) is not set.	
	':' Normal termination.							
G	'ERR' Abnormal termination. (Returned when the command termination is other than a							
Status	normal termination, or returned when data is received via external USB or							
	RS-232C.)							
Disclosed/non-disclosed	Non-discl	losed						
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
	Response	example:						
D 1	NWSMTPTO1?							
Remarks	NWSMT	PTO1=epson@	ecx.co.jp					
	:							

## Set mail destination address 2

destination address 2								
Command	NWSMTPTO2 x							
	x: Mail destination address 2 sent by SMTP.							
Parameter	The number of characters is up to 64.							
1 arameter	0 characters set no destination address.							
	Refer to the "Character Restrictions" for the effective characters.							
Function	Set the mail destination address 2 used by the mail send function.							
Tunction	Set the send source mail address used by the mail send function.							
Return code	Absence							
	':' Normal termination.							
	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment							
Status	cannot be made with the input value, or the command termination is other than a							
	normal termination, or returned when data is received via external USB or							
	RS-232C.)							
Disclosed/non-disclosed	Non-disclosed							
Parameter	INIT Absence INC Absence DEC Absence							
presence/absence								
	Setting example 1: Example of setting epson@exc.co.jp as the destination address							
	:NWSMTPTO2 epson@exc.co.jp							
	:							
Remarks								
	Setting example 2: Example of setting no destination address							
	:NWSMTPTO2							
	<u> </u> :							

## Get mail destination address 2

Command	NWSMT	PTO2?						
Parameter	Absence	Absence						
Function	Return the	e mail destinati	ion address 2 u	ised by the ma	ail send funct	ion.		
Tunction	Return the	e send source r	nail address us	sed by the mai	l send function	on.		
Return code	Return the	Return the mail destination address 2 of up to 64 characters.						
Return code	0 characte	ers indicate tha	t the mail dest	ination addres	s 2 is not set.			
	':'	Normal termin	nation.					
G	'ERR' Abnormal termination. (Returned when the command termination is other than a							
Status	normal termination, or returned when data is received via external USB or							
	RS-232C.)							
Disclosed/non-disclosed	Non-discl	osed						
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
	Response example:							
Remarks	:NWSMTPTO2?							
	NWSMT	PTO2=epson@	exc.co.jp					
	:							

# Set mail destination address 3

NWSMT	РТОЗ х							
x: Mail destination address 3 sent by SMTP.								
The number of characters is up to 64.								
0 char	acters set no de	stination addr	ess.					
Refer	to the "Characte	er Restrictions	" for the effec	tive characters	S.			
Set the n	nail destination	address 3 used	l by the mail s	end function.				
Set the se	end source mail	address used	by the mail se	nd function.				
Absence								
':'	Normal termin	nation.						
'ERR'	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment							
cannot be made with the input value, or the command termination is other than a								
normal termination, or returned when data is received via external USB or								
RS-232C.)								
Non-disc	losed	1				_		
INIT	Absence	INC	Absence	DEC	Absence			
Setting e	xample 1: Exan	ple of setting	epson@exc.c	o.jp as the des	stination addre	SS		
:NWSMTPTO3 epson@exc.co.jp								
:								
Setting e	xample 2: Exan	ple of setting	no destination	n address				
:NWSM	ГРТО3							
:								
	x: Mail d The m 0 char Refer Set the m Set the se Absence ':' 'ERR'  Non-disc INIT  Setting e :NWSM' :	The number of charact 0 characters set no de Refer to the "Characte Set the mail destination and set the send source mail Absence ':' Normal termin 'ERR' Abnormal termin cannot be made normal termin RS-232C.) Non-disclosed INIT Absence  Setting example 1: Exam :NWSMTPTO3 epson@ :	x: Mail destination address 3 sent by S The number of characters is up to 6 0 characters set no destination addre Refer to the "Character Restrictions Set the mail destination address 3 used Set the send source mail address used Absence ':' Normal termination. 'ERR' Abnormal termination. (Retreatment to be made with the inpromal termination, or return RS-232C.) Non-disclosed INIT Absence INC  Setting example 1: Example of setting :NWSMTPTO3 epson@exc.co.jp : Setting example 2: Example of setting	x: Mail destination address 3 sent by SMTP.  The number of characters is up to 64. 0 characters set no destination address.  Refer to the "Character Restrictions" for the effect of the mail destination address 3 used by the mail set set the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of setting on the mail set of the send source mail address used by the mail set of the send source mail address used by the mail set of setting on the mail set of the send source mail address used by the mail set of setting on the send source mail address used by the mail set of setting on the send source mail address used by the mail set of setting on the mail set of setting on the send source mail address a used by the mail set of setting on the send source mail address used by the mail set of setting on the send source mail address as used by the mail set of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on the send source mail address as used by the effect of setting on	x: Mail destination address 3 sent by SMTP.  The number of characters is up to 64.  0 characters set no destination address.  Refer to the "Character Restrictions" for the effective character.  Set the mail destination address 3 used by the mail send function.  Set the send source mail address used by the mail send function.  Absence  ':' Normal termination.  'ERR' Abnormal termination. (Returned when a parameter errocannot be made with the input value, or the command to normal termination, or returned when data is received value.  RS-232C.)  Non-disclosed  INIT Absence INC Absence DEC  Setting example 1: Example of setting epson@exc.co.jp as the desiron.  Setting example 2: Example of setting no destination address	x: Mail destination address 3 sent by SMTP.  The number of characters is up to 64.  0 characters set no destination address.  Refer to the "Character Restrictions" for the effective characters.  Set the mail destination address 3 used by the mail send function.  Set the send source mail address used by the mail send function.  Absence  ':' Normal termination.  'ERR' Abnormal termination. (Returned when a parameter error occurred, ad cannot be made with the input value, or the command termination is o normal termination, or returned when data is received via external US.  RS-232C.)  Non-disclosed  INIT Absence INC Absence DEC Absence  Setting example 1: Example of setting epson@exc.co.jp as the destination addre :NWSMTPTO3 epson@exc.co.jp  :  Setting example 2: Example of setting no destination address		

## Get mail destination address 3

Command	NWSMTI	NWSMTPTO3?						
Parameter	Absence	Absence						
Function	Return the	e mail destinati	on address 3 u	ised by the ma	il send functi	on.		
runction	Return the	e send source n	nail address us	sed by the mai	l send functio	n.		
D-4 d-	Return the	Return the mail destination address 3 of up to 64 characters.						
Return code	0 characte	ers indicate that	t the mail dest	ination addres	s 3 is not set.			
	':' Normal termination.							
G	'ERR' Abnormal termination. (Returned when the command termination is other than a							
Status	normal termination, or returned when data is received via external USB or							
	RS-232C.)							
Disclosed/non-disclosed	Non-discl	osed						
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
	Response example:							
Remarks	:NWSMTPTO3?							
	NWSMTI	PTO3=epson@	exc.co.jp					
	:							

## Set SMTP server IP address

Command	NWSMT	NWSMTPSRV xxx.xxx.xxx						
Parameter		Specify the address with an ASCII character string, whose 3 significant digits are 0 to 255, and a delimiter '.'.						
	The field	The field of less than 3 digits need not be filled with 0.						
Function	Set the SI	MTP server IP	address.					
Return code	Absence	Absence						
Status	':' 'ERR'	. Normai termination.						
Disclosed/non-disclosed	Non-discl	osed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks		Setting example: :NWSMTPSRV 163.141.12.3						

## Get SMTP server IP address

TP server IP address									
Command	NWSMT	NWSMTPSRV?							
Parameter	Absence								
Function	Return th	e set SMTP ser	ver IP address	i.					
D ( 1	Return th	e SMTP server	IP address set	with the ASC	II character st	ring, whose 3	significant		
Return code	digits are	0 to 255, and the	he delimiter ':'						
	':'	Normal termin	nation.						
Status	'ERR'	'ERR' Abnormal termination. (Returned when the command termination is other than a							
		normal termina	ation, or retur	ned when data	is received vi	a USB or RS-2	232C.)		
Disclosed/non-disclosed	Non-disc	losed							
Parameter	INIT	Absence	INC	Absence	DEC	Absence			
presence/absence									
	Response	example							
D 1	:NWSMTPSRV?								
Remarks	NWSMT	PSRV=163.141	1.12.3						
	:								

Set SMTP port number

Command	NWSMTI	NWSMTPPORT xxxxx						
Parameter	ASCII cha	ASCII character string whose 5 significant digits are 0 to 65535.						
Function	Set the SN	ATP port numb	er.					
Return code	Absence							
Status	'ERR'	. Normal termination.						
Disclosed/non-disclosed	Non-discl	osed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks	Setting ex:NWSMT:	ample: PPORT 25						

Get SMTP port number

Command	NWSMTPPORT?						
Parameter	Absence						
Function	Return the set SMTP port number.						
Return code	Return the SMTP port number set with the ASCII character string whose 5 significant digits are 0 to 65535.						
Status	':' Normal termination.  ERR' Abnormal termination. (Returned when the command termination is other than a normal termination, or returned when data is received via USB or RS-232C.)						
Disclosed/non-disclosed	Non-disclosed						
Parameter	INIT Absence INC Absence DEC Absence						
presence/absence							
Remarks	Response example :NWSMTPPORT? NWSMTPTO=25 :						

## Set notification event 1

Command	NWSMTP	EVT1 xxxx yy	ууу					
	xxxx: ASCII character string of 0000 to FFFF. (Hexadecimal representation)							
	Correspond to <parameter 1=""> of the return code of IMEVENT?.</parameter>							
	The event of 1 setting is sent as mail when it changes.							
	The	event of 0 sett	ing is not sent	as mail if it cl	hanges.			
Parameter	yyyy: ASC	II character st	ring of 0000 t	o FFFF. (Hexa	decimal repre	esentation)		
	Corr	respond to <pa< td=""><td>rameter 2&gt; of</td><td>the return cod</td><td>le of IMEVEN</td><td>NT?.</td><td></td></pa<>	rameter 2> of	the return cod	le of IMEVEN	NT?.		
	The	event of 1 sett	ing is sent as	mail when it cl	hanges.			
	The	event of 0 sett	ing is not sent	as mail if it cl	hanges.			
	Specify the	Specify the event to be sent to the mail destination address 1 among the events to be						
Function	returned by PJ using IMEVENT?.							
	When 000	When 0000 is set to both xxxx and yyyy, no mail is sent.						
Return code	Absence	Absence						
	':' Normal termination.							
Status	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment							
Status	cannot be made with the input value, or the command termination is other than a							
	1	normal termina	ation, or return	ned when data	is received vi	a USB or RS-2	232C.)	
Disclosed/non-disclosed	Non-disclo	osed				ı		
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
	Setting exa	ample 1: Mail	is sent if no si	gnal and lamp	burnout occu	rs.		
	:NWSMTPEVT1 0002 0004							
Remarks	:							
Remarks								
	Setting exa	ample 2: Mail	is not sent if a	ny event occur	rs.			
	:NWSMTI	PEVT1 0000 0	0000					

## Get notification event 1

incation event 1	T								
Command	NWSMTPEVT1?								
Parameter	Absence								
Function	Return the setting of the notification event 1.								
Return code	Return the parameter set using NWSMTPEVT1.								
Status	:' Normal termination.  ERR' Abnormal termination. (Returned when the command termination is other than a normal termination, or returned when data is received via USB or RS-232C.)								
Disclosed/non-disclosed	Non-disclosed								
Parameter presence/absence	INIT Absence INC Absence DEC Absence								
Remarks	Response example: :NWSMTPEVT1? NWSMTPEVT1=0002 0004 :								

## Set notification event 2

Command	NWSMTP	EVT2 xxxx yy	ууу					
	xxxx: ASCII character string of 0000 to FFFF. (Hexadecimal representation)							
	Correspond to <parameter 1=""> of the return code of IMEVENT?.</parameter>							
	The event of 1 setting is sent as mail when it changes.							
	The	event of 0 sett	ing is not se	nt as mail if it	changes.			
Parameter	уууу: ASC	II character st	ring of 0000 t	FFFF. (Hexa	adecimal repre	esentation)		
	Corr	respond to <pa< td=""><td>arameter 2&gt; of</td><td>the return cod</td><td>de of IMEVEN</td><td>NT?.</td><td></td></pa<>	arameter 2> of	the return cod	de of IMEVEN	NT?.		
	The	event of 1 sett	ing is sent as	nail when it cl	hanges.			
	The	event of 0 sett	ing is not sent	as mail if it cl	hanges.			
	Specify the	Specify the event to be sent to the mail destination address 2 among the events to be						
Function	returned by PJ using IMEVENT?.							
	When 000	When 0000 is set to both xxxx and yyyy, no mail is sent.						
Return code	Absence	Absence						
	':' Normal termination.							
Status	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment							
Status	cannot be made with the input value, or the command termination is other than a							
	1	normal termina	ation, or return	ed when data	is received vi	a USB or RS-2	232C.)	
Disclosed/non-disclosed	Non-disclo	osed				ı		
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
	Setting exa	ample 1: Mail	is sent if no si	gnal and lamp	burnout occu	rs.		
	:NWSMTPEVT2 0002 0004							
Remarks	:							
Remarks								
	Setting exa	ample 2: Mail	is not sent if a	ny event occur	rs.			
	:NWSMTI	PEVT2 0000 0	0000					

## Get notification event 2

incation event 2								
Command	NWSMTPEVT2?							
Parameter	Absence							
Function	Return the	Return the setting of the notification event 2.						
Return code	Return the	parameter set	using NWSM	TPEVT2.				
Status	'ERR'	: Normal termination.						
Disclosed/non-disclosed	Non-discle	Non-disclosed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks	Response:NWSMTFNWSMTF		0004					

## Set notification event 3

Command	NWSMTPE	NWSMTPEVT3 xxxx yyyy								
	xxxx: ASCII character string of 0000 to FFFF. (Hexadecimal representation)									
	Correspond to <parameter 1=""> of the return code of IMEVENT?.</parameter>									
	The event of 1 setting is sent as mail when it changes.									
Parameter	The event of 0 setting is not sent as mail if it changes.									
Parameter	yyyy: ASCII character string of 0000 to FFFF. (Hexadecimal representation)									
	Corre	espond to <pa< td=""><td>rameter 2&gt; of</td><td>the return co</td><td>de of IMEVE</td><td>NT?.</td><td></td></pa<>	rameter 2> of	the return co	de of IMEVE	NT?.				
	The e	event of 1 sett	ing is sent as	mail when it c	changes.					
	The e	event of 0 sett	ing is not sent	as mail if it c	hanges.					
	Specify the event to be sent to the mail destination address 3 among the events to be									
Function	returned by PJ using IMEVENT?.									
	When 0000 is set to both xxxx and yyyy, no mail is sent.									
Return code	Absence	Absence								
	':' Normal termination.									
Status	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment									
Status	cannot be made with the input value, or the command termination is other than a									
	normal termination, or returned when data is received via USB or RS-232C.)									
Disclosed/non-disclosed	Non-disclos	sed								
Parameter	INIT	Absence	INC	Absence	DEC	Absence				
presence/absence										
	Setting example 1: Mail is sent if no signal and lamp burnout occurs.									
	:NWSMTPEVT3 0002 0004									
Remarks	:									
	Setting example 2: Mail is not sent if any event occurs.									
	:NWSMTPEVT3 0000 0000									

#### Get notification event 3

incation event 5									
Command	NWSMTPEVT3?								
Parameter	Absence	Absence							
Function	Return the	Return the setting of the notification event 3.							
Return code	Return the	Return the parameter set using NWSMTPEVT3.							
Status	'ERR'	: Normal termination.							
Disclosed/non-disclosed	Non-discle	osed							
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence			
Remarks	Response:NWSMTFNWSMTF		0004						

## Set mail notification function ON/OFF

Command	NWSMTPACT xxx (xxx indicates the parameter)							
D	Make the mail notification function valid: ON							
Parameter	Make the mail notification function invalid: OFF							
	Set whether the mail send function is valid or invalid.							
Function	Change the mail notification function-related settings after making the mail notification function invalid with this command. (The mail notification function-related settings indicate the following. Mail destination address 1 to 3, SMTP server IP address, SMTP port number, notification event 1 to 3).							
Return code	Absence							
Status	':' Normal termination.  'ERR' Abnormal termination. (Returned when the command termination is other than a normal termination.)							
Disclosed/non-disclosed	Non-disclosed							
Parameter	INIT Abs	INIT Absence INC Absence DEC Absence						
presence/absence								
Remarks	Setting example :NWSMTPACT :		the SMTP fu	nction valid.				

## Get mail notification function ON/OFF

Command	NWSMTPACT?								
Parameter	Absence	Absence							
Function	Return the	Return the ON/OFF setting of the mail notification function.							
D-4 d-	Mail notification function is valid: ON								
Return code	Mail notification function is invalid: OFF								
	':' Normal termination.								
Status	'ERR' Abnormal termination. (Returned when the command termination is other than a								
	normal termination, or returned when data is received via USB or RS-232C.)								
Disclosed/non-disclosed	Non-disclo	osed							
Parameter	INIT	Absence	INC	Absence	DEC	Absence			
presence/absence									
	Response example:								
Remarks	:NWSMTPACT?								
	NWSMTPACT=ON								
	:								

## Test mail function

Command	NWSMTPTEST								
Parameter	Absence								
	setting us	mail of the folloed to send mail	_		_	ending mail, m	ake the		
			Message			Line f	feed code		
Function	Liı	Line 1 Nam		Projector Name	2>	<cr><lf></lf></cr>			
	Liı	ne 2	IP: <wwv< td=""><td>v.xxx.yyy.zzz&gt;</td><td></td><td><cr></cr></td><td><lf></lf></td></wwv<>	v.xxx.yyy.zzz>		<cr></cr>	<lf></lf>		
	Liı	ne 3	TEST MAIL			<cr></cr>	<lf></lf>		
Return code	For details of the text, refer to the mail notification function request specification.  Absence								
	':'	Normal termin	nation.						
Status	'ERR'								
Disclosed/non-disclosed	Non-discl	Non-disclosed							
Parameter presence/absence	INIT	INIT Absence INC Absence DEC Absence							
Remarks	Setting example 1: :NWSMTPTEST :								

Set IP address, sub-net mask, default gateway (wired LAN)

	k, default gateway (wired LAN)
Command	NWCNF ww xxx.xxx.xxx yyy.yyy.yyy.yyy zzz.zzz.zzz.zzz
	ww=DHCP ON/OFF
	xxx.xxx.xxx=IP address
D	yyy.yyy.yyy=Net mask zzz.zzz.zzz=Default gateway
Parameter	Specify the address with an ASCII character string, whose 3 significant digits are 0 to 255, and a
	delimiter '.'.
	The field of less than 3 digits need not be filled with 0.
	(1) Set the DHCP, IP address, sub-net mask and default gateway.
	(2) When DHCP is set to ON, the projector ignores the other parameters and "0. 0. 0. 0 (IP address, sub-net mask and default gateway)" is sent from devices to the projector as parameter.
	(3) When DHCP is set to OFF, the other parameters are set.
	(4) The status is sent before the connection with the projector is cut off.
	(5) The parameter check of NWCNF performed by the network projector is divided into two
	steps.
	The check in the first step is as follows.
	· The check is made with the connection of the PC and projector established.
	· ':' is returned when the result of this check is OK, or 'ERR' is returned when the result is
	NG.
	[Check]
	The parameter is checked as a mere character string.
	Example) Does the numerical part have only a value? Is the address value 255 or less
	Is the DHCP setting either ON or OFF?, etc.
	The check in the second step is as follows.
	· This check is made with the connection of the PC and projector cut off.
	Reason: The EMP-7800/8300 judges whether the value set to ENCORE is appropriate or
	not. When the value is set, the connection must be cut off once because of the ENCORE
	specifications.
Function	
	In this check, whether the result is OK or NG is not sent to the PC.
	Reason: Since the connection is cut off, the EMP-7800/8300 cannot send the check
	result to the PC.
	Remarks: The PC must search for the projector using the HELLP request of the ESC/VP.net protocol.
	[Check]
	The validity of the network setting is judged. For validity, the function that ENCORE
	uses to return the Error status is used. When any of the following conditions is
	satisfied, the Error status is returned.
	The result is NG when the Error status is returned, or OK if it is not returned.
	Error condition 1: [IP address]
	· The value in the first byte of the IP address is 127 or 224 or more.
	· All bits in the network part of the IP address are 0.
	· All bits in the host part of the IP address are 0 or 1.
	Error condition 2: [Sub-net mask]
	· All bits of the sub-net mask are 1.
	• The value in the 8 most significant bits of the sub-net mask is other than 0 or 25:
	Error condition 3: [Default GW]
	The network part of the default GW does not match that of the IP address.
	· All bits in the host part of the default GW are 0 or 1.
Return code	· The default GW matches the IP address.  Absence
Return Code	':' Normal termination.
Status	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment cannot
Status	
	be made with the input value, or the command termination is other than a normal

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	tern	termination, or returned when data is received via USB or RS-232C.)						
Disclosed/non-disclosed	Non-disclosed	Non-disclosed						
Parameter presence/absence	INIT	IT Absence INC Absence DEC Absence						
Remarks	:NWCNF OF:			5.0 163.141.32	2.254			

Get IP address, sub-net mask, default gateway (wired LAN)

iddress, sub-net mask, default	galeway (w	ateway (wired LAN)					
Command	NWCNF?	NWCNF?					
Parameter	Absence	Absence					
Function	Return the	set DHCP ON	V/OFF, IP add	ress, sub-net n	nask and defa	ult gateway.	
Return code		Return the IP address, sub-net mask and default gateway set with the ASCII character string, whose 3 significant digits are 0 to 255, and the delimiter '.'.					
Status	'ERR'						
Disclosed/non-disclosed	Non-discle	osed					
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence	
Remarks	default gat Response :NWCNF	-	ned.	ŕ		P address, sub	o-net and

# Set WINS address (wired LAN)

NS address (wired LAN)							
Command	NWWINS	NWWINS yyy.yyy.yyy zzz.zzz.zzz.zzz					
Parameter	Specify the and a delimental The field of	Specify the address with an ASCII character string, whose 3 significant digits are 0 to 255, and a delimiter '.'. One parameter may be set if the address is set to only WINS1.  The field of less than 3 digits need not be filled with 0.  yyy.yyy.yyy=WINS1 address					
	ZZZ.ZZZ.ZZ	z.zzz=WINS2	address				
Function	Set up the	WINS server a	address in the	projector main	n unit.		
Return code	Absence	Absence					
Status	'ERR'	. Normal termination.					
Disclosed/non-disclosed	Non-discl	osed					
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence	
Remarks		Setting example:NWWINS 163.152.67.1 This command can be set only when DHCP is OFF and cannot be set when DHCP is OFF. (ERR)					

# Get WINS address (wired LAN)

Command	NWWINS	NWWINS?					
Parameter	Absence	Absence					
Function	Return the	e set WINS add	dress.				
	Return the	teturn the WINS address set with the 3-digit ASCII character string of 0 to 255.					
Return code		Return example:NWWINS? NWWINS=163,152,67.1 133,159,48,17					
Status		':' Normal termination.					
Disclosed/non-disclosed	Non-discl	osed					
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence	
Remarks						otten from the setur	

## Set DNS address (wired LAN)

Command	NWDNS yyy.yyy.yyy zzz.zzz.zzz					
Parameter	Specify the address with an ASCII character string, whose 3 significant digits are 0 to 255, and a delimiter '.'.One parameter may be set if the address is set to only DNS1.  The field of less than 3 digits need not be filled with 0.  yyy.yyy.yyy.yyy=DNS1 address  zzz.zzz.zzz=DNS2 address					
Function	Set up the DNS server address in the projector main unit.					
Return code	Absence					
Status	':' Normal termination.  'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment cannot be made with the input value, DHCP is ON, or the command termination is other than a normal termination.)					
Disclosed/non-disclosed	Non-disclosed					
Parameter presence/absence	INIT Absence INC Absence DEC Absence					
Remarks	Setting example:NWDNS 163.152.67.1  This command can be set only when DHCP is OFF and cannot be set when DHCP is OFF.  (ERR)					

# Get DNS address (wired LAN)

Command	NWDNS?	NWDNS?					
Parameter	Absence						
Function	Return the	set DNS addr	ess.				
	Return the	Return the DNS address set with the 3-digit ASCII character string of 0 to 255.					
Return code		Return example:NWDNS? NWDNS=163.152.67.1 133.159.48.17					
Status	'ERR'	':' Normal termination.					
Disclosed/non-disclosed	Non-disclo	osed					
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence	
Remarks	Č	Regardless of whether DHCP is ON or OFF, the setting (value gotten from the server when DHCP is ON) is returned. When there is only one address, only its value is returned.					

Set IP address, sub-net mask, default gateway (wireless LAN)

Commond	gateway (wireless LA								
Command		xx.xxx.xxx.xxx yyy.yyy.yyy.yyy zzz.zzz.zzz.zzz t uuu v	VVVV						
	ww=DHCP ON/OFF								
	xxx.xxx.xxx.xxx=II								
	yyy.yyy.yyy=Net mask								
	zzz.zzz.zzz.eDe								
		s with an ASCII character string, whose 3 significant di	gits are 0 to 255,						
	and a delimiter '.'.								
	The field of less that	an 3 digits need not be filled with 0.							
	t = ESSID, WEP, A	Adhoc flag (1 byte) *							
	u = ESSID (32 char	racters)							
	$v = WEP \text{ key } \{\text{hexa}\}$	adecimal 26 bytes (13 characters)}							
	In the flag, whether	the ESSID is specified or not, whether the WEP key is	s valid or invalid,						
	and whether Adhoc	e is ON or OFF can be specified as indicated below.							
	Value	Specification							
	0	ESSID not specified, WEP key invalid, Adhoc OFF	1						
	1	ESSID not specified, WEP key invalid, Adhoc ON	#1						
	2	ESSID not specified, WEP key valid, Adhoc OFF							
Parameter	3	ESSID not specified, WEP key valid, Adhoc ON	#1						
	4	ESSID specified, WEP key invalid, Adhoc OFF	#2						
	5	ESSID specified, WEP key invalid, Adhoc ON	#3						
	6	ESSID specified, WEP key valid, Adhoc OFF	#2						
	7	ESSID specified, WEP key valid, Adhoc ON	#3						
		s not specified, set ANY to the system on the network p							
	*WHEN THERE	IS NO ESSID, THE PARAMETER "U" MUST NO	T BE SET.						
	#1 When the project hoc".  #2 When the project mode".	ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that	of "Channel ad of "Infrastructure						
	#1 When the project hoc".  #2 When the project mode".  #3 When the project	ctor type is C or E, the specification is the same as that	of "Channel ad of "Infrastructure						
	#1 When the project hoc".  #2 When the project mode".	ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that	of "Channel ad of "Infrastructure						
	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".	ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that	of "Channel ad of "Infrastructure						
Function	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char	etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that	of "Channel ad of "Infrastructure of "ESSID ad						
Function Return code	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char	ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that cacter Restrictions" for the effective characters.	of "Channel ad of "Infrastructure of "ESSID ad						
	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP a Absence	ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that cacter Restrictions" for the effective characters.	of "Channel ad of "Infrastructure of "ESSID ad						
Return code	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP a Absence  ':' Normal t	ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that cacter Restrictions" for the effective characters.	of "Channel ad of "Infrastructure of "ESSID ad						
	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP a Absence  ':' Normal to TERR' Abnorma	etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that exacter Restrictions" for the effective characters.	of "Channel ad of "Infrastructure of "ESSID ad tey and Adhoc.						
Return code	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP a Absence ':' Normal to ERR' Abnormatic cannot be	etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that eacter Restrictions" for the effective characters.  Enddress, sub-net mask, default gateway, ESSID, WEP kermination.  All termination. (Returned when a parameter error occurrence)	of "Channel ad of "Infrastructure of "ESSID ad eey and Adhoc. red, adjustment on is other than a						
Return code	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP a Absence ':' Normal to ERR' Abnormatic cannot be	ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that ctor type is C or E, the specification is the same as that cacter Restrictions" for the effective characters.  Indicates, sub-net mask, default gateway, ESSID, WEP keep the sermination.  In termination. (Returned when a parameter error occurred made with the input value, or the command termination.	of "Channel ad of "Infrastructure of "ESSID ad  eey and Adhoc.  red, adjustment on is other than a						
Return code Status	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP a Absence  ':' Normal to be normal te	etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that exacter Restrictions" for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.	of "Channel ad of "Infrastructure of "ESSID ad eey and Adhoc. red, adjustment on is other than a or RS-232C.)						
Return code  Status  Disclosed/non-disclosed	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP at Absence ':' Normal to 'ERR' Abnormatic cannot be normal te Non-disclosed	etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that exacter Restrictions" for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as that exacter Restrictions for the effective characters.  Indicated the same as the effective characters for the effective characters for the effective characters.	of "Channel ad of "Infrastructure of "ESSID ad eey and Adhoc. red, adjustment on is other than a or RS-232C.)						
Status  Disclosed/non-disclosed Parameter	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP a Absence  ':' Normal to the normal te Non-disclosed  INIT Absence  When DHCP is ON A parameter error in Setting example: Normal te Norma	etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that eacter Restrictions" for the effective characters.  Address, sub-net mask, default gateway, ESSID, WEP k ermination.  All termination. (Returned when a parameter error occurre made with the input value, or the command termination ermination, or returned when data is received via USB error and the values of the other three parameters are ignored. Includes the case where the matching and validity of the WWLCNF OFF 163.141.12.1 163.141.12.254 255.255.	of "Channel ad of "Infrastructure of "ESSID ad ey and Adhoc. red, adjustment on is other than a or RS-232C.) nce e settings are lost. 6.255.0 7 EPSON es.						
Return code  Status  Disclosed/non-disclosed  Parameter presence/absence	#1 When the project hoc".  #2 When the project mode".  #3 When the project hoc".  *Refer to the "Char Set the DHCP, IP a Absence ':' Normal te 'ERR' Abnorma cannot be normal te Non-disclosed  INIT Absence  When DHCP is ON A parameter error in Setting example: NV FFFF  Refer to NWCNF for When the ESSID, V	etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that etor type is C or E, the specification is the same as that eacter Restrictions" for the effective characters.  Indiduction of the effective characters.  Indicution of the effect	of "Channel ad of "Infrastructure of "ESSID ad ey and Adhoc. red, adjustment on is other than a or RS-232C.) nce e settings are lost. 6.255.0 7 EPSON es.						

# Get IP $\underline{\text{address}}, \text{ sub-net mask, default gateway (wireless LAN)}$

Command	NWWLC	NF?						
Parameter	Absence	Absence						
Function		Return the set DHCP ON/OFF, IP address, sub-net mask and default gateway, ESSID, WEP key and Adhoc value.						
Return code	ASCII cha ESSID, W	Return the DHC ON/OFF, the IP address, sub-net mask and default gateway set with the ASCII character string, whose 3 significant digits are 0 to 255, and the delimiter '.', the ESSID, WEP and Adhoc flag value, and the ESSID value of max.32 bytes and the WEP key of max.26 bytes.						
Status	'ERR'	':' Normal termination.						
Disclosed/non-disclosed	Non-discl	osed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks	default ga values are Response :NWWLC	-	rned. When the	ere is no ESSI	D and the WE	EP key is inval		

#### Set WINS address (wireless LAN)

Command	NWWLW	NWWLWINS yyy.yyy.yyy zzz.zzz.zzz.zzz					
	Specify the address with an ASCII character string, whose 3 significant digits are 0 to 255,						
	and a deli	miter '.'. One p	arameter may	be set if the a	ddress is set	to only WINS1.	
Parameter		of less than 3 d					
	ууу.ууу.у	yy.yyy=WINS	1 address				
		z.zz=WINS2					
Function	Set up the	WINS server	address in the	projector mai	n unit.		
Return code	Absence						
	':' Normal termination.						
G	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment						
Status	cannot be made with the input value, DHCP is ON, or the command termination is						
	other than a normal termination.)						
Disclosed/non-disclosed	Non-discl	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
	Setting ex	ample:NWWL	WINS 163.15	52.67.1			
Remarks	This command can be set only when DHCP is OFF and cannot be set when DHCP is OFF.						
	(ERR)						

# Get WINS address (wireless LAN)

Command	NWWLW	NWWLWINS?					
Parameter	Absence						
Function	Return the	e set WINS add	lress.				
	Return the	Return the WINS address set with the 3-digit ASCII character string of 0 to 255.					
D-4							
Return code	Return code  Return example:NWWLWINS?						
NWWLWINS=163.152.67.1 133.159.48.17							
	':'	':' Normal termination.					
Status	'ERR'	Abnormal tern	nination. (Retu	arned when the	e command te	ermination is of	her than a
		normal termina	ation.)				
Disclosed/non-disclosed	Non-discl	osed					
Parameter	INIT	Absence	INC	Absence	DEC	Absence	
presence/absence							
Damada	Regardless of whether DHCP is ON or OFF, the setting (value gotten from the server when						
Remarks	DHCP is	ON) is returned	d.When there i	is only one add	dress, only its	value is return	ed.

# Set DNS\_address (wireless LAN)

S address (wireless LAN)							
Command	NWWLD	NWWLDNS yyy.yyy.yyy zzz.zzz.zzz.zzz					
Parameter	and a deli The field yyy.yyy.y	Specify the address with an ASCII character string, whose 3 significant digits are 0 to 255, and a delimiter '.'. One parameter may be set if the address is set to only DNS1.  The field of less than 3 digits need not be filled with 0.  yyy.yyy.yyy=DNS1 address  zzz.zzz.zzz=DNS2 address					
Function	Set up the	DNS server ac	ddress in the p	rojector main	unit.		
Return code	Absence	Absence					
Status	':' 'ERR'	. Normal termination.					
Disclosed/non-disclosed	Non-discl	losed					
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence	
Remarks		ample:NWWL			and cannot be	set when DHC	CP is OFF.

## Get DNS address (wireless LAN)

Command	NWWLDI	NWWLDNS?							
Parameter	Absence	Absence							
Function	Return the	set DNS addr	ess.						
	Return the DNS address set with the 3-digit ASCII character string of 0 to 255.								
Return code		Return example:NWWLDNS? NWWLDNS=163.152.67.1 133.159.48.17							
	':' Normal termination.								
Status	'ERR'	Abnormal tern	nination. (Retu	arned when the	e command te	rmination is ot	her than a		
	normal termination.)								
Disclosed/non-disclosed	Non-disclo	osed							
Parameter	INIT	Absence	INC	Absence	DEC	Absence			
presence/absence									
D 1	Regardless of whether DHCP is ON or OFF, the setting (value gotten from the server when								
Remarks	DHCP is 0	ON) is returned	l. When there	is only one ad	dress, only its	value is return	ned.		

## Get communication network IF type

Command	NWIF?							
Parameter	Absence							
Function	Return the type of the communicating network I/F.							
	Hexadecimal 1 byte							
	0x00 Wired LAN							
	0x01 802.11b							
Return code	0x02 802.11a							
	0x03 802.11g							
	0x04~0xFF Reserved							
	'.' Normal termination.							
Status	'ERR' Abnormal termination. (Returned when the command termination is other than a							
	normal termination, or returned when data is received via USB or RS-232C.)							
Disclosed/non-disclosed	Non-disclosed							
Parameter	INIT Absence INC Absence DEC Absence							
presence/absence								
	This command gets the network projector side network I/F that is making communication							
	using the ESCVP.net protocol. When both the wired and 802.11b interfaces are installed,							
	0x01 is returned if the I/F that is actually communicating is 802.11b.							
Remarks								
Kemarks	Example:							
	:NWIF?							
	NWIF=01							
	:							

## Set DNS suffix (wired LAN)

Command	NWDNSI	NWDNSDMNxxxxxxxx						
Parameter	xxx = DN	xxx = DNS suffix (ASCII 96 bytes)						
Function	Set up the	DNS suffix (d	omain suffix)	in the projecto	or main unit.			
Return code	Absence							
Status	'ERR'	. Normal termination.						
Disclosed/non-disclosed	Non-discle	osed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks		Setting example:NWDNSDMN easymp.co.jp This command can be set only when DHCP is OFF and cannot be set when DHCP is OFF.  FRR)						

# Get DNS suffix (wired LAN)

Command	NWDNSI	NWDNSDMN?							
Parameter	Absence	Absence							
Function	Return the	e set DNS suffi	х.						
	Return the	Return the DNS suffix set with the ASCII character string of 96 bytes.							
Return code									
return code	Return example:NWDNSDMN?								
	NWDNS=	NWDNS=easymp.co.jp							
	':'	Normal termin	nation.						
Status	'ERR'	Abnormal tern	nination. (Retu	arned when the	e command te	ermination is of	her than a		
		normal termina	ation.)						
Disclosed/non-disclosed	Non-discl	osed							
Parameter	INIT	Absence	INC	Absence	DEC	Absence			
presence/absence									
	Regardless of whether DHCP is ON or OFF, the setting (value gotten from the server when								
Remarks	DHCP is	ON) is returned	ł.						

## Set DNS suffix (wireless LAN)

Suilla (wheless LAIN)								
Command	NWWLDI	NWWLDNSDMN xxxxxxxxx						
Parameter	xxx = DNS	xxx = DNS suffix (ASCII 96 bytes)						
Function	Set up the	DNS suffix (d	lomain suffix)	in the project	or main unit.			
Return code	Absence							
Status	'ERR'	. Normal termination.						
Disclosed/non-disclosed	Non-disclo	osed						
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
Remarks		Setting example:NWWLDNSDMN easymp.co.jp This command can be set only when DHCP is OFF and cannot be set when DHCP is OFF.  ERR)						

# Get DNS suffix (wireless LAN)

Command	NWWLDI	NWWLDNSDMN?							
Parameter	Absence	Absence							
Function	Return the	set DNS suffi	х.						
	Return the	Return the DNS suffix set with the ASCII character string of 96 bytes.							
Return code		Return example:NWWLDNSDMN?  NWWLDNS=easymp.co.jp							
Status	':' 'ERR'	':' Normal termination.							
Disclosed/non-disclosed	Non-discle	osed							
Parameter presence/absence	INIT								
Remarks		Regardless of whether DHCP is ON or OFF, the setting (value gotten from the server when DHCP is ON) is returned.							

Set IP address, sub-net mask, default gateway  $\ (for\ 802.1x)$ 

Command		FS <f1> <f2></f2></f1>	> <f3><f4> &lt;</f4></f3>	:F5> <f6></f6>						
	<f1> Whet</f1>	her DHCP is (	ON or OFF ca	n be specified						
		ify the IP add		•		with an ASCI	I character			
	•	whose 3 signi		•	•					
	0.1	eld of less than								
		ify the sub-ne	_			ess with an AS	SCII			
	character string, whose 3 significant digits are 0 to 255, and a delimiter '.'.									
	The fi	eld of less than	n 3 digits need	not be filled	with 0.					
	<f4>: Spec</f4>	ify the default	gateway of w	ireless LAN. S	Specify the ad-	dress with an	ASCII			
	charac	ter string, who	ose 3 significa	nt digits are 0	to 255, and a	delimiter '.'.				
_	The fi	eld of less than	n 3 digits need	not be filled	with 0.					
Parameter	<f5>:Optio</f5>	on of wireless	LAN. (2 cha	racters. Hexad	ecimal represe	entation and 1	byte but the			
	<f5>:Option of wireless LAN. (2 characters. Hexadecimal representation and 1 byte but the command consists of 2 characters.) When the hexadecimal representation is converted to</f5>									
	binary notation, each bit represents the following.									
	Bit 0: Ad-Hoc mode									
	Bit 1: ESSID valid/invalid flag On: Valid									
	Bit 2-15: Reserved									
	<f6>: Specify the ESSID. Max. 32 characters. Valid only when Bit 1 of &lt;5&gt; is set.</f6>									
	When DHCP is set to ON, the projector ignores the parameters of IP, sub-net mask and									
	defaul	t gateway and	then devices	send "0.0.0.0"	to the project	or.				
	default gateway and then devices send "0.0.0.0" to the projector.  *Refer to the "Character Restrictions" for the effective characters.									
Function	Set up the v	vireless LAN 1	parameter in tl	ne projector m	ain unit.					
Return code	Absence									
	':' Normal termination.									
~	'ERR' A	bnormal termi	ination. (Retui	ned when a p	arameter error	occurred, adj	ustment			
Status	ca	annot be made	with the inpu	t value, or the	command ter	mination is of	her than a			
	cannot be made with the input value, or the command termination is other than a normal termination.)									
Disclosed/non-disclosed	Non-disclos	sed								
Parameter	INIT	INIT Absence INC Absence DEC Absence								
presence/absence										
D 1	Setting example: NWWLCNFS ON 0.0.0.0 0.0.0.0 0.0.0.0 03 ESSID									
Remarks	*Walid anly	v vybon IM Tvy	oe is 22 or 23.							

# Get IP address, sub-net mask, default gateway $\ (for\ 802.1x)$

Command	NWWLCN	NWWLCNFS?						
Parameter								
Function	Return the	wireless LAN	parameter.					
D -4	NWWLCN	FS?						
Return code	NWWLC	NWWLCNFS = ON 163.152.67.1.255.255.255.0 163.152.67.254 03 ESSID						
	':' Normal termination.							
Status	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment							
Status	cannot be made with the input value, or the command termination is other than a							
	normal termination.)							
Disclosed/non-disclosed	Non-disclos	sed						
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
Remarks	*Valid only	when IM-Ty	pe is 22 or 23.					

# Set the second ESSID

Command	NWESSID	NWESSID2 <f1></f1>						
Parameter	•	F1>: Specify the second ESSID.  If the "Character Restrictions" for the effective characters.						
Function	Set up the s	second ESSID	in the project	or main unit.				
Return code	Absence							
Status	'ERR' A	: Normal termination.						
Disclosed/non-disclosed	Non-disclo	sed					•	
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks		etting example: NWESSID2 ESSID2 Valid only when IM-Type is 22 or 23.						

## Get the second ESSID

Command	NWESSID	NWESSID2?							
	TTT LOSID.	THEODIEZ.							
Parameter									
Function	Return the	second ESSID	٠.						
	NWESSID	2?							
Return code	NWESSID:	WESSID2=ESSID2							
	':' Normal termination.								
Status	'ERR' A	bnormal term	ination. (Retu	ned when the	command ter	mination is oth	ner than a		
	n	ormal termina	tion.)						
Disclosed/non-disclosed	Non-disclos	sed							
Parameter	INIT	Absence	INC	Absence	DEC	Absence			
presence/absence									
Remarks	*Valid only	when IM-Ty	pe is 22 or 23.						

## Set the third ESSID

uniu EssiD								
Command	NWESSID:	NWESSID3 <f1></f1>						
Parameter	_	<f1>: Specify the third ESSID. Refer to the "Character Restrictions" for the effective characters.</f1>						
Function	Set up the t	hird ESSID in	the projector	main unit.				
Return code	Absence							
Status	'ERR' A	. Normal termination.						
Disclosed/non-disclosed	Non-disclos	sed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks		etting example: NWESSID3 ESSID3 Valid only when IM-Type is 22 or 23.						

# Get the third ESSID

Command	NWESSID:	NWESSID3?						
Parameter								
Function	Return the	third ESSID.						
D. (	NWESSID:	3?						
Return code	NWESSID:	WESSID3=ESSID3						
	':' Normal termination.							
Status	'ERR' A	bnormal term	ination. (Retur	rned when the	command terr	mination is oth	ner than a	
	normal termination.)							
Disclosed/non-disclosed	Non-disclos	sed						
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
Remarks	*Valid only	when IM-Ty	pe is 22 or 23.					

Set security system

Command	NWWLSEC wxyyzz
	w = Specify the encryption algorithm.(One character, Hexadecimal notation and 4 bit)
	0 : Absence
	1:WEP
	2:TKIP
	3 : CKIP
	4 : AES
	5-F : Reserved
	x = Specify the key length of the encryption algorithm.(One character, Hexadecimal notation
	and 4 bit)
	0 : Absence
	1 : 64 bit
	2:128 bit
	3:152 bit
	4-F : Reserved
	yy = Specify the key management system.(Two characters. Notation is hexadecimal number
	system and the key length is 1 byte. However since the parameter is treated as a character, the
Parameter	parameter consists of two characters.)
	00: Absence
	01 : Shared key authentication
	02 : TTLS
	03 : TLS
	04 : LEAP
	05 : MD5
	06 : PEAP
	07-FF: Reserved
	zz = Specify the key management system.(Two characters. Notation is hexadecimal number
	system and the key length is 1 byte. However since the parameter is treated as a character, the
	parameter consists of two characters.)
	00 : Absence
	01: 802.1x (RADIUS) authentication
	02 : WPA
	03 : WPA2
	04-FF : Reserved
Function	Set up wireless LAN security system in the projector main unit.
Return code	Absence

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Status	'ERR' A	: Normal termination.							
Disclosed/non-disclosed	Non-disclo	Non-disclosed							
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence			
Remarks	NWSEC 11	Setting example: When WEP is 64 Bit,  NWSEC 110000  *Valid only when IM-Type is 22 or 23.							

Get security system

urity system									
Command	NWWLSE	NWWLSEC?							
Parameter									
Function	Return the	wireless LAN	security syste	m.					
	When WEF	is 64 Bit,							
Return code	NWSEC?								
	NWSEC =	NWSEC =110000							
	':' Normal termination.								
Status	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment								
Status	cannot be made with the input value, or the command termination is other than a normal								
	termination	.)							
Disclosed/non-disclosed	Non-disclo	sed							
Parameter	INIT	Absence	INC	Absence	DEC	Absence			
presence/absence									
Remarks	*Valid only	when IM-Ty	pe is 22 or 23						

## Set WEP Key ID

Command	NWWEDIL	WWEPID <f1></f1>						
Command								
	_	<f1>: Specify key ID. 1 byte.</f1>						
	1: Specify "1" as Key ID.							
Parameter	2: Specify "2" as Key ID.							
	3: Specif	y "3" as Key I	D.					
	4: Specif	y "4" as Key I	D.					
	5-F: Reserved							
Function	Set up the V	Set up the WEP ID information in the projector main unit.						
Return code	Absence							
	':' N	Normal termina	ation.					
Status	'ERR' Abnormal termination. (Returned when the command termination is other than a							
	normal termination.)							
Disclosed/non-disclosed	Non-disclos	sed						
Parameter	INIT	Presence	INC	Absence	DEC	Absence		
presence/absence								
D 1	Setting example: NWWEPID 1							
Remarks	*Valid only	when IM-Ty	pe is 22 or 23.					

# Get WEP Key ID

Command	NWWEPIE	NWWEPID?						
Parameter	Absence	Absence						
Function	Return the	WEPID inform	nation.					
D	NWWEPID	)?						
Return code	n code NWWEPID=1							
	':' Normal termination.							
Status	'ERR'	Abnormal term	ination. (Retu	rned when the	command ter	mination is ot	her than a	
	normal termination.)							
Disclosed/non-disclosed	Non-disclos	sed						
Parameter	INIT	Absence	INC	Absence	DEC	Absence		
presence/absence								
Remarks	*Valid only	*Valid only when IM-Type is 22 or 23.						

Set WEP encryption key 1

P encryption key i								
Command	NWWEP1	NWWEP1 <f1></f1>						
	<f1> : WE</f1>	P key						
Parameter	* The len	gth depends o	n parameter "x	" of NWWLS	SEC.			
	10 byte	10 bytes or 26 bytes. Notation is hexadecimal number system.						
Function	Set up key	WEP encrypti	on key 1 on th	e projector ma	ain unit.			
Return code	None	None						
Status	':' Normal termination.						ı a	
Status	'ERR' A		iination. (Retu	rned when the	e command ter	mination is ot	ner tnan a	
Disclosed/non-disclosed	Non-disclo	sed						
Parameter	INIT	Presence	INC	Absence	DEC	Absence		
presence/absence								
Remarks	Setting example (10 bytes): NWWEP1 4141414141							
	*Valid only	y when IM-Ty	pe is 22 or 23.					

Command	NWWEP1?	NWWEP1?						
Parameter	None							
Function	Return WEP	encryption	n key 1 fro	m the proje	ctor main u	nit.		
Return code	NWWEP1?  NWWEP1= 414	WWEP1? WWEP1= 4141414141						
Status	'ERR' Al	':' Normal termination.						
Disclosed/non-disclosed	Non-disclose	ed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks	*Valid only	when IM-Ty	pe is 22 or 23.					

Set WEP encryption key 2

Command	NWWEP2	<f1></f1>						
	<f1> : WEP key</f1>							
Parameter	* The len	gth depends o	n parameter ":	x" of NWWLS	SEC.			
	10 bytes or 26 bytes. Notation is hexadecimal number system.							
Function	Set up WE	P encryption k	ey 2 on the pr	ojector main u	ınit.			
Return code	None	None						
	':' Normal termination.							
Status	'ERR'	Abnormal term	nination. (Retu	rned when the	e command ter	rmination is otl	her than a	
	normal terr	mination.)						
Disclosed/non-disclosed	Non-disclo	sed						
Parameter	INIT	Presence	INC	Absence	DEC	Absence		
presence/absence								
Remarks	Setting example (10 bytes): NWWEP2 4141414141							
	*Valid only	when IM-Ty	pe is 22 or 23.					

Command	NWWEP2?	NWWEP2?						
Parameter	None	None						
Function	Return WE	Return WEP encryption key 2 from the projector main unit.						
Return code	NWWEP2	NWWEP2? NWWEP2 = 4141414141						
Status	'ERR'							
Disclosed/non-disclosed	Non-disclos	sed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks	*Valid only when IM-Type is 22 or 23.							

Set WEP encryption key 3

Command	NWWEP3	<f1></f1>						
	<f1> : WEP key</f1>							
Parameter	* The len	gth depends o	n parameter "	x" of NWWLS	SEC.			
	10 bytes or 26 bytes. Notation is hexadecimal number system.							
Function	Set up WE	P encryption k	tey 3 on the pr	ojector main u	ınit.			
Return code	None							
	':' Normal termination.							
Status	'ERR'	Abnormal term	nination. (Retu	rned when the	e command ter	mination is otl	her than a	
	normal terr	mination.)						
Disclosed/non-disclosed	Non-disclo	sed						
Parameter	INIT	Presence	INC	Absence	DEC	Absence		
presence/absence								
Remarks	Setting example (10 bytes): NWWEP3 4141414141							
	*Valid only	when IM-Ty	pe is 22 or 23.					

encryption key 5								
Command	NWWEP3	NWWEP3?						
Parameter	None	None						
Function	Return WE	P encryption l	key 3 from the	projector mai	n unit.			
Return code	NWWEP3	NWWEP3? NWWEP3 =4141414141						
Status	'ERR'	':' Normal termination.						
Disclosed/non-disclosed	Non-disclo	sed						
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence		
Remarks	*Valid only	y when IM-Ty	pe is 22 or 23.					

Set WEP encryption key 4

Command	NWWEP4	NWWEP4 <f1></f1>						
	<f1>: WEP key</f1>							
Parameter	* The len	gth depends o	n parameter "	x" of NWWLS	SEC.			
	10 bytes or 26 bytes. Notation is hexadecimal number system.							
Function	Set up WE	Set up WEP encryption key 4 on the projector main unit.						
Return code	None							
	':' Normal termination.							
Status	'ERR'	Abnormal term	nination. (Retu	rned when the	e command ter	rmination is otl	her than a	
	normal terr	normal termination.)						
Disclosed/non-disclosed	Non-disclo	sed						
Parameter	INIT	Presence	INC	Absence	DEC	Absence		
presence/absence								
Remarks	Setting example (10 bytes): NWWEP4 4141414141							
	*Valid only	y when IM-Ty	pe is 22 or 23.					

Command	NWWEP4?	NWWEP4?												
Parameter	None													
Function	Return WE	P encryption l	key 4 from the	projector mai	n unit.									
Return code	NWWEP4	WWEP4? WWEP4 =4141414141												
':' Normal termination.  Status 'ERR' Abnormal termination. (Returned when the command termination is other normal termination.)														
Disclosed/non-disclosed	Non-disclos	sed												
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence								
Remarks	*Valid only when IM-Type is 22 or 23.													

Set prior interface

Command	NWPRIMI	Fx										
	X = Specify prior network interface. 1 byte.											
Parameter	0: Give priority to Wired LAN interface.											
	1: Give p	priority to Wire	eless LAN into	erface.								
г .:	Set up prior	r interface in th	ne projector m	ain body.								
Function	Specify wh	ich interface sl	nould be conn	ected to mail s	server or SNM	IP.						
Return code	Absence	sence										
Status	'ERR' A		ination. (Retue with the input	_		coccurred, adju						
Disclosed/non-disclosed	Non-disclo	sed										
Parameter	INIT	Absence	INC	Absence	DEC	Absence						
presence/absence												
Remarks	Setting example: NWPRIMIF 1  *Valid only when IM-Type is 22 or 23.											

Get prio<u>r interfa</u>ce

or interface											
Command	NWPRIMI	F?									
Parameter											
Function	Return the	prior interface									
Return code	NWPRIMI NWPRIMI										
Status	'ERR' A		ination. (Retu	•		coccurred, adjustion is other					
Disclosed/non-disclosed	Non-disclo	sed									
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence					
Remarks	*Valid only	*Valid only when IM-Type is 22 or 23.									

## Set LEAP user name

AP user name	1												
Command	NWSECUS	SER x											
Parameter	x = User na	ame for LEAP											
Function	Set the use	r name for LEA	AP.										
Return code	Absence	bsence											
Status	'ERR' A	Normal termina Abnormal term cannot be made normal termina	ination. (Retue with the input	•		, 3							
Disclosed/non-disclosed	Non-disclo	sed											
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence							
Remarks	Setting example : NWSECUSER 1 *Valid only when IM-Type is 22 or 23.												

## Get LEAP user name

Command	NWSECU	SER?											
Parameter													
Function	Return the	turn the user name for LEAP.											
D 1	NWSECU	SER?											
Return code NWSECUSER = easympuser													
	':' I	Normal termina	ation.										
Chatasa	'ERR'	'ERR' Abnormal termination. (Returned when a parameter error occurred, adjustment											
Status	(	cannot be made with the input value, or the command termination is other than a											
	1	normal termina	tion.)										
Disclosed/non-disclosed	Non-disclo	sed											
Parameter	INIT	Absence	INC	Absence	DEC	Absence							
presence/absence													
Remarks	*Valid onl	*Valid only when IM-Type is 22 or 23.											

#### Set LEAP passward

passwaru												
Command	NWSECPA	ASSWD x										
Parameter	x = Passwo	rd for LEAP.										
Function	Set the pass	sword for LEA	.P.									
Return code	Absence											
Status	'ERR' A	Normal termination.  RR' Abnormal termination. (Returned when a parameter error occurred, adjustment cannot be made with the input value, or the command termination is other than a normal termination.)										
Disclosed/non-disclosed	Non-disclos	sed										
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence						
Remarks		Setting example: NWSECPASSWD easymppassword *Valid only when IM-Type is 22 or 23.										

## Get LEAP password

Command	NWSECPA	ASSWD?									
Parameter											
Function	Return the	password for I	LEAP.								
Return code	NWSECPA NWSECPA	ASSWD? ASSWD=easy	mppassword								
Status	'ERR' A		ination. (Retu	•		coccurred, adjustion is otl					
Disclosed/non-disclosed	Non-disclo	sed									
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence					
Remarks	*Valid only	*Valid only when IM-Type is 22 or 23									

## Set WPA-PSK key

Command	NWSECPS	SK x									
Parameter	x = WPA-1	PSK key									
Function	Specify W	PA-PSK key									
Return code	Absence										
Status	'ERR'	Normal termination.  RR' Abnormal termination. (Returned when a parameter error occurred, adjustment cannot be made with the input value, or the command termination is other than a normal termination.)									
Disclosed/non-disclosed	Non-disclo	sed									
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence					
Remarks  Setting example: NWSECPSK easymppsk  *Valid only when IM-Type is 22 or 23.											

## Get WPA-PSK key

A-PSK key												
Command	NWSECP	SK?										
Parameter												
Function	Return the WPA-PSK key.											
Return code NWSECPSK? NWSECPSK=easympkey												
Status	'ERR'	Normal termina Abnormal term cannot be made normal termina	ination. (Retu	-		-						
Disclosed/non-disclosed	Non-discle	osed										
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence						
Remarks	*Valid on	*Valid only when IM-Type is 22 or 23.										

# Validate setting value in the projector

Command	NWRESE	Γ										
Parameter	Absence											
Function	Validate se	etting value in t	he projector									
Return code	Absence											
Status	'ERR'	Normal termination.  (Returned when a parameter error occurred, adjustment cannot be made with the input value, or the command termination is other than a normal termination.)										
Disclosed/non-disclosed	Non-disclo	sed										
Parameter presence/absence	INIT	Absence	INC	Absence	DEC	Absence						
Remarks	*Valid onl	etting example : NWRESET  Valid only when IM-Type is 22 or 23.  *Not validate setting when the status of projector is stand-by mode.										

#### **6.1 Character Restrictions**

The characters that can be set to the character string of the parameter are defined below.

The character codes, 0x00 to 0x1F and 0x80 to 0xff, cannot be set. The shaded characters cannot be set, either.

If any character that cannot be set exists in the parameter, "ERR" is returned as the status.

	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+a	+b	+c	+d	+e	+f
0x20		!	"	#	\$	%	&	•	(	)	*	+	,	-		/
0x30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
0x40	@	Α	В	С	D	Е	F	G	Н	I	J	K	L	M	N	О
0x50	P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	۸	-
0x60	`	a	b	с	d	e	f	g	h	i	j	k	1	m	n	0
0x70	p	q	r	s	t	u	v	w	X	у	z	{		}	~	

Set projector name (NWPNAME)

Ī	name (1)	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+a	+b	+c	+d	+e	+f
	0x20		!	"	#	\$	%	&	1	(	)	*	+	,	1		/
L	0x30	0	1	2	3	4	5	6	7	8	9	Ŀ	;	<	=	>	?
L	0x40	@	A	В	C	D	Е	F	G	Н	I	J	K	L	M	N	О
L	0x50	P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	٨	-
	0x60	`	a	b	c	d	e	f	g	h	i	j	k	1	m	n	0
Ĺ	0x70	p	q	r	S	t	u	v	w	X	y	z	{		}	~	

Remarks) From the computer naming rules of Windows

#### Community name (NWCNAME)

marine (117																
	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+a	+b	+c	+d	+e	+f
0x20		!	=	#	\$	%	&	-	(	)	*	+	,	-		/
0x30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	^	?
0x40	@	Α	В	C	D	Е	F	G	Н	I	J	K	L	M	N	О
0x50	P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	^	-
0x60	,	a	b	c	d	e	f	g	h	i	j	k	1	m	n	0
0x70	р	q	r	s	t	u	v	w	X	у	z	{		}	~	

## Mail destination address x(NWSMTPT0x)

		+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+a	+b	+c	+d	+e	+f
0	x20		!	"	#	\$	%	&	,	(	)	*	+	,	-		/
0	x30	0	1	2	3	4	5	6	7	8	9		;	<	II	>	?
0	x40	@	A	В	C	D	E	F	G	Н	I	J	K	L	M	N	О
0	x50	P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	٨	1
0	x60	`	a	b	c	d	e	f	g	h	i	j	k	1	m	n	0
0	x70	p	q	r	s	t	u	v	w	X	y	Z	{		}	~	

Remarks) Properly, the characters that can be used as the mail address should be defined according to RFC2234, 2821 and 2822, but check is made according to the instructions in the above table.

## ESSID (NWWLCNF, NWWLCNFS, NWESSID2, NWESSID3)

	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+a	+b	+c	+d	+e	+f
0x20		!	"	#	\$	%	&	'	(	)	*	+	,	-		/
0x30	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
0x40	@	A	В	С	D	Е	F	G	Н	I	J	K	L	M	N	О
0x50	P	Q	R	S	T	U	V	W	X	Y	Z	[	¥	]	٨	
0x60	,	a	b	С	d	е	f	g	h	i	j	k	1	m	n	0
0x70	р	q	r	s	t	u	V	W	Х	у	Z	{		}	~	

Note: IM-Type that is 23 or larger number excluding IM-M and IM-XP, treats "^ " as space by IM internal processing..

# **6.2 COMMAND LIST**

Command list for Tyep A, B, C, D, E, F, G, and H

	A, B, C, D, E, F, G, and H	Туре								
Command	Explanation	A,D,J	В	С	Е	F	G	H,I	J	K
NWTRAPIP1	Set SNMP trap destination address 1	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWTRAPIP1?	Get SNMP trap destination address 1	OK	OK	OK	ОК	ОК	ОК	ОК	ОК	OK
NWTRAPIP2	Set SNMP trap destination address 2	OK	OK	OK	OK	ОК	ОК	ОК	OK	OK
NWTRAPIP2?	Get SNMP trap destination address 2	OK	OK	ок	ОК	ОК	ОК	ОК	OK	OK
NWPNAME	Set projector name	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWONAME?	Get projector name	OK	OK	ок	ОК	ОК	ОК	ОК	OK	OK
NWCNAME	Set community name	OK	OK	ОК	ОК	ОК	ОК	ОК	OK	OK
NWCNAME?	Get community name	OK	OK	ОК	ОК	ОК	ОК	ОК	ОК	OK
NWMAC?	Get MAC address	OK	OK	OK	OK	OK	OK	ОК	OK	OK
NWSMTPTO1	Set mail destination address 1	OK	OK	OK	OK	OK	OK	ОК	OK	OK
NWSMTPTO1?	Get mail destination address 1	OK	OK	OK	OK	OK	OK	ОК	OK	OK
NWSMTPTO2	Set mail destination address 2	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWSMTPTO2?	Get mail destination address 2	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWSMTPTO3	Set mail destination address 3	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWSMTPTO3?	Get mail destination address 3	OK	OK	ОК	ОК	ОК	ОК	ОК	OK	OK
NWSMTPSVR	Set SMTP server IP address	ОК	OK	ОК	ОК	ОК	ОК	ОК	ОК	OK
NWSMTPSVR?	Get SMTP server IP address	ОК	OK	ОК	ОК	ОК	ОК	ОК	ОК	OK
NWSMTPPORT	Set SMTP port number	ОК	OK	ОК	ОК	ОК	ОК	ОК	ОК	OK
NWSMTPPORT?	Get SMTP port number	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWSMTPEVT1	Set notification event 1	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWSMTPEVT1?	Get notification event 1	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWSMTPEVT2	Set notification event 2	OK	OK	OK	OK	ОК	ОК	ОК	OK	OK
NWSMTPEVT2?	Get notification event 2	OK	OK	OK	OK	ОК	ОК	ОК	OK	OK
NWSMTPEVT3	Set notification event 3	OK	OK	OK	OK	ОК	ОК	ОК	OK	OK
NWSMTPEVT3?	Get notification event 3	OK	OK	OK	OK	ОК	ОК	ОК	OK	OK
NWSMTPACT	Set mail notification function ON/OFF	OK	OK	OK	OK	ОК	ОК	ОК	OK	OK
NWSMTPACT?	Get mail notification function ON/OFF	OK	OK	ОК	ОК	ОК	ОК	ОК	OK	OK
NWSMTPTEST	Test mail function	OK	OK	ОК	ОК	ОК	ОК	ОК	OK	OK
NWCNF	Set IP, sub-net, gateway (wired LAN)	OK	OK	OK	OK	ОК	ОК	ОК	OK	OK
NWCNF?	Get IP, sub-net, gateway (wired LAN)	OK	OK	ОК	OK	OK	OK	ОК	OK	OK
NWWLCNF	Set IP, sub-net, gateway (wireless LAN)		OK	OK						
NWWLCNF?	Get IP, sub-net, gateway (wireless LAN)		OK	OK						
NWWINS	Set WINS address		OK							
NWWINS?	Get WINS address		OK							
NWDNS	Set DNS address		OK							
NWDNS?	Get DNS address		OK							
NWDNSDMN	Set DNS suffix		OK							

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NWDNSDMN?	Get DNS suffix		ОК					
NWIF?	Get communication network IF type	OK						
NWWLCNFS	Set IP address, sub-net mask, default gateway (for 802.1x)				OK			OK
NWWLCNFS?	Get IP address, sub-net mask, default gateway (for 802.1x)				OK			ОК
NWESSID2	Set the second ESSID				OK			
NWESSID2?	Get the second ESSID				OK			
NWESSID3	Set the third ESSID				OK			
NWESSID3?	Get the third ESSID				OK			
NWWLSEC	Set security system				OK	OK	OK	
NWWLSEC?	Get security system				OK	OK	OK	
NWWEP	Set WEP Key ID				OK	OK	OK	
NWWEP?	Get WEP Key ID				OK	OK	OK	
NWWEP1	Set WEP encryption key 1				OK	OK	OK	
NWWEP1?	Get WEP encryption key 1				OK	OK	OK	
NWWEP2	Set WEP encryption key 2				OK	OK	OK	
NWWEP2?	Get WEP encryption key 2				OK	OK	OK	
NWWEP3	Set WEP encryption key 3				OK	OK	OK	
NWWEP3?	Get WEP encryption key 3				OK	OK	OK	
NWWEP4	Set WEP encryption key 4				OK	OK	OK	
NWWEP4?	Get WEP encryption key 4				OK	OK	OK	
NWPRIMIF	Set prior interface				OK	OK	OK	
NWPRIMIF?	Get prior interface				OK	OK	OK	
NWSECUSER	Set LEAP user name				OK	OK	OK	
NWSECUSER?	Get LEAP user name				OK	OK	OK	
NWSECPASSWD	Set LEAP passward				OK	OK	OK	
NWSECPASSWD?	Get LEAP passward				OK	OK	OK	
NWSECPSK	Set WPA-PSK key				OK	OK	OK	
NWSECPSK?	Get WPA-PSK key				OK	OK	OK	

#### 6.3 Models

Type A EMP/PL-7800/7900/8300/9300/TW500

Type B EMP/PL-8350, EMP-8300 with ELPXP01

Type C EMP/PL-735/7850/7950

Type D EMP/PL-830

Type E EMP/PL-737/745/755/765/835

Type F EMP/PL-1715/1815

Type G EMP/PL-1825, EB/PL-G5150/G5350/1725/1735W

Type H EMP/PL-6100

Type I EMP/PL-400W/6110/83/83H/83+/822/822H/822+, EB/PL-G5000/G5100/G5200W/G5300/410W

Type J EB/PL-84

Type K

# 7. Appendix A: COMMAND TO GET PROJECTOR STATUS INFORMATION

7.1 Get Event Type (IMEVENT?)

Command	IMEVENT?								
Parameter	Absence								
	Get the event type when an event (INT) is generated from the projector.								
Function	Return example:IMEVENT?								
	IMEVENT=0001 01 0001 0001								
	<event code=""> <parameter 1=""> <parameter 2=""> Parameter 3&gt;</parameter></parameter></event>								
Return code	Refer to Table 1 for details.								
	':' Normal termination.								
Status	'ERR' Abnormal termination. (Returned when the command termination is								
	other than a normal termination.)								
Disclosed/non-disclosed	Non-disclosed								
Parameter presence/absence	INIT Absence INC Absence DEC Absence								
Remarks									

<Table 1>

			<table 1=""></table>	
]	Response	data of Get event type		Reference
Type Projector status change notification	Event code *2	Parameters <parameter 1="" 1:="" byte=""> Projector status 01: Standby 02: Warmup 03: Normal 04: Cool down 05 to FE: (Empty) FF: Abnormal  <parameter 2="" 2:="" bytes=""> Warning type Bit 0: Lamp life Bit 1: No signal Bit 2: Unsupported signal Bit 3: Air filter Bit 4: High temperature Bit 5: Reserved</parameter></parameter>	type. (Since no warning is indicated by all bits 0, clear the bits that have restored from the warnings to 0.) The "air filter" is added now for use when a dedicated sensor is installed in the future. For the time being, "high temperature" is used.  The alarm type is valid only when the projector status is "abnormal". (Because of the ESC/VP21 properties, the alarm type can be made not to be sent unless an error occurs. This is entrusted to the judgment of the	ESC/VP21-compatible commands *1  PWSTATUS? <parameter 1="" 1:="" byte=""> Projector status 01: Standby 02: Warmup 03: Normal 04: Cool down 05 to FE: (Empty) FF: Abnormal <parameter 2="" 2:="" bytes=""> Warning type Bit 0: Lamp life Bit 1: No signal Bit 2: Unsupported signal Bit 3: Air filter Bit 4: High temperature Bit 5: Reserved (aspect change) Bit 6 to Bit 15 (reserved) <parameter 2="" 3:="" bytes=""> Alarm type Bit 0: Lamp ON failure Bit 1: Lamp lid Bit 2: Lamp burnout (ON, then OFF) Bit 3: Fan Bit 4: Temperature sensor Bit 5: High temperature</parameter></parameter></parameter>
		Bit 6: Interior (system) Bit 7 to Bit 15 (Reserved)		Bit 6: Interior (system) Bit 7 to Bit 15 (Reserved)

<sup>\* 1</sup> ESC/VP21 commands used when it is desired to get information at other than event occurrence.

<sup>\* 2</sup> Should be expressed in 32-bit hexadecimal. Up to 32 events from 01 to 8000.