SONY

Large Venue Projector

SRX-110/105

PROTOCOL MANUAL

1st Edition

1. Introduction

This protocol manual describes the basic configuration and basic operations of various commands used for projector. Projector can be controlled using the commands provided in “Appendix”. Using an external CONTROLLER , etc., inputs can be switched and the power can also be turned on and off. In the following paragraphs, “CONTROLLER” means an external device such as a PC which controls projector using these commands.

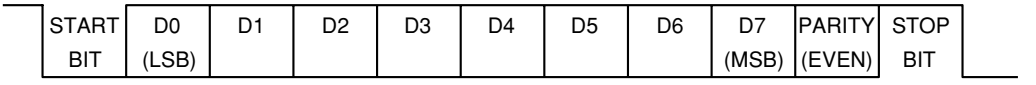
2. RS-232C

2-1. Communication Specifications

<RS-232C Communication Signal>

- Full duplex communication channels (Flow control not performed.)
- Start-stop synchronism system
- Baud rate: 38.4 kbps (bits per second)
- The bit configuration is defined as follows.

1 START Bit + 8 DATA Bits + 1 PARITY Bit + 1 STOP Bit



EVEN Parity.....Total number of “1”s from D0 to D7 is an even number.

2-2. Transmission Block Format

The SDCP protocol is transmitted. (Refer to Section 3-4 for details.)

2-3. Connection

<RS-232C Connection>

Communication is enabled by the use of a D-Sub 9 Pin cross (reverse) cable.
The pin assignment of D-Sub 9 Pin and D-Sub 25 Pin is as follows.

D-Sub 9 Pin	D-Sub 25 Pin	Name	
Shell = FG	1	FG	Grounding for safety protection or cable shield
3	2	TxD	Transmission data
2	3	RxD	Reception data
7	4	RTS	Transmission request
8	5	CTS	Transmission permission
6	6	DSR	Data set ready
5	7	SG	GND for signal
1	8	DCD	Data channel signal carrier detection
4	20	DTR	Data terminal ready
9	22	RI	Calling display (Presence/absence of calling signal)

Pins indicated as D-Sub 25 Pin are not used.
Assured cable length: 15 m (However, assurance may not be applicable for some cables.)

The software for controlling the projector from a PC is intended for performing transmission and reception for only the TxD and RxD lines.
Therefore there is no handshake normally performed by RS-232C.

2-4. Communication Procedure

2-4-1. Outline of Communication

All communication between CONTROLLER (PC, etc.) and DEVICE (PROJECTOR) is performed by the command block format. Communication is started by the issue of a command at CONTROLLER and ended when the return data is sent to CONTROLLER after DEVICE receives the command.
CONTROLLER is prohibited from sending several commands at one time. This means that after CONTROLLER sends one command, it cannot send other commands until DEVICE returns the return data.
DEVICE sends the return data after processing the command. The time from when CONTROLLER sends the command until the return data is returned differs according to the contents of the command.

Note

When Sircs Direct Command is sent, return data may not be returned in some cases.

2-5. Communication Rules

- When sending a command from CONTROLLER, the return data from PROJECTOR should be received first before sending the next command. Even if the next command is sent before receiving the return data, since PROJECTOR will not be able to receive that command, it does not return a response to CONTROLLER. Consequently, no error code is also sent.
  The following lists the approximate waiting times for PROJECTOR to return the return data after CONTROLLER sends the command.
- When a communication error occurs, PROJECTOR ignores the data received until now, and set into the reception standby state.
- For undefined commands or commends determined as invalid by PROJECTOR, PROJECTOR will send the “NAK” return data to CONTROLLER .
- Take note that when data is written when the input signal of PROJECTOR is unstable, that data (value) will not be incorporated.
- When INDEX specified SIRCS direct command is transmitted, leave an interval of 45 msec until the next transmission. (Do not return the return data (ACK, NAK) when the SIRCS direct command is received.)

2-6. Approximate Return Waiting Times

The await-return time is approx. 30 msec.

Note

This is the case, unless the communications are interfered anyway.

3. NETWORK

This section describes the performance, operations and protocol to be used of advertisement and PJ Talk.

3-1. Advertisement

The advertisement service is provided to facilitate development of a PC application that can automatically detect a projector on the network. This function is achieved by broadcasting the equipment information periodically to the network.

3-1-1. Function

The equipment information shown below is transmitted as the broadcast packet periodically (at certain intervals).

Information	Description
Category	Category of the equipment
Equipment name	Name of the equipment
Serial number	Serial number of the equipment
Installation information	Installation location of the equipment
Community	Community name of the equipment
Power status	Power status of the equipment

Notes

- The category of projector is 0x0a.
- The power status sets ffffh if communication error occurs.

Protocol

The SDAP protocol is defined in order to provide this service.

Item	Description
Protocol name	SDAP (Simple Display Advertisement Protocol)
Transport	UDP
Port number	53862 (Factory-shipments value)
Broadcast interval	Once every 30 seconds (Factory-shipments value)

3-1-2. Setup Items

The items that can be set for the advertisement service are described below.

Setup items	Description
Port No.	Port number
Interval	Broadcast interval
Broadcast Address	Adding the transmission place.

3-2. PJ Talk

The remote control service is provided that can control the projector from remote location via network.

3-2-1. Function

This responds to the control command and requests for acquiring the status and information supplied from clients.

Control request
Enables the input to be selected and picture control to be adjusted.

SIRCS request
Enables remote control by sending the SIRCS code.

Status request
Enables equipment status information such as power status, error information and power-on time to be acquired.

Information request
Enables equipment information such as equipment name, serial number and installation information to be acquired.

Protocol

Item	Description
Protocol name	SDCP (Simple Display Control Protocol)
Transport	TCP
Port number	53484 (Factory-shipments value)
TCP connection timeout	30 seconds (Factory-shipments value)

3-2-2. Setup Items

The items that can be set for the PJ Talk service are described below.

Setup item	Description
Port No.	Port number
Timeout	TCP connection timeout time
Host Address	IP address of connectable PC

3-3. SDAP Protocol

This section describes the SDAP packet structure.

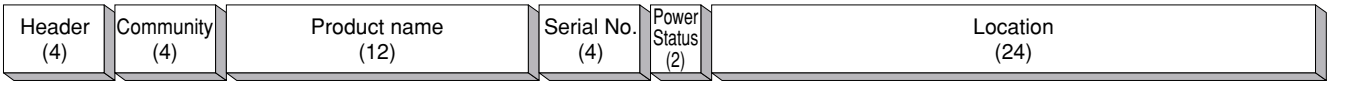


Fig.1 Packet structure

1) Header
The header consists of ID (16 bit), version (8 bit) and category (8 bits).

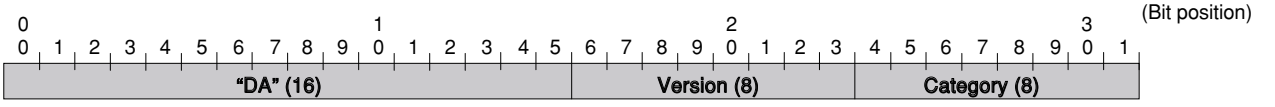


Fig. 2 Header

ID
It is fixed to "DA".

Version
This indicates the version number of protocol.
It is fixed to 01h (version 1).

Category
Category number 0Ah of the projector is entered here.

2) Community
The community that is set in the display equipment is entered.

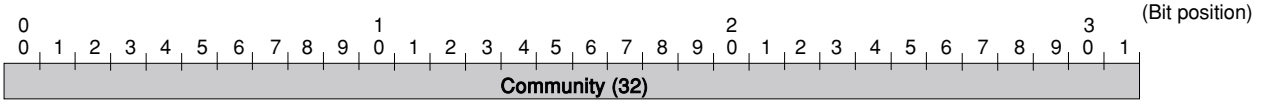


Fig. 3 Community

3) Equipment Information

Product Name
Name of equipment (Maximum twelve characters)
In case, less than twelve characters, 00h is entered in the blank space.

Serial No.
Serial number is entered.

Power Status.
Power supply status of the equipment is entered.

Location
Information of installation location (Maximum twenty four characters)
In case, less than twenty four characters, 00h is entered in the blank space.

3-4. SDCP Protocol

This section describes the packet structure of version 2.

Fig. 1 Packet structure

3-4-1. Format

3-4-1-1. Header

The header consists of version (8 bits) and category (8 bits).

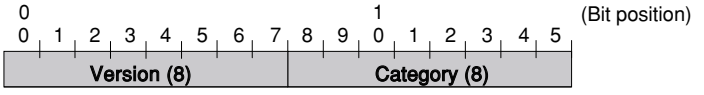


Fig. 2 Header structure

Version

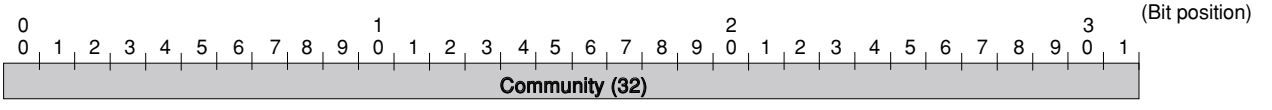
This indicates the version number of protocol.
It is fixed to 02h (version 2).

Category

Category number 0Ah of the projector is entered here. Projector checks the category number. If a different category number is entered, the request is ignored.

3-4-1-2. Community

When the community data matches the community that is set in the display equipment, the request is executed. Community consists of four alphanumeric characters (case sensitive). All display equipment has the default value “SONY” when shipped from the factory.

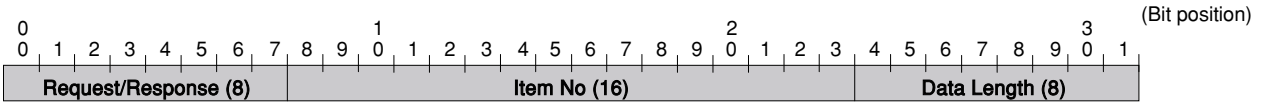


Note

Community should be entered with four characters. Three characters or less are not accepted.

3-4-1-3. Command

This section describes the format of the request command and the response command.



(1) Request
This section describes the format of the request command that is issued from the host PC to the projector.

Community
This is the same alphanumeric characters as those of community that is set in the projector to which request is going to be sent.

Request
There are only two types of request. One is the GET request to acquire the projector information and status. The other is the SET request to modify the projector setup.

Request	Contents
SET (00h)	Used to control turning the power on/off and to control the input selector, and to change the various setups.
GET (01h)	Used to acquire the installation information, equipment status and various setup values.

Item No.
This is the item number of the request target.

Data Length
This is the length of the data accompanying the request. The maximum length is 128 bytes. If there is no data, it is 0.

Data
This is the data accompanying the request.

(2) Response
This section describes the format of the response command which is used to return a response to the host PC from the projector.

Community
The same alphanumeric characters as those of the request is entered.

Response
The response returns the result of executing the request from the host PC.

Response	Contents
NG (00h)	Indicates that the request is illegal or cannot be executed.
OK (01h)	Indicates that the request was executed correctly.

Item No.
The same value as those of the request is entered.

Data Length
This is the length of the data accompanying the response. The maximum length is 128 bytes. If there is no data, it is 0.

Data
This is the data accompanying the response.

3-4-1-4. SET Request

The SET request is used to set a new value in the specified item. Details of the request and the response are described below.

Request

Request	Item No.	Data Length	Data
SET (00h)	Item No.	n	Set Data (n byte)

Response

OK (01h)	Item No.	0

3-4-1-5. GET Request

The GET request is used to acquire the value of the specified item. Details of the request and the response are described below.

Request

Request	Item No.	Data Length
GET (01h)	Item No.	0

Response

OK (01h)	Item No.	n	Get Data (n byte)

3-4-1-6. ERROR Response

When an error occurs in the contents of a request or in the result of execution, NG is returned as the response.

NG (00h)	Item No.	2	Error Code (16)

○

3-4-2. Items

Category	Description	SET	GET
70**h	Used to transmit the RS-232C protocol.	○	
A0**h	Used to set or acquire various information of the equipment	○	○

3-4-2-1. RS-232C Transmission (70**h)

Used to transmit the RS-232C protocol.
Refer to SXRD PROTOCOL APPENDIX_70xxh.xls for data length and data.

Lower byte	Description	SET	GET
00h	Command that receives response from RS-232C	○	

3-4-2-2. Equipment Information Acquisition (A0**h)

Used to set or acquire the information of the equipment (SXRD projector).
Refer to SXRD PROTOCOL APPENDIX_A0xxh.xls for the lower byte, data length and data.

3-4-3. Error Code

The error code list is shown below with a detailed description of each.

Category	Error	Error Code
Item Error (01**h)	Invalid Item	01h
	Invalid Item Request	02h
	Invalid Length	03h
	Invalid Data	04h
	Short Data	11h
	Not Applicable Item	80h
Community Error (02**h)	Different Community	01h
Request Error (10**h)	Invalid Version	01h
	Invalid Category	02h
	Invalid Request	03h
	Short Header	11h
	Short Community	12h
	Short Command	13h
Network Error (20**h)	Timeout	01h
Comm Error (F0**h)	Timeout	01h
	Check Sum Error	10h
	Framing Error	20h
	Parity Error	30h
	Over Run Error	40h
	Other Comm Error	50h
	Unknown Response	F0h
NVRAM Error (F1**h)	Read Error	10h
	Write Error	20h

3-4-3-1. Item Error

This error occurs when the Item No. of a request is illegal or its data is illegal. The conditions for occurrence of the respective errors are shown below.

Invalid Item
An unsupported Item No. is specified.

Example 1: The unsupported category 0xA** is specified.
Example 2: The unsupported Item No. 0x8010 is specified.

Invalid Item Request
The Item No. is supported but an unsupported Request is issued.

Example: An attempt is made to set data in the Model Name (0x8001).

Invalid Length
Data length of the specified Item No. is too long.

Example: An attempt is made to set 25 byte data in the installation location (0x8003).

Invalid Data
Data of the specified Item No. is outside the setting range.

Example: An attempt is made to set 101 in the Item when the setting range of the Item is 1 to 100.

Short Data
The length of data is shorter than the value specified by the data length.

Example: The actual data length is 9 bytes but data length is 10.

Not Applicable Item
An item that is not valid at present is specified.

Example: The item to switch the display is specified when the main power is off.

3-4-3-2. Community Error

This error occurs when community is different.

Example: “ABCD” is specified when “SONY” is set.

3-4-3-3. Request Error

This error occurs when header or command is illegal. The conditions of occurrence of the respective errors are shown below.

Invalid Version

The version of the header is other than 2.

Note

When another version is supported, an error occurs in all versions other than the supported version.

Invalid Category

The category does not match.

Example: 0x0B is specified in the device of category = 0x0A.

Invalid Request

An unsupported request is specified.

Example: Request = 0x02 is specified.

Short Header

The received data is 1 byte.

Short Community

The received data is in the range of 2 to 5 bytes.

Short Command

The received data is in the range of 6 to 9 bytes.

3-4-3-4. Network Error

This is an error that occurs in TCP/IP. The conditions of occurrence of the respective errors are shown below.

Timeout

Communication was interrupted.

3-4-3-5. Comm Error

This is an error in communication with the main control microprocessor of the display.

Timeout
Reception data is not returned after data is sent.

Check Sum Error
A check sum error occurred in the main control microprocessor of the display.

Framing Error
A framing error occurred.

Parity Error
A parity error occurred.

Over Run Error
An overrun error occurred.

Other Comm Error
Another error occurred.

Unknown Response
The data cannot be processed was received.

3-4-3-6. NVRAM Error

Read Error
Reading from NVRAM was failed.

Write Error
Writing to NVRAM was failed.

Version 0.02

<Communication Protocol>

Use the following protocol to send data to and receive them from the projector.
The details on CMD1, CMD2, and DATA (written in red) are described in "Communication Commands".
The details on CHECK DATA, DATA LENGTH, and CHECK SUM (written in blue)
are described on this worksheet.

B0
START CODE
A5 h

Destination (To) INDEX				
B1	B2	B3	B4	B5
PERIPHERAL INDEX	GROUP INDEX		DEVICE INDEX	
01 h	00 h	01 h	00 h	01 h

Source (From) INDEX				
B6	B7	B8	B9	B10
PERIPHERAL INDEX	GROUP INDEX		DEVICE INDEX	
03 h	00 h	01 h	00 h	01 h

CMD[0]	CMD[1]	~~CMD[3]~~
B11	B12	B13
CATEGORY	SET	Fixed value
		80 h

CHECK DATA
B14
B16 + 2

DATA LENGTH	
B15	B16
00 h	Note 1

DATA[1]	DATA[2]
Bn (= B17)	Bn + 1

DATA[N]
Bm (= Bn + (N-1))

CHECK SUM
Bm + 1

END CODE
Bm + 2
5A h

<About CHECK DATA>

The total number of bytes from "DATA 1" to "DATA N" + 2 is assigned here.

As for the "DATA" part, the number of bytes vary depending the command to be sent.
Also, even when the command is the same, the number of bytes in the "DATA" section varies depending on whether the command is "SET" or
For this reason the value here varies depending on the command to be sent.

<About DATA LENGTH>

The total number of bytes from "DATA 1" to "DATA N" + 2 is assigned here as in "CHECK DATA".
The difference from "CHECK DATA" is that only "the total number of bytes" is set without 2 added.

<About CHECK SUM>

Sets the checksum.

Checksum can be calculated by
operating "XOR" to the values from "PERIHERAL INDEX(B1)" to "DATA N(Bm)".
<Example of calculation>

A5	1010	0101
5A	0101	1010
Answer	1111	1111

<About CMD[0], CMD[1], DATA[1], ...DATA[N]>

Refer to the "PjStn2CommCommandTable" sheet.

List of All Commands

NO	COMMAND NAME	RS232C	CMD1	CMD2	DATA1	DATA2	DATA3	DATA4	DATA5	DATA6	DATA7	DATA8	DATA9		
			CMD[0]	CMD[1]	CMD[2]	CMD[3]	CMD[4]	CMD[5]	CMD[6]	CMD[7]	CMD[8]	CMD[9]	CMD[10]	~	CMD[4+n]
1	ADJ USER <USER COMMAND> (ADJ USER NO)	SET	00h	00h	ADJ USER NO		Option	DATA							
		GET		01h	ADJ USER NO										
		REPLY		02h	ADJ USER NO		Status	Lower		Upper		DATA			
		ACK(232C)		03h	ACK/NAK	DATA									
2	DU USER <USER COMMAND> (DU USER NO)	SET	01h	00h	DU USER NO		DATA SIZE	DATA	~	~	~	~	~	~	Data[n-1]
		GET		01h	DU USER NO		DATA SIZE								
		REPLY		02h	DU USER NO		DATA SIZE	DATA	~	~	~	~	~	~	Data[n-1]
		ACK(232C)		03h	ACK/NAK	DATA									
3	SIRCS <USER COMMAND> Send SIRCS	SET	17h	00h	CATEGORY		SIRCS CODE	REPEAT	REPEAT NUMBER						
4	MEMORY <USER COMMAND> MEMORY(SAVE/RESET)	REQUEST	03h	00h	SAVE/RESET	MEMORY NO	INPUT	ADJ USER NO							
		ACK(232C)		03h	ACK/NAK	DATA									
22	ADJ USER MULTI PICS <USER COMMAND> (ADJ USER NO MULTI)	SET	20h	00h	INPUT	ADJ USER NO		Option	DATA						
		GET		01h	INPUT	ADJ USER NO									
		REPLY		02h	INPUT	ADJ USER NO		Status	Lower		Upper		DATA		
		ACK(232C)		03h	INPUT	ACK/NAK	DATA								

Item Number		Data	
Item Name	Data	Upper Byte	Lower Byte
ACK		00h	00h
NAK	Undefined Command	01h	01h
	Size Error		04h
	Select Error		05h
	Range Over		06h
	Not Applicable		0Ah
	Check Sum Error	F0h	10h
	Framing Error		20h
	Parity Error		30h
	Over Rub Error		40h
	Other Comm Error		50h

1.About ADJ USER NO and ADJ USER NO MULTI

(1)ADJ SET command
Sets an adjustment value.
"ADJ REPLY data" returns when "ADJ SET" is executed.

(2) ADJ GET command
Acquires an adjustment value.
Response to the "Get adjustment value of ADJ item" command (ADJ REPLY data) returns when "ADJ GET" is executed.

(3) ADJ REPLY command
Response to the "Get adjustment value of ADJ item" command

(4) How to use the ADJ STATUS flag (ADJ REPLY: CMD[4])
(a) When the ADJ Status flag is "00h"
Since this is a normal adjustment value, set the adjustment item using the value of "ADJ DATA".
(b) When the ADJ Status flag is "01h"
Since this is an adjustment item error (the adjustment value of this item cannot be set), the adjustment item of Projector Station is masked (displayed in gray).
(c) When the ADJ Status flag is "02h"
Check that the value of "ADJ DATA" is "ADJ Lower" (the minimum value of the adjustment value) or larger and "ADJ Upper" (the maximum value of the adjustment value) or lower, and set the adjustment item using the value of this "ADJ DATA".

1. Access to the ADJ USER items

Set adjustment value of ADJ USER item

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[3]	CMD[4]	CMD[5]	CMD[6]
Function	ADJ USER	SET	ADJ USER NO		Option	DATA	
Value	00h	00h	MSB / Refer to [ADJ USER NO List]	LSB	Refer to [OPTION List]	MSB	LSB

Get adjustment value of ADJ USER item

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[3]
Function	ADJ USER	GET	ADJ USER NO	
Value	00h	01h	MSB / Refer to [ADJ USER NO List]	LSB

Response to the "Get adjustment value of ADJ USER item" command

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[3]	CMD[4]	CMD[5]	CMD[6]	CMD[7]	CMD[8]	CMD[9]	CMD[10]
Function	ADJ USER	REPLY	ADJ USER NO		Status	Lower		Upper		DATA	
Value	00h	02h	MSB / Refer to [ADJ USER NO List]	LSB	Refer to [Status List]	MSB	LSB	MSB	LSB	MSB	LSB

22. Access to the ADJ USER MULTI PICS items(SRX-001 multi-screen supported)

Set adjustment value of ADJ USER MULTI item

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[3]	CMD[4]	CMD[5]	CMD[6]	CMD[7]
Function	ADJ USER MULTI PICS	SET	INPUT	ADJ USER NO		Option	DATA	
Value	20h	00h	Refer to [INPUT List]	MSB	LSB	Refer to [OPTION List]	MSB	LSB
				Refer to [ADJ USER NO List]				

Get adjustment value of ADJ USER MULTI item

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[2]	CMD[3]
Function	ADJ USER MULTI PICS	GET	INPUT	ADJ USER NO	
Value	20h	01h	Refer to [INPUT List]	MSB	LSB
				Refer to [ADJ USER NO List]	

Response to the "Get adjustment value of ADJ USER MULTI item" command

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[2]	CMD[3]	CMD[4]	CMD[5]	CMD[6]	CMD[7]	CMD[8]	CMD[9]	CMD[10]
Function	ADJ USER MULTI PICS	REPLY	INPUT	ADJ USER NO		Status	Lower		Upper		DATA	
Value	20h	02h	Refer to [INPUT List]	MSB	LSB	Refer to [Status List]	MSB	LSB	MSB	LSB	MSB	LSB
				Refer to [ADJ USER NO List]								

[OPTION List]

Option		
No Function	Do nothing	00h
Relative	Relative value	01h
Absolute	Absolute value	02h
Reset	Reset	03h

[Status List]

Status	
Complete successfully	00h
Adjustment item ERROR (Cannot be adjusted by the currentinput signal and power mode)	01h
Adjustment value ERROR (OutOfRenge) (The setting value is out of the adjustment range.)	02h

[INPUT List]

INPUT	
Input 1	bit0
Input 2	bit1
Input 3	bit2
Input 4	bit3

INPUT's bitOR can be used only for SET

[ADJ USER NO List]

ADJ USER NO		VALUE	
Picture Mode	02h	function1	00h
		function2	01h
		function3	02h
Screen Control	05h	2BYTE data (See Note1)	
PICTUREMUTING	30h	Off	00h
		Screen1 ON	01h
		Screen2 ON	02h
		Screen3 ON	04h
		Screen4 ON	08h
Input-1 Signal Sel	32h	RGB	00h
		YCbCr	01h
		YPbPr	02h
Input-2 Signal Sel	33h	RGB	00h
		YCbCr	01h
		YPbPr	02h
Input-3 Signal Sel	34h	RGB	00h
		YCbCr	01h
		YPbPr	02h
Input-4 Signal Sel	35h	RGB	00h
		YCbCr	01h
		YPbPr	02h
Cinema_PSF	3ch	Off	00h
		On	01h
TESTPATTERN	3dh	Off	00h
		Pattern 1	01h
		Pattern 2	02h
LCD_Contrast	3eh	00h to 4Bh (0 to 75)	
LAMP MODE	40h	100%	00h
		93%	01h
		86%	02h
		79%	03h
		72%	04h
		65%	05h
		58%	06h
		51%	07h
Lamp Select	41h	DUAL	00h
		SINGLE	01h
		reserved	02h
		reserved	03h
INSTALLATION	43h	FRONT	00h
		REAR	01h

[ADJ USER NO MULTI List]

ADJ USER NO MULTI		VALUE	
Contrast	10h	00h to 64h (0 to 100)	
Brightness	11h	00h to 64h (0 to 100)	
Color	12h	00h to 64h (0 to 100)	
Hue	13h	00h to 64h (0 to 100)	
Sharpness	14h	00h to 64h (0 to 100)	
ColTemp	17h	6500K	00h
		custom1	01h
		custom2	02h
		Δ	03h
		Δ	04h
		Δ	05h
Color Space	1ch	DCDM	00h
		709	01h
		CIEXYZ	02h
		Reserved	03h
Gamma Correction	22h	Off	00h
		Gamma 1.8	01h
		Reserved	02h
		Gamma 2.2	03h
		Reserved	04h
		Gamma 2.6	05h
OSD	3Ah	OFF	00h
		ON	01h
H_Shift	54h	0 to 300	
V_Shift	55h	0 to 100	
Dot Phase_No	56h	00 to 63	
H_Size_OFFSET	57h	-50 to 50	
GAINRED	80h	00h to 64h (0 to 100)	
GAINGREEN	81h	00h to 64h (0 to 100)	
GAINBLUE	82h	00h to 64h (0 to 100)	
BIASRED	83h	00h to 80h (0 to 128)	
BIASGREEN	84h	00h to 80h (0 to 128)	
BIASBLUE	85h	00h to 80h (0 to 128)	

Note 1			bit7 bit6	bit5 bit4	bit3 bit2	bit1 bit0
Upper 8 bits	Screen Mode	Lower 2bit value of 8bits	Screen4 INPUT	Screen3 INPUT	Screen2 INPUT	Screen1 INPUT
00h	1 picture	00h	INPUT 1	INPUT 1	INPUT 1	INPUT 1
01h	2 picture	01h	INPUT 2	INPUT 2	INPUT 2	INPUT 2
02h	reserved (3)	02h	INPUT 3	INPUT 3	INPUT 3	INPUT 3
03h	4 picture	03h	INPUT 4	INPUT 4	INPUT 4	INPUT 4

In SRX-001

is used in ADJ USER(00)

is used in ADJ USER MULTI PICS(20)

[ADJ USER NO List] New

Screen Mode	03h	00h	1 picture
		01h	2 picture
		02h	reserved (3)
		03h	4 picture

Screens

Screen	04h	bit0	Screen1
		bit1	Screen2
		bit2	Screen3
		bit3	Screen4
		bit7	ScreenALL
LAMP MODE B	42h		Refer to LAMPMODE (40h).

Screen selection

VREFHIRED	86h	00h to FFh (0 to 255)	O
VREFHIGREEN	87h	00h to FFh (0 to 255)	O
VREFHIBLUE	88h	00h to FFh (0 to 255)	O
DevRefreshOff	89h	00h	ON
		01h	OFF
InterPol	8ah	00h	OFF
		01h	ON
VCOMRED	8bh	00h to FFh (0 to 255)	O
VCOMGREEN	8ch	00h to FFh (0 to 255)	O
VCOMBLUE	8dh	00h to FFh (0 to 255)	O

DEVICE REFRESH OFF

Processing between QDI assistant

Upper 4bit	Color	Lower 4bit	PATTERN
bit0	Blue	0	Nothing (un-displaying)
bit1	Green	1	Crossing hatch (Normal)
bit2	Red	2	Crossing hatch (Invert)

2.DU USER

(2) When DU USER GET is executed
Data is acquired from the shared memory
When "DU GET" is performed, the response to the "Get adjustment value of the DU item" command (DU REPLY data) returns.

(3) About DU USER REPLY
Response to the "Get data from the shared memory" command

2.DU USER

Get data of desired size from desired address in the shared memory

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[3]	CMD[4]
Fuction	DU USER	GET	DU USER NO		DATA SIZE
Value	01h	01h	MSB	LSB	n(Max=16)

Response to the "Get data of desired size from desired address in the shared memory" command

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[3]	CMD[4]	CMD[5]	CMD[6]	CMD[7]	CMD[8]
Fuction	DU USER	REPLY	DU USER NO		DATA SIZE	Data[0]	Data[1]	Data[2]	Data[3]
Value	01h	02h	MSB	LSB	n(Max=16)				
			Refer to [DU USER NO List]						

DU USER NO		Description
Command Name	VALUE	
STATUS ERROR	0x01	Acquire the reason why the equipment fel
STATUS POWER	0x02	Acquire POWER MODE
CONTROL MODE SEL	0x05	CONTROL MODE
LAMP TIME WARNING	0x08	Acquire lamp timer warning
INPUT SIGNAL	0x09	Acquire current input signa
FH	0x0A	Acquire H Frequency
FV	0x0B	Acquire V Frequency
ORIGNAL STATUS NO	0x0E	Acquire the original status numbe
RESOLUTION	0x0F	Acquire resolution
SET TIMER	0x12	Acquire equipment use time
LAMP TIMER	0x13	Acquire lamp use time
ROM VERSION	0x1D	Acquire the main software version
Lamp Time Countdown	0x24	Count down to the lamp available time
FPGA VERSION	0x27	Acquire the FPGA software version
FPGA VERSION2	0x28	Acquire the FPGA software version
FPGA VERSION3	0x29	Acquire the FPGA software version
BOARD ID	0x2A	Acquire input signal board ID
LAMP_STATUS	0x2B	Acquire lamp illumination status
LENS_SENSOR_STATUS	0x2C	Acquire the lens sensor value
TIMER RESET	0x2D	Reset timers
FPGA VERSION4	0x2E	Acquire the FPGA software version
SHUTTER_STATUS	0x2F	Acquire the shutter status
Model Number	0x31	Acquire model number
Model Name	0x33	Acquire model name (16-byte ASCII code)
Sirial Number	0x34	Acquire serial number
SCREEN_INPUTCH	0x36	Acquire input channel for 4 screen quadrants

[DU USER NO List]

DU USER NO	VALUE	REPLY DATA		DATA SIZE / EACH	DATA FORM & TOTAL DATA SIZE
STATUSERROR	01h	NO ERROR	See Note 1		6Byte
STATUSPOWER	02h	STANBY	0x00		1Byte
		START UP	0x01		
		STARTUP LAMP	0x02		
		POWER ON	0x03		
		COOLING1	0x04		
		COOLING2	0x05		
		SAVING COOLING1	0x06		
		SAVING COOLING2	0x07		
		SAVING STABY	0x08		
CONTROLMODESEL	05h	USER	0x00		1Byte
		SERVICE	0x01		
		SPSERVICE	0x02		
		MATSUDAA	0x03		
		FACTORY	0x04		
LAMPTIMEWARNING	08h	NORMALITY	0x00		1Byte
		LAMP_A TIME WARNING	0x01		
		LAMP_B TIME WARNING	0x02		
		LAMP_AB TIME WARNING	0x03		
INPUTSIGNAL	09h	RGB1024X768	0x0E		
		RGB1280X960	0x11		
		RGB1280X1024	0x12		
		RGB1600X1200	0x13		
		RGB_HDTV	0x16		
		YUV_15K	0x17		
		YUV_30K	0x18		
		YPBPR_HDTV	0x1A		
		VIDEO_CH_NOINPUT	0x1B		
		INPUT_CH_NOINPUT	0x1C		
		INPUT_CH_UNKNOWN	0x1D		
FH	0Ah	FH	Eg. 31.5[kHz]: 0x0C4B	2Byte	8Byte INPUT1/INPUT2/INPUT3/INPUT4
FV	0Bh	FV	Eg. 59.9[Hz]: 0x176A	2Byte	8Byte INPUT1/INPUT2/INPUT3/INPUT4
ORIGNAL_STATUSNO	0Eh	NOINPUT	0x00	1Byte	4Byte INPUT1/INPUT2/INPUT3/INPUT4
		480/60i	0x03		
		575/50i	0x04		
		1080/60i	0x05		
		1024X768_VESA60	0x17		
		1024X768_VESA70	0x18		
		1024X768_VESA75	0x19		
		1024X768_VESA85	0x1A		
		1280X960_VESA60	0x20		
		1280X1024_VESA60	0x24		
		1280X1024_VESA75	0x25		
		1280X1024_VESA85	0x26		
		1600x1200_VESA60	0x27		
		480_60P	0x2B		
		475_50P	0x2C		
		1080_50I	0x2D		
		720_60P	0x2F		
		720_50P	0x30		
		1080_48I	0x31		
RESOLUTION	0Fh	RESO_15K60	0x02	1Byte	4Byte INPUT1/INPUT2/INPUT3/INPUT4
		RESO_15K50	0x03		
		RESO_HDTV	0x04		
		RESO_1024X768	0x0A		
		RESO_1280X960	0x0D		
		RESO_1280X1024	0x0E		
		RESO_1600X1200	0x0F		
		RESO_480_60P	0x10		
		RESO_575_50P	0x11		
		RESO_1080I_50I	0x12		
		RESO_720_60P	0x14		
		RESO_720_50P	0x15		
		RESO_1080_48I	0x16		
SETTIMER	12h	USE TIME	Unsigned 2-byte value: unit h		4Byte
LAMPTIMER	13h	USE TIME	Unsigned 2-byte value: unit h	2Byte	4Byte LAMP_A/LAMP_B
ROM_VERSION	1Dh	MAIN SOFT ROM VERSION	Major 1Byte Minor 1Byte		2Byte

Lamp Timer Countdown	24h	No warning XX to lamp available time XX to lamp available time	0x00 0x01 0x02	1Byte	2Byte LAMP_A/LAMP_B
FPGA_VERSION1	27h	VERSION	Major 1Byte Minor 1Byte	2Byte	16Byte PR1_QDI/PR1_VSA/ PR2_QDI/PR2_VSA/ PR3_QDI/PR3_VSA/ PR4_QDI/PR4_VSA
FPGA_VERSION2	28h	VERSION	Major 1Byte Minor 1Byte	2Byte	LPD TG/MX IN UPPER/MX IN LOWER/RESERVE D/RESERVED/RES ERVED/RESERVED /RESERVED
FPGA_VERSION3	29h	VERSION	Major 1Byte Minor 1Byte	2Byte	16Byte IFA CSC/IFB CSC/IFC CSC/IFD CSC/RESERVED/R ESERVED/RESERV ED/RESERVED
BOARD_ID	2Ah	VIF board HIF board reserved reserved NO BOARD	0x00 0x01 0x02 0x03 0x07	1Byte	4Byte
LAMP_STATUS	2Bh	LAMP AB ON reserved LAMP A ON LAMP B ON LAMP OFF	0x00 0x01 0x02 0x03 0xFF		1Byte
LENS_SENSOR_STATUS	2Ch	Assign 8 sensor values to each bit	See Note 2		1Byte
TIMER RESET	2Dh	Lamp A Lamp B reserved	0x00 0x01 0x02		1Byte
FPGA_VERSION4	2Eh	VERSION	Major 1Byte Minor 1Byte	2Byte	16Byte HIFA_HDSDIC/HIFB _HDSDIC/HIFC_HD SDIC/HIFD_HDSDIC /HIFA_HDSDIM/HIF B_HDSDIM/HIFC_H DSDIM/HIFD_HDSD
SHUTTER STATUS	2Fh	Closed (mute ON) Open (mute OFF)	0x00 0x01		1Byte
Model Number	31h	Unknow Reserved	0x00 0x01		1Byte
Model Name	33h	Model name	ASCII code		16Byte
Sirial Number	34h	Serial number	Unsigned 4-byte value		4Byte
SCREEN_INPUTCH	36h	INPUT 1 INPUT 2 INPUT 3 INPUT 4	0x00 0x01 0x02 0x03	1Byte	4Byte SCREEN1/SCREEN 2/SCREEN3/SCREE N4

Note 1

Error description

	1BYTE	2BYTE	3BYTE	4BYTE	5BYTE	6BYTE
LSB	PWR PROT	24V PROT	FAN1 LAMPA	OPT UNIT	BallastA Error	FAN8 HIF
	PWR PROT	16V PROT	FAN2 LAMPB	LAMPA TEMP	BallastB Error	dummy
	PWR PROT	dummy	FAN3 T_Prism	LAMPB TEMP	LAMPA	dummy
	PWR PROT	dummy	FAN4 BallastA	LAMPA DOOR	LAMPB	dummy
	PWR PROT PR1	B_DET	FAN5 BallastB	LAMPB DOOR	CPU ERROR	FAN10 REAR CT
	PWR PROT PR2	dummy	FAN6 OPT UNIT	REAR COVER	SHUTTER OPENNING	dummy
	PWR PROT	dummy	FAN7 PR-284	dummy	dummy	dummy
MSB	PWR PROT	dummy	dummy	dummy	dummy	dummy

Note 2

LSB	SHUTTER Open	
	SHUTTER Close	
	ZOOM S	
	ZOOM L	
	FOCUS F	
	FOCUS N	
	SHIFT -	H:SENSOR **OFF**
MSB	SHIFT +	L:SENSOR **ON**

3.Sending SIRCS

(1) About SIRCS SE
It only sends SIRCS.
At this time, "SIRCS REPLY data" does not return.

Set SIRCS CODE

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[3]	CMD[4]	CMD[5]	CMD[6]	CMD[7]
Function	SIRCS	SET	CATEGORY		SIRCS CODE	REPEAT SW	REPEAT NUMBER	
Value	17h	00h	MSB / LSB		Refer to [CATEGORY List]	0/1	MSB / LSB	
			Refer to [SIRCS CODE List]			Refer to [REPEAT List]		

[CATEGORY List]

CATEGORY	VALUE
15-bit length	4054h
20-bit length	855Ah

[REPEAT List]

REPEAT SW	REPEAT Operation
00h	Equivalent to when SircsCode is sent singularly (the remote controller pressed once). REPEAT NUMBER is invalid at this time.
01h	Equivalent to when SircsCode is generated consecutively (the remote controller pressed consecutively), as if it was pressed as much as the number of times of REPEAT NUMBER.

<SIRCS CODE List>

is the command to be used this time.

<15BIT CATEGORY>

	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x																
1x									CONTRAST+ HIGH	CONTRAST- LOW	COLOR+ HIGH	COLOR- LOW			BRITNESS+ BRIGHT	BRITNESS- DARK
2x			SHARPNESS+ SHARP	SHARPNESS- SOFT	SHUTTER MUTING						VIDEO (INPUT1)	INPUT A (INPUT2)	INPUT B (INPUT3)		POWER ON	POWER OFF
3x																
4x																
5x																
6x		Screen1	Screen2	Screen3	Screen4											INPUT C (INPUT4)
7x	INPUT D		LENS SHIFT ↑	LENS SHIFT ↓	FOCUS F	FOCUS N		ZOOM L	ZOOM S	Screens						

<20BIT CATEGORY>

	x0	x1	x2	x3	x4	x5	x6	x7	x8	x9	xA	xB	xC	xD	xE	xF
0x																
1x																
2x																
3x																
4x																
5x		VIDEO MEMORY 1	VIDEO MEMORY 2	VIDEO MEMORY 3												
6x																
7x																KEY UP

Note 1) The motor starts to move when the LENS SHIFT, FOCUS, and ZOOM commands are set. Set KEY UP to stop it.

4.MEMORY(SAVE/RESET) Process

Memory Save/Reset Request Commands

CMD Number	CMD[0]	CMD[1]	CMD[2]	CMD[3]	CMD[4]	CMD[5]	CMD[6]
Fuction	MEMORY	MEMORY REQUEST	SAVE/RESET	MEMORY NO	INPUT	ADJ USER NO (UPPER byte)	ADJ USER NO (LOWER byte)
Value	03h	00h	SAVE(1)??? RESET(0)	Refer to [MEMORY NO	Refer to [INPUT List]	ADJ USER NO	
						dummy	dummy

[MEMORY NO List]

MEMORY NO	VALUE	INPUT parameter valid/invalid	ADJ USER NO parameter valid/invalid
CH	1	O	×
ST_USER	2	O	×
SET_USER	3	×	×
WB_ALL	4	×	×
WB_1	5	×	×
WB_2	6	×	×
reserved	7	×	×
reserved	8	×	×
reserved	9	×	×
reserved	A	×	×

[INPUT List]

INPUT	
Input 1	bit0
Input 2	bit1
Input 3	bit2
Input 4	bit3

INPUT's bitOR can be used

Setup Screen Items and Their Descriptions

The basic specifications of the setup screen and setting data is those of Qualia's Web screen.
SRX001 may include items that are not .
SRX001 contain data whose size should be changed, but basically it is written in Qualia's specifications.
SRX001 may require some items to be added but they are not added here

The item number of the data or data size are subject to additions and changes.

PJ Talk

The commands that already exist in the SDCP v2 specifications are used as they are.
The communication commands are invented in response to the new PJ Talk category 0xA0**.
They can be assigned to 0x90**. It actually is an addition to 0x90**.

ver(1)	category(1)	community(4)	Request/ Response(1	Item No.(2)	Length(1)	Data(n)
0x02	0x0A	SONY	SET/GET OK/NG	0xA0 ID	Variable	Variable

For the ID, refer to: EEPROM control table!A1
It corresponds to the ID No. in column A of the EEPROM control table.

Response

Responses to SET command

OK	0xA0	ID		0

Responses to GET command

OK	0xA0	ID	Length	Data(n)

About error responses

Based on the SDCP v2 protocol

Setup screen

The WEB Setup screens are posted for your reference.
The parameter numbers (parameter names) of the setting item are indicated on the right side of the screen.
The conditions for checking errors of the item's data and error messages are indicated below the screen.

Parameter
This is the list of the number of item data, the number of data bytes, links to data contents, and setup screens.
The number is shown in the lower bytes of the command number in the SET/GET commands.
The number is subject to change.
You can identify the details of the data by referring to the links

Parameter List
IDAscendingOrder

Other sheets
Details on data contents

Special commands
The data of the items provided so far are the ones that simply sets or gets data,
but other than those commands, there are commands that need to be provided as well.

Reboot request
Command that resets and starts NS7520

Update mode request
Command that moves NS7520 into the update mode

Test mail request
Sends a test mail by using the setting content of the mail report. ← Make it asynchronous.
Should the result of the sent mail be returned synchronously or asynchronously? In response to the test mail send request, whether the request was accepted,
Currently it is synchronous. The time when responses are given is unknown. It depends on the enviror or not accepted because the line is busy, is returned.
"Test mail has been sent" (normally/abnormally ended) is acquired by the Get progress com

Maintenance reference time reset request
Command that sets the maintenance reference time in the mail report to the set timer of that time.

Mail body view
Command to check a mail body ← Delete
The mail body may be longer than the maximum packet length of SDCP v2.
Is this function necessary?

Get information error
There are errors that NS7520 detects other than the ones that H8 detects.

Checking errors in the SDCP data

When the data of illegal format is set (For example when you try to set 99 in Month)
On the communication protocol, it is possible to return the error response: Invalid Data and to discard the value.

In the case of QUALIA (HTTP), we have thought that no illegal value would be transmitted
when performing an error check with the browser's script, but when setting it with SDCP,
should we perform error checks for all the items by using SDCP?
If so, the error check that has been performed with a script should also be available in NS7520.

← Error check is also performed on a GUI application, but since SDCP is disclosed, the error check is not required at the SDCP level.

About endian

NS7520 is bi-endian but is set as big-endian. Since Intel's family of CPUs is little-endian, the PC and NS7520 have different endian
Big endian is when 0x1234 is placed as 0x12/0x34 with the smaller address first, and little-endian is when it is placed as 0x34/0x12

About boader adjustment of the structure members

Different alignment is specified in each individual structure. Refer to the boarder adjustment values that are described on the description sheet of each structure.

The treatment of the string-form data in the 0xA0** command group

A NULL terminal symbol is not included (though it's OK to include it). The NULL terminal symbol is added at the receiver of the data
Therefore, the length of string data can be set from 0 up to the maximum number of bytes
For other data formats, an error occurs unless the designated data length is kept. (Invalid Data Length)
When data length is 0, it means the string is empty.
Generally, the string-type information stipulates a large maximum size, but the actual value is shorter than the stipulated number of characters
Only the string-type data receives a special treatment since no unnecessary data are communicated.

About the 0xA0C* commands

Write data to EEPROM by Set command of each data item.
But this merely enables the setting next time the power is turned on.
If you want to enable the setting right after it is set, send the "0xA0C* Apply" command.

Category	No.	Data					
		Description	SET	GET	Link		
	0x00-0x0f						
	0x10	Owner name	0x20	0x20	CharString!A1	Owner!G4	
	0x11	Organization name	0x20	0x20	CharString!A1	Owner!G5	
Owner Information	0x12	Installation location	0x18	0x18	CharString!A1	Owner!G9	Information!J5
	0x13	Lens type	0x01	0x01	LENS!B3	Owner!G11	
	0x14	Note	0x80	0x80	CharString!A1	Owner!G15	
	0x15-0x1f						
	0x20	Time zone	0x01	0x01	TZONE!B3	Date!D3	
	0x21	Summer time adjustment ON/OFF	0x01	0x01	ONOFF!B3	Date!D5	
Date & Time	0x22	Date	0x03	0x03	Calendar!B3	Date!D9	Information!J23
	0x23	Time zone	0x02	0x02	Calendar!B3	Date!D10	Information!K23
	0x24	NTP server name	0x40	0x40	CharString!A1	Date!D14	
	0x25-0x2f						
	0x30	Administrator password	0x08	0x08	CharString!A1	Password!E5	
Password	0x31	User name	0x10	0x10	CharString!A1	Password!E10	
	0x32	User password	0x08	0x08	CharString!A1	Password!E11	
	0x33-0x3f						
	0x40-0x42						
	0x43	Lamp notification time	0x02	0x02	lamp!B3	Mail!D14	
	0x44	Maintenance notification time	0x04	0x04	mainte!B3	Mail!D16	
	0x45	Maintenance reference time	0x04	0x04	mainte!B3		
	0x46	Mail address	0x40	0x40	CharString!A1	Mail!D24	
	0x47	Mail address	0x40	0x40	CharString!A1	Mail!D25	
	0x48	Mail address	0x40	0x40	CharString!A1	Mail!D26	
	0x49	Mail address	0x40	0x40	CharString!A1	Mail!D27	
	0x4a	Report timing (To)	0x01	0x01	Report!B3	Mail!D28	
	0x4b	Report timing (Cc)	0x01	0x01	Report!B3	Mail!D29	
Mail Report	0x4c	Mail format	0x01	0x01	Format!B3	Mail!D32	
	0x4d	Mail account (sender mail)	0x40	0x40	CharString!A1	Mail!D38	
	0x4e	SMTP server name	0x40	0x40	CharString!A1	Mail!D40	
	0x4f	Authentication ON/OFF	0x01	0x01	ONOFF!B3	Mail!D42	
	0x50	Authentication type	0x01	0x01	AuthType!B3	Mail!D44	
	0x51	POP3 server name	0x40	0x40	CharString!A1	Mail!D46	
	0x52	POP account name (login name)	0x40	0x40	CharString!A1	Mail!D48	
	0x53	POP password	0x20	0x20	CharString!A1	Mail!D49	
	0x54	SMTP account name (login name)	0x40	0x40	CharString!A1	Mail!D52	
	0x55	SMTP password	0x20	0x20	CharString!A1		
	0x56	Maintenance elapsed hours	×	0x04	mainte!B3	Mail!D18	
	0x57-0x5f						

	0x60	Contact destination	0x30	0x30	CharString!A1			
	0x61	Contact person	0x30	0x30	CharString!A1			
	0x62	Contact place	0x30	0x30	CharString!A1			
	0x63	Community name	0x09	0x09	CharString!A1	SNMP!E4		
	0x64	Access right	0x01	0x01	Access!B3	SNMP!E5		
	0x65	Tra destination IP address (for 4 addresses	0x10	0x10	IPADDR!B3	SNMP!E6		
	0x66	Community name	0x09	0x09	CharString!A1	SNMP!E7		
SNMP	0x67	Access right	0x01	0x01	IPADDR!B3	SNMP!E8		
	0x68	Trap destination IP address (for 4 addresse	0x10	0x10	IPADDR!B3	SNMP!E9		
	0x69	Community name	0x09	0x09	CharString!A1	SNMP!E10		
	0x6a	Access right	0x01	0x01	IPADDR!B3	SNMP!E11		
	0x6b	Trap destination IP address (for 4 addresse	0x10	0x10	IPADDR!B3	SNMP!E12		
	0x6c	Authenticated trap ON/OFF	0x01	0x01	ONOFF!A1	SNMP!E19		
	0x6d	Number of hosts to be authorized	0x01	0x01	Host!B3	SNMP!E22		
	0x6e	IP address of host to be authorized (for 4 hc	0x10	0x10	IPADDR!B3	SNMP!E23		
	0x6f-0x7f							
	0x80	MAC address (Flash memory)	×	0x06	MAC!B3	Network!D16	Information!J18	
	0x81	Ethernet speed	0x01	0x01	SPEED!B3	Network!D17	Information!J19	
	0x82	DHCP ON/OFF	0x01	0x01	ONOFF!B3	Network!D4	Information!J12	
	0x83	IP address	0x04	0x04	IPADDR!B3	Network!D6	Information!J13	
Network	0x84	Subnet mask	0x04	0x04	IPADDR!B3	Network!D7	Information!J14	
	0x85	Gateway	0x04	0x04	IPADDR!B3	Network!D9	Information!J15	
	0x86	DNS1 IP address	0x04	0x04	IPADDR!B3	Network!D10	Information!J16	
	0x87	DNS2 IP address	0x04	0x04	IPADDR!B3	Network!D11	Information!J17	
	0x88-0x8f							
	0x90	SDAP Enable/Disable	0x01	0x01	ONOFF!B3	SDAP!D2		
	0x91	SDAP port number	0x02	0x02	Port!B3	SDAP!D5		
	0x92	SDAP send cycle	0x02	0x02	Interval!B3	SDAP!D6		
	0x93	Number of SDAP receivers	0x01	0x01	Host!B3	SDAP!D10		
SDAP	0x94	SDAP destination IP address (for 4 address	0x10	0x10	IPADDR!B3	SDAP!D11		
&	0x95	PJTALK Enable/Disable	0x01	0x01	ONOFF!B3	PJTALK!D2		
Pjtalk	0x96	Port number	0x02	0x02	Port!B3	PJTALK!D5		
	0x97	SDCP Timeout	0x02	0x02	Interval!B3	PJTALK!D7		
	0x98	Number of hosts to be authorized	0x01	0x01	Host!B3	PJTALK!D10		
	0x99	IP address of host to be authorized (for 4 hc	0x10	0x10	IPADDR!B3	PJTALK!D11		
	0x9a	Community name (SDCP/SDAP commc	0x04	0x04	ixCharString!B3	SDAP!D4	PJTALK!D4	
	0x9b-0x9f							
	0xa0	NS7520 version number	×	0x04	Ver!B3			
Info	0xa1	Acquire current error	×	0x06	ErrorLog!B10	Information!J10		
	0xa2	SY CPLD version number	×	0x02				
	0xa3-0xaf							
	0xb0	Lamp Timer Reset Log	×	0x60	LampRst!B3	Information!J36		
Log	0xb1	Error Log	×	0xa4	ErrorLog!B3	Information!J47		
	0xb2	Mail Report Log	×	0x7d	MailLog!B3	Information!J62		
	0xb3-0xbf							
	0xc0	Update owner information	0x01	×	Apply!B3	Owner!G21		
	0xc1	Update date & time	0x01	×	Apply!B3	Date!D19		
	0xc5	Update password	0x01	×	Apply!B3	Password!E16		
	0xc6	Update Network	0x01	×	Apply!B14	Network!D20		
	0xc7	Update SDAP	0x01	×	Apply!B3	SDAP!D16		
	0xc8	Update PJTALK	0x01	×	Apply!B3	PJTALK!D16		
Apply	0xc9	Update mail report	0x01	×	Apply!B26	Mail!E18	Mail!D56	Mail!D62
	0xca	Update SNMP	0x01	×	Apply!B3	SNMP!E30		
	0xc2	Reboot command	0x06	×	scendingOrder!	Reboot!I3		
	0xc3	Flash Write command	0x06	×	Apply!B37	Update!I3		
	0xc4	Acquire test mail send state	×	0x02	TestMail!B3			
	0xcb	Set LCD Contrast adjustment display	0x01	×				
	0xcc-0xcf							
	0xd0-0xff							

Acquired from H8 by 0x8001 or 0x70** command
Acquired from H8 by 0x8001 or 0x70** command
IDAscendingOrderIB6
Acquired from H8 by 0x70** command

IDAscendingOrderIB80

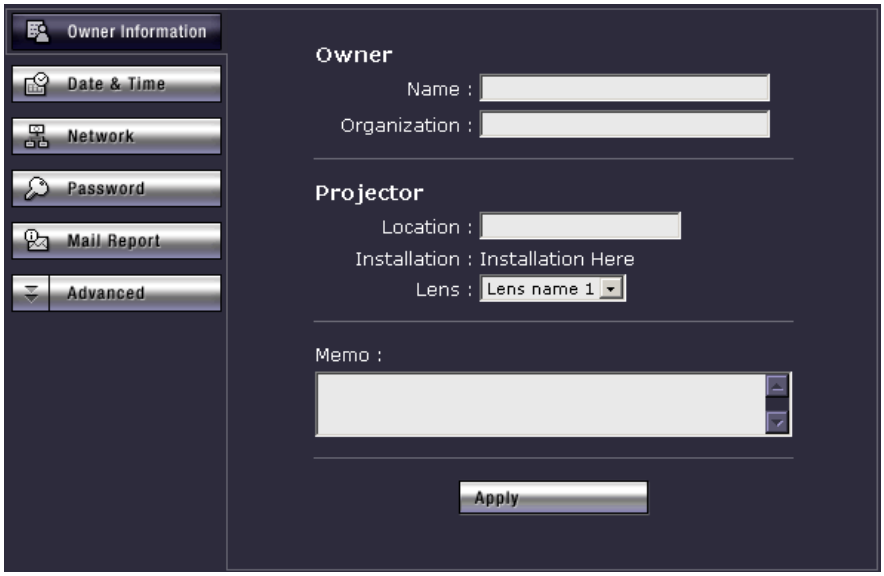
IDAscendingOrderIB60
IDAscendingOrderIB61
IDAscendingOrderIJ62
IDAscendingOrderIB63
IDAscendingOrderIB64
IDAscendingOrderIB65
IDAscendingOrderIB58
IDAscendingOrderIB59

IDAscendingOrderIB79
IDAscendingOrderIB12 IDAscendingOrderIB13
Acquired from H8 by 0x70** command
Acquired from H8 by 0x70** command
Acquired from H8 by 0x70** command
Acquired from H8 by 0x70** command

IDAscendingOrderIB82

IDAscendingOrderIB83

IDAscendingOrderIB84



IDAscendingOrder!B4
IDAscendingOrder!B5

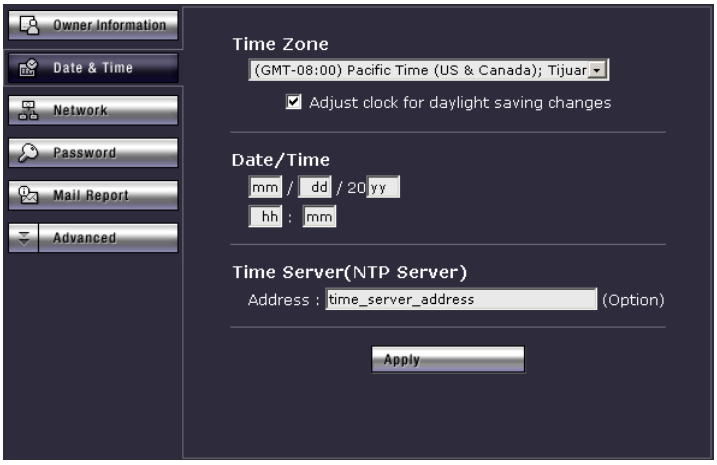
IDAscendingOrder!B6
H8 full
IDAscendingOrder!B7

IDAscendingOrder!B8

IDAscendingOrder!B86

Error

Name is empty	Enter up to 32 characters
Organization is empt	Enter up to 32 characters
Location is empty	Enter up to 24 characters
Memo is empty	Enter up to 128 characters



IDAscendingOrder!B10

IDAscendingOrder!B11

IDAscendingOrder!B12

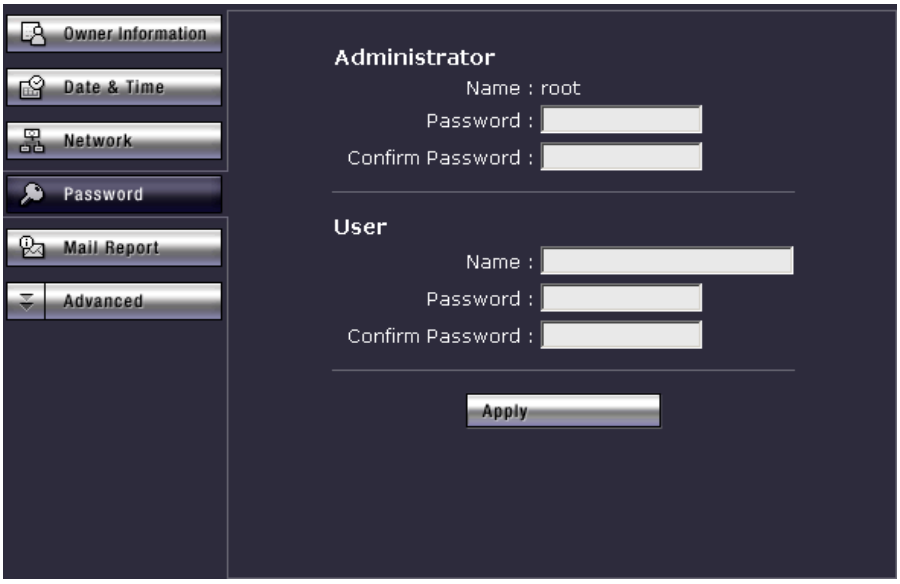
IDAscendingOrder!B13

IDAscendingOrder!B14

IDAscendingOrder!B87

Error

	Year is less than 3	Enter a number between 3 and 99
	Year is larger than 99	
	Year is empty	
	Year is in 3 digits or more	
	Regular expression /\D{1,3}/	
	Month is empty	Enter a number between 1 and 12
	Month is less than 1	
	Month is larger than 12	
	Month in 3 digits or more	
	Regular expression /\D{1,3}/	
	Day is empty	An invalid data was entered.
	Day is less than 1	
	Day is larger than 31	
	Regular expression /\D{1,3}/	
	In month 4/6/9/11, day is larger than 30	
	In month 2 of a leap year, day is larger than 29	
	In month 2 of a common year, day is larger than 28	
	Hour is empty	Enter a number between 0 and 23
	Hour is less than 0	
	Hour is larger than 23	
	Regular expression /\D{1,3}/	
	Minute is empty	Enter a number between 0 and 59
	Minute is less than 0	
	Minute is larger than 59	
	Regular expression /\D{1,3}/	
	Timer server is in the regular expression [^	The server address is wrong
Regular expressio	/\D{1,3}	Serch for the characteres other than decimal numbers by the three characteres at the l
	[^a-zA-Z0-9_@.-]	There is a character other than a-z, A-Z, 0-9, _, @, and -.



IDAscendingOrder!B16

IDAscendingOrder!B17

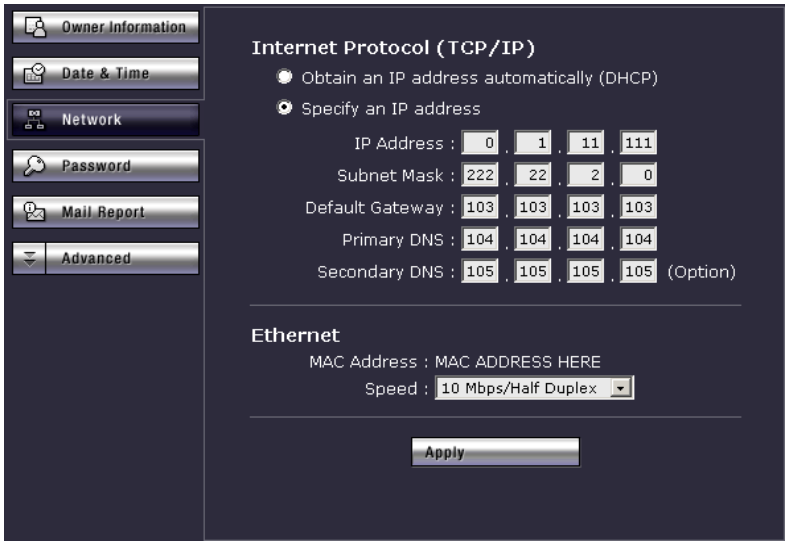
IDAscendingOrder!B18

Password is displayed as ****.

IDAscendingOrder!B88

Error

When password is not empty Confirm Password does not match	Password does not match
When confirm password is not empty Pasword does not match	Password does not match
When user name is not empty When one character is 0-127d, if 1 is added the sum of all the characters becomes more than 16, and in other cases, the same is true if 2 is added. When there is Japanese character code	Enter up to 16 characters
When user password is not empty User name is empty	Enter the user name
User password confirm does not matc	Password does not match
When user password confirm is not empty User password does not match	Password does not match



IDAscendingOrder!B60

IDAscendingOrder!B61
IDAscendingOrder!B62
IDAscendingOrder!B63
IDAscendingOrder!B64
IDAscendingOrder!B65

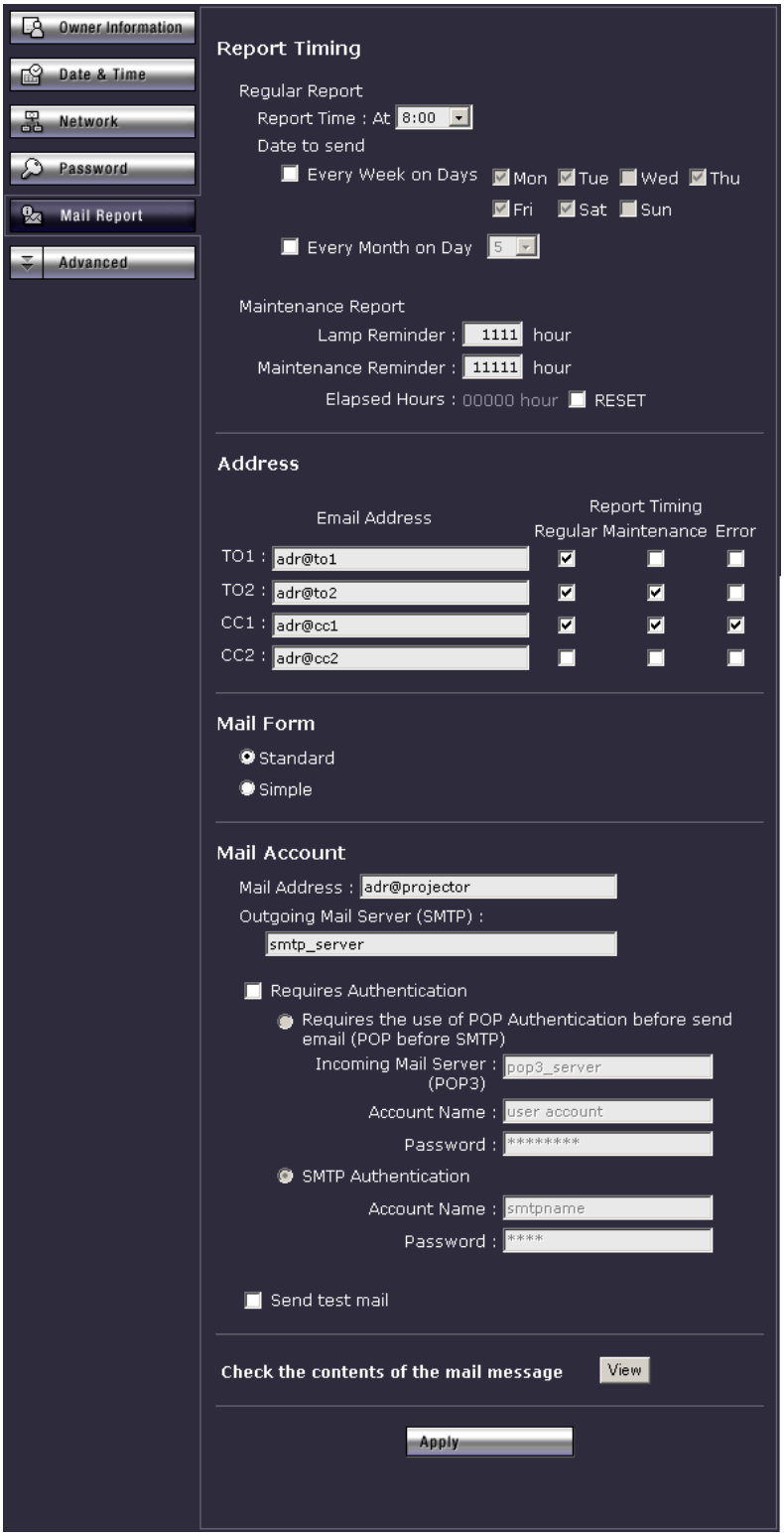
IDAscendingOrder!B58
IDAscendingOrder!B59

IDAscendingOrder!B89

Error

When "Specify an IP address" is selected Less than 0 Larger than 255 Regular expression /\D{1,3}/	Enter a number between 0 and 255
IP Address is empty	Enter the IP address and subnet mask
Subnet Mask is empty	Enter the IP address and subnet mask

Regular e /\D{1,3} Serch characters other than decimal numbers by the three characteres at the head.



Delete specifications

Delete specifications

Delete specifications

IDAscendingOrder!B21

IDAscendingOrder!B22

IDAscending IDAscendingOrder!B92

IDAscendingOrder!B24
IDAscendingOrder!B25
IDAscendingOrder!B26
IDAscendingOrder!B27
IDAscendingOrder!B28
IDAscendingOrder!B29

IDAscendingOrder!B30

IDAscendingOrder!B31

IDAscendingOrder!B32

IDAscendingOrder!B33

IDAscendingOrder!B34

IDAscendingOrder!B35

IDAscendingOrder!B36
IDAscendingOrder!B37

IDAscendingOrder!B38
IDAscendingOrder!B39

IDAscendingOrder!B92

Delete specifications

IDAscendingOrder!B92

IDAscendingOrder!B96 Test mail progress/send result

Error

Check the following in the case where To1 Address is not empty

@ is not present	invalid mail address form
@ is at the head	
@ is at the tail	
Two or more @'s are present	
None of Report Timming of To1 is selected	Set the report timing
Mail Address is empty	Enter the mail address of the mail account
SMTP server is empty	Enter the SMTP server adress

Check the following in the case where To2, Cc1, and Cc2 Addresses are not empty

@ is not present	invalid mail address form
@ is at the head	
@ is at the tail	
Two or more @'s are present	
None of Report Timing is selected	Set Report Timing

Check the following in the case where Regular Report is ON

Date to send is not selected	Set the day to send the Regular Report

Check the following in the case where Maintenance report is ON

Both Lamp Reminder and Maintenance Reminder ar	Set the time to send the Maintenance Report

Check the following in the case where Every Week is selected

Day of the week is not selected.	Set the day of the week to send the Regular Report

Check the following in the case where the Lamp Reminder is not empty

The hour is less than 0	Enter the numeric values between 1 and 9999 for the ho
The hour is larger than 99999	
Character other than decimal numbers is present	

Check the following in the case where the Maintenance Reminder is not empty

The hour is less than 0	Enter a number between 1 and 99999
The hour is larger than 99999	
Character other than decimal numbers is present	

Check the following in the case where Mail Address is not empty

@ is not present	Invalid mail address form
@ is at the head	
@ is at the tail	
Two or more @'s are present	
SMTP server is empty	Enter the SMTP server adress

Check the following in the case where the SMTP server is not empty

Mail address is empty	Enter the mail address of the mail account

Check the following in the case where Send test mail is selected

TO1, TO2, CC1 and CC2 are all empty	Enter an Address
Mail address is empty	Enter the mail address of the mail account
SMTP server is empty	Enter the SMTP server adress

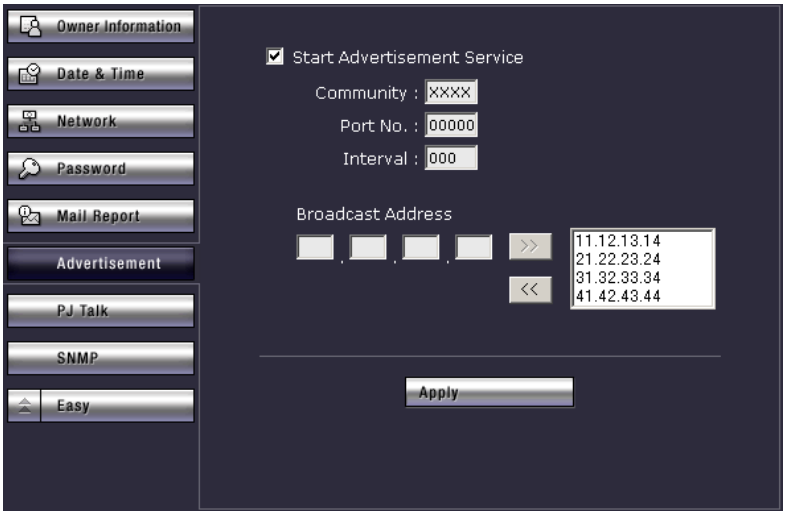
Check the following in the case where Require Authentication is selected

Check the following in the case of POP before SMTP

POP3 server is empty	Enter the address of the POP3 server used for receivin r
Account name is empty	Enter the account name
Account password is empty	Enter the password

Check the following in the case of SMTP Authentication

Account name is empty	Enter the account name
Account password is empty	Enter the password



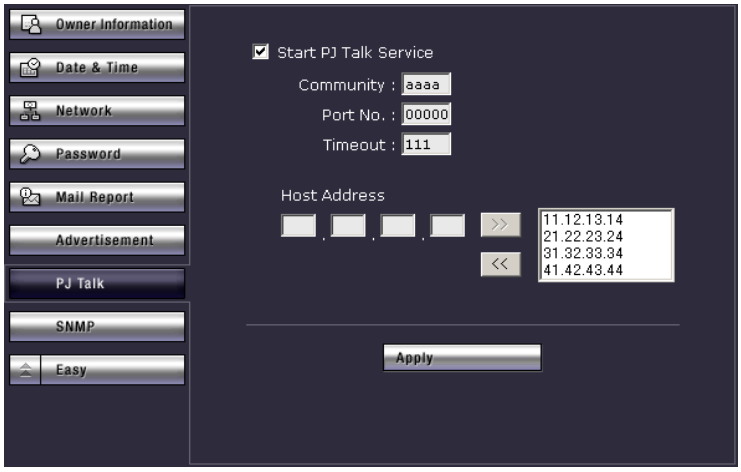
IDAscendingOrder!B67

IDAscendingOrder!B77
IDAscendingOrder!B68
IDAscendingOrder!B69

IDAscendingOrder!B70
IDAscendingOrder!B71

IDAscendingOrder!B90

Error		
	Check the following in the case where Start PJ Talk Service is selected	
	Community is empty	
	Community is the regular expression [^	Enter 4 characters
Port No.	Less than 0	
	Larger than 65535	
	Regular expression /\D{1,3}/	
	Port No. is empty	Enter a number between 0 and 65535
Timeout	Less than 10	
	Larger than 65535	
	Regular expression /\D{1,3}/	
	Timeout is empty	Enter a number between 10 and 65535
When adding an address		
	Less than 0	Enter a number between 0 and 255
	Larger than 255	
	Regular expression /\D{1,3}/	
Regular expressio	/\D{1,3} [^a-zA-Z0-9_@.-]	Serch for the characters other than decimal numbers by the three characteres at the There is a character other than a-z, A-Z, 0-9, _, @, and -.



PJTALK!B72

IDAscendingOrder!B77
IDAscendingOrder!B73

IDAscendingOrder!B74

IDAscendingOrder!B75
IDAscendingOrder!B76

IDAscendingOrder!B91

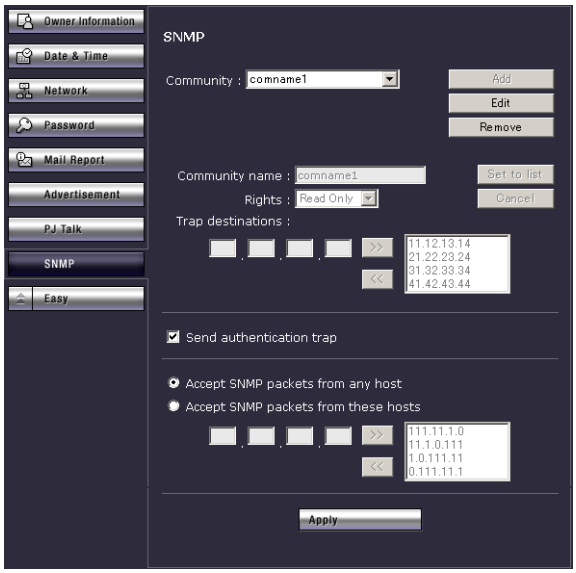
Error

	Check the following in the case where Start PJ Talk Service is selected	
	Community is empty	
	Community is the regular expression [^a-zA-Z0-9_@.-]	Enter 4 characters
Port No.	Less than 0	
	Larger than 65535	
	Regular expression /\D{1,3}/	
	Port No. is empty	Enter a number between 0 and 65535
Timeout	Less than 10	
	Larger than 65535	
	Regular expression /\D{1,3}/	
	Timeout is empty	Enter a number between 10 and 65535

When adding an address

	Less than 0	Enter a number between 0 and 255
	Larger than 255	
	Regular expression /\D{1,3}/	

Regular expressio	/\D{1,3}	Serch for the characters other than decimal numbers by the three characteres at the head.
	[^a-zA-Z0-9_@.-]	There is a character other than a-z, A-Z, 0-9, _, @, and -.



IDAscendingOrder!B45
IDAscendingOrder!B46
IDAscendingOrder!B47
IDAscendingOrder!B48
IDAscendingOrder!B49
IDAscendingOrder!B50
IDAscendingOrder!B51
IDAscendingOrder!B52
IDAscendingOrder!B53

When the address is 0.0.0.0, it means no destination is registered.

IDAscendingOrder!B54

IDAscendingOrder!B55
IDAscendingOrder!B56

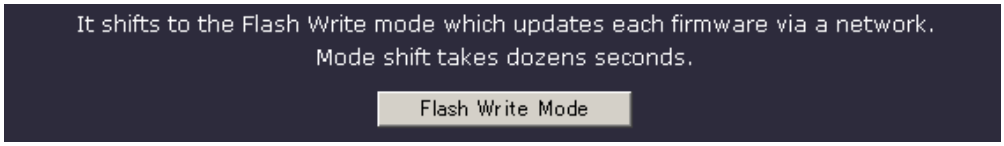
When the address is 0.0.0.0, it means no host is registered.
When all the addresses are 0.0.0.0, "Accpt SNMP packets from any hosts" is beir

IDAscendingOrder!B93

Error

When adding an address
Less than 0 Enter a number between 0 and 255
Larger than 255
Regular expression /\D{1,3}/

Regular expression /\D{1,3} Serch for the characters other than decimal numbers by the three characteres at the head.



IDAscendingOrder!B95

IDAscendingOrder!B94

<- back

0xc0 Update owner information
0xc1 Update date &time
0xc5 Update password
0xc7 Update SDAP
0xc8 Update PJTALK
0xca Update SNMP

Length 1
Data [0]
fixed to 0

0xc6 Update network
Length 1
Data [0]
bit0 DHCP
bit1 IP
bit2 SUBNET
bit3 GATEWAY
bit4 DNS
bit5 SPEED

Update (sets the changed one to 1)

0xc9 Update mail report
Length 1
Data [0]
bit0 MAINTE RESET
bit1 TEST MAIL

0xc2 Reboot command
Length 6
Data
"reboot"

0xc3 Flash Write command
Length 6
Data
"flashw"

<- back

Length 2
Data [0][1]

(decimal)	reason	result string
0	No send request	
1	Sending	
100	success	OK
200		
201	the receiver's address, to_addr, is NULL or invalid.	Internal Error 201
202	invalid message body, for example, NULL or invalid buffer p	Internal Error 202
203	invalid message size,for example,buflen<=0.	Internal Error 203
204	No server	Could not find SMTP server.
205	no mailbox	Could not find user's mailbox.
206	TCP layer Error in transmiting message.	Internal Error 206
207	email message cancelled (with MCDlete())	Internal Error 207
208	mailbox syntax error	SMTP transaction error.
209	mailbox busy	SMTP mailbox busy.
213	other errors	Unexpected error.
300		POP3 login failed.
310		POP3 logout failed.
320		
400		
401	Could not find SMTP server	Could not find SMTP server.
410		
411	Cound not find POP server	Could not find POP server.
402		DNS not specified.
412		DNS not specified.
500		Internal Error 500
501		
502		

<- back

Length 125
Data

pack(1)

```
typedef struct {
   u_short          error       Mail send result code
   u_char           mail_type   Mail type
   u_char           date[3]     Mail send date          yymmdd
   u_char           time[2]     Mail send time          hhmm
} MAIL_LOG_RECORD

typedef struct {
   MAIL_LOG_RECO| record[15];  Save 15 logs
   u_char           write       Log number to be written next
   int              total       Total number of errors
} MAILREPORT_LOG

MAILREPORT_LOG  mail_log
```

The logs are displayed from the newer ones by referring to "mail_log.write" and "mail_log.total".

Map ->

data[0]	[0]	15	14	13	12	11	10	9	8	error	
	[1]	7	6	5	4	3	2	1	0		
	[2]	7	6	5	4	3	2	1	0	mail_type	
	[3]	7	6	5	4	3	2	1	0		yy
	[4]	7	6	5	4	3	2	1	0	date	mm
	[5]	7	6	5	4	3	2	1	0		dd
	[6]	7	6	5	4	3	2	1	0	time	hh
	[7]	7	6	5	4	3	2	1	0		mm
data[1]	[8]	15	14	13	12	11	10	9	8	error	
	[9]	7	6	5	4	3	2	1	0		
	[10]	7	6	5	4	3	2	1	0	mail_type	
	[11]	7	6	5	4	3	2	1	0		yy
	[12]	7	6	5	4	3	2	1	0	date	mm
	[13]	7	6	5	4	3	2	1	0		dd
	[14]	7	6	5	4	3	2	1	0	time	hh
	[15]	7	6	5	4	3	2	1	0		mm
…	…										
data[14]	[112]	15	14	13	12	11	10	9	8	error	
	[113]	7	6	5	4	3	2	1	0		
	[114]	7	6	5	4	3	2	1	0	mail_type	
	[115]	7	6	5	4	3	2	1	0		yy
	[116]	7	6	5	4	3	2	1	0	date	mm
	[117]	7	6	5	4	3	2	1	0		dd
	[118]	7	6	5	4	3	2	1	0	time	hh
	[119]	7	6	5	4	3	2	1	0		mm
write	[120]	7	6	5	4	3	2	1	0		
total	[121]	31	30	29	28	27	26	25	24		
	[122]	23	22	21	20	19	18	17	16		
	[123]	15	14	13	12	11	10	9	8		
	[124]	7	6	5	4	3	2	1	0		

<- back

Length 164
Data

pack(4)

```
typedef struct {
   u_char          internal;   NS7520 detection error
   u_char          pj[5];      Error received from H8
} PJ_ERROR;

typedef struct {
PJ_ERROR           error;      Error flag
u_long             set_timer;  Set timer when an error occurs
u_char             date[3];    Date                    yy/mm/dd
} PJERROR_LOG_RECORD

typedef struct {
   PJERROR_LOG_RECO record[10]; Save 10 logs
   u_char          windex;     Log number to be written next
} PJERROR_LOG;

PJERROR_LOG        error_log
```

The logs are displayed from the newer ones by referring to "error_log.windex".
If all of the error contents are 0, that record is regarded to be empty.

Map ->

	[0]	7	6	5	4	3	2	1	0	error.internal
	[1]	39	38	37	36	35	34	33	32	
	[2]	31	30	29	28	27	26	25	24	
	[3]	23	22	21	20	19	18	17	16	error.pj
	[4]	15	14	13	12	11	10	9	8	
	[5]	7	6	5	4	3	2	1	0	
	[6]				padding					
	[7]				padding					
record[0]	[8]	31	30	29	28	27	26	25	24	
	[9]	23	22	21	20	19	18	17	16	set_timer
	[10]	15	14	13	12	11	10	9	8	
	[11]	7	6	5	4	3	2	1	0	
	[12]	7	6	5	4	3	2	1	0	yy
	[13]	7	6	5	4	3	2	1	0	date mm
	[14]	7	6	5	4	3	2	1	0	dd
	[15]				padding					
	[16]	7	6	5	4	3	2	1	0	error.internal
	[17]	39	38	37	36	35	34	33	32	
	[18]	31	30	29	28	27	26	25	24	
	[19]	23	22	21	20	19	18	17	16	error.pj
	[20]	15	14	13	12	11	10	9	8	
	[21]	7	6	5	4	3	2	1	0	
	[22]				padding					
	[23]				padding					
record[1]	[24]	31	30	29	28	27	26	25	24	
	[25]	23	22	21	20	19	18	17	16	set_timer
	[26]	15	14	13	12	11	10	9	8	
	[27]	7	6	5	4	3	2	1	0	
	[28]	7	6	5	4	3	2	1	0	yy
	[29]	7	6	5	4	3	2	1	0	date mm
	[30]	7	6	5	4	3	2	1	0	dd
	[31]				padding					
…	…									
	[144]	7	6	5	4	3	2	1	0	error.internal
	[145]	39	38	37	36	35	34	33	32	
	[146]	31	30	29	28	27	26	25	24	
	[147]	23	22	21	20	19	18	17	16	error.pj
	[148]	15	14	13	12	11	10	9	8	
	[149]	7	6	5	4	3	2	1	0	
	[150]				padding					
	[151]				padding					
record[9]	[152]	31	30	29	28	27	26	25	24	
	[153]	23	22	21	20	19	18	17	16	set_timer
	[154]	15	14	13	12	11	10	9	8	
	[155]	7	6	5	4	3	2	1	0	
	[156]	7	6	5	4	3	2	1	0	yy
	[157]	7	6	5	4	3	2	1	0	date mm
	[158]	7	6	5	4	3	2	1	0	dd
	[159]				padding					
windex	[160]	7	6	5	4	3	2	1	0	
	[161]				padding					
	[162]				padding					
	[163]				padding					

<- back

Length 96
Data
pack(4)

```
typedef struct {
   u_short          prev_lamp_timer[ Lamp illumination time right before lamp rese
   u_long           set_timer        Set timer at lamp reset
   u_char           date[3]          Date                                yy/mm/dd
} PJ_TRACE_LAMP_RESET;

PJ_TRACE_LAMP_RE lamp_reset[8];     Save eight logs
```

Dates are displayed in the order from new to old.
If "prev_lamp_timer" is 0, that record is regarded to have no log.

Map ->

	[0]	15	14	13	12	11	10	9	8	prev_lamp_timer[0]
	[1]	7	6	5	4	3	2	1	0	
	[2]	15	14	13	12	11	10	9	8	prev_lamp_timer[1]
	[3]	7	6	5	4	3	2	1	0	
	[4]	31	30	29	28	27	26	25	24	
	[5]	23	22	21	20	19	18	17	16	
lamp_reset[0]	[6]	15	14	13	12	11	10	9	8	Set Timer
	[7]	7	6	5	4	3	2	1	0	
	[8]	7	6	5	4	3	2	1	0	yy
	[9]	7	6	5	4	3	2	1	0	date mm
	[10]	7	6	5	4	3	2	1	0	dd
	[11]				padding					
	[12]	15	14	13	12	11	10	9	8	prev_lamp_timer[0]
	[13]	7	6	5	4	3	2	1	0	
	[14]	15	14	13	12	11	10	9	8	prev_lamp_timer[1]
	[15]	7	6	5	4	3	2	1	0	
	[16]	31	30	29	28	27	26	25	24	
	[17]	23	22	21	20	19	18	17	16	
lamp_reset[1]	[18]	15	14	13	12	11	10	9	8	Set Timer
	[19]	7	6	5	4	3	2	1	0	
	[20]	7	6	5	4	3	2	1	0	yy
	[21]	7	6	5	4	3	2	1	0	date mm
	[22]	7	6	5	4	3	2	1	0	dd
	[23]				padding					
…	…									
	[84]	15	14	13	12	11	10	9	8	prev_lamp_timer[0]
	[85]	7	6	5	4	3	2	1	0	
	[86]	15	14	13	12	11	10	9	8	prev_lamp_timer[1]
	[87]	7	6	5	4	3	2	1	0	
	[88]	31	30	29	28	27	26	25	24	
	[89]	23	22	21	20	19	18	17	16	
lamp_reset[7]	[90]	15	14	13	12	11	10	9	8	Set Timer
	[91]	7	6	5	4	3	2	1	0	
	[92]	7	6	5	4	3	2	1	0	yy
	[93]	7	6	5	4	3	2	1	0	date mm
	[94]	7	6	5	4	3	2	1	0	dd
	[95]				padding					

<- back

IP ROM Version

Length 4
Data [0] [1] [2] [3]
MSB LSB

"%02d.%02d", ver/100, ver%100

<- back

Number Of Host

Length 1
Data [0]
0 Min
…
4 Max

<- back

Port Number

Length	2		
Data	[0]	[1]	
	high	low	
		0	Min
	…		
		65535	Max

<- back

Interval

Length 1
Data [0]
10 Min
…
65535 Max Unit: second

<- back

Maintenance Notification Time

Length	4				
Data	[0]	[1]	[2]	[3]	
	MSB			LSB	
		2	Min		
	…				
		99999	Max	Unit: hour	

<- back

Lamp Notification Time

Length	2			
Data	[0]	[1]		
	high	low		
		2	Min	
	…			
		9999	Max	Unit: hour

<- back

SNMP Access right

Length 1
Data [0]
0 Read Only
1 Read/Write
2 Other

<- back

Mail Report Condition

Length 1

Data	b7	b6	b5	b4	b3	b2	b1	b0
	---	~~REGULAF~~	MAINTENANCI	ERROR	---	~~REGULAF~~	MAINTENANCI	ERROR

To1
Cc1

To2
Cc2

<- back

Mail Format

Length 1
Data [0]
0 Standard
1 Simple

<- back

SMTP Authentication Type

Length 1
Data [0]
0 POP before SMTP
1 SMTP Auth

<- back

An n-byte long, fixed character string. A terminal NULL is not included in the n byt

<- back

Character string of up to n bytes. ~~The terminal NULL need not be included in the n bytes. If it is shorter than that, terminate the string with a NULL.~~

<- back

Ethernet MAC Address

Length	6					
Data	[0]	[1]	[2]	[3]	[4]	[5]
	0x08	0x00	0x46			
		Fixed		Variable		

<- back

Ethernet Speed

Length 1
Data [0]

0 100 Mbps/Full Duplex
1 100 Mbps/Half Duplex
2 10 Mbps/Full Duplex
3 10 Mbps/Half Duplex
4 Auto Detect

<- back

Length 1
Data [0]

0	OFF	Disabled	Prohibited
1	ON	Enabled	Allowed

<- back

IP Address Format

Length 4
Data [0] [1] [2] [3]
aaa bbb ccc ddd

Length 16
Data [0] [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] [12] [13] [14] [15]
aaa bbb ccc ddd aaa bbb ccc ddd aaa bbb ccc ddd aaa bbb ccc ddd
First Second Third Fourth

IP Address : aaa.bbb.ccc.ddd

<- back

Lens Name

Length 1
Data [0]
0 VPLL-ZP310
1 VPLL-ZP400
2 VPLL-ZP550

<- back

Time Zone

Length 1
Data [0]

0 (GMT-12:00) Eniwetok, Kwajalein
1 (GMT-11:00) Midway Island, Samoa
2 (GMT-10:00) Hawaii
3 (GMT-09:00) Alaska
4 (GMT-08:00) Pacific Time (US & Canada); Tijuana
5 (GMT-07:00) Arizona
6 (GMT-07:00) Mountain Time (US & Canada)
7 (GMT-06:00) Saskatchewan
8 (GMT-06:00) Mexico City
9 (GMT-06:00) Central America
10 (GMT-06:00) Central Time (US & Canada)
11 (GMT-05:00) Indiana (East)
12 (GMT-05:00) Bogota, Lima, Quito
13 (GMT-05:00) Eastern Time (US & Canada)
14 (GMT-04:00) Caracas, La Paz
15 (GMT-04:00) Santiago
16 (GMT-04:00) Atlantic Time (Canada)
17 (GMT-03:30) Newfoundland
18 (GMT-03:00) Greenland
19 (GMT-03:00) Buenos Aires, Georgetown
20 (GMT-03:00) Brasilia
21 (GMT-02:00) Mid-Atlantic
22 (GMT-01:00) Azores
23 (GMT-01:00) Cape Verde Is.
24 (GMT) Casablanca, Monrovia
25 (GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London
26 (GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
27 (GMT+01:00) Sarajevo, Skopje, Sofija, Vilnius, Warsaw, Zagreb
28 (GMT+01:00) Brussels, Copenhagen, Madrid, Paris
29 (GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague
30 (GMT+01:00) West Central Africa
31 (GMT+02:00) Athens, Istanbul, Minsk
32 (GMT+02:00) Jerusalem
33 (GMT+02:00) Cairo
34 (GMT+02:00) Harare, Pretoria
35 (GMT+02:00) Bucharest
36 (GMT+02:00) Helsinki, Riga, Tallinn
37 (GMT+03:00) Kuwait, Riyadh
38 (GMT+03:00) Nairobi
39 (GMT+03:00) Baghdad
40 (GMT+03:00) Moscow, St. Petersburg, Volgograd
41 (GMT+03:30) Tehran
42 (GMT+04:00) Abu Dhabi, Muscat
43 (GMT+04:00) Baku, Tbilisi, Yerevan
44 (GMT+04:30) Kabul
45 (GMT+05:00) Islamabad, Karachi, Tashkent
46 (GMT+05:00) Ekaterinburg
47 (GMT+05:30) Calcutta, Chennai, Mumbai, New Delhi
48 (GMT+05:45) Kathmandu
49 (GMT+06:00) Astana, Dhaka
50 (GMT+06:00) Almaty, Novosibirsk
51 (GMT+06:00) Sri Jayawardenepura
52 (GMT+06:30) Rangoon
53 (GMT+07:00) Krasnoyarsk
54 (GMT+07:00) Bangkok, Hanoi, Jakarta
55 (GMT+08:00) Irkutsk, Ulaan Bataar
56 (GMT+08:00) Kuala Lumpur, Singapore
57 (GMT+08:00) Perth
58 (GMT+08:00) Taipei
59 (GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi
60 (GMT+09:00) Seoul
61 (GMT+09:00) Yakutsk
62 (GMT+09:00) Osaka, Sapporo, Tokyo
63 (GMT+09:30) Adelaide
64 (GMT+09:30) Darwin
65 (GMT+10:00) Vladivostok
66 (GMT+10:00) Canberra, Melbourne, Sydney
67 (GMT+10:00) Guam, Port Moresby
68 (GMT+10:00) Brisbane
69 (GMT+10:00) Hobart
70 (GMT+11:00) Magadan, Solomon Is., New Caledonia
71 (GMT+12:00) Auckland, Wellington
72 (GMT+12:00) Fiji, Kamchatka, Marshall Is.

<- back

Date & Time

Length 3
Data [0] [1] [2]
yy mm dd

yy	year	3-99(d)
mm	month	1-12(d)
dd	day	1-31(d)

Length 2
Data [0] [1]
hh mm

hh	hour	0-23(d)
mm	minute	0-59(d)

Invalid when a number larger than 30 is specified for the day in the months of 4, 6, 9 or 11.
Invalid when a number larger than 29 is specified for the day of February (2) of the year that is divisible by 4.
Invalid when a number larger than 28 is specified for the day of February (2) of the year that is not divisible by 4.