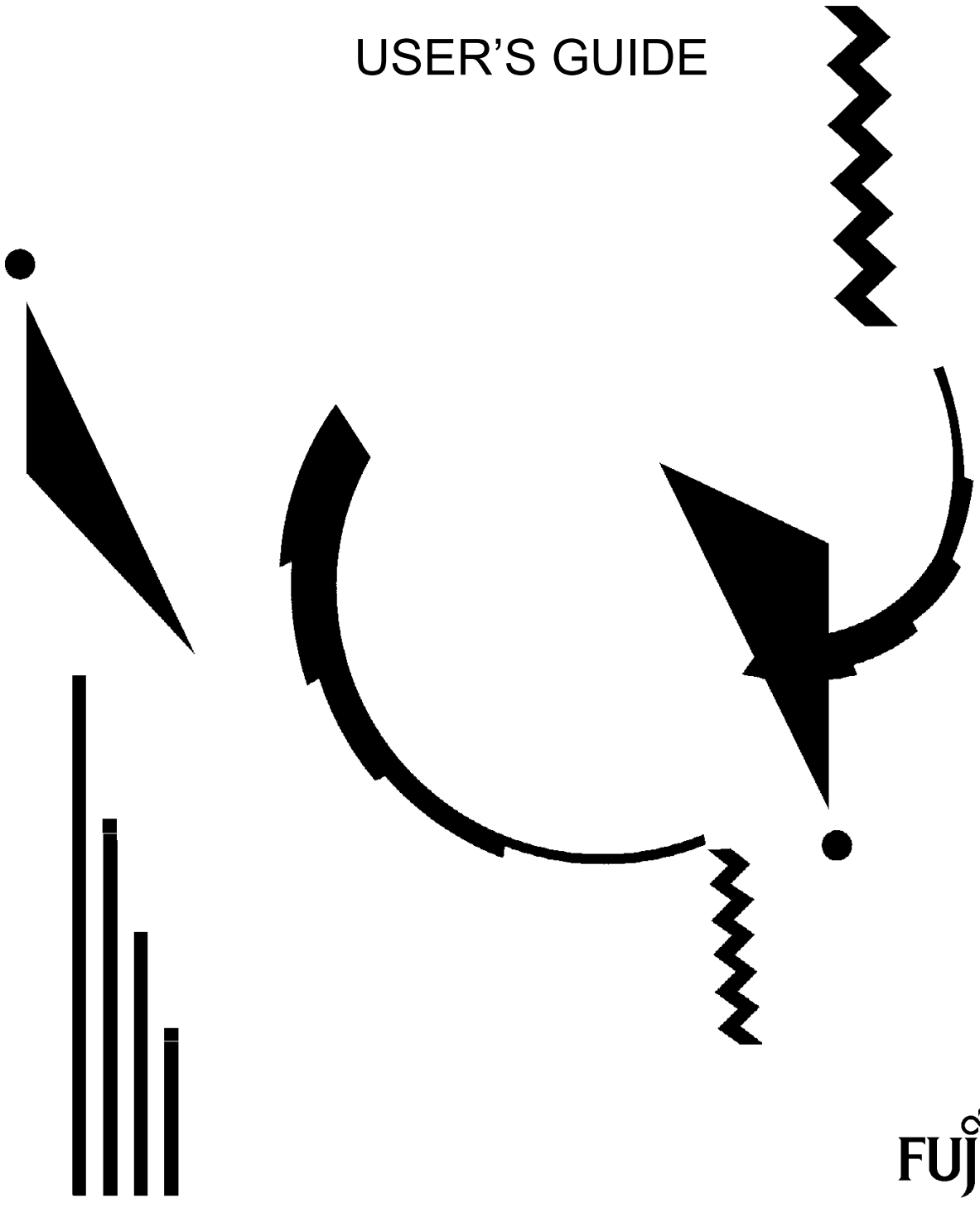
IP-9500e Series SOFTWARE

USER'S GUIDE



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USING IP-9500e Series SAFELY

Handling of This Manual

This manual contains important information regarding the safe use of IP-9500**e** Series. Before attempting to use this product, read this document thoroughly, paying particular attention to the "Notes on Safety." Be sure to keep this document in a safe and convenient location for quick reference.

Fujitsu makes every effort to prevent users and bystanders from being injured and to prevent property damage. Be sure to use this product in accordance with the instructions in this manual.

Warning on Electromagnetic Interference

The following notice is for USA users only.

IP-9500**e** Series has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Regu**l**ations. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generate**s**, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction document, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

The following notice is for Canada users only.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

The following notice is for EU (European Union) users only.

This is Class A product of Electromagnetic Interference (EMI) standard. In a domestic environment this product may cause radio interference in which case the user may be required to make adequate measures.

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It is strictly inhibited to copy or reverse-engineer (reverse-assemble or reverse-compile) any programs included in the relevant equipment.

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PREFACE

This document explains how to use software for IP-9500**e** Series. IP-9500**e** Series consists of IP-9500e, IP-9500De and IP-9000e. IP-9500e and IP-9000e.runs as an encoder or a decoder. IP-9500De runs as a dedicated decoder.

For information on how to install IP-9500e Series, connect cables and use buttons and LEDs, see the following manual:

- IP-9500e / IP-9500De / IP-9000e User's Guide

This document is intended for system designers or administrators who use IP-9500e Series. It assumes that these users have a basic understanding of networks and video streaming.

Edition 06
Jul 2008

Product Use Environment

The product explained in this document is designed and manufactured for use in standard applications such as general office work, personal devices and household appliances. This product has not been designed or manufactured for special uses requiring extremely high levels of safety, or if the required level of safety cannot be ensured, for uses where a failure, operational error or some other factor could be life-threatening or cause a physical injury (such as nuclear-reactor control in atomic facilities, automatic flight control, air traffic control, mass transportation control, medical devices for life support, or missile launch controls in weapons facilities). (In this document, these special uses are referred to as "high-risk" uses.) The customer is urged not to use this product without taking measures to guarantee the level of safety required for such high-risk uses. Customers that are likely to use this product for high-risk applications are requested to consult our sales representative before embarking on such specialized use.

Note

The contents of this manual may be revised without prior notice.

ALERT INDICATIONS

This document uses various alert indications to urge the user to use the equipment safely, to prevent users and bystanders from suffering personal injury or property damage. Alert indication consists of alert signal and alert statement. The alert signals and their meanings are as follows.

⚠WARNING	This indicates a hazardous situation that could result in death or serious personal injury if you do not perform the procedure correctly.
⚠ CAUTION	This indicates a hazardous situation that could result in minor or moderate personal injury if the user does not perform the procedure correctly. This signal also indicates that damage to the product or other property may occur if the user does not perform the procedure correctly.

Alert Indication in This Manual

An alert statement follows an alert signal. An alert signal is provided in the center of a line. An alert statement is indented on both ends to distinguish it from regular text. Similarly, one space line is inserted before and after the alert statement.

(Example)

⚠WARNING

Electric shock
Consult the system administrator when checking the voltage at the outlet.
Otherwise, electric shock may result.

NOTE ON HANDLING THE PRODUCT

Maintenance

⚠WARNING

Users must not attempt to repair IP-9500e Series themselves. Consult the Fujitsu Service Center.

⚠ CAUTION

Read this document thoroughly before using the product. For clarification of any unclear points regarding the use of the product, consult the Fujitsu Service Center.

If a fault occurs, contact the Fujitsu Service Center with information on the fault and the alarm LED status.

CONTENTS

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Chapter1
Before Using This Product

This chapter explains items to be confirmed before using IP-9500e Series.

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1.1 Main Features

IP-9500e Series is a video encoder that uses the high compression video encoding technology H.264. It enables real-time streaming of high definition (HD) and standard definition (SD) video through the optical fiber networks like FTTH.

The table below shows the product lineup for IP-9500e Series.

Name	Type	Description
IP-9500e	HD/SD Encoder / Decoder	HD/SD Hybrid Platform Encoder/Decoder Software Switchable
IP-9500De	HD/SD Dedicated Decoder	HD/SD Hybrid Platform Dedicated Decoder
IP-9000	SD Encoder / Decoder	HD Upgradable (*1) Encoder/Decoder Software Switchable

IP-9500e and IP-9000e can run as an encoder or decoder as provisioned from the Web screen after the Software is installed. When running as an encoder, it encodes input video and audio signals, and distributes them in real-time through the IP network or outputs them through the DVB-ASI interface (*2). When running as a decoder, it decodes the encoded data received through the IP network or DVB-ASI interface and outputs it as output audio and video signals. IP-9500De can run only as a decoder.

In addition, the archiving function (*3) is available when the IP-9500e or IP-9000e is used as an encoder, enabling for time to be taken in distributing HD content, even when the network band is small.

Main features of IP-9500e Series are shown as follows;

- Best-in-Class Video Quality
- Super Low Latency
- Robust Error Correction
- HD / SD Hybrid Platform
- Simulcast (Dual Encoding)
- Encoder / Decoder Software Switchable
- HD Full Upgradeable (IP-9000e)
- Intercom Service Line
- Compact 1RU Size & Multiple Interface
- Encoder Archiving and File Transfer
- Auxiliary Data Port (RS-232C)
- High Reliability and Environment Tolerant
- Encoder Selection
- Analog Down-converter & HD-SDI Pass-thru

*1 Check for availability

*2 The DVB Option Card is a separately sold option.

*3 The CF Card is a separately sold option.

*4 After the software upgrade, IP-9000e provides the same features with IP-9500e

1.2 IP-9500e Series Software Configuration

1.2.1 Components of IP-9500e Series Software Package

The table below lists the components of IP-9500e Series software package.

Table 1-1 Software Package Components

Package Name		Code	Q'ty	Remarks
IP-9500e Software V03		NB782423	1	Purchase unit for IP-9500e
	CD-ROM	---	1	Software storage media
	Software Guide and License Agreement	---	1	---
	User's Guide	---	1	This document
IP-9500De Decoder Software V03		NB7824A3	1	Purchase unit for IP-9500De
	CD-ROM	---	1	Software storage media
	Software Guide and License Agreement	---	1	---
	User's Guide	---	1	This document
IP-9000e Software V01		NB782511	1	Purchase unit for IP-9000e
	CD-ROM	---	1	Software storage media
	Software Guide and License Agreement	---	1	
	User's Guide	---	1	This document

1.2.2 Software Installation

Install the software through the PC by following the procedural instructions accompanying the CD-ROM.

See Chapter 2 for details on the procedure.

1.3 Typical Application

The figure below shows a typical configuration example.

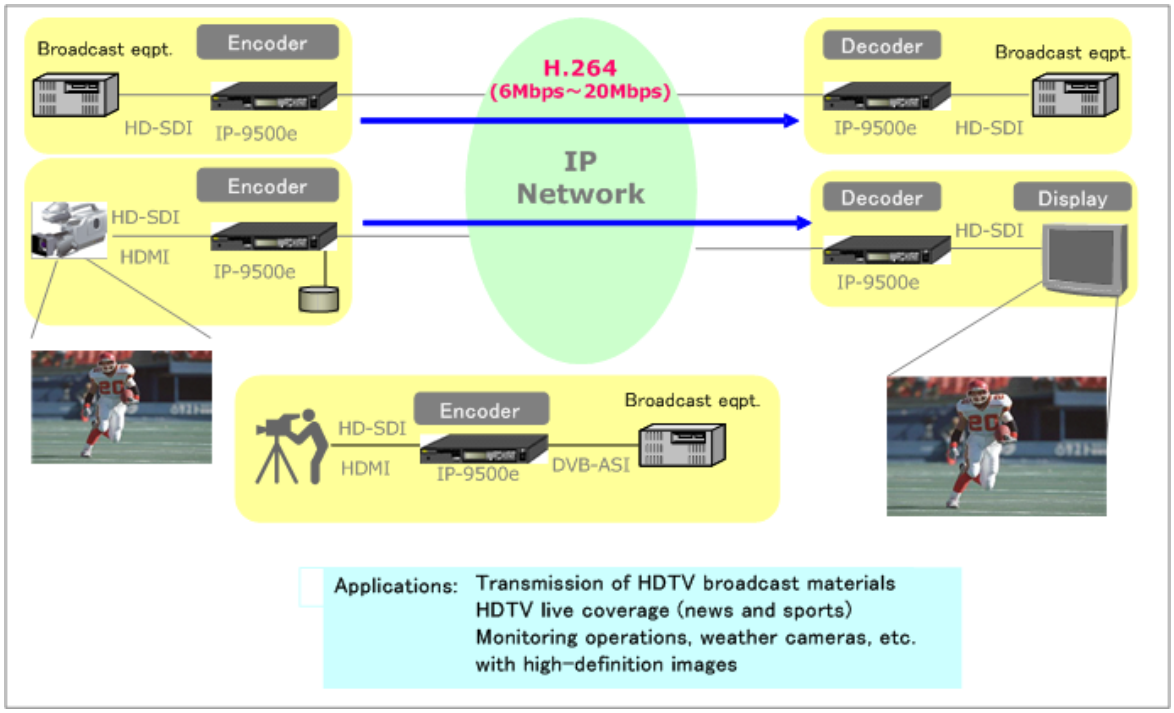

Figure 1-1 Typical Application

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Chapter 2
Installation & Operation

This chapter explains how to install IP-9500e Series.

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2.1 Installing Software

This section explains the procedure for installing software on IP-9500e Series.

2.1.1 Preparation

The IP addresses of IP-9500e Series of the upper port (CONSOLE) and lower port (LAN) at shipment from the factory are as follows;

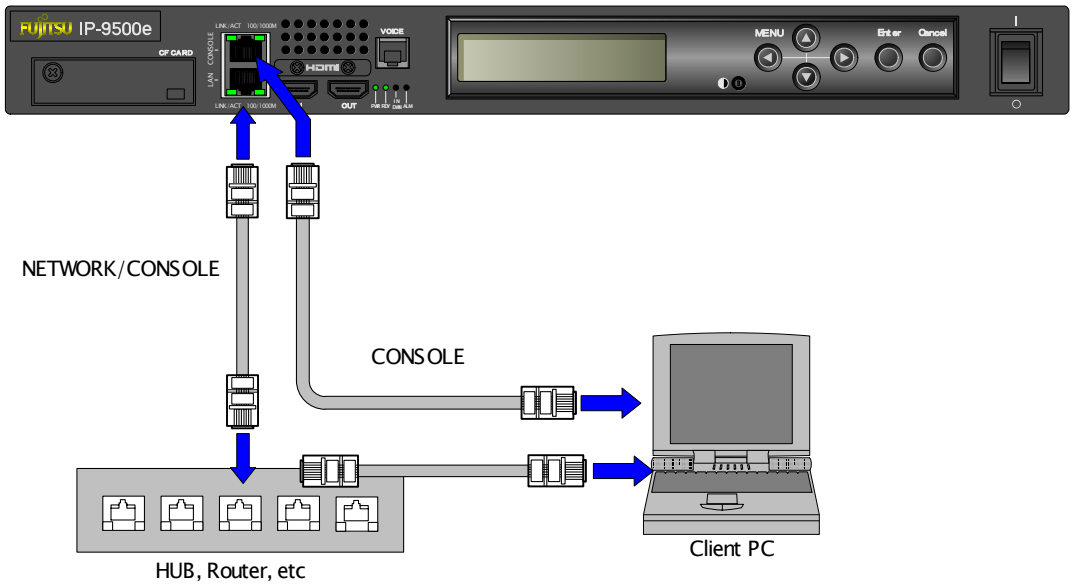
- CONSOLE (upper port)

  IP address: 192.168.255.253, Subnet mask: 255.255.255.252

- LAN (lower port)

  IP address: 10.0.0.1, Subnet mask: 255.0.0.0

Using either the CONSOLE or LAN port, connect IP-9500e Series to a hub or directly using two UTP cables, and install software through the installation PC while keeping IP-9500e Series and PC disconnected from your network.



⚠ CAUTION

If you operate IP-9500e Series with the default IP address, disconnect IP-9500e Series from your network and connect IP-9500e Series to the control terminal, and then set up IP-9500e Series.

After setting up IP-9500e Series to meet the requirements for your network, connect IP-9500e Series to the network. If you connect IP-9500e Series to your network with the default IP address at shipment from the factory, and unexpected fault may occur in your network.

2.1.2 Software Configuration

(1) Files on the CD-ROM

The CD-ROM contains software and this manual.

Table 2-2 File List

Product	File Name	Function
IP-9500e Software V03	IP9500eSoftwareV03.bin	Software Product for IP-9500e
IP-9500De Decoder Software V03	IP9500DeDecoderSoftwareV03.bin	Software Product for IP-9500De
IP-9000e Software V01	IP9000eSoftwareV01.bin	Software Product for IP-9000e

The following configuration file will be used for a relevant utility tool in a system with IP-9500e Series (e.g. SNMP Manager).

Table 2-3 Configuration File List for System Utility Tool

File Name	Function	Recommended environment
FUJI9x00-MIB-EN.txt	Extended MIB	Fujitsu Network Node Manager

2.1.3 Installation Procedure

(1) Access method (via Console port)

Access IP-9500e Series Web page from the Web browser. The default Console address of IP-9500e Series at shipment from the factory is 192.168.255.253. Temporarily set the proxy setting on the Web browser to OFF and type **http://192.168.255.253** to access IP-9500e Series Web page.

(2) Installation page

IP-9500e Series maintenance page appears. Click Software management in the left frame of the Web browser screen. The Software management window (installation, etc.) appears in the right frame of the Web browser screen.

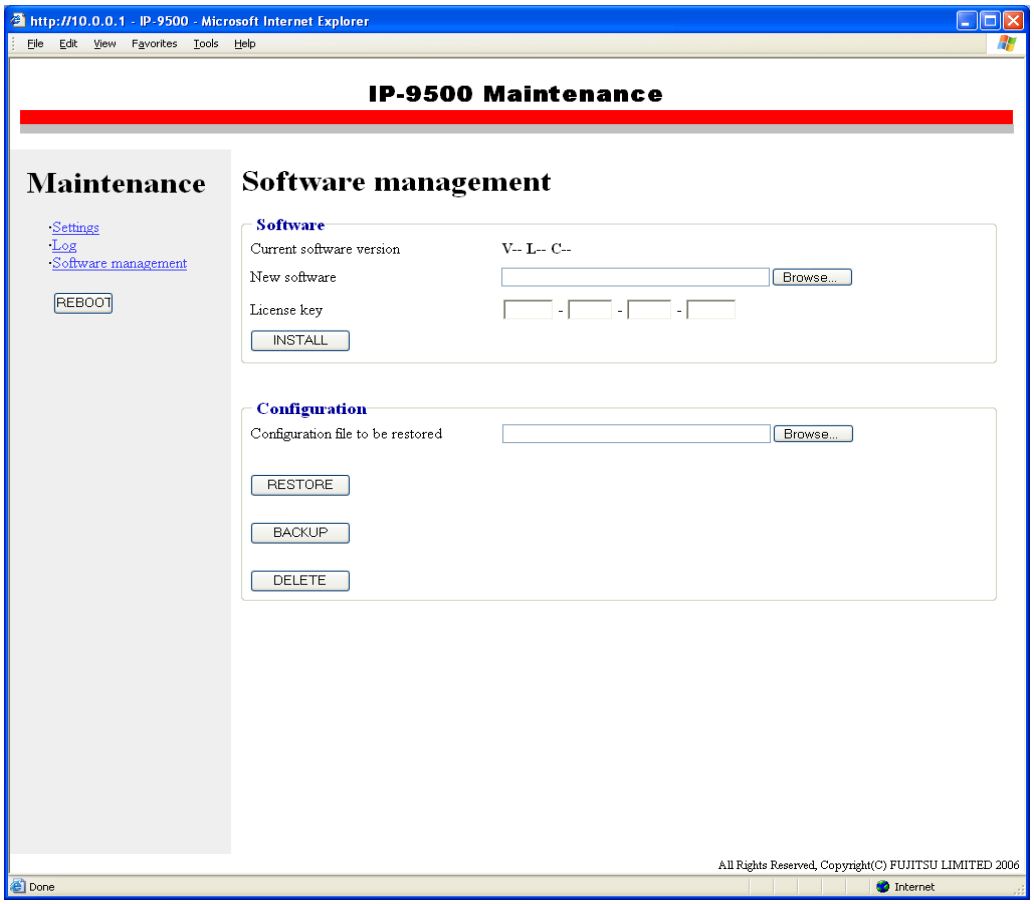


Figure 2-1 Installation Window (Factory Shipment Firmware)

(3) Selecting software

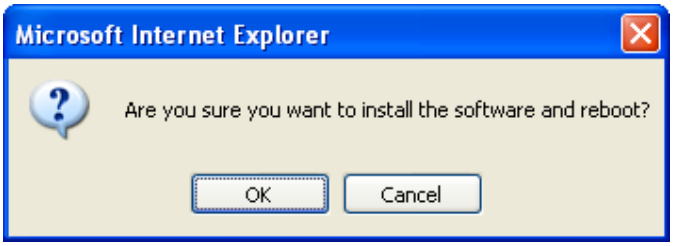
Select software in the New software field. Select the binary file (.bin) on the CD-ROM.

(4) Entering the license number

Enter the license number in the License key field. The license key is written on the license certificate provided with the product.

(5) Starting installation

Click INSTALL button. The following confirmation dialog box appears. Click the OK button to start installation. Upon completion of installation, IP-9500e Series is automatically rebooted.



(6) Verifying the startup

Display IP-9500e Series setup window from the Web browser, and verify that the new software has been installed and started. See Section 2.2 for more information.

⚠ CAUTION

Do not power off or press the reset button during installation.
Doing so may prevent IP-9500e Series from starting.

⚠ CAUTION

Do not access another Web page during installation. Otherwise, you may lose information on the progress.

2.1.4 Uninstallation Procedure

(1) Access method

Access IP-9500e Series Web page using the Web browser.

Type **http://xxx.xxx.xxx.xxx** to access IP-9500e Series Web page.

Note: xxx.xxx.xxx.xxx is the IP address that you defined for IP-9500e Series.

(2) Uninstallation page

If the Software has already been installed, the COMMON subframe appears. Click SOFTWARE MANAGEMENT in the left frame of the Web browser screen. The Software Management window appears in the right from on the browser screen.

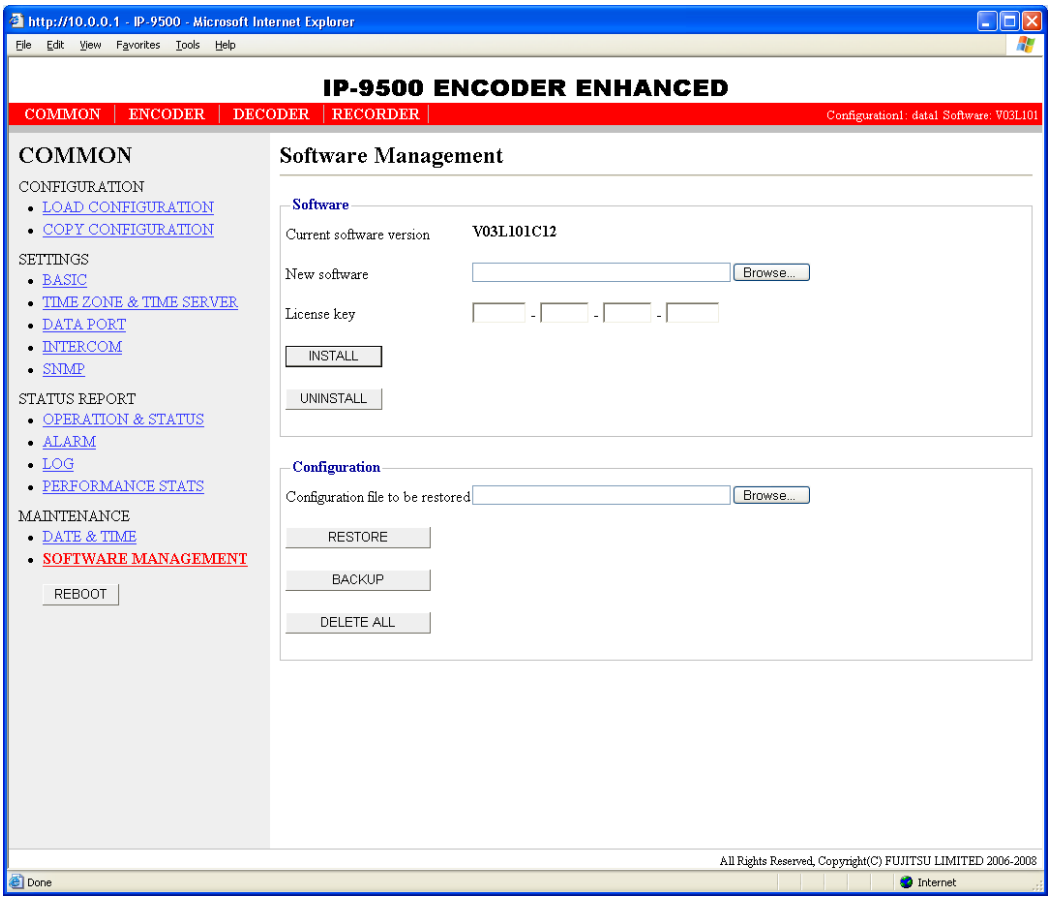
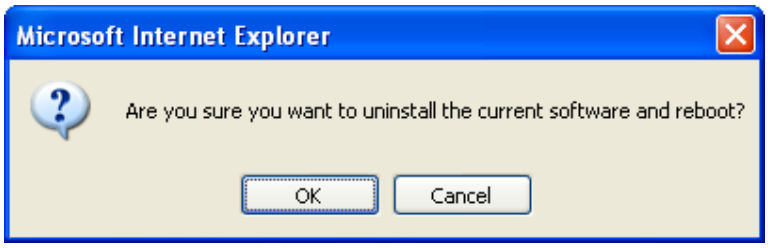


Figure 2-2 Uninstallation Window

(3) Software uninstallation

Click UNINSTALL button. The following confirmation dialog box appears. Click the OK button to start uninstallation. Upon completion of uninstallation, IP-9500e Series is automatically rebooted.



⚠ CAUTION

Do not power off or press the reset button during installation.
Doing so may prevent IP-9500e Series from starting.

⚠ CAUTION

Do not access another Web page during installation. Otherwise, you may lose information on the progress.

2.2 Equipment Operation

This section explains how to operate IP-9500e Series Software.

The Software can be operated through the Web screen or the front panel.

2.2.1 Operation through Web Screen

All IP-9500e Series settings and status information can be checked through the Web screen. See Chapter 3, "Web Operation," for more information.

2.2.2 Operation through Front Panel

The settings and status concerning the functions frequently used during operation, such as checking status information and IP addresses, can be checked through key operations (Enter, Cancel, and arrow keys) and information displayed on the front panel. See Chapter 4, "Front Panel Operation," for more information.

2.2.3 Notes

◆Checking the current IP address or setting an IP address

If the IP address setting (address acquisition method) becomes unknown, it can be checked or an IP address can be set through the front panel.

- Checking the IP address at the LAN port

  See 4.4.1 Status (LAN) or 4.5.1 Status (LAN).

- Setting the IP address at the LAN port

  See 4.4.11 Setting (LAN) or 4.5.9 Setting (LAN).

- Checking the IP address at the CONSOLE port

  See 4.4.2 Status (CONSOLE) or 4.5.2 Status (CONSOLE).

- Setting the IP address at the CONSOLE port

  See 4.4.12 Setting (CONSOLE) or 4.5.10 Setting (CONSOLE).

◆In the case of failure in automatic acquisition of an IP address

When IP-9500e Series starts, the LAN port:

(1) Cannot access the DHCP server

(2) Attempts to but fails to set up a PPPoE connection.

(3) Conflicts with the IP address at the CONSOLE port.

If the conditions in (1) and (2) above are met, all 0s (zero) are displayed and IP address acquisition is repeated.

If the condition in (3) above is met, the IP address at the LAN port is as follows:

IP address: 169.254.0.1 (Subnet mask = 255.255.0.0)

Take proper corrective action such as reviewing the settings on the DHCP and PPPoE servers or the IP address setting on IP-9500e Series. (See also Section 5.1, “Troubleshooting.”)

◆Forcibly changing to the fixed IP address from DHCP, PPPoE

- To use the front panel menu for forcible changing

  See 4.4.11 Setting (LAN) or 4.5.9 Setting (LAN).

- To use Web access through the CONSOLE port for forcible changing

  See 3.2.2 Basic.

◆Powering off on PPPoE connection

- When in the state of PPPoE connection, turn off IP-9500e Series following 4.4.16 Shutdown or 4.5.15 Shutdown. Otherwise, it may take some time to establish the next PPPoE connection

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Chapter 3
Web Operation

This chapter explains how to operate individual functions from the Web browser.

note) 3.3 Encoder and 3.4 Recoder are described only for IP-9500e and IP-9000e. If IP-9500De Decoder Software is installed on IP-9500De, see 3.1 Starting up, 3.2 Common Menu and 3.5 Decoder.

note 2) As for IP-9500e, IP-9000De and IP-9000e specification, see Appendixes “IP-9500e/IP-9500De Specifications” and “IP-9000e Specifications”

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3.1 Starting Up

3.1.1 Login

By default, the network password window shown below is invalid (not displayed).

To enable the network password function, set the user ID and password by following the instructions in Section 3.2.2, “Basic.”

From the upper part of the Web screen, select [COMMON], [ENCODER], [DECODER] and [RECORDER] to display these menus.

* Microsoft® Internet Explore 6.0 SP2 is the recommended Web browser.

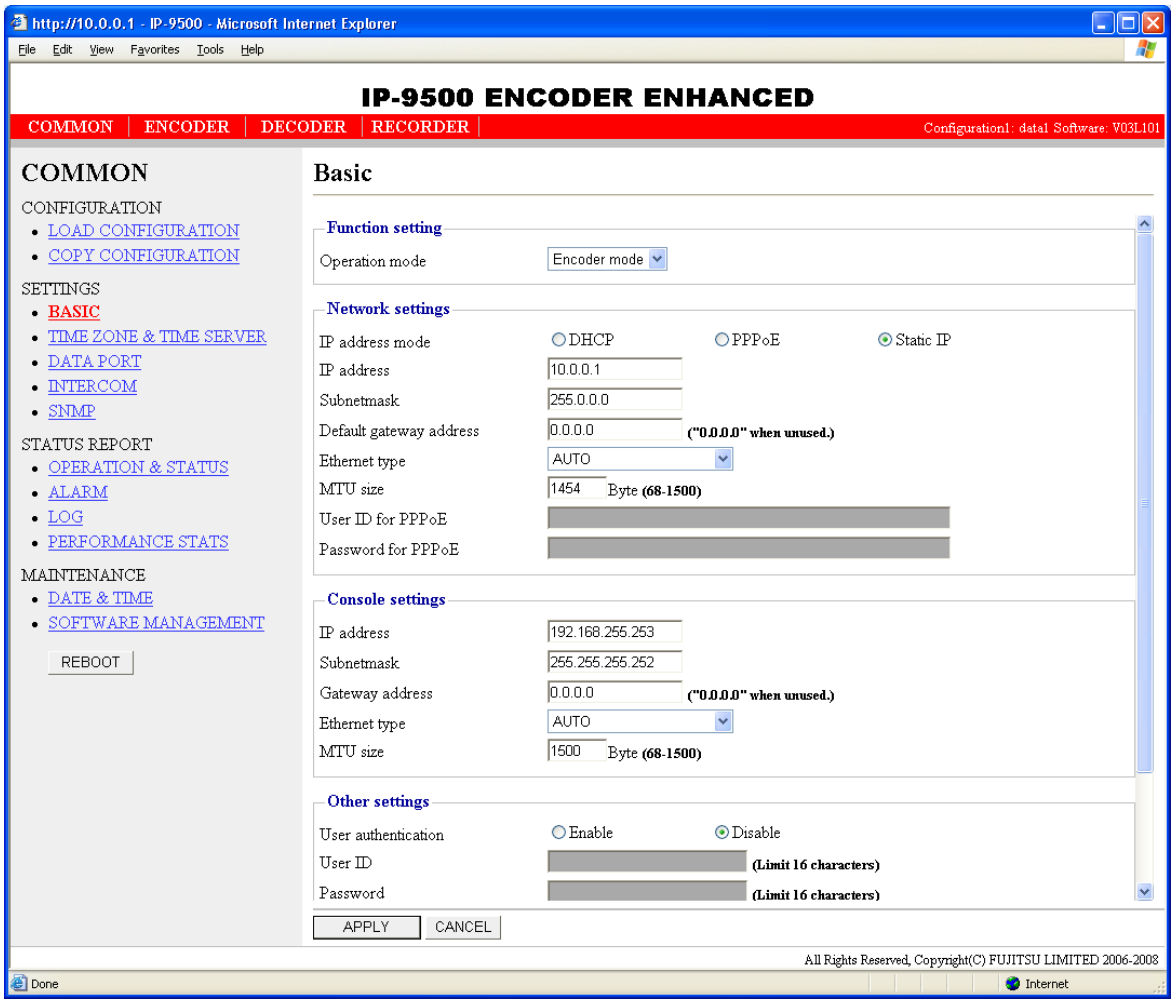


Figure 3-1 IP-9500e Software (Encoder Mode) Window Example

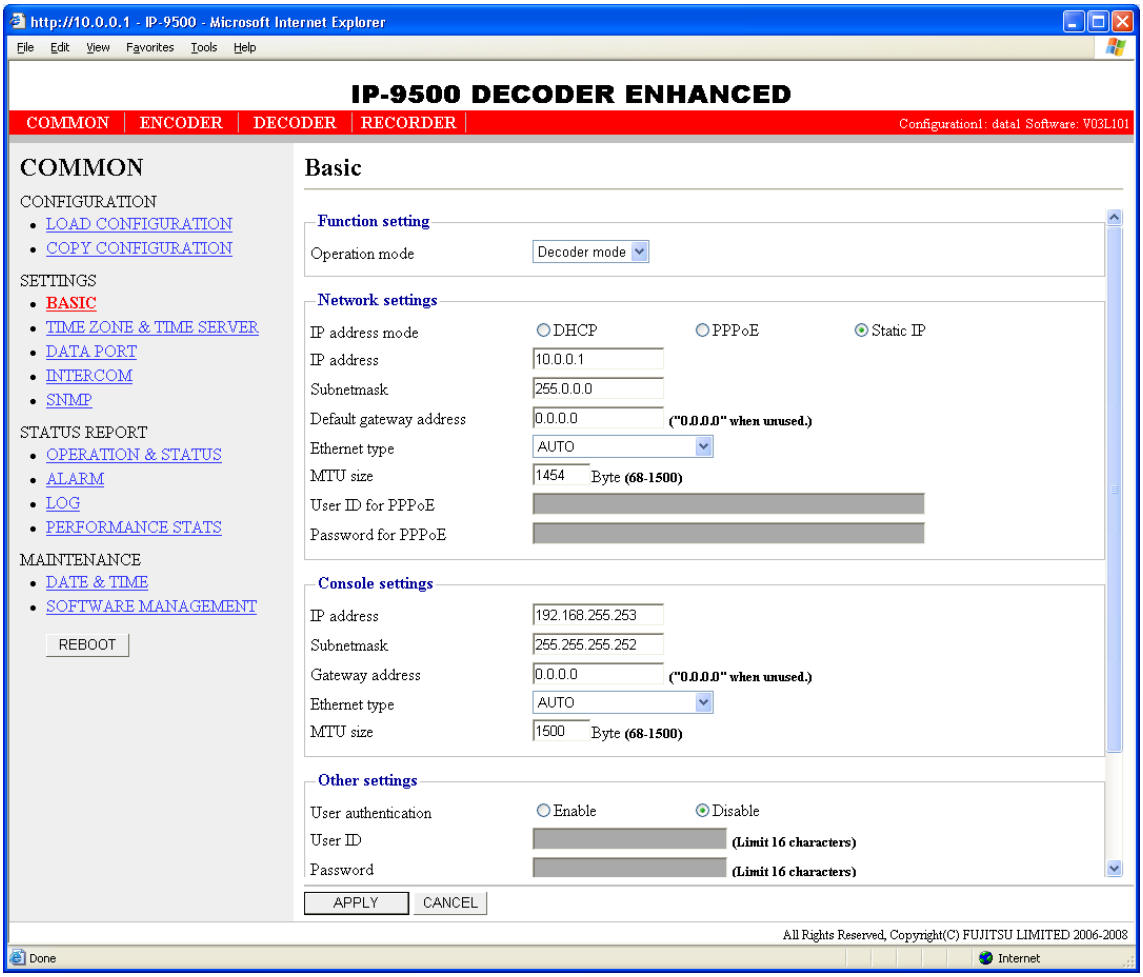


Figure 3-2 IP-9500e Software (Decoder Mode) Window Example

3.1.2 If the Screen is not Accessible

For some time after the power-on or reboot, you may not be able to access the screen normally. Please wait for about 60 seconds before starting access.

3.2 Common Menu

3.2.1 Configuration Data

IP-9500e Series has a data storage area in which up to 10 sets of configuration data can be stored. By storing up to 10 sets of configuration data in advance in the storage area, it can be used by switching with ease between these sets of configuration data.

For instance, it is useful in switching between encoder and decoder, changing resolution or bit rates or switching the network interfaces including PPPoE, DHCP, static IP, etc.

Table 3-1 Parameters Preprogrammed in Configuration Data lists the parameters, of which 10 sets can be stored independently as configuration data. For detail information on the individual parameters, see the respective sections shown in the reference column in the table below.

Table 3-1 Parameters Preprogrammed in Configuration Data

Category	Window Name	Parameter of Subordinate Group Name	Reference
COMMON	BASIC	Function setting	3.2.2 Basic
		Network settings	
		Console settings	
		Other settings	
	TIME ZONE & TIME SERVER	Time zone setting	3.2.3 Time Zone & Time Server
		Time server settings	
	DATA PORT	Operation settings	3.2.4 Data Port
		Port number settings	
		RS-232C settings	
	INTERCOM	Operation settings	3.2.5 Intercom
		Port number settings	
	SNMP	Operation settings	3.2.6 SNMP
ENCODER	SETTINGS	Video input settings	3.3.1 Setting (Encoder)
		Audio input settings	
		Main/Sub Encoder settings	
		Main/Sub Encoder port setting	
	ENCODER ADDRESS REPORT	Report settings	3.3.2 Encoder Address Report
		Destination settings	
RECORDER	SETTINGS	Recorder settings	3.4.1 Setting (Recorder)
DECODER	SETTINGS	Video output settings	3.5.1 Setting (decoder)
		Audio output settings	
		Decoder settings	
		Decoder port settings	
	REFERENCE CLOCK	Reference clock input	3.5.2 Reference Clock

Click LOAD CONFIGURATION in the left frame of the Web screen to display the Configuration data window in the right frame.

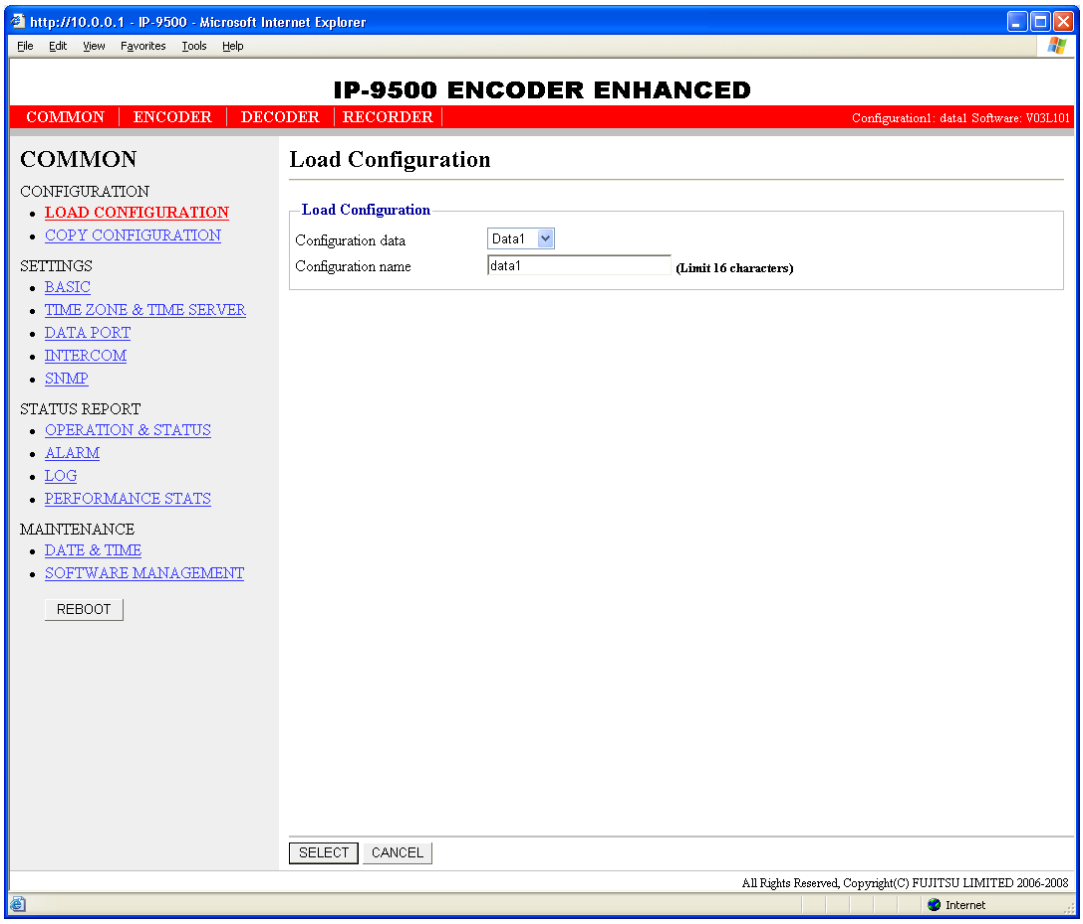


Figure 3-3 Configuration Data Window

◆Registering configuration data

Select data numbers 1 to 10 from the drop-down list menu in the configuration data field.

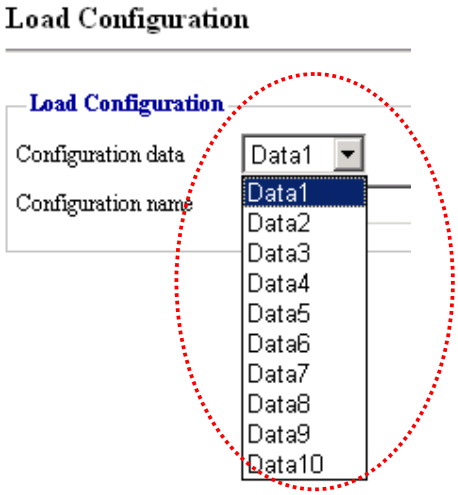
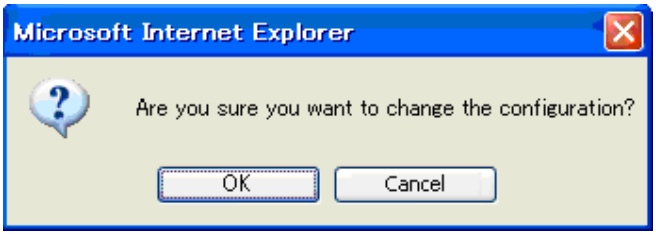


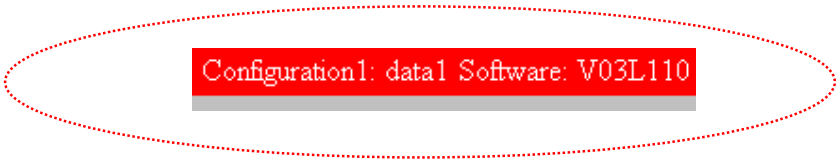
Figure 3-4 Selecting Configuration Data

Assign the selected data a name using up to 16 alphanumeric characters in the Configuration name field, and then click the SELECT button. The dialog box shown below appears. Click the OK button to change the registration number of the configuration data.

*) Reboot is required only when the operation mode is changed between encoder and decoder after loading configuration.



Confirm that the configuration data number in the upper right red zone on the Basic setting window has been changed to the previously selected number.



Next, update the parameters listed in **Table 3-1 Parameters Preprogrammed in Configuration Data** using the following respective windows, and then click the OK button or APPLY to update and register the configuration data.

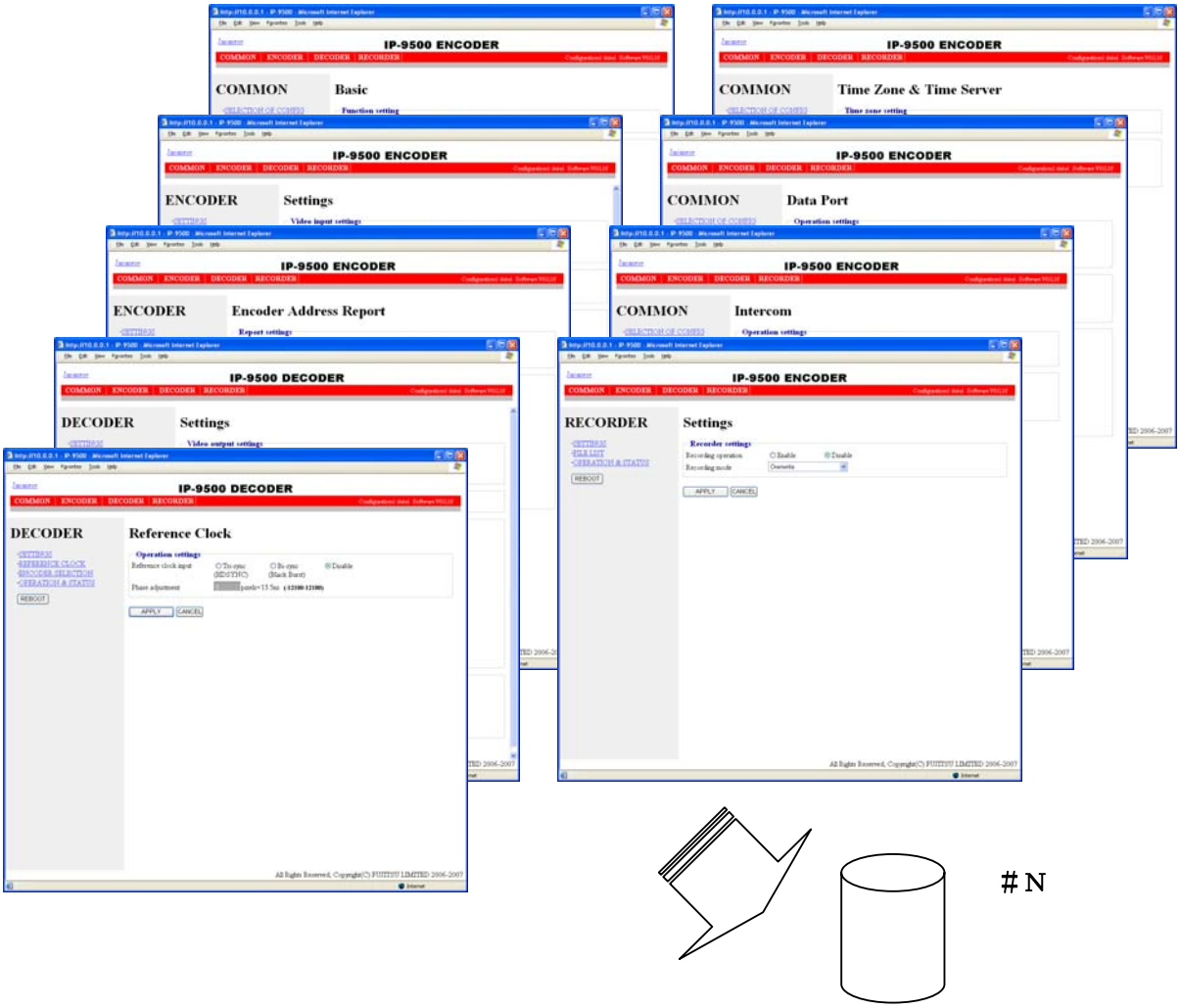


Figure 3-5 Parameters, of which 10 Sets are Handled as Independent Configuration Data

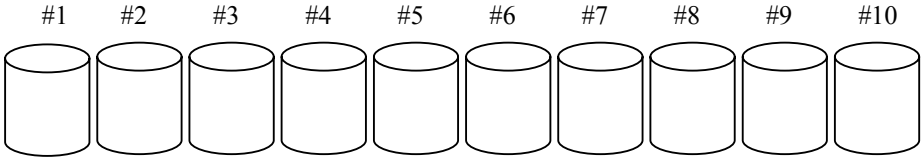


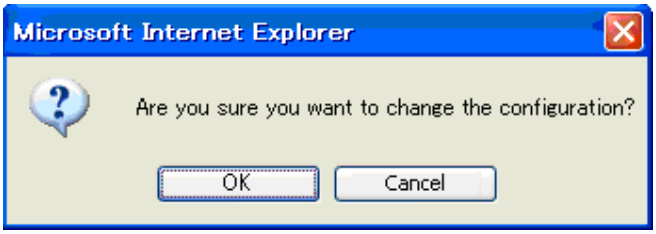
Figure 3-6 Configuration Data (10 independent sets)

◆Using configuration data

Select (from 1 to 10) the data number you want to use from the configuration data field by referring to the corresponding name in the Configuration name field.

Click the SELECT button. When the following dialog box appears, click the OK button. IP-9500e Series updates the configuration data registration number.

*) Reboot is required only when the operation mode is changed between encoder and decoder after loading configuration.



Confirm that the configuration data number in the upper right red zone on the Basic setting window has been changed to the previously selected number.

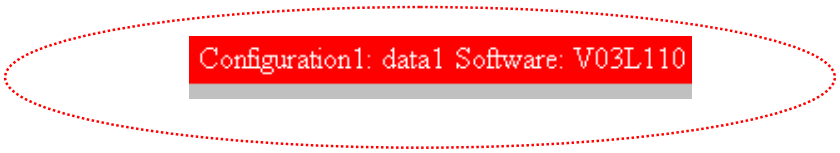


Table 3-2 Configuration Data Selection Items

	Item	Description	Parameter
Selection of Config	Configuration data	<When updating or registering> Ten types of configuration data registered in advance can be switched, updated and registered each. <When using> Ten types of configuration data registered in advance can be switched data.	- Data numbers 1 to 10
	Configuration name	<When updating or registering > A configuration name can be assigned to each type of configuration data. <When using> An assigned configuration name can be used for switching configuration data.	- Any name (using 16 alphanumeric characters)

3.2.2 Copying Configuration Data

For the configuration data of which there are a maximum of ten types that is used in "LOAD CONFIGRATION" copying is performed between sets of configuration data. Copying can be done when making settings for other configuration data, by using parameters for configuration data that are already registered.

For example, copying can be used conveniently in cases when, for configuration data that is already registered, you want to create configuration data with changed resolutions and bit rates.

Click COPY CONFIGURATION in the left frame of the Web screen to display the Copy Configuration window in the right frame. Make the required settings by referring to **Table 3-3 Copy Configuration Setting Items**.

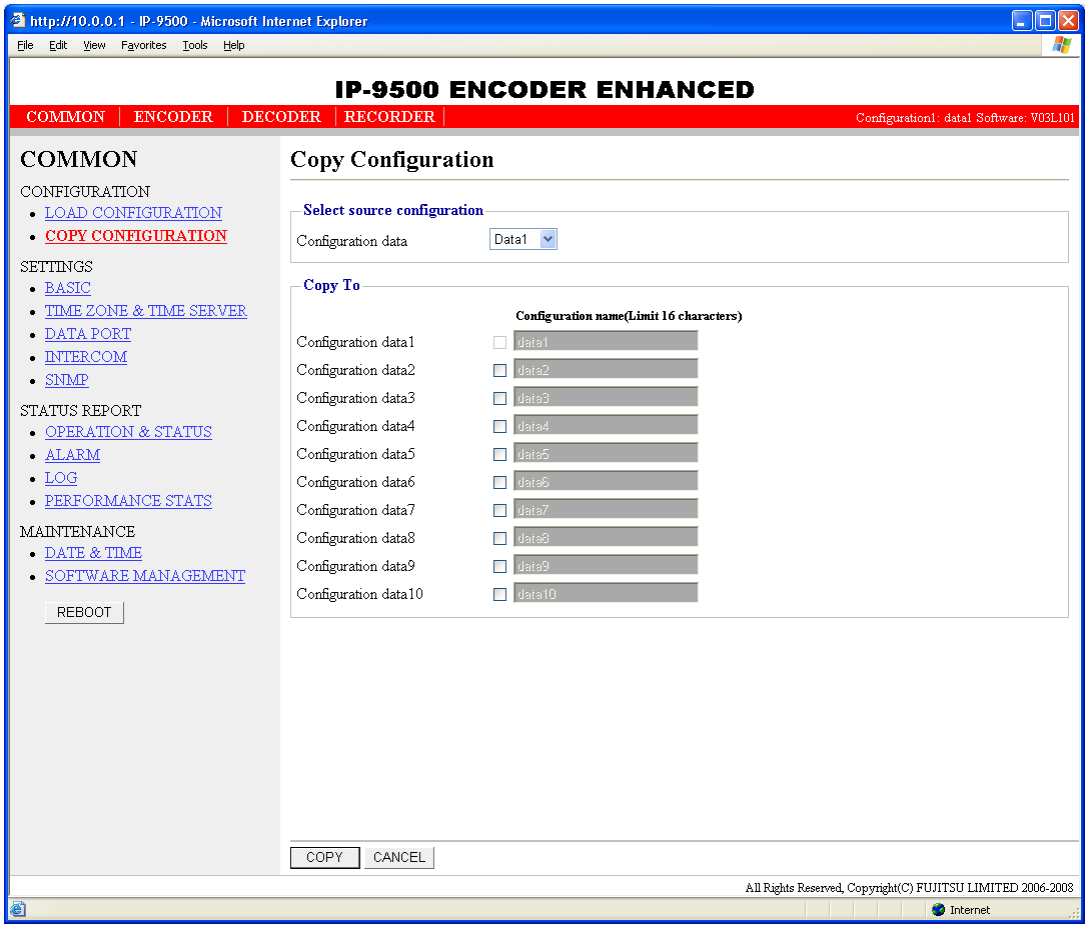


Figure 3-7 Copy Configuration Window

After the completion of the settings, click the COPY button. The message below appears.

Click OK to apply the settings.

Table 3-3 Copy Configuration Setting Items

	Item	Description	Parameter
Select source configuration	Configuration data	Select one of the ten types of configuration data that have already been registered to copy the data.	・Data numbers 1 to 10
Copy to	Configuration data 1~10	Select the configuration data to which you want to make the copy. It is possible to select multiple configuration data as copy destinations, but the source configuration and the configuration data that is currently in use cannot be selected.	・Radio buttons
	Configuration name	A configuration name can be assigned to each type of configuration data.	・Any name (using 16 alphanumeric characters)

3.2.3 Basic

*** Basic comprises a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuration Data.**

You can set or change the settings of the parameters related to the network connection of IP-9500e Series or the operation mode in which it should operate after power-on. Make the required settings by referring to **Table 3-4 Basic Setting Items**.

IMPORTANT

If you operate IP-9500e Series with the default IP address, disconnect it from your network. Connect it to the setting terminal via a hub or directly through a UTP cable. From the setting terminal, set it up to meet the requirements for your network and then connect it to the network. If you connect it to your network with the default IP address, an unexpected fault may occur in your network.

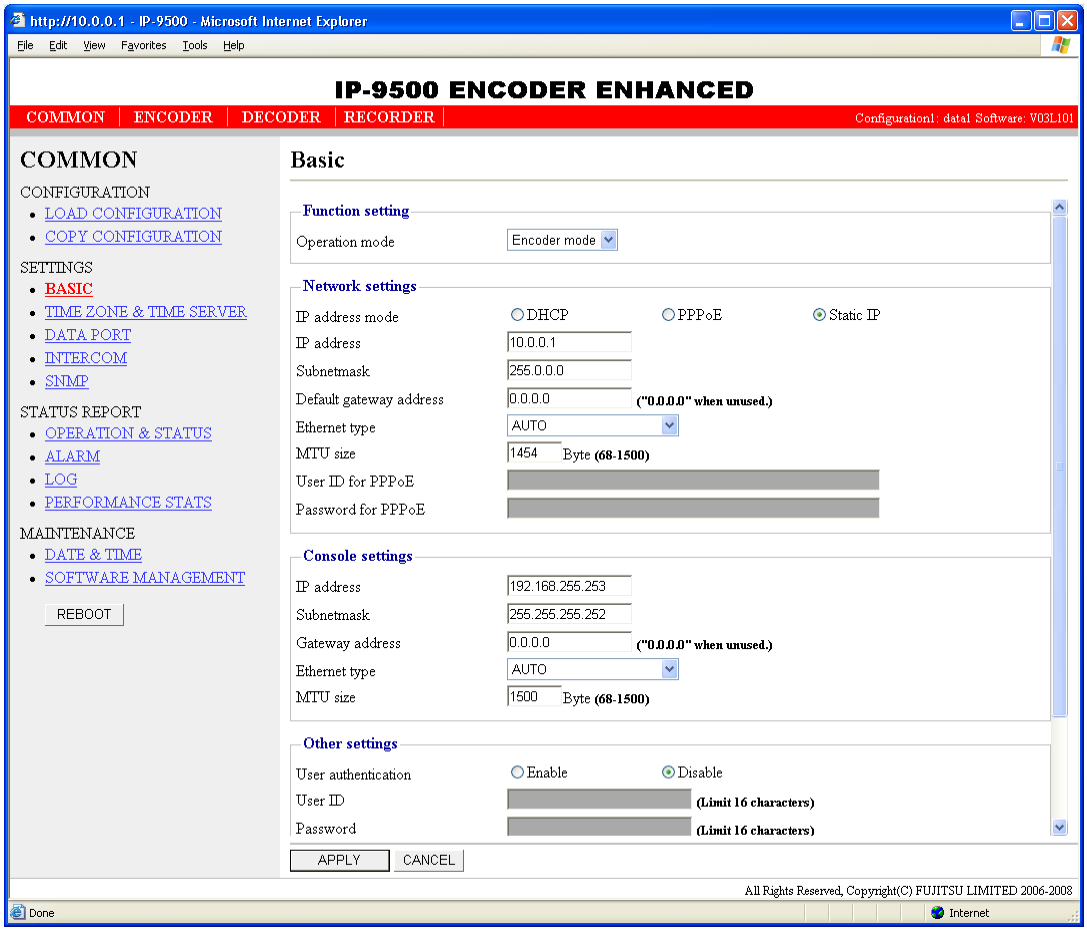


Figure 3-8 Basic Information Window

After the completion of the settings, click APPLY button. The message below appears.

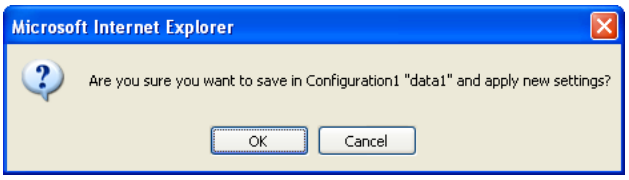


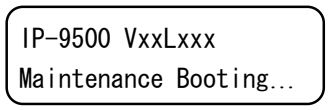
Table 3-4 Basic Setting Items

	Item	Description	Parameter
Function setting	Operation mode*1	Encoder mode and decoder mode can be selected.	- Encoder mode (Default) - Decoder mode
Network settings	IP address mode	Specify the IP address acquisition method	- DHCP - PPPoE - Static IP (Default)
	IP address (Enable for static IP)	Specify the IP address.	IP address other than the following: 224.0.0.0 to 239.255.255.255 (Class D) 240.0.0.0 to 255.255.255.255 (Class E) 0.0.0.0, 127.0.0.0 to 127.255.255.255 (Default: 10.0.0.1)
	Subnetmask (Enable for static IP)	Specify the subnet mask.	IP address other than the following: 255.255.255.254, 255.255.255.255 (Default: 255.0.0.0)
	Default Gateway address (Enable for static IP)	Specify the gateway address.	IP address other than the following: 224.0.0.0 to 239.255.255.255 (Class D) 240.0.0.0 to 255.255.255.255 (Class E) 127.0.0.0 to 127.255.255.255 (Default: None (represented as 0.0.0.0))
	Ethernet type	Select the LAN interface operation mode.	- AUTO (Default) - 100Base-TX Full - 100Base-TX Half - 10Base-T Full - 10Base-T Half
	MTU size	Specify the maximum size of IP packet sent to the LAN.	576 to 1500 bytes (Default) 1454 bytes * For PPPoE, specify 1454 (recommended).
	User ID for PPPoE	Specify the user ID for PPPoE connection.	(Default: Blank)
	Password for PPPoE	Specify the password for PPPoE connection.	(Default: Blank)

	Item	Description	Parameter
Console settings	IP address	Specify IP address.	IP address other than the following: 224.0.0.0 to 239.255.255.255 (Class D) 240.0.0.0 to 255.255.255.255 (Class E) 0.0.0.0, 127.0.0.0 to127.255.255.255 169.254.0.0 to 169.254.255.255 (Default: 192.168.255.253)
	Subnetmask	Specify the subnet mask.	IP address other than the following: 255.255.255.254 255.255.255.255 (Default: 255.255.255.252)
	Gateway address 2)	Specify the gateway address.	IP address other than the following: 224.0.0.0～239.255.255.255(Class D) 240.0.0.0～255.255.255.255(Class E) 127.0.0.0～127.255.255.255 (Default: None (represented as 0.0.0.0))
	Ethernet type	Select Ethernet operation mode.	- AUTO (Default) - 100Base-TX Full - 100Base-TX Half - 10Base-T Full - 10Base-T Half
	MTU size	Specify the maximum size of IP packet sent to the LAN.	576 to 1500 bytes (Default) 1500 bytes
Other settings	User authentication	Specify whether to enable user authentication for accessing the Web screen.	- Enable - Disable (Default)
	User ID	Specify the user ID for authentication.	16 en-size alphanumeric characters
	Password	Specify the password for authentication.	16 en-size alphanumeric characters
	WEB server title	Specify the character string to be displayed on the title bar of the Web screen. It is used to identify the Web screen with the equipment name.	Up to 64 bytes character. (Default: Blank)
	Downconverter settings	Specify the type of SD analog video signal output for the monitor (VIDEO OUT terminal) and the type of downconverted image output to the internal SD encoder.	・Letter box (Default) ・Side cropped

	Loopback AV output	Select whether to enable loopback output of the following I/F IN/OUT signals to the output terminal. ・HD-SDI *3 ・Analog audio *3 ・DVB-ASI (option) *4) (Enabled during encoder operation)	・Enable (Default) ・Disable
	Test mode	Specify the HDMI test mode.	- Disable (Default) - HDMI monitor (*Sink test) - HDMI generator (*Source test) * Select “Disable” for the normal operation. Other modes use for the HDMI test purpose.

Note: If power-on is performed in combination with the Cancel key (see IP-9500e or IP-9500De User’s Guide), the IP address and subnet mask on both LAN and CONSOLE ports are temporarily reset to the defaults (LAN IP address 10.0.0.1, subnet mask 255.0.0.0, and CONSOLE IP address 192.168.255.253, subnet mask 255.255.255.252). If it becomes unclear what an IP address is, connect the equipment with the defaults and use the setup menu to confirm the IP address and subnet mask. In this case, the password restriction is also disabled. Press and hold the Cancel key until the following menu appears on the front panel. The equipment reboots, and the IP address and subnet mask that were set for the equipment are restored.



*1 Encoder mode is available only for IP-9500e or IP-9000e.

*2 Applicable when a time server or a SNMP manager is connected via the Console.

*3 Enabled during encoder operation

*4 Enabled during decoder operation

3.2.4 Time Zone & Time Server

*** Time Zone & Time Server is a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuration Data.**

Set the time zone and time server at the location where IP-9500e Series is installed. Click TIME ZONE & TIME SERVER in the left frame of the Web screen. The Time Zone & Time Server window appears in the right frame. Make settings according to the operation mode by referring to **Table 3-5 Time Zone Setting Item** and **Table 3-6 Time Server Setting Items**.

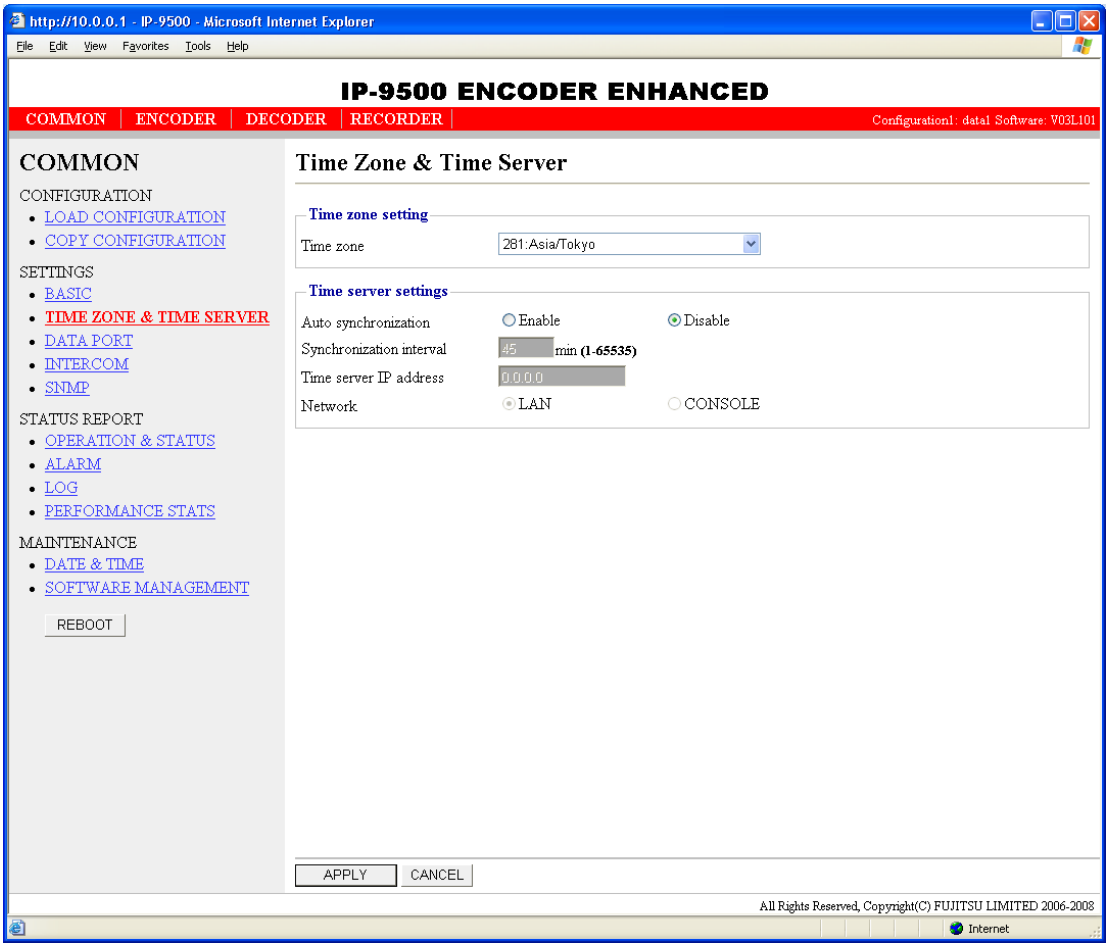


Figure 3-9 Time Zone & Time Server Window

After the completion of the settings, click APPLY button. The message below appears. Click OK to apply the settings. *Reboot is not required.

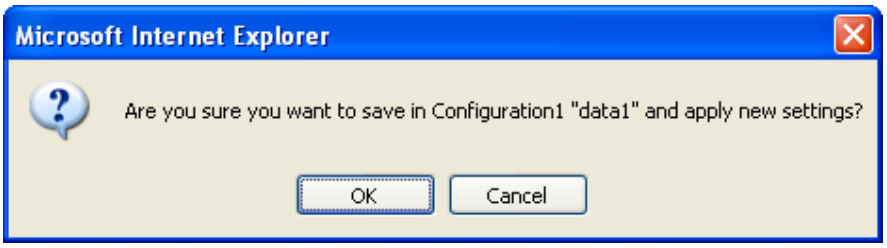


Table 3-5 Time Zone Setting Item

Item	Description	Parameter
Time zone	Select the time zone at the installation site.	(Default: Asia/Tokyo)

Table 3-6 Time Server Setting Items

	Item	Description	Parameter
Operation	Auto synchronization	Specify whether to automatically synchronize with the time server.	- Disable (Default) - Enable
	Synchronization interval	Synchronize with the time server at the specified interval (in minutes).	1 to 65535 (Default: 45)
Network setting	Time server IP address	IP address of time server	Other than 0.0.0.0 (Default: 0.0.0.0)
	Network	Select network type	- LAN(Default) - CONSOLE

3.2.5 Data Port

*** Data Port is a group of setting items, of which 10 sets can be registered independently by selecting data number as in 3.2.1 Configuration Data.**

This setup is performed to enable data communication with another device on the IP network by connecting the external device through the RS-232C port (D-sub 9-pin) provided at the rear of IP-9500e Series.

Click DATA PORT in the left frame of the Web screen. The Data Port window appears in the right frame, where you can set parameters for data communication with another device via the IP network. Make the required settings by referring to **Table 3-7 Data Port Setting Items** and **Table 3-8 Operation Modes**.

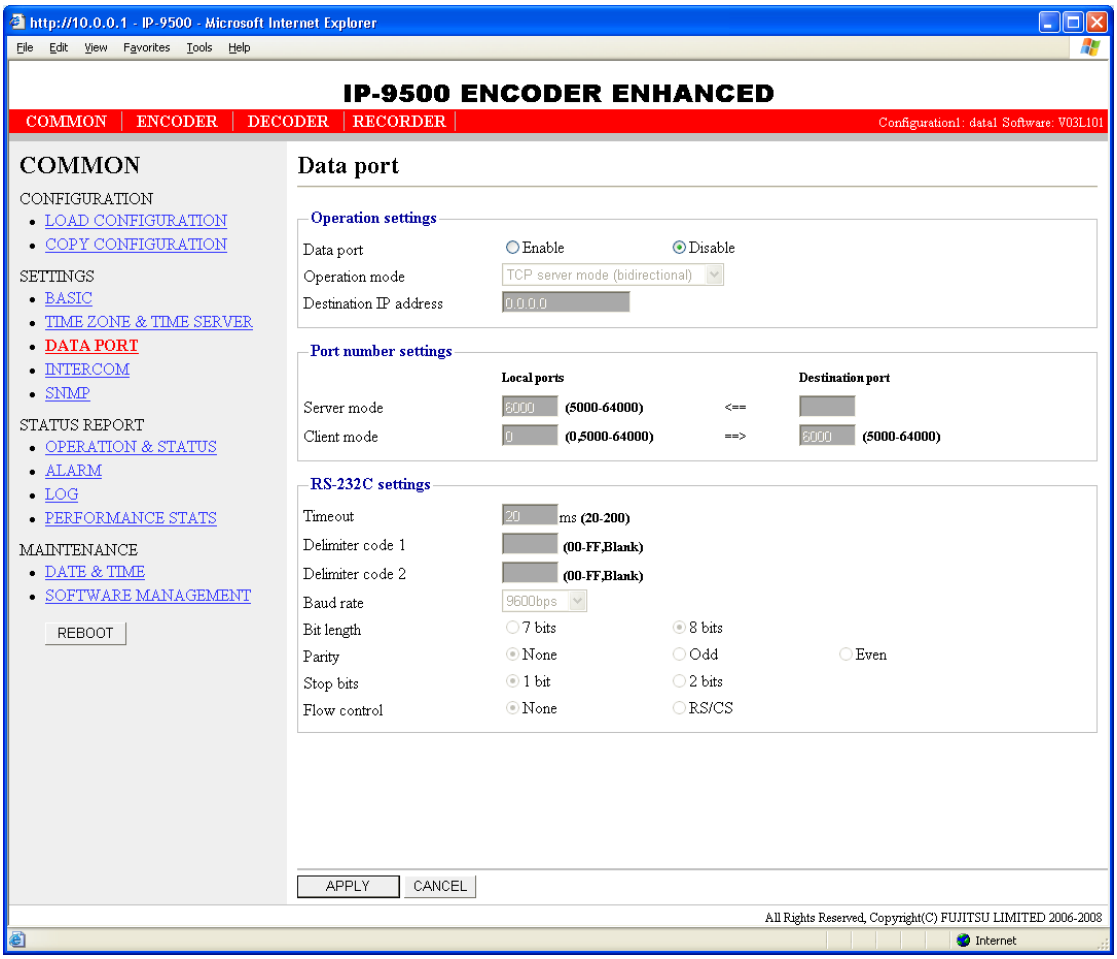


Figure 3-10 Data Port Window

After the completion of the settings, click the APPLY button. The message below appears. Click OK to apply the settings. *Reboot is not required.

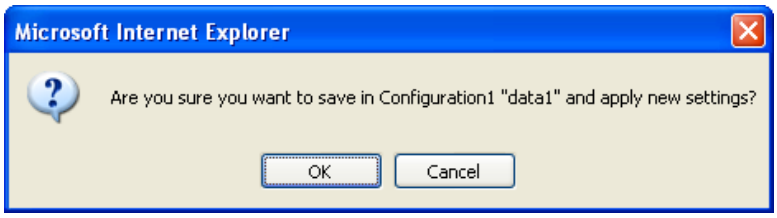


Table 3-7 Data Port Setting Items

	Item	Description	Parameter
Operation settings	Data port	Specify whether to enable the data port.	- Enable - Disable (Default)
	Operation mode	Specify the operation mode of the data I/O port at power-on.	- TCP server mode (bidirectional) (Default) - TCP server mode (receiving only) - TCP client mode (bidirectional)
	Destination IP address	IP address of data communication destination in TCP client mode.	Other than 0.0.0.0 (Default: 0.0.0.0)
Port number settings	Server mode	Own port number in server mode	1024 to 64000 (Default: 6000)
	Client mode	Own port number in client mode	0 or 1024 to 64000 (Default: 0) * If o is specified, a port number from 1024 to 4096 is automatically selected.
		Destination port number in client mode	1024 to 64000 (Default: 6000)
RS-232C settings	Timeout	Timeout value for reception (in ms)	20 to 200 (Default: 20)
	Delimiter code 1	Delimiter code (hexadecimal code)	00 to ff or Blank (no delimiter) (Default: Blank)
	Delimiter code 2	Delimiter code (hexadecimal code)	00 to ff or Blank (no delimiter) (Default: Blank)
	Baud rate	Communication speed	1200/2400/4800/9600 (Default) /19200/38400 bps
	Bit length	Character size	7 bits or 8 bits (Default)
	Parity	Parity	None (Default), Odd or Even
	Stop bit	Stop bit setting	1 bit (Default) or 2 bits
	Flow control	Flow control setting	None (Default), RS or CS

Table 3-8 Operation Modes

	Operation mode	Description
(1)	TCP server mode (bidirectional)	Bidirectional data communication is performed between the data port (LSD: RS-232C) and another device connected via the IP network. IP-9500e Series waits, at the specified port number, for access through socket connection from the destination device. (IP address setting is not required.)
(2)	TCP server mode (receiving only)	Data received from another device connected via the IP network is output to the data port. Data received from the data port is not sent to the destination. IP-9500e Series waits, at the specified port number, for access through socket connection from the destination device. (IP address setting is not required.)
(3)	TCP client mode (bidirectional)	Bidirectional data communication is performed between the data port and another device connected via the IP network. IP-9500e Series sets up a socket connection through the specified port to the device with the specified IP address.

* The following combinations of modes are available for data communication between IP-9500e Series:

(1) <-> (3)

(2) <-> (3)

3.2.6 Intercom

*** Intercom is a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuration Data.**

This setup is performed to enable bidirectional voice communication with a destination device on the IP network by connecting the voice port (RJ-25) located on the front of IP-9500e Series to external equipment with the dedicated cable.

Click INTERCOM in the left frame of the Web screen. The intercom window appears in the right frame, where you can set parameters for intercom with the counterpart device via the IP network. Make the required settings by referring to **Table 3-9 Intercom Setting Items**.

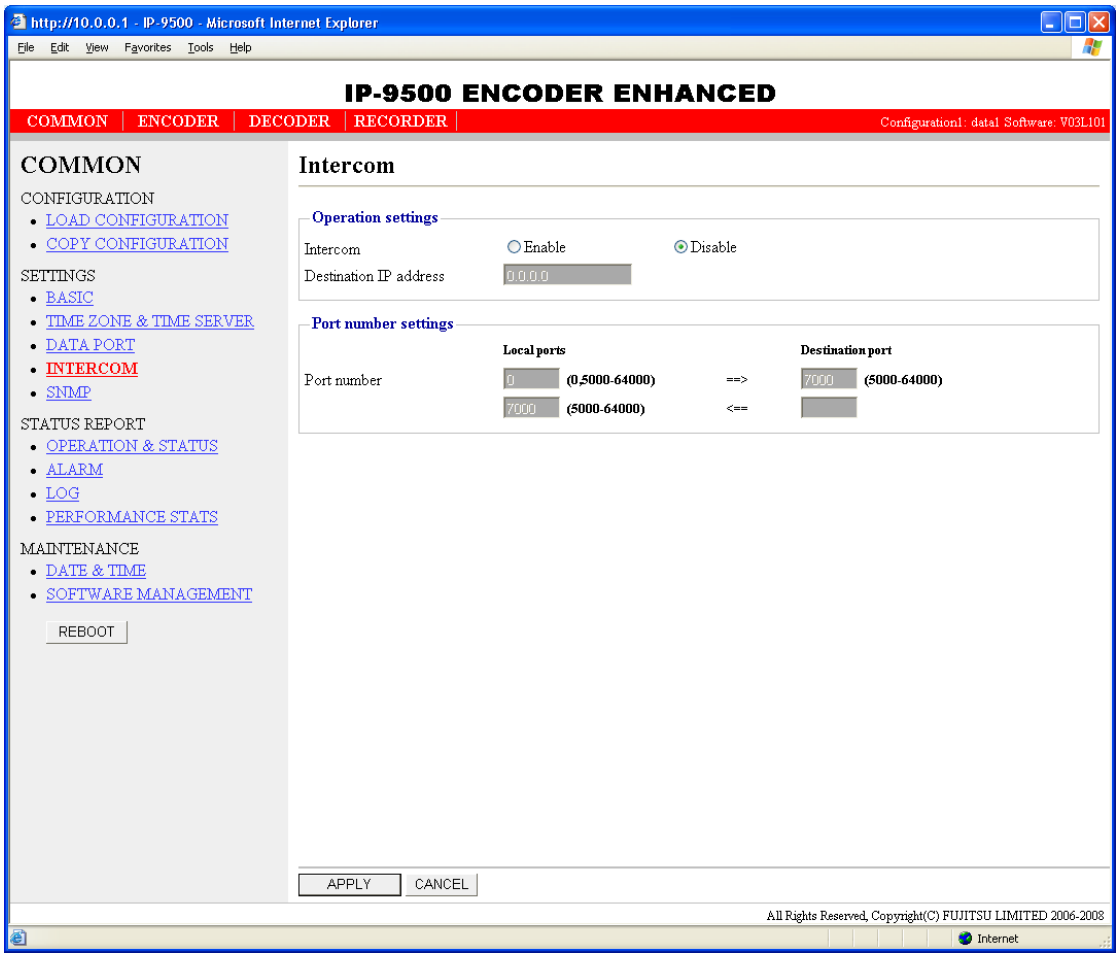


Figure 3-11 Intercom Window

After the completion of the settings, click the APPLY button. The message below appears. Click OK to apply the settings. * Reboot is not required.

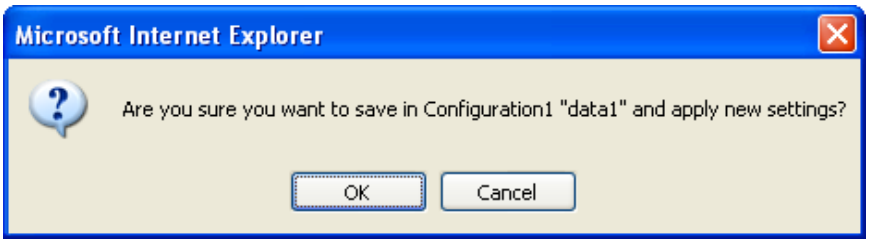


Table 3-9 Intercom Setting Items

	Item	Description	Parameter
Operation mode settings	Intercom	Specify whether to enable intercom.	- Enable - Disable (Default)
	Destination IP address	Destination IP address of intercom	Other than 0.0.0.0 (Default: 0.0.0.0)
Port number setting	Port number	Set the own port number to send.	0 or 5000 to 64000 (Default: 0) * If 0 is specified, a port number from 1024 to 4096 is automatically selected.
		Set the destination port number to send.	1024 to 64000 (Default: 7000)
		Set the own port number to receive.	1024 to 64000 (Default: 7000)

⚠ CAUTION

The intercom function is a simple function to be used for voice communication between operators during streaming and is not an interface provided for broadcasting.

⚠ CAUTION

The voice interruption occurs only occasionally while the recording function is activated.

3.2.7 SNMP

*** SNMP is a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuration Data.**

Click SNMP in the left frame of the Web screen. The SNMP window appears in the right frame, where you can set parameters for SNMP with the counterpart device via the IP network. Make the required settings by referring to **Table 3-10 SNMP Setting Items**.

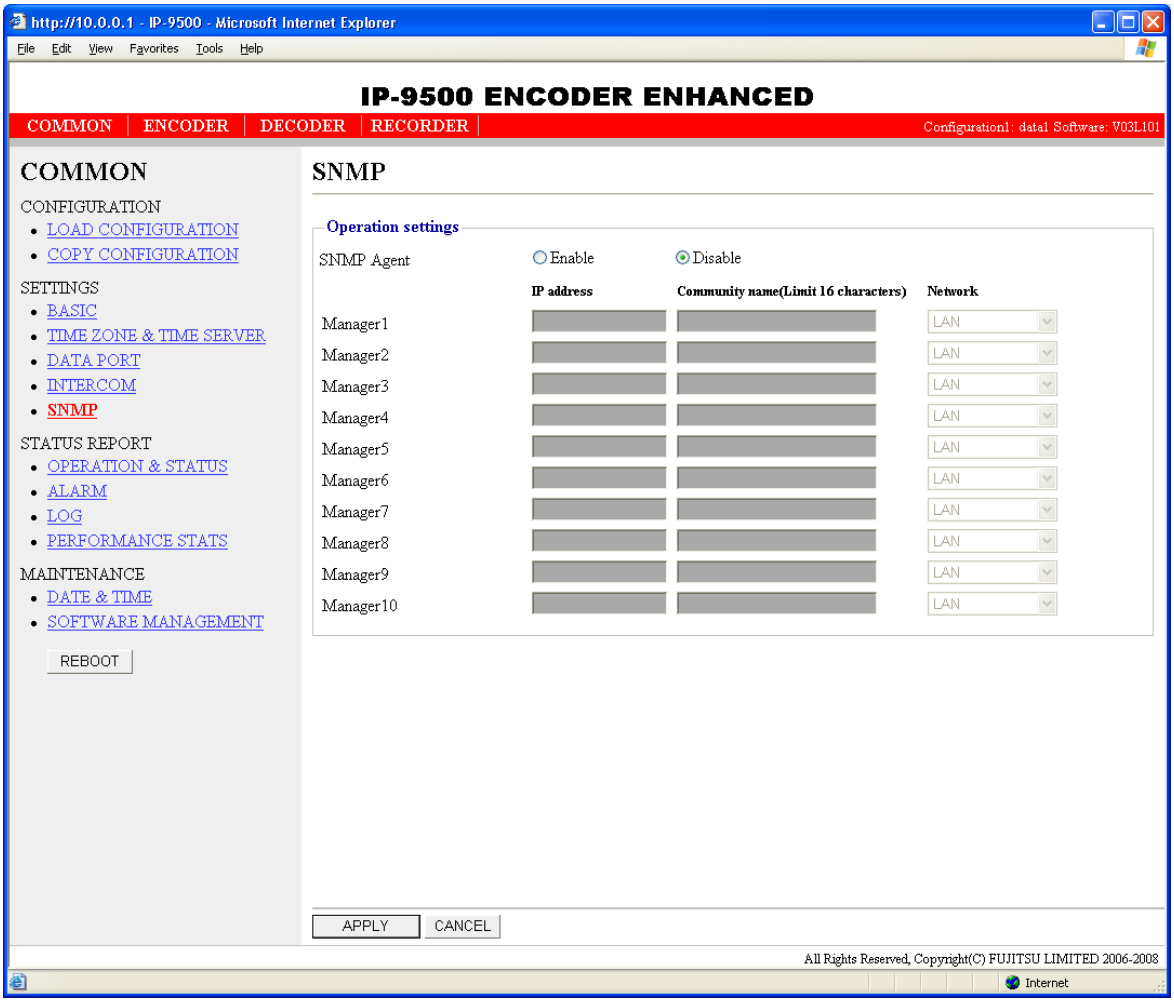


Figure 3-12 SNMP Window

After the completion of the settings, click the APPLY button. The message below appears. Click OK to apply the settings. * Reboot is not required.

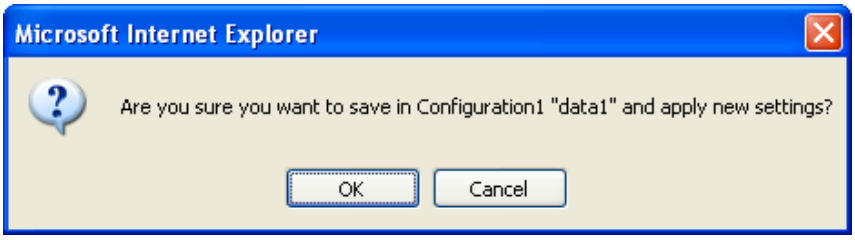


Table 3-10 SNMP Setting Items

Item		Description	Parameter
SNMP Agent		Specify whether to enable SNMP agent.	- Disable (Default) - Enable
Manager #N	IP address	Set IP address of SNMP manager. (Max. 10 managers can be registered.)	IP address
	Community	Specify the community name to accept the SNMP request from the SNMP manager.	Alphanumeric 16 characters
	Network	Specify the gateway to communicate with SNMP manager .	- LAN (Default) - CONSOLE

3.2.8 Operation & Status (Common)

Click OPERATION & STWATUS in the left frame of the Web screen. The Operation & Status window appears in the right frame, where you can check the status of equipment operation such as the state of LAN operation. For details, see **Table 3-11 Operation & Status Display Items**.

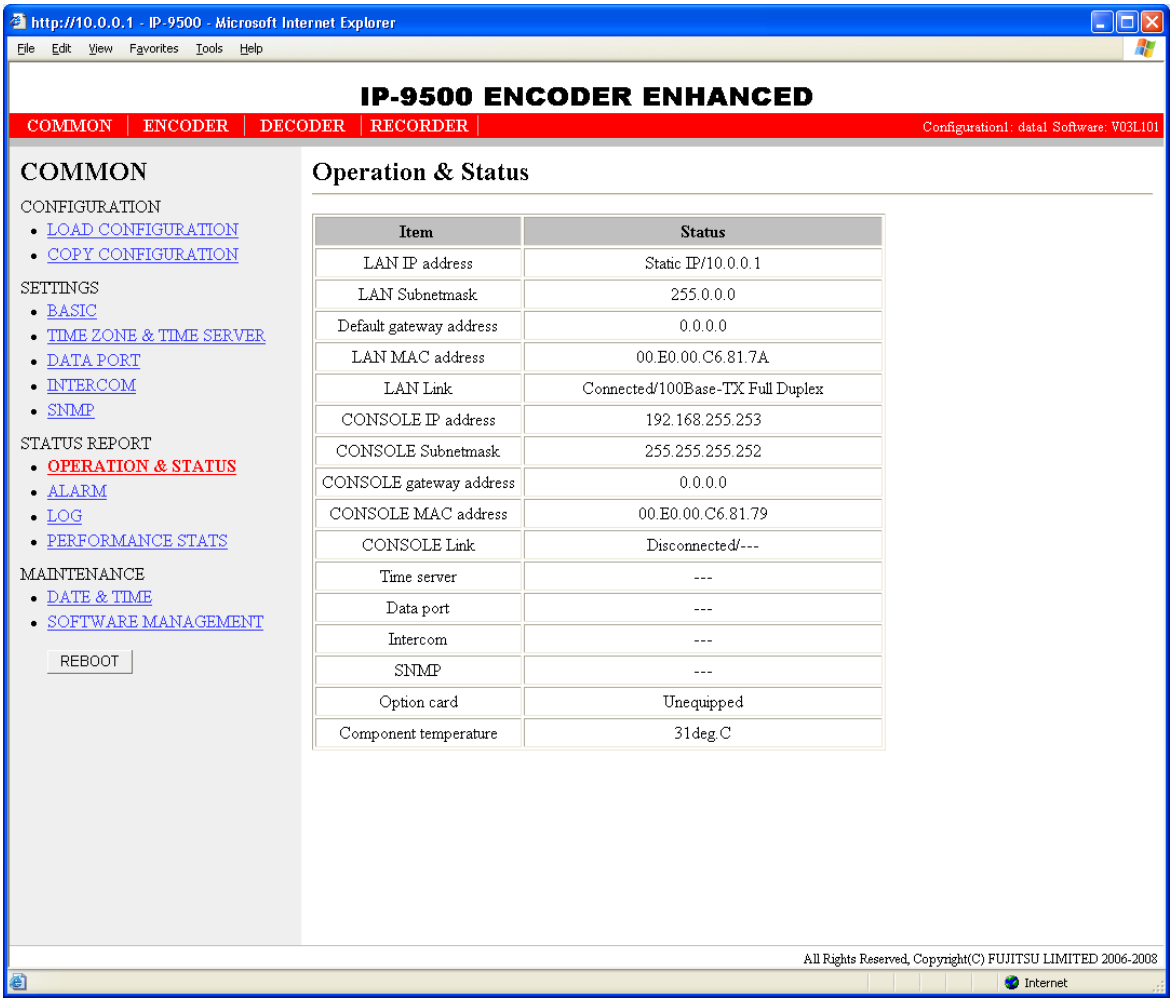


Figure 3-13 Operation & Status Window

Table 3-11 Operation & Status Display Items

Item		Display
LAN	IP address mode/ IP address	**{DHCP / PPPoE / Static IP}** Displays the IP address acquisition mode.
		Displays the IP address in operation.
	Subnetmask	Displays the subnet mask.
	Default gateway address	Displays the gateway address.
	MAC address	Displays the MAC address.
	LINK/LAN operation status	**{Connected / Disconnected}** Displays the LINK status.
		{1000Base-T Full Duplex / 1000Base-T Half Duplex / 100Base-TX Full Duplex / 100Base-TX Half Duplex / 10Base-T Full Duplex / 10Base-T Half Duplex} Displays the LAN interface operation status.
CONSOLE	IP address	Displays the IP address in operation.
	Subnet mask	Displays the subnet mask.
	Gateway address	Displays the gateway address.
	MAC address	Displays the MAC address.
	LINK/LAN operation status	**{Connected / Disconnected}** Displays the LINK status.
		{1000Base-T Full Duplex / 1000Base-T Half Duplex / 100Base-TX Full Duplex / 100Base-TX Half Duplex / 10Base-T Full Duplex / 10Base-T Half Duplex} Displays the LAN interface operation status.
Time server		**{Normal / Fault / Synchronization failure/ ---}** Displays the status of synchronization with the specified time server.
Data port		**{Normal / Fault / ---}** Displays whether an error has occurred during data communication. **{Operation mode}** Displays the operation mode of the current data port communication. **{IP address}** Displays the destination IP address of the current data port communication. - TCP server mode / TCP server mode (receiving only) Displays the communication destination IP address only when a connection is set up. (Displays 0.0.0.0 when no communication is set up.) - TCP client mode Displays the connection destination IP address. **{Port number}** Displays the port number of the current data port communication. - TCP server mode / TCP server mode (receiving only) Displays the connection destination port number only when a connection is set up. (Displays 0 when no communication is set up.) - TCP client mode Displays the wait port number on the destination device.
Intercom		**{Normal / Fault / ---}** Displays the receiving status of intercom. **{IP address}** Displays the destination IP address of the current intercom. **{Port number}** Displays the destination port number of the current intercom.
SNMP		**{Normal / ---}** Display the status of the SNMP agent.
Option card		**{DVB-ASI equipped / Unequipped / Fault / Unknown}** Displays the status of the option card.
Equipment temperature		Displays the internal temperature of the equipment.

3.2.9 Alarm

Click ALARM in the left frame of the Web screen. The Alarm window appears in the right frame, where you can check the alarm list. For details, see **Table 3-12 Alarm List**.

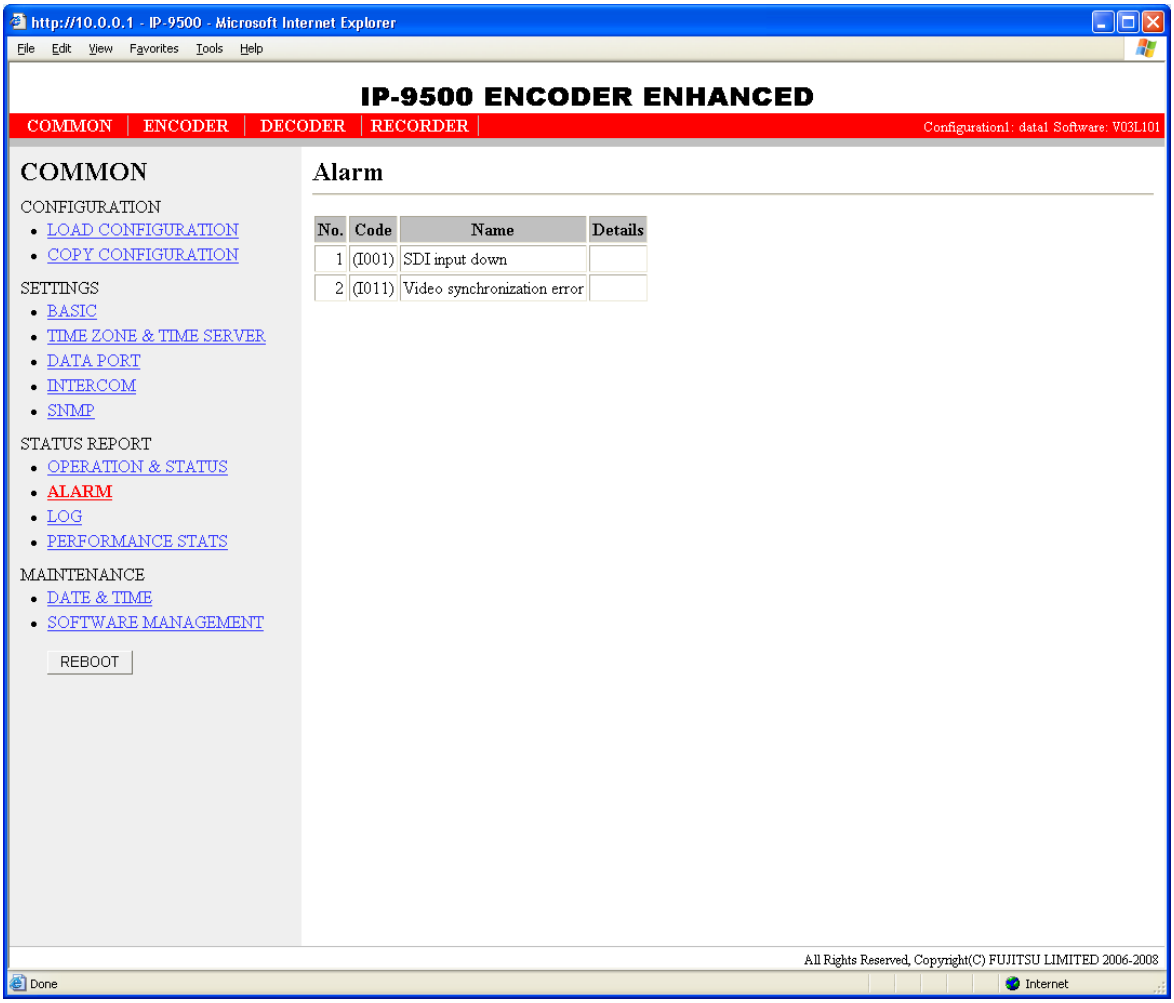


Figure 3-14 Alarm Window

Table 3-12 Alarm List

Error No.	Error information	Description
I001	HD-SDI input down	HD/SD-SDI input signal not detected
I002	HDMI input down	HDMI input signal not detected
I005	DVB-ASI input down	DVB-ASI input signal not detected
I006	Reference clock input down	GENLOCK input PLL synchronization not detected
I011	Video synchronization error	Video input synchronization failure
I015	DVB-ASI synchronization error	DVB-ASI synchronization failure
I016	Reference clock synchronization error	GENLOCK input PLL synchronization failure
I021	Input data error (*9)	Count-up caused by performance statistics error
E001	Power error (*1)	Power failure occurred
E003	Temperature error occurrence (*5)	Extreme temperature (shutdown processing started)
E00A	Flash ROM check sum error (*1)	Operation data error detected in internal Flash ROM
E010	FAN1 error (*2)	FAN1 error (low speed) or stopped
E011	FAN2 error (*2)	FAN2 error (low speed) or stopped
E013	Temperature warning (*2)	Thermal alarm (alarm only) detected
E082	CODEC1 error (*4)	Main CODEC LSI error detected
E083	CODEC2 error (*4)	Sub CODEC LSI error detected
E084	CF card access error (*3)	CF card access failure detected
E085	CF card power error (*3)	Overcurrent to CF card detected
E08B	SUB CPU1 error (*4)	SUB CPU1 error detected
E08C	SUB CPU2 error (*4)	SUB CPU2 error detected
E08E	Clock error (*1)	Clock error or interruption detected
E08F	Memory error (*1)	SDRAM memory check error detected
E090	Downconverter error (*6)	Downconverter error detected
E091	Intercom error (*4)	Intercom error detected
E092	Version mismatch (*3)	Version mismatch between hardware and software
E093	Sending buffer overflow (*7)	Sending buffer overflow occurred
E0A1	Option card error (*3)	Option card failure
E0A4	Option card selection (Unequipped) (*8)	Option card unequipped

If an alarm recovers occurs after an alarm occurrence.

*1: After occurrence of this error, the ALM LED remains on. The device needs to be rebooted to turn off the ALM LED.

*2: The ALM LED blinks while this alarm is active. The LED goes off when the alarm cause is recovered.

*3: After occurrence of this error, the ALM LED remains to blink.

*4: After occurrence of this error, the operation is retired for recovery. If the retry for recovery is unsuccessful, the ALM LED remains on. The device needs to be rebooted to turn off the ALM LED.

*5: If an extreme temperature is detected, all LEDs except LINK/ACT, 100/1000 go on. The device needs to be rebooted to turn off the LEDs.

*6: The ALM LED is on while this alarm is active. The LED goes off when the error cause is recovered.

*7: The ALM LED blinks while this alarm is active. The LED goes off when the alarm cause is recovered. In case that the settings exceeds the capacity of the IP network, please reconfigure them to meet the network requirement

*8: The ALM LED is on while this alarm is active. The LED goes off when the error cause is recovered. The IN DWN LED lights when the DVB-ASI interface is selected at decoder or with the subordination for the reference clock at encoder.

*9: The IN DWN LED is on while this alarm is active. The LED goes off 10 seconds after the error cause is recovered. See 3. 2. 12 Performance Statistics for the details of the statistical information counter about the alarm occurrence.

3.2.10 Log

Click LOG in the left frame of the Web screen. The Log window appears in the right frame, where you can check the alarm log. For details, see Table 3-13 Log Type.

If you click the DELETE ALL LOGS button, the alarm log is detected completely.

* Up to 100 log items per page can be saved to up to 10 pages (1,000 log items in total). Log items exceeding 1,000 items are overwritten beginning with the chronologically oldest items.

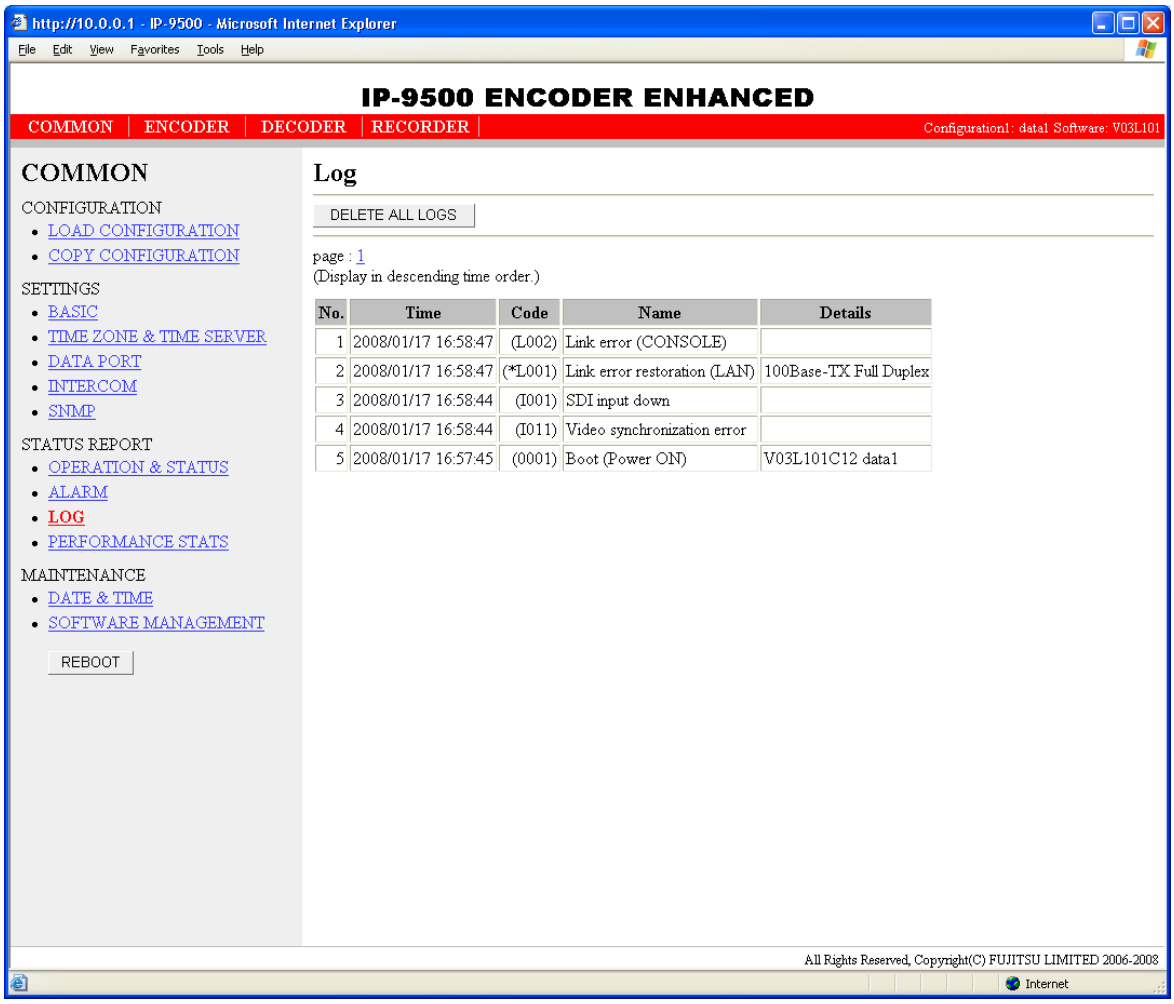


Figure 3-15 Log Window

Table 3-13 Log Type

Error No.	Error Information	Description	RC
0001	Boot (Power ON)	Normal start using the switch	-
0002	Boot (Reset)	Normal start by reboot	✓
0006	Software update	Software update	-
0007	Boot (Restart)	Restarted owing to CPU failure	✓
0008	Boot (Others)	Restarted owing to software failure	✓
0009	Shutdown	Shut down by LCD operation	✓
000A	RTC initialization	RTC battery backup failure	-
000B	CF card initialization	CF card format error	-
000C	Configuration update	Operation data update	-
000D	Basic settings change	Change basic setting	-
000E	Configuration data switching	Switch configuration data	-
L001	LINK error (LAN)	Disconnected from network equipment	-
L002	LINK error (CONSOLE)	Disconnected from network equipment	-
L006	Time server synchronization failure	Time synchronization with the time server failed	-
L009	DHCP connection failure	DHCP disconnection recognized	-
L00A	PPPoE connection failure	PPPoE disconnection recognized	-
L00C	IP address collision	IP address contention between LAN and CONSOLE	-
L00E	DHCP connection update	IP address recognized during DHCP connection	-
L00F	PPPoE connection update	IP address recognized during PPPoE connection	-
I001	SDI input down	HD/SD-SDI input signal not detected	-
I002	HDMI input down	HDMI input signal not detected	-
I005	DVB-ASI input down	DVB-ASI input signal not detected	-
I006	Reference clock input down	GENLOCK input PLL synchronization not detected	-
I011	Video synchronization error	Video input synchronization failure	-
I015	DVB-ASI synchronization error	DVB-ASI synchronization failure	-
I016	Reference clock synchronization error	GENLOCK input PLL synchronization failure	-
I021	Input data error (*9)	Count-up caused by performance statistics error	-
E001	Power error (*1)	Power failure occurred	✓
E003	Temperature error occurrence (*5)	Extreme temperature (shutdown processing started)	✓
E00A	Flash ROM check sum error (*1)	Operation data error detected in internal Flash ROM	✓
E010	FAN1 error (*2)	FAN1 error (low speed) or stopped	✓
E011	FAN2 error (*2)	FAN2 error (low speed) or stopped	✓
E013	Temperature warning (*2)	Thermal alarm (alarm only) detected	✓
E082	CODEC1 error (*4)	HD CODEC LSI error detected	✓
E083	CODEC2 error (*4)	SD CODEC LSI error detected	✓
E084	CF card access error (*3)	CF card access failure detected	✓
E085	CF card power error (*3)	Overcurrent to CF card detected	✓
E08B	SUB CPU1 error (*4)	SUB CPU1 error detected	✓
E08C	SUB CPU2 error (*4)	SUB CPU2 error detected	✓
E08E	Clock error (*1)	Clock error or interruption detected	✓
E08F	Memory error (*1)	SDRAM memory check error detected	✓
E090	Downconverter error (*6)	Downconverter error detected	✓
E091	Intercom error (*4)	Intercom error detected	✓
E092	Version mismatch (*3)	Version mismatch between hardware and software	✓
E093	Sending buffer overflow (*7)	Sending buffer overflow occurred	✓

E0A1	Option card error (*3)	Option card failure	✓
E0A4	Option card selection (Unequipped) (*8)	Option card unequipped	✓

If an alarm recovers occurs after an alarm occurrence, "*" is provided to the left of the relevant error code.

When DVB-ASI interface is used, the relay contact output is available. The column "RS" shows the parameters output to the relay contact interface. When the alarm occurs, the relay contact circuit is closed. It is opened when it recovered.

*1: After occurrence of this error, the ALM LED remains on. The device needs to be rebooted to turn off the ALM LED.
*2: The ALM LED blinks while this alarm is active. The LED goes off when the alarm cause is recovered.
*3: After occurrence of this error, the ALM LED remains to blink.
*4: After occurrence of this error, the operation is retired for recovery. If the retry for recovery is unsuccessful, the ALM LED remains on. The device needs to be rebooted to turn off the ALM LED.
*5: If an extreme temperature is detected, all LEDs except LINK/ACT, 100/1000 go on. The device needs to be rebooted to turn off the LEDs.
*6: The ALM LED is on while this alarm is active. The LED goes off when the error cause is recovered.
*7: The ALM LED blinks while this alarm is active. The LED goes off when the alarm cause is recovered. In case that the settings exceeds the capacity of the IP network, please reconfigure them to meet the network requirement.
*8: The ALM LED is on while this alarm is active. The LED goes off when the error cause is recovered. The IN DWN LED lights when the DVB-ASI interface is selected at decoder or with the subordination for the reference clock at encoder.
*9: The IN DWN LED is on while this alarm is active. The LED goes off 10 seconds after the error cause is recovered. See 3. 2. 12 Performance Statistics for the details of the statistical information counter about the alarm occurrence.

3.2.11 Performance Statistics

Click PERFORMANCE STATS in the left frame of the Web screen. The Performance Statistics window appears in the right frame. Select the port from {Main Encoder (IP), Main Encoder (DVB-ASI), Sub Encoder, Decoder (IP), Decoder (DVB-ASI), Data Port or Intercom} and the interval from {All, Hour, Day, Week or Month} and then click to check the various types of performance data shown in **Table 3-14 Performance Statistics Items**.

Checking the Auto update button enables the performance data to be automatically updated every 10 seconds, and changes the button indication to Manual update, clicking the button again disables automatic updating and changes the button indication back to Auto update.

Clicking the DELETE ALL PERFORMANCE DATA button deletes all performance data.

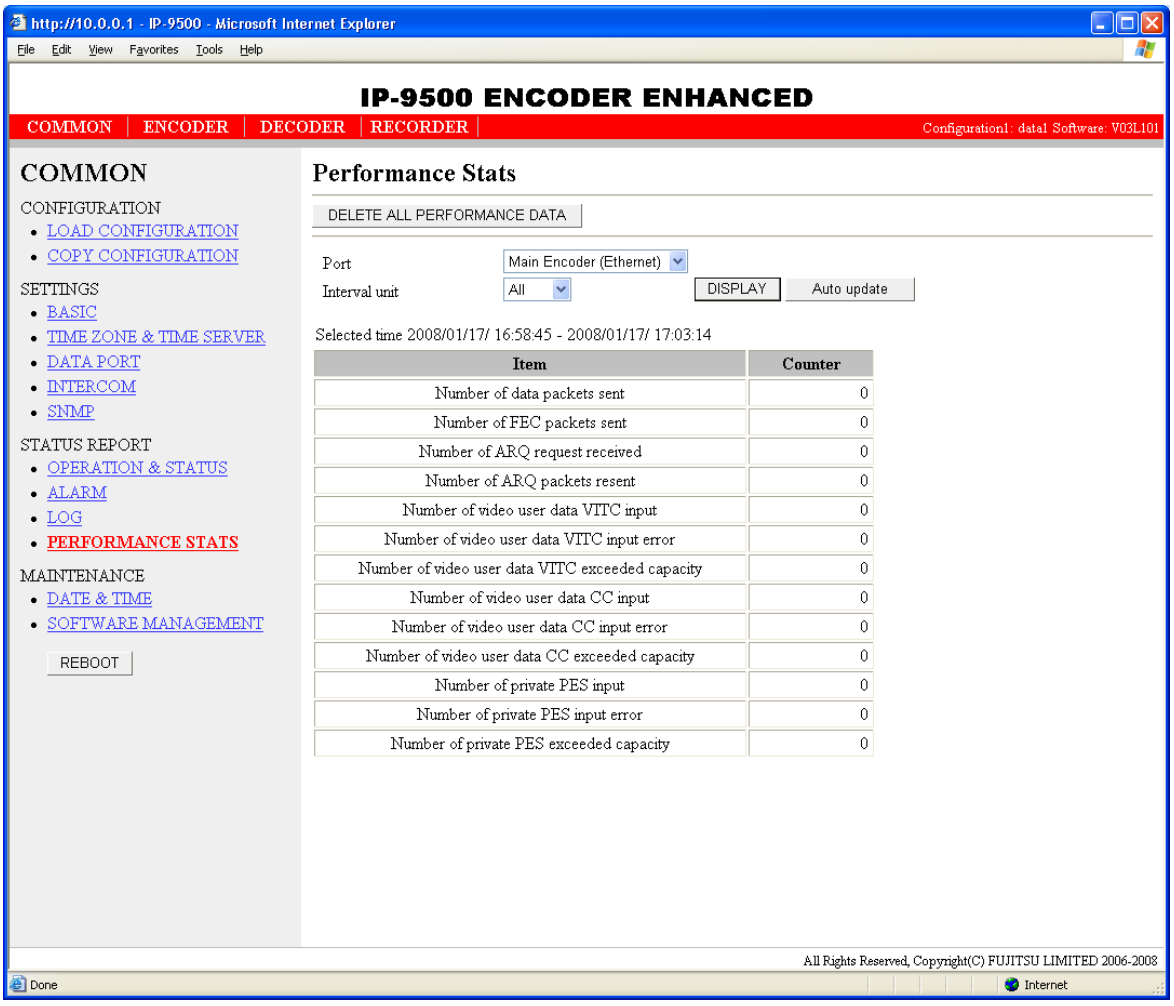


Figure 3-16 Performance Statistics Window

Table 3-14 Performance Statistics Items

Port	Item	Description	Display
Main Encoder (Ethernet)	Number of data packets sent	Displays the number of audio and video data packets sent.	**{-----}** The status of packet transmission can be checked. The counter returns to 0 after it expires. Power-off or clicking the encode start button clears the counter.
	Number of FEC packets sent	Displays the number of FFC packets sent.	**{-----}** The counter restarts counting from 0 after it expires.
* Displayed only for encoder	Number of ARQ request received	Displays the number of ARQ requests received.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of ARQ packets resent	Displays the number of ARQ packets resent.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of private PES input	Displays the number of Ancillary data (Private PES) input.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of private PES input errors (*1)	Displays the number of Ancillary data (Private PES) input errors.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of private PES exceeded capacity (*1)	Displays the number of Ancillary data (Private PES) that have exceeded capacity.	**{-----}** The counter restarts counting from 0 after it expires.
Main Encoder (DVB-ASI)	Number of TS packets sent	Displays the number of TS packets sent.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of private PES input	Displays the number of Ancillary data (Private PES) input.	**{-----}** The counter restarts counting from 0 after it expires.
* Displayed only for encoder	Number of private PES input errors (*1)	Displays the number of Ancillary data (Private PES) input errors.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of private PES exceeded capacity (*1)	Displays the number of Ancillary data (Private PES) that have exceeded capacity.	**{-----}** The counter restarts counting from 0 after it expires.
Sub Encoder	Number of data packets sent	Displays the number of audio and video data packets sent.	**{-----}** The status of packet transmission can be checked. The counter returns to 0 after it expires. Power-off or clicking the encode start button clears the counter.
	Number of FEC packets sent	Displays the number of FFC packets sent.	**{-----}** The counter restarts counting from 0 after it expires.
* Displayed only for encoder	Number of ARQ request received	Displays the number of ARQ requests received.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of ARQ packets resent	Displays the number of ARQ packets resent.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of private PES input	Displays the number of Ancillary data (Private PES) input.	**{-----}** The counter restarts counting from 0 after it expires.
	Number of private PES input errors (*1)	Displays the number of Ancillary data (Private PES) input errors.	**{-----}** The counter restarts counting from 0 after it expires.

	Number of private PES exceeded capacity (*1)	Displays the number of Ancillary data (Private PES) that have exceeded capacity.	{-----} The counter restarts counting from 0 after it expires.
Decoder (Ethernet)	Number of data packets received	Displays the number of audio and video data packets received.	{-----} The status of packet reception can be checked. The counter restarts counting from 0 after it expires. Power-off or clicking the encode start button clears the counter.
	Number of data packets recovered	Displays the number of data packets recovered by the FEC or ARQ error correction function.	{-----} The counter restarts counting from 0 after it expires.
	Number of data packets lost	Displays the number of data packets that were abandoned on the network and could not be received.	{-----} The counter restarts counting from 0 after it expires.
	Number of FEC packets received	Displays the number of FEC packets received.	{-----} The counter restarts counting from 0 after it expires.
	Number of ARQ packets received	Displays the number of data packets received by ARQ.	{-----} The counter restarts counting from 0 after it expires.
* Displayed only for decoder	Number of data packets recovered by FEC	Displays the number of data packets recovered by FEC.	{-----} The counter restarts counting from 0 after it expires.
	Number of ARQ request sent	Displays the number of ARQ request packets sent when a packet was lost.	{-----} The counter restarts counting from 0 after it expires.
	Number of data packets recovered by ARQ	Displays the number of data packets recovered by ARQ.	{-----} The counter restarts counting from 0 after it expires.
	Number of data loss exceeding concealment time	3.5.1 Setting (Decoder) Displays the number of displaying "blue" or "gray" image not receiving data for longer time than the setting value of [Packet non-receiving recognition time].	{-----} The counter restarts counting from 0 after it expires.
	Number of reloading TS stream	Displays the number of reloading TS stream without packets recovery because of many packets lost. *In the following situation, the number is counted. 3.5.1 Setting (Decoder) - [ARQ operation] is performed. - When the number of data packets lost is 4000 or more - [ARQ operation] is not performed. - When the number of data packets lost is 24 packets or more.	{-----} The counter restarts counting from 0 after it expires.
	Number of discontinuous PCR (*1)	Displays the number of discontinuous PCR values detected during decoding.	{-----} The counter restarts counting from 0 after it expires.
	Number of video decoding errors (*1)	Displays the number of video decoding errors detected during decoding.	{-----} The counter restarts counting from 0 after it expires.

	Number of audio PES format mismatch	Displays the number of times that an audio PES packet that the decoder does not regard as being applicable to decoding is received. This is counted specifically in the following cases. ・For MPEG-1 Layer 2/MPEG2 AAC -During reception of an audio stream that is not 1PES/1AAU. ・Transparent - During reception of an audio stream that is not 1PES/1AAU. -When the 1AAU active audio ES size has exceeded the threshold value. -When the active audio ES size extracted from the PES header and the size extracted from the audio ES header do not match.	{-----} The counter restarts counting from 0 after it expires.
	Number of audio decoding errors (*1)	Displays the number of audio decoding errors detected during decoding.	{-----} The counter restarts counting from 0 after it expires.
	Number of private PES received (*1)	Displays the number of Private PES packets received.	{-----} The counter restarts counting from 0 after it expires.
	Number of private PES decoding errors (*1)	Displays the number of Private PES errors detected during decoding.	{-----} The counter restarts counting from 0 after it expires.
Decoder (DVB-ASI)	Number of TS packets input	Displays the number of all TS packets input into the decoder (number of packets before PID filtering).	{――――} The counter restarts counting from 0 after it expires.
	Number of TS packets received	Displays the number of TS packets subject to decoding (number of packets before PID filtering).	{――――} The counter restarts counting from 0 after it expires.
	Number of data loss exceeding concealment time	3.5.1 Setting (Decoder) Displays the number of displaying “blue” or “gray” image not receiving data for longer time than the setting value of [Packet non-receiving recognition time].	{――――} The counter restarts counting from 0 after it expires.
	Number of discontinuous PCR (*1)	Displays the number of discontinuous PCR values detected during decoding.	{――――} The counter restarts counting from 0 after it expires.
	Number of video decoding errors (*1)	Displays the number of video decoding error detected during decoding.	{――――} The counter restarts counting from 0 after it expires.

* Displayed only for decoder	Number of audio PES format mismatch	Displays the number of times that an audio PES packet that the decoder does not regard as being applicable to decoding is received. This is counted specifically in the following cases. ・For MPEG-1 Layer 2/MPEG2 AAC -During reception of an audio stream that is not 1PES/1AAU. ・For Transparent - During reception of an audio stream that is not 1PES/1AAU. -When a 1AAU active audio ES size has exceeded the threshold value. -When the active audio ES size extracted from the PES header and the size extracted from the audio ES header do not match.	{−−−−−} The counter restarts counting from 0 after it expires.
	Number of audio decoding errors (*1)	Displays the number of audio decoding errors detected during decoding.	{−−−−−} The counter restarts counting from 0 after it expires.
	Number of private PES received	Displays the number of Private PES packets received.	{−−−−−} The counter restarts counting from 0 after it expires.
	Number of private PES decoding errors (*1)	Displays the number of Private PES errors detected during decoding.	{−−−−−} The counter restarts counting from 0 after it expires.
Data port	Number of data received in byte on RS-232C	Displays the number of data bytes received through the RS-232C port.	{-----} The counter restarts counting from 0 after it expires.
	Number of data sent in byte on RS-232C	Displays the number of data bytes sent to the RS-232C port.	{-----} The counter restarts counting from 0 after it expires.
	Number of data received in byte on LAN port	Displays the number of data bytes received through the LAN port.	{-----} The counter restarts counting from 0 after it expires.
	Number of data sent in byte on LAN port	Displays the number of data bytes sent to the LAN port.	{-----} The counter restarts counting from 0 after it expires.
Intercom	Number of data packets received	Displays the number of intercom packets received.	{-----} The counter restarts counting from 0 after it expires.
	Number of data packets lost	Displays the number of intercom packets that were abandoned on the network and could not be received.	{-----} The counter restarts counting from 0 after it expires.
	Number of data packets dumped	Displays the number of packets that were inconsistent in terms of formats or that were abnormal.	{-----} The counter restarts counting from 0 after it expires.
	Number of data packets sent	Displays the number of intercom packets sent.	{-----} The counter restarts counting from 0 after it expires.
	Number of packets lost at sending	Displays the number of intercom packets that could not be sent.	{-----} The counter restarts counting from 0 after it expires.

Note: Each counter, consisting of 32 bits, can count up to 4294967295.

* 1. In case the count-up is made in this counter, LED (IN DWN) blinks for 10 seconds, I021 (Input data error) is saved as the log information.

3.2.12 Date & Time

Two types of setting modes are available. In one mode, you can enter arbitrary date and time data. In another mode, you can instruct the system to synchronize with the time server on the network.

Click DATE & TIME in the left frame of the Web screen. The Date & Time window appears in the right frame, where you can set the date and time of the clock built in IP-9500e Series.

Clicking the APPLY PC TIME button sets the date and time of the PC. Clicking the MANUAL UPDATE button after entering an arbitrary date and time sets the specified date and time.

Clicking the SYNCHRONIZE WITH TIME SERVER button promptly adjusts the time with the time server specified in Section 3.2.3, "Time Zone & Time Server." This function is enabled only when "Enable" is specified for Auto Synchronization.

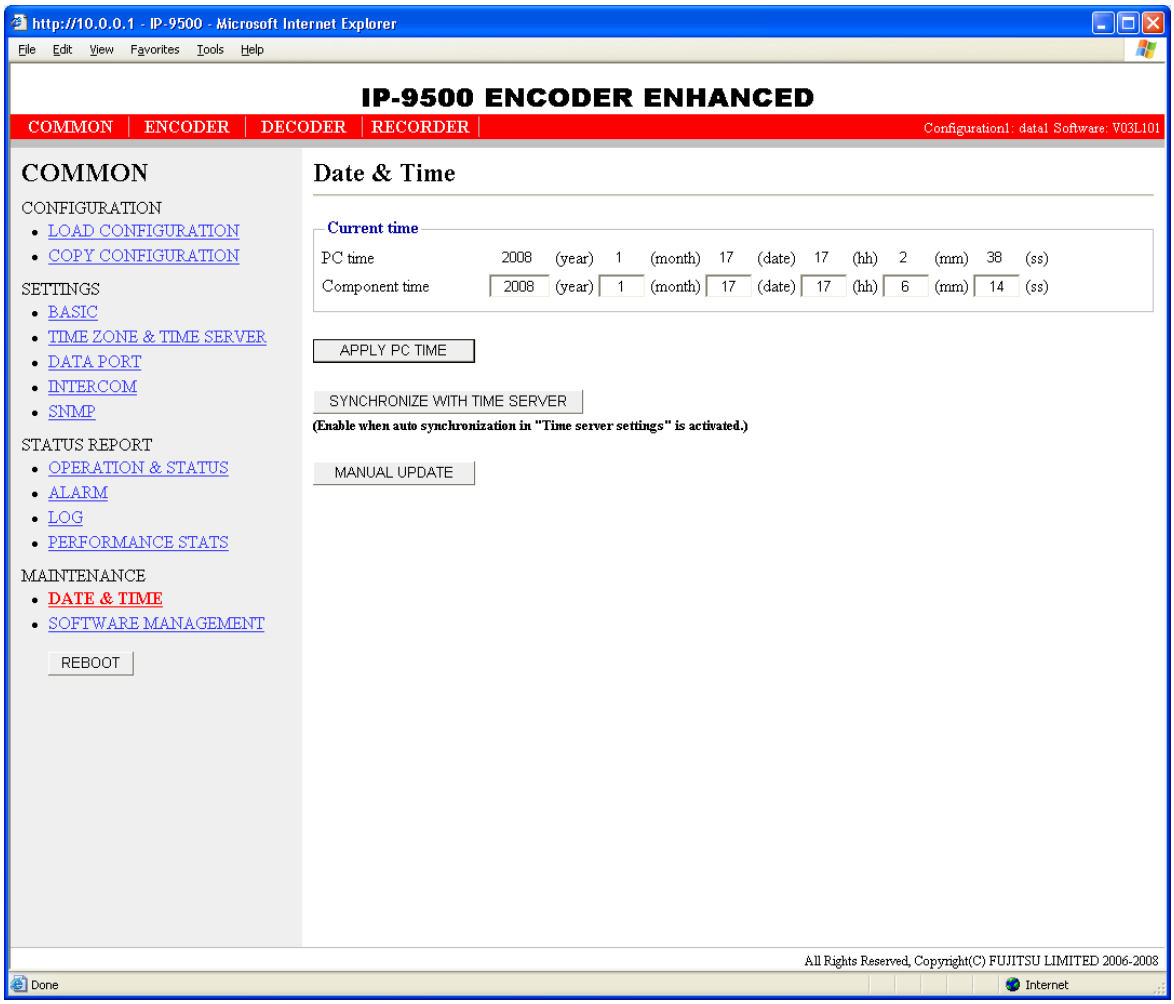


Figure 3-17 Date & Time Window Main Encoder (IP)

3.2.13 Software Management

Click SOFTWARE MANAGEMENT in the left frame of the Web screen. The Software Management window appears in the right frame, where you can install software or restore, save or delete configuration data.

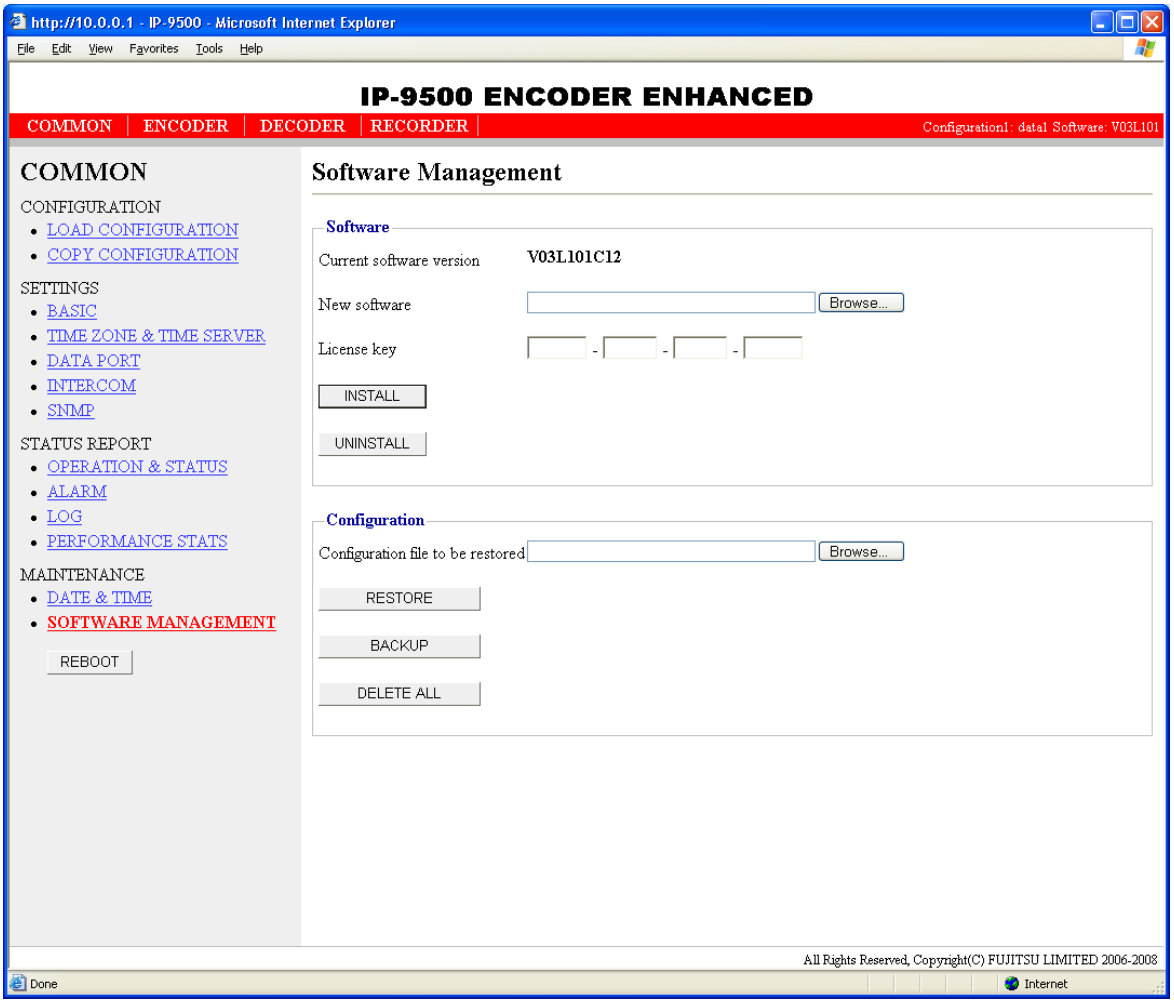


Figure 3-18 Software Management Window Main Encoder (DVB-ASI)

■ Software

Specify the new file to be installed, enter the license key and click the INSTALL button to start installing the software.

Clicking the UNINSTALL button starts uninstalling the software.

■ Configuration

● Configuration Restoration

Specify the file containing all configuration data and then click the RESTORE button to restore all the configuration data, which was saved previously, to IP-9500e Series.

● Configuration Backup

All the configuration data currently stored in IP-9500e Series can be backed up to the PC by clicking the BACKUP button.

● Deletion of the configuration data

All the configuration data currently stored in IP-9500e Series can be initialized by clicking the DELETE ALL button. This operation also resets information including the IP address to the state before shipment from the factory.

Table 3-15 Software Management Items

	Item	Description
Software	Current software version	Displays the software version. V-- L-- C-- is displayed immediately after shipment from the factory.
	New software	Specify the full path of the file to be installed. The Browse button can also be used to select the file.
	License key	Enter the license key attached to the software.
Configuration	Configuration file to be restored	To restore all the configuration data, specify the full path of the file. The Browse button can also be used to select the file.
	RESTORE	Use this button to restore all the configuration data. This button is enabled when a file name is specified in the "Configuration file to be restored" field.
	BACKUP	Use this button to back up all the configuration data from the IP-9500e Series to the PC.
	DELETE ALL	Use this button to delete all the configuration data from the IP-9500e Series. This operation resets all the configuration data to the default.

⚠ CAUTION

If all the configuration data is changed (restored or deleted), the IP address, subnet mask, and gateway may be changed. Note that this may cause an unexpected problem in your network.

⚠ CAUTION

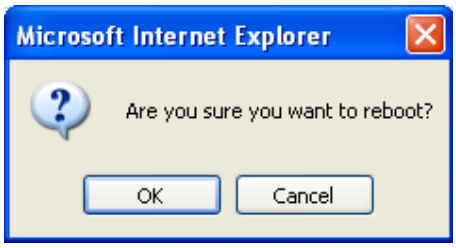
Do not turn power off or press the reset switch while all the configuration data is being changed (being restored or deleted). Doing so may prevent IP-9500e Series from starting.

⚠ CAUTION

If you access another Web screen while all the configuration data is being changed (being restored or deleted), you may lose information on the progress of the changing.

3.2.14 Reboot

Click the REBOOT button in the left frame of the Web screen. The dialog box shown below appears for confirmation. Click the OK button to reboot.



3.3 Encoder

3.3.1 Setting (Encoder)

*** Settings is a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuration Data.**

Set parameters related to encoding. Make the required settings by referring to **Table 3-16 Encoder Setting Items and Table 3-17 Main/Sub-encoder System Bit Rate Setting Range**.

The same screen is displayed for Setup, Main Encoder, and Sub Encoder, which are located in the frame on the left side of the Web screen. By clicking on the tab for each, the settings screen for each is displayed at the top of the frame on the right side.

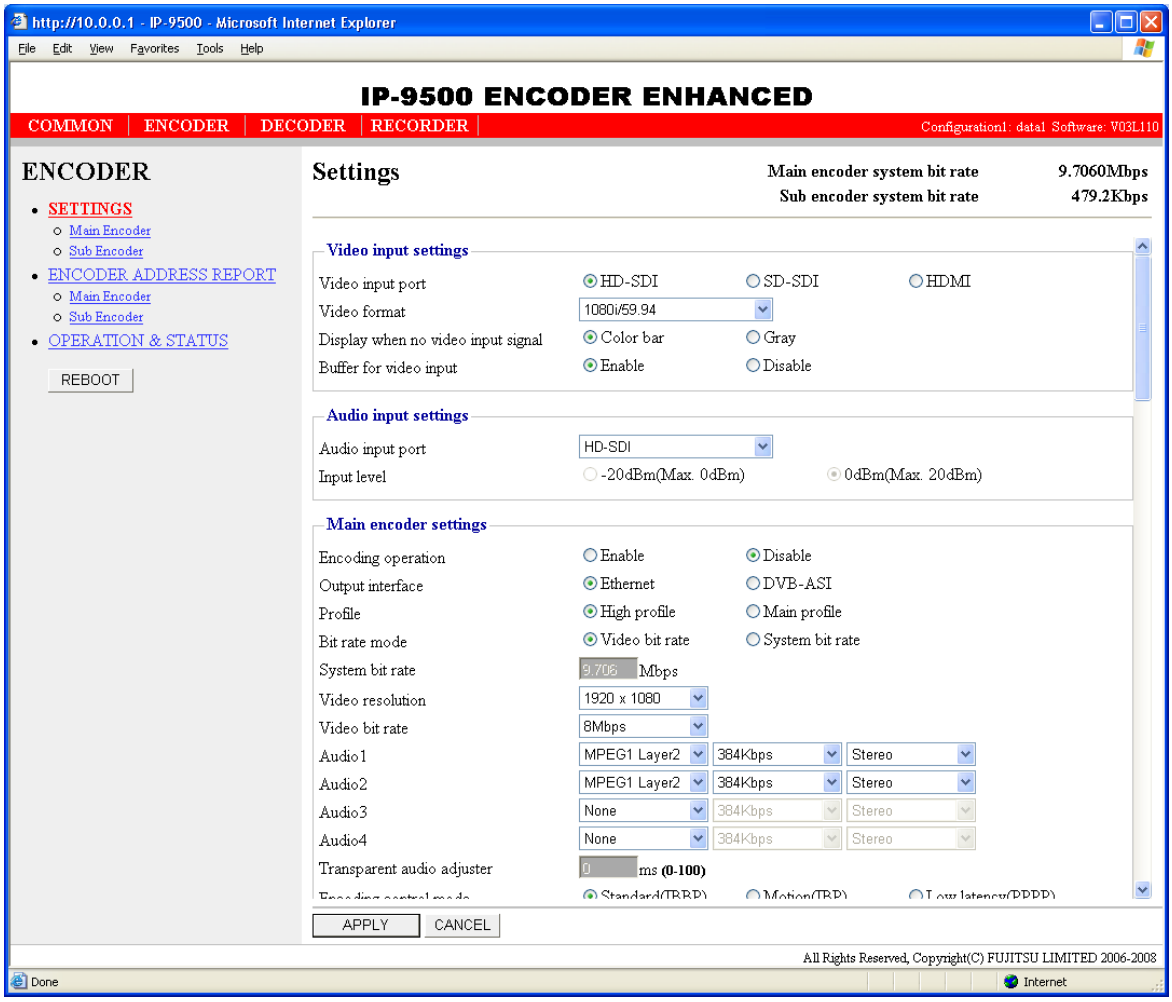


Figure 3-19 Settings Screen (Encoder)

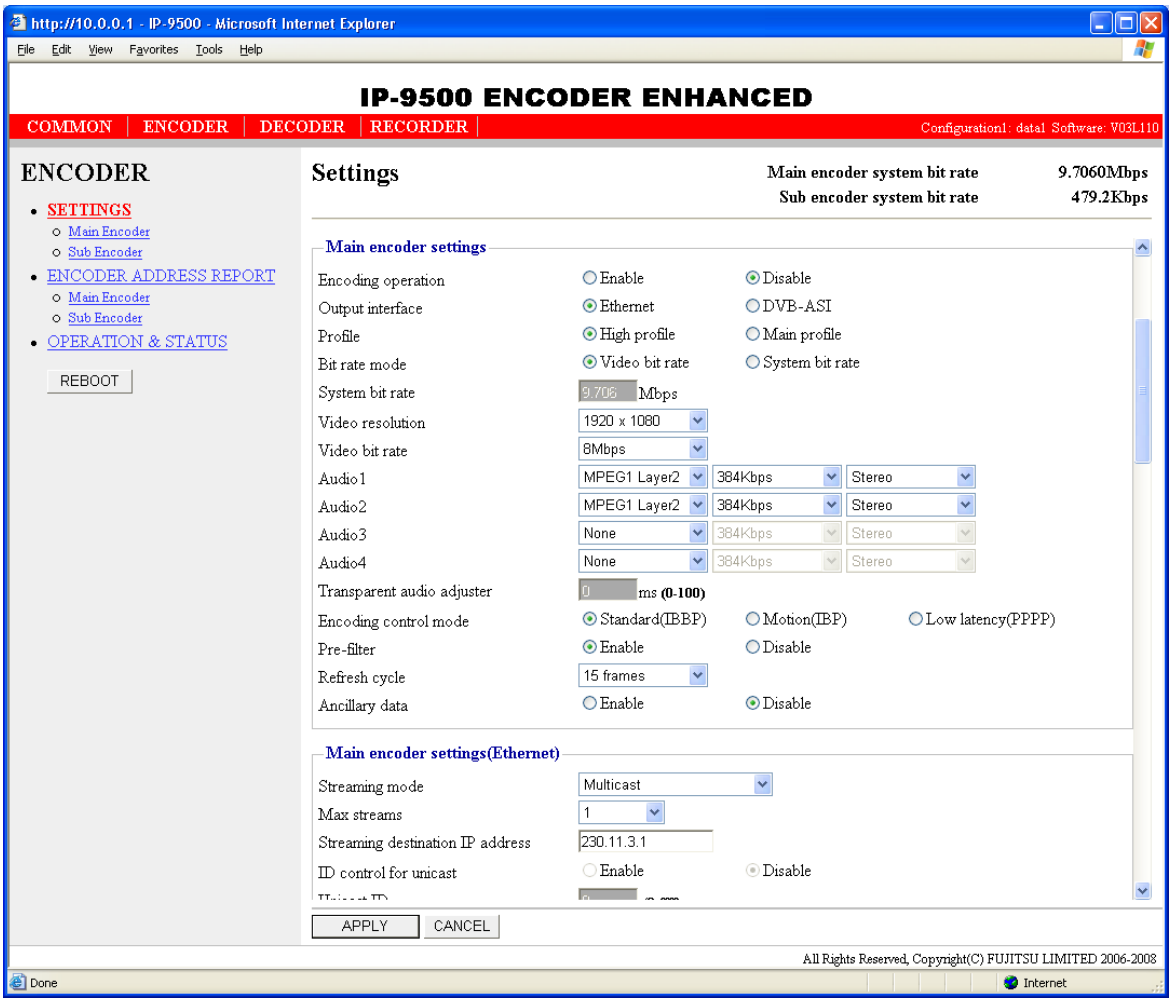


Figure 3-20 Settings Screen (Main Encoder) 1

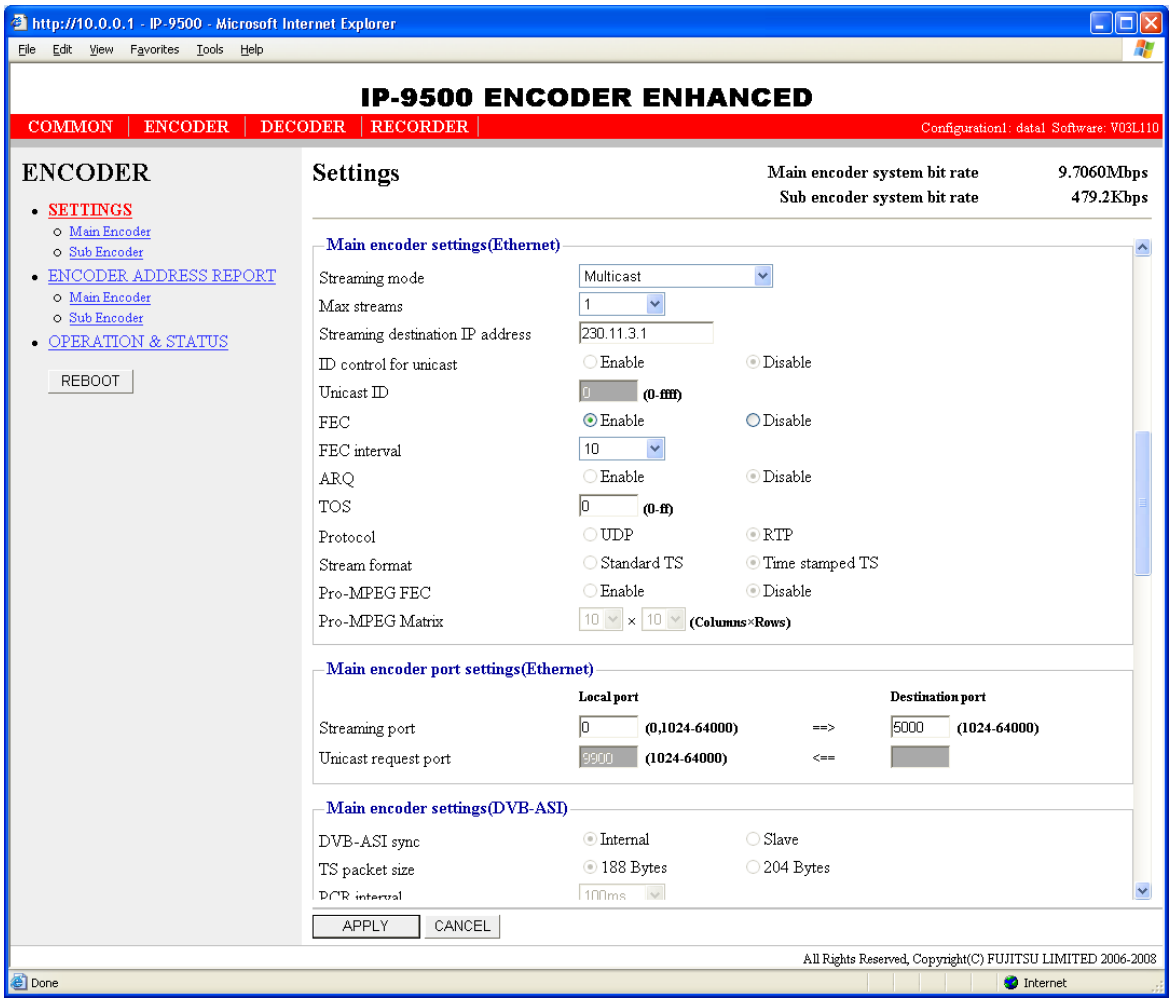


Figure 3-21 Settings Screen (Main Encoder) 2

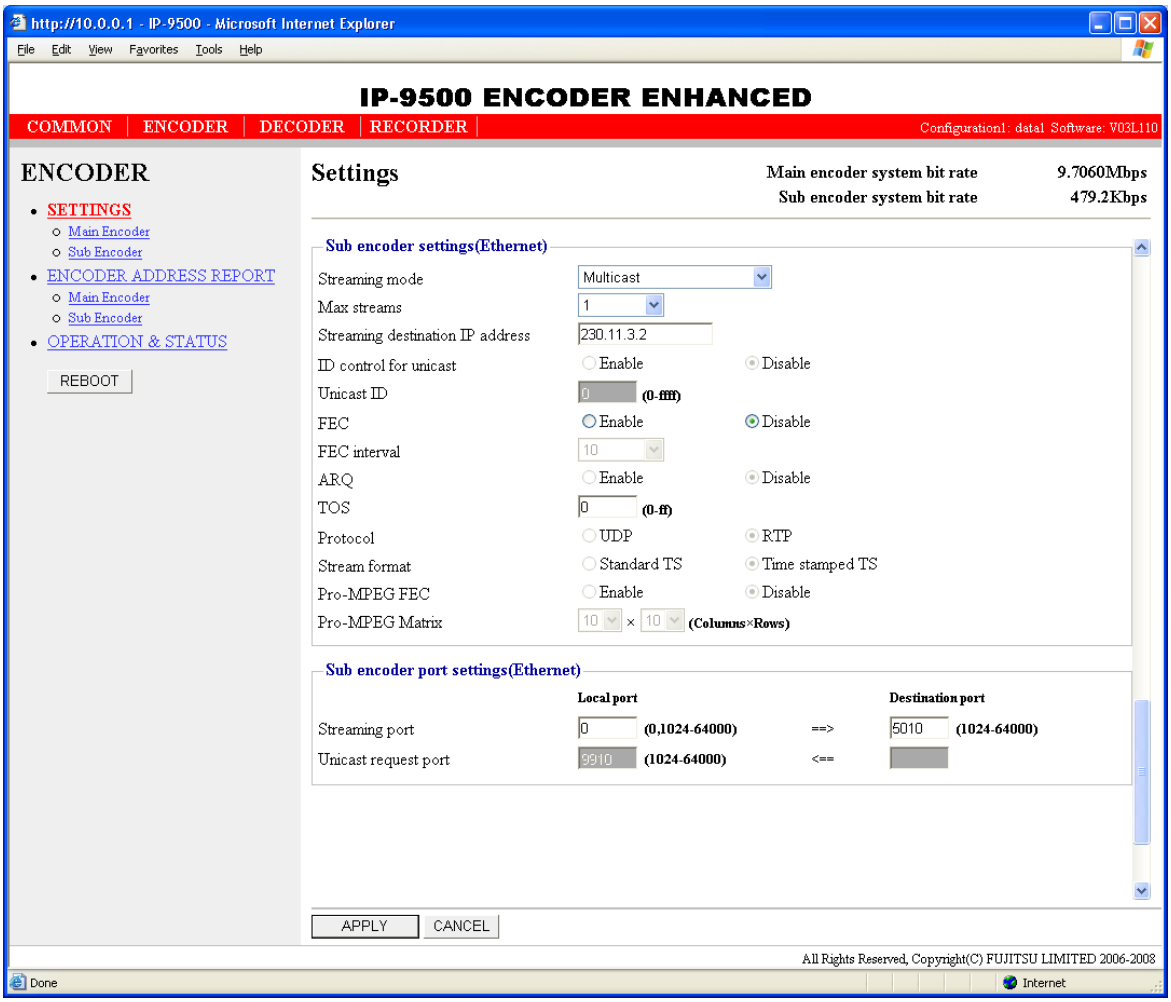


Figure 3-22 Settings Screen (Sub Encoder)

After the completion of the settings, click the APPLY button. The message below appears. Click OK to apply the settings. * Reboot is not required.

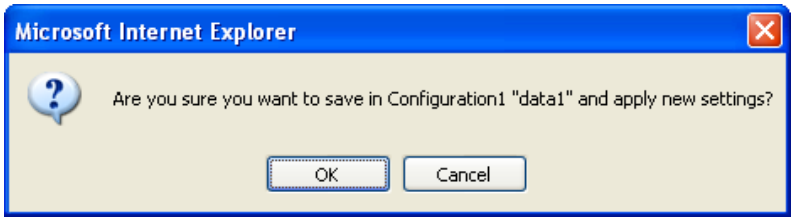


Table 3-16 Encoder Setting Items

Item		Description	Parameter
Main encoder System bit rate		Displays the system bit rate for the main encoder that is currently set.	————
Sub encoder System bit rate		Displays the system bit rate for the sub encoder that is currently set.	————
Video input settings	Format selection	Select between interlaced (1080i) and progressive (720p).	・1080i (Default) ・720p ・480i/576i
	Video input format	Select the video input format. The contents that can be selected depend on the format selection status.	When 1080i is selected: ・HD-SDI (1080i/59.94Hz) (Default for IP-9500e) ・HD-SDI (1080i/50Hz) ・HDMI (1080i/59.94Hz) ・HDMI (1080i/50Hz) When 720p is selected: ・HD-SDI (720p/59.94Hz) ・HD-SDI(720p/50Hz) ・HDMI(720p/59.94Hz) ・HDMI(720p/50Hz) When 480i/576i is selected ・SD-SDI(480i/59.94Hz) (Default for IP-9000e) ・SD-SDI(576i/50Hz) ・HDMI(480i/59.94Hz) ・HDMI(576i/50Hz) * The encrypted signal cannot be input because the HDCP is not supported.
	Display when no video input signal	Set the image to be sent when the vide input signal is interrupted.	- Color bars (Default) - Gray
	Buffer for video input	Set the buffer for video input. If Enable is set, resistance to video input errors is improved.	・Enable (Default) ・Disable

Audio input settings	Audio input	Set the analog audio input format. The contents that can be selected depend on the status of the video input format.	When HD-SDI is selected: ・HD-SDI (Default for IP-9500e) ・Analog When HDMI is selected ・HDMI ・Analog When 480i/576i and SD-SDI are selected ・SD-SDI（Default for IP-9000e） ・Analog When 480i/576i and HDMI are selected ・HDMI ・Analog
	Input level	Set the audio input level. Settings are possible only when analog is selected for the audio input format.	- -20dBm (0dBm max） - 0dBm (20dBm max) (Default)
Main encoder settings	Encoding operation	Specify whether to enable encoding upon starting and at the present moment.	- Enable - Disable (Default).
	Output interface	Specify the output interface.	- Ethernet (Default) - DVB-ASI * * When DVB-ASI card is installed
	Profile	Set the profile of video encoding format.	- High profile (Default) - Main profile * When you select “1080i/59.94,” “1080i/50,” “720p/59.94,” or “720p/50” in [Video input format]. * When you select “480i/59.94” or “576i/50” in [Video input format], the main profile is automatically selected.
	Bit rate mode	Set the rate specification.	- Video bit rate (Default) - System bit rate
	System bit rate	Set the system bit rate.	-Up to 43.000Mbps when “1920x1080,” “1440x1080," “960x1080,” “1280x720,” “960x720” or “640x720” of [Video resolution] is selected. - Up to 24.000Mbps when “720x480” or “720x576” of [Video resolution] is selected. * When the “System rate” is selected in the [Rate specification].
	Video resolution	Set the video resolution for encoding. The contents that can be selected depend on the status of the format selection.	When 1080i is selected: ・1920x1080 (Default) ・1440x1080 ・960x1080 When 720p is selected ・1280x720 ・960×720 ・640x720 When 480i is selected ・720×480 When 576i is selected ・720×576

Main encoder settings	Video bit rate	Set the video bit rate when the [Rate specification] is the [Video bit rate]. The contents that can be selected depend on the status of [Video resolution].	When the [Rate Specification] is the [Video bit rate] and [Video resolution] is "1920x1080" or "1280x720": ・6 Mbps ・7 Mbps ・8 Mbps (Default) ・9 Mbps ・10 Mbps ・11 Mbps ・12 Mbps ・14 Mbps ・16 Mbps ・18 Mbps ・20 Mbps ・27 Mbps When the [Rate Specification] is the [Video bit rate] and [Video resolution] is "1440x1080" or "960 × 720" : ・4 Mbps ・5 Mbps ・6 Mbps ・7 Mbps ・8 Mbps ・9 Mbps ・10 Mbps ・11 Mbps ・12 Mbps When the [Rate Specification] is the [Video bit rate] and [Video resolution] is "960x1080" or "640x720": ・4 Mbps ・5 Mbps When the [Rate Specification] is the [Video bit rate] and [Video resolution] is "720x480" or "720x576": ・2 Mbps ・3 Mbps ・4 Mbps ・6 Mbps ・10 Mbps * When the [Rate specification] is the [System rate], the video bit rate assigned for the video is displayed, but cannot be set.

	Audio 1, 2, 3, 4 * You can set the audio formats 1, 2, 3 and 4 separately.	Set the audio 1~4 encoding format, audio rate and mode. The contents that can be selected depend on the [Video input] format status.	Encoding format ・MPEG1 Layer2 (Default) ・MPEG2 AAC ・Transparent ・None * Transparent cannot be selected when HDMI is selected for the video input format. When [Audio encoding format] is "MPEG1 Layer 2": ・384 Kbps (Default) ・256 Kbps ・128 Kbps Audio mode - Stereo (Default) - Dual monaural When [Audio encoding format] is "MPEG2 AAC": ・256 Kbps ・128 Kbps ・ 64 Kbps Audio mode - Stereo When [Audio encoding format] is "Transparent": ・2304 Kbps Audio mode - Stereo When [Audio encoding format] is "None": ・There are no items that can be set.
	Transparent audio adjuster	Adjust output period for transparent audio	0～100 msec 0 (Default)
	Encoding control mode	Set the type of latency.	・ Quality (IBBP) (Default) ・ Motion * (IBP) * suitable for fast-moving video (ex: sport) ・ Low latency * (PPPP) * suitable for low delay live transmission
	Pre-filter	Set whether to use a pre-filter.	・Enable(Default) ・Disable
	Refresh cycle	Set the refresh cycle.	If [Video formats for Video input settings] is "1080i/59.94" or "480i/59.94": ・15 frame (Default) ・30 frame If [Video formats for Video input settings] is "1080i/50" or "576i/50": ・12 frame ・24 frame If [Video formats for Video input settings] is "720/59.94" : ・30 frame ・60 frame If [Video formats for Video input settings] is "720P/50" : ・24 frame ・48 frame

	Ancillary data	Set whether to transmit ancillary data. * Set whether to transmit the ancillary data that uses the private PES of its own format.	- Enable - Disable (Default) * When "Enable" is set, the ancillary data except the sounds multiplexed in the HD/SD-SDI ancillary data area (areas Y and C) are detected and transmitted using the private PES of their own formats. The data can be transmitted from the head line up to the following transmission capacity: Maximum 720Kbps when the [Video input format] is "HD-SDI (1080i/59.94H)" or "HD-SDI (720p/59.94Hz)." Maximum 600Kbps when it is "HD-SDI (1080i/50Hz)" or "HD-SDI (720p/50Hz)." Maximum 720Kbps when it is "SD-SDI (480i/59.94Hz)." Maximum 600Kbps when it is "SD-SDI (576i/50Hz)."
	Streaming mode	Select multicast transmission or unicast (simplex) transmission or unicast transmission.	- Multicast (Default) - Unicast (simplex) : Specifying streaming destination - Unicast : Accepting streaming request
Main encoder settings (Ethernet) These parts can be set when Ethernet is selected for output interface.	Max streams	Set the number of maximum streams. The contents that can be selected depend on the status of system rate.	1 to 4 (System rate is to 5.750Mbps) 1 to 3 (System rate is 5.751 to 7.666Mbps) 1 to 2 (System rate is 7.668 to 11.500Mbps) 1 (System rate is 11.6Mbps or higher) ・Default is 1 * Only "1" can be set when "Multicast" or "Unicast (Specifying streaming destination)" is selected for the [Streaming mode].
	Streaming destination IP address	Set the multicast address for the streaming destination.	224.0.0.0 to 239.255.255.255 (Default: Encoder: 230.11.3.1) Setting the following values is inhibited: 240.0.0.0 to 255.255.255.255 (Class E) 127.0.0.0 to 127.255.255.255 *This parameter can not be set when Unicast is selected for the [Streaming mode].
	ID control for unicast	Specify whether to enable ID checking when a streaming request is received during unicast .	- Enable - Disable (Default)
	Unicast ID	Specify unicast ID when ID control for unicast is enabled.	0000 to ffff (Default: 0000)
	FEC	Specify whether to generate FEC packets.	- Enable (Default) - Disable * Only IP-9500Decoder can receive FEC.
	FEC insertion interval	Set the insertion interval for generating an FEC packet.	4 to 24 (Default: 10) * Only IP-9500 Decoder can receive FEC.
	ARQ	Specify whether to enable ARQ operation.	- Enable - Disable (Default) * This parameter can be set when Unicast is selected for Streaming mode.
	TOS	Set IP packet TOS (Type Of Service) value.	0 to ff (Default value: 0)

	Protocol	Set the transport protocol that transports IP when "multicast" or "unicast (simplex)" in the [Streaming mode] and "Disable" for [FEC] and "RTP" for [Transport protocol] are selected.	- UDP - RTP (Default) * When UDP is selected, [Stream format] is fixed to "TS". * When UDP is selected, the IP-9500 Series cannot receive streaming.
	Stream format	Select the stream format for the MPEG to be turned into IP.	・TS ・Time stamped TS (Default) *This parameter can be set when Multicast is set for Streaming mode and Disable is selected for FEC. *When TS is selected, the IP-9500 Decoder can not receive the streaming.
	Pro-MPEG FEC	Select whether to generate Pro-MPEG FEC packets.	・Enable ・Disable (Default) * This parameter can be set when TS is selected for Stream format.
	Pro-MPEG Matrix	Set the Pro-MPEG's matrix value.	Can be set within a range of 4 to 20 x 4 to 20. (Default: 10×10) * This parameter can be set when Enable is selected for Pro-MPEG FEC. *The value over 100 = NxN cannot be set.
Main encoder port settings (Ethernet) These parts can be set when Ethernet is selected for output interface.	Streaming port	Specify the own device port number used to send streams.	0, 1024 to 64000 (Default: 0) * If 0 is specified, one of the port numbers from 32768 to 61000 is automatically selected.
	Unicast request port	Specify the destination device port number used when streams are sent.	1024 to 64000 (Default: 5000)
Main encoder settings (DVB-ASI) These parts can be set when DVB-ASI is selected for output interface.	DVB-ASI sync	Specify whether to operate internal clock or subordination clock from external.	- Internal (Default) - Subordination
	TS packet size	Specify the TS packet size output from DVB-ASI card.	- 188 Bytes (Default) - 204 Bytes* (*All 0s (zero) for 16 bytes.)
	PCR insertion interval	Set the insertion interval for PCR.	- 30/40/50/60/70/80/90/100msec (Default: 100msec)
	Program number	Set the program number.	Hexadecimal number from 1 to ffff (Default: 0001)
	PMT PID	Specify the PID for program association table.	Hexadecimal number from 1 to 1ffe (Default: 0100)
	Video PID	Specify the PID for video.	Hexadecimal number from 1 to 1ffe (Default: 1011)
	Audio PID1-4	Specify the PID for audio 1.	Hexadecimal number from 1 to 1ffe (Default: 1100)
		Specify the PID for audio 2.	Hexadecimal number from 1 to 1ffe (Default: 1101)
		Specify the PID for audio 3.	Hexadecimal number from 1 to 1ffe (Default: 1102)
		Specify the PID for audio 4.	Hexadecimal number from 1 to 1ffe (Default: 1103)
	PCR PID	Specify the PID for PCR.	Hexadecimal number from 1 to 1fff (Default: 1001)

	Ancillary PID	Specify the PID for Ancillary data	Hexadecimal number from 1 to 1ffe (Default: 1200)
	Encoding operation	Specify whether to enable encoding upon starting and at the present moment.	・Enable ・Disable (Default)
	Selecting profile	Set the profile of video encoding format when “720x480” or “720x576” is selected for [Video resolution].	- High profile - Main profile (Default) *When “352x240” or ”352x288” is selected for [Video resolution], main profile is selected automatically.
Sub encoder settings	Bit rate mode	Set the rate specification.	- Video bit rate (Default) - System bit rate
	System bit rate	Set the system rate when “System rate” is selected for [Rate specification].	- Up to 12.000Mbps when “Video resolution” is “720x480” or “720x576.” - Up to 500Kbps when [Video resolution] is “352x240” or “352x288.”
	Video resolution	Set the video resolution for encoding. The contents that can be selected differ, depending on the video input format.	When [Video formats for Video input settings] is “1080i/59.94,” “720p/59.94,” or “480i/59.94”: ・352×240 (Default) ・720×480 When [Video formats for Video input settings] is “1080i/50,” “720p/50,” or “576i/50”: ・352×288 ・720×576
	Video bit rate Audio 1	Set the video bit rate when [Bit rate mode] is “Video bit rate.” The contents that can be selected differ, depending on the status of the video resolution. * Displays the bit rate assigned for the video when [Bit rate mode] is “System bit rate,” but cannot set it. Set the audio 1 encoding format, audio bit rate and audio mode for the audio. The contents that can be selected differ, depending on the status of the video input.	When [Bit rate mode] is “Video bit rate” and [Video resolution] is “350×240”or “352×288”: ・384Kbps VBR (Default) ・256Kbps VBR When [Bit rate mode] is “Video bit rate” and [Video resolution] is “720×480”or 720×576”: ・2Mbps ・3Mbps ・4Mbps ・6Mbps ・10Mbps Audio 1 encoding format ・MPEG1 Layer2 ・MPEG2 AAC ・None (Default) When the “Audio 1 encoding format” is the “MPEG1 Layer 2,” audio bit rates are: - 384Kbps - 256Kbps - 128 Kbps Audio mode - Stereo - Dual monaural * Set the audio 1 encoding format to “None” if you want to input other than PCM sounds when the audio 1 encoding format of the main encoder is “Transparent.”

			When [Audio 1 encoding format] is “MPEG2 AAC,” the audio bit rates are: ・256Kbps ・128 Kbps ・64 Kbps Audio mode - Stereo When [Audio1 encoding format] is “None”: - There are no items that can be set.
	Encoding control mode	Set the control mode for encoding	When [Video resolution] is “352×240”or “352×288”: ・There are no items that can be set When [Video resolution] is “720×480”or “720×576”: ・Quality (Default) (IBBP) ・Motion (IBP) ・Low latency (PPPP)
	Pre-filter	Set whether to use a pre-filter.	When [Video resolution] is “352×240”or “352×288”: ・There are no items that can be set When [Video resolution] is “720×480”or “720×576”: ・Enable (Default) ・Disable
	Refresh cycle	Set the refresh cycle. The contents that can be selected differ, depending on the status of the [Video resolution] and [Encoding control mode].	When [Video resolution] is “352×240” or “352×288”: ・There are no items that can be set. When [Video resolution] is “720×480,” and [Encoding control mode] is “Quality” is selected: ・15 frames ・30 frames
			When [Video resolution] is “720×480,” and [Encoding control mode] is “Motion” is selected: ・14 frames ・28 frames
			When [Video resolution] is “720×480,” and [Encoding control mode] is “Low Latency” is selected: ・30 frames ・60 frames
			When [Video resolution] is “720×576,” and [Encoding control mode] is “Quality” is selected: ・12 frames ・24 frames
			When [Video resolution] is “720×576,” and [Encoding control mode] is “Motion” is selected: ・12 frames ・24 frames

			When [Video resolution] is "720×576," and [Encoding control mode] is "Low Latency" is selected: ・36 frames ・72 frames
	Ancillary data	Set whether to use ancillary data. * Set whether to use the ancillary data (only VITC (SMPTE RP-188) and CC (CEA-708)) using the private PES of its own format.	When [Video resolution] is "352×240" or "352×288": ・There are no items that can be set When [Video resolution] is "720×480" or "720×576": ・Enable ・Disable (Default) * When "Enable" is selected, only the ancillary data (VITC (SMPTE RP-188) and CC (CEA-708) multiplexed in the ancillary data area (areas Y and C) of HD/SD-SDI using the private PES of their own formats.
	Streaming mode	Select multicast transmission, unicast transmission (Specifying the streaming destination) or unicast transmission (Accepting the streaming request).	・Multicast (Default) ・Unicast (Specifying the streaming destination) ・Unicast (Accepting the streaming request)
	Max streams	Set the number of maximum streams. The contents that can be selected differ, depending on the status of the system bit rate. Only "1" can be set only when "Multicast" or "Unicast (Specifying the streaming destination)" is selected for Streaming mode.	1 to 4 (The system bit rate is up to 5.750Mbps) 1 to 3 (It is 5.751 to 7.666Mbps) 1 to 2 (It is 7.668 to 11.500Mbps) 1 (It is 11.501Mbps and higher) * The default value is 1.
Sub encoder settings (Ethernet)	Streaming destination IP address	Set the multicast address of the streaming destination. Cannot be set when unicast or unicast (Specifying the streaming destination) is selected for the streaming mode.	224.0.0.0 to 239.255.255.255 (Default: Encoder: 230.11.3.2) Setting the following values is inhibited. 240.0.0.0 to 255.255.255.255 (Class E) 127.0.0.0 to 127.255.255.255
	ID control for unicast	Select whether to enable ID checking for confirming the validity of the streaming request from the decoder when "unicast (Accepting streaming request)"is selected in the [Streaming mode].	・Enable ・Disable (Default)
	Unicast ID	Specify unicast ID when ID control for unicast is enabled.	0000 to ffff (Default: 0000)
	FEC	Select whether to generate FEC packets.	・Enable ・Disable (Default)
	FEC packet insertion interval	Set the insertion interval for FEC packets when "Enable" is selected for [FEC].	4 to 24 (Default: 10)
	ARQ	Select whether to enable ARQ operation.	・Enable ・Disable (Default)
	TOS	Set the TOS (Type Of Service) value of an IP packet.	0 to ff (Default: 0)

	Protocol	Set the transport protocol for transmitting via IP when "multicast" or "unicast (simplex)" is selected for the [Streaming mode], and "Disable" for [FEC].	- UDP - RTP (Default) * When UDP is selected, [Stream format] is fixed to "TS". * When UDP is selected, IP-9500 Series is not capable of receiving.
	Stream format	Set the stream format for the MPEG to be transmitted via IP when "multicast" or "unicast (simplex)" is selected for the [Streaming mode], "Disable" for [FEC] and "RTP" for [Transport protocol].	Can be set when "Multicast" is set for [Streaming mode] and "Disable" is selected for [FEC]. ・TS ・Time stamped TS (Default) When TS is selected, the IP-9500e series is not capable of receiving.
	Pro-MPEG FEC	Select whether to generate Pro-MPEG FEC packets when TS is selected for Stream format.	・Enable ・Disable (Default)
	Pro-MPEG Matrix	Set the matrix value for when "Enable" is selected for Pro-MPEG FEC.	Can be set within a range of 4 to 20 x 4 to 20. (Default: 10 x 10) * You cannot set the NxN value of higher than 100.
Sub encoder port settings (Ethernet)	Streaming port	Specify the own device port number used to send streams.	0, 1024 to 64000 (Default: 0) * If 0 is specified, one of the port numbers from 32768 to 61000 is automatically selected.
		Specify the destination device port number used when streams are sent.	1024 to 64000 (Default: 5010)
	Unicast request port	Specify the own device port number used to receive unicast streaming requests.	1024 to 64000 (Default: 9910)

Table 3-17 Main/Sub-encoder System Bit Rate Setting Range

Main Encoder	
Video Resolution	System bit rate setting range
1920x1080 1280x720	Up to 43.000Mbps (can be set in 1kbps increment) The system bit rate setting with the video bit rate range of 6 to 27Mbps is enabled. You cannot set the system bit rate range with the video bit rate range of lower than 6Mbps. When the system bit rate is set with the video bit rate of higher than 27Mbps, the video bit rate is fixed to 27Mbps.
1440x1080 960x1080 960x720 640x720	Up to 43.000Mbps (can be set in 1kbps increment) The system bit rate setting with the video bit rate range of 4 to 27Mbps is enabled. You cannot set the system bit rate range with the video bit rate range of lower than 4Mbps. When the system bit rate is set with the video bit rate of higher than 27Mbps, the video bit rate is fixed to 27Mbps.
720x480 720x576	Up to 24.000Mbps (can be set in 1kbps increment) The system bit rate setting with the video bit rate range of 2 to 10Mbps is enabled. You cannot set the system bit rate range with the video bit rate range of lower than 2Mbps. When the system bit rate is set with the video bit rate of higher than 10Mbps, the video bit rate is fixed to 10Mbps.

Sub Encoder	
Video Resolution	System bit rate setting range
720x480	Up to 12.000Mbps (can be set in 1kbps increment)

720x576	The system bit rate setting with the video bit rate range of 2 to 10Mbps is enabled. You cannot set the system bit rate range with the video bit rate range of lower than 2Mbps. When the system bit rate is set with the video bit rate of higher than 10Mbps, the video bit rate is fixed to 10Mbps.
352x240 352x288	Up to 500Kbps (can be set in 1kbps increment) The system bit rate setting with the video bit rate range of 256 to 384Kbps is enabled. You cannot set the system bit rate range with the video bit rate range of lower than 256Kbps. When the system bit rate is set with the video bit rate of higher than 384Kbps, the video bit rate is fixed to 384Kbps.

⚠ CAUTION

The maximum system bit rate when the streaming and recording are activated simultaneously is limited up to 14.0499 Mbps.

3.3.2 Encoder Address Report

*** This function is enabled only when the device operation mode is encoder mode.**

*** Encoder address report is a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuartion Data.**

To dynamically obtain an IP address using DHCP or PPPoE, the IP address needs to be known. If the report destination is specified in advance, the obtained IP address is reported to the specified destination. IP-9500e decoder or a PC running a certain type of software (*1) is normally specified as the report destination. If the decoder is specified in advance as the report destination, you can specify an encoder from the Web screen to request streaming. (See Section 4.5.3 for information about decoder setting and operation.)

Click ENCODER ADDRESS REPORT in the left frame of the Web screen. The Encoder Address Report window appears in the right frame. Make the required settings by referring to **Table 3-17 Setting Items for Encoder Address Report**.

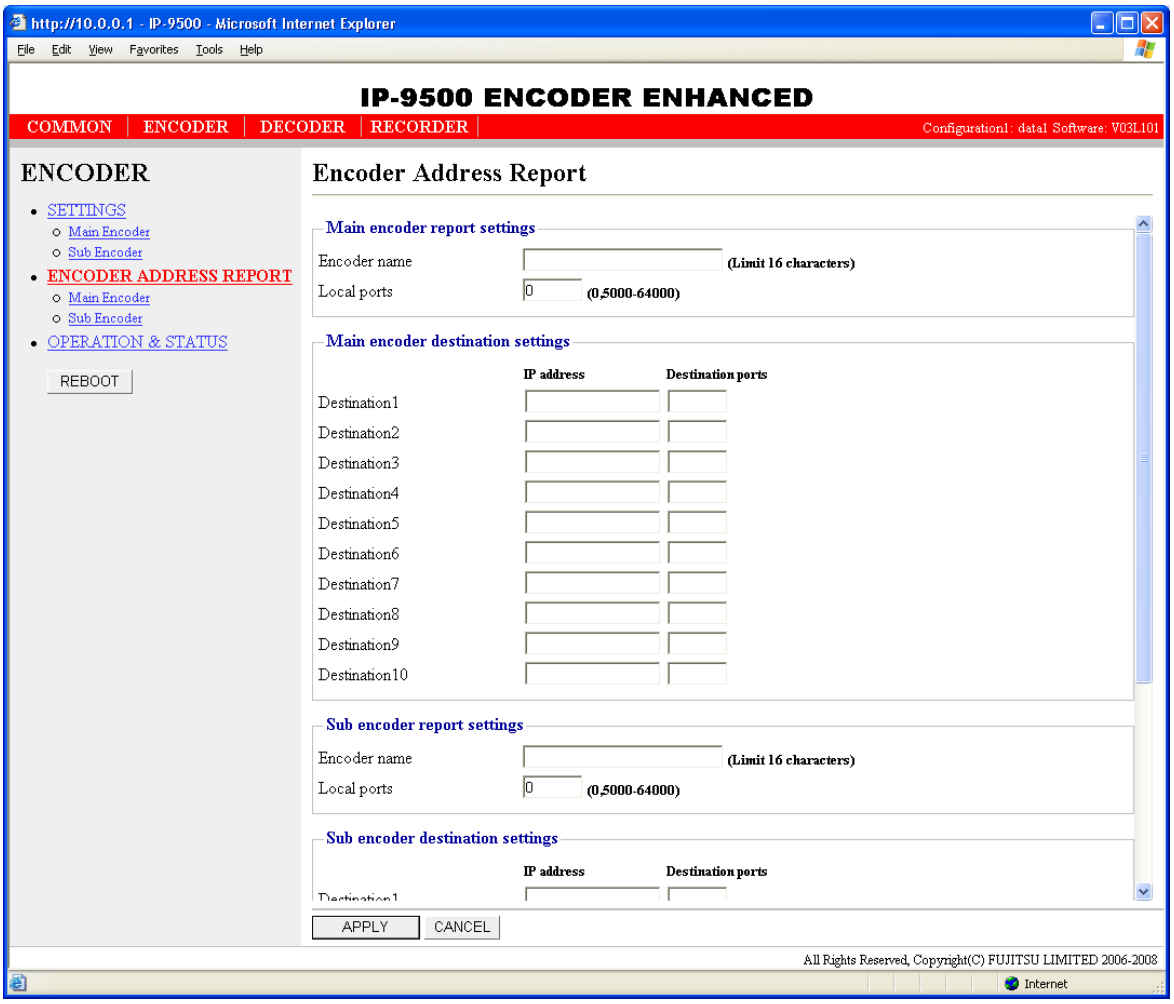


Figure 3-23 Encoder Address Report Window

After the completion of the settings, click the APPLY button. The message below appears. Click OK to apply the settings. * Reboot is not required.

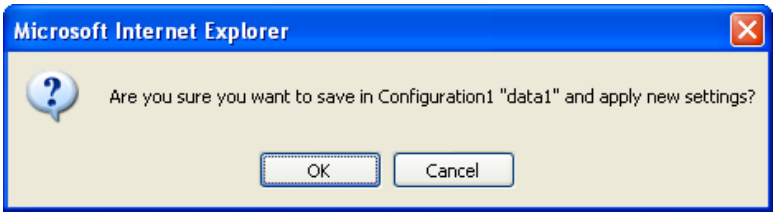


Table 3-17 Setting Items for Encoder Address Report

Item		Description
Encoder name		Specify an arbitrary name used to identify the encoder. (Up to 16 characters)
Own port		Specify the own device port number used to send an encoder address message. 0 or 1024 to 64000 (Default: 0) * If 0 is specified, one of the port numbers from 32768 to 61000 is automatically selected.
Destination 1 to 10	IP address	Specify the IP address of the device to which the encoder IP address is to be reported.
	Port number	Specify the destination port number to which the encoder address is to be reported. (1024 to 64000)

3.3.3 Operation & Status (Encoder)

*** This function is enabled only when the device operation mode is encoder mode.**

Click OPERATION & STATUS in the left frame of the Web screen. The Operation & Status window appears in the right frame.

From this window, you can check encoder operation information such as on encoding and video input.

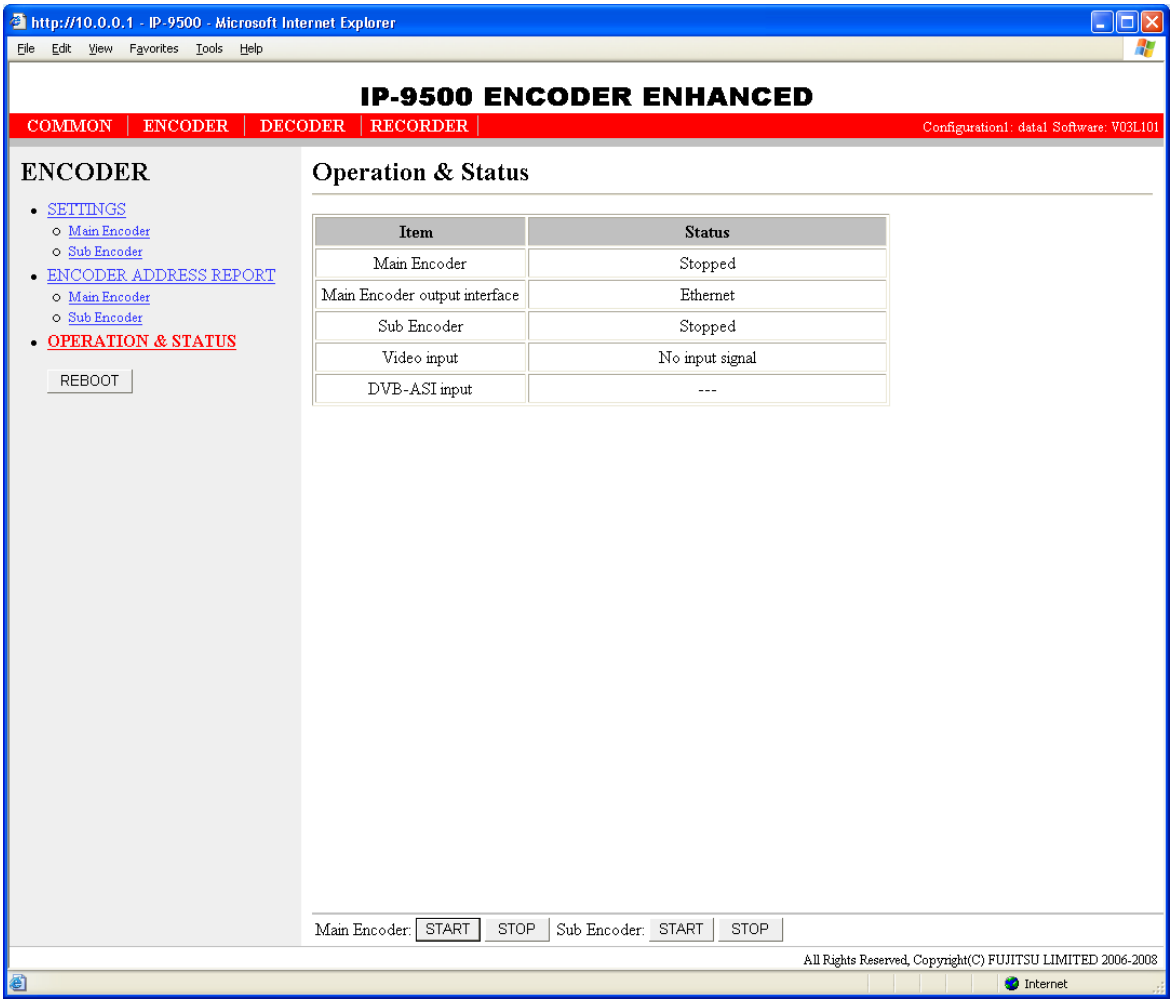


Figure 3-24 Operation & Status (Encoder) Window

You can control encoding and streaming. When the status is "Stopped," clicking the START button starts encoding. To stop encoding, click the STOP button.

Table 3-18 Encoder Operation & Status Display Items

Item	Display
Main Encoder	**{Operating / Stopped}** Displays the operation status as the result of setting in the Settings window or the operation of the encoding START or STOP button.
	Number of possible streams: N **Destination address: Port number {Normal / Abnormal}** N=1 (when the destination address is a multicast address) 1 to 4 (when the destination address is a unicast address; the maximum number of streams depends on the system rate) Displays whether an error occurred for each destination address.
Main Encoder Output interface	**{Ethernet / DVB-ASI}** Displays the output interface.
Sub Encoder	**{Operating / Stopped}** Displays the operation status as the result of setting in the Settings window or the operation of the encoding START or STOP button.
	Number of possible streams: N **Destination address: Port number {Normal / Abnormal}** N=1 (when the destination address is a multicast address) 1 to 4 (when the destination address is a unicast address; the maximum number of streams depends on the system rate) Displays whether an error occurred for each destination address.
Video input	**{Normal / Fault / No video signal}** Displays whether a video input signal is present.
DVB-ASI input	**{Normal / Fault / No input signal / ---}** Displays the input status of DVB-ASI signal for synchronization.

⚠ CAUTION

The maximum system bit rate when the streaming and recording are activated simultaneously is limited up to 14.0499 Mbps

3.4 Recorder

An optional auxiliary storage media is required for this function.

3.4.1 Setting (Recorder)

*** Settings is a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuration Data.**

Set parameters related to recording. Make the required settings by referring to**Table 3-19 Recorder**.

The recording is activated in the encoder mode. Some of the video bit rate cannot be recorded because of the specification limitation.

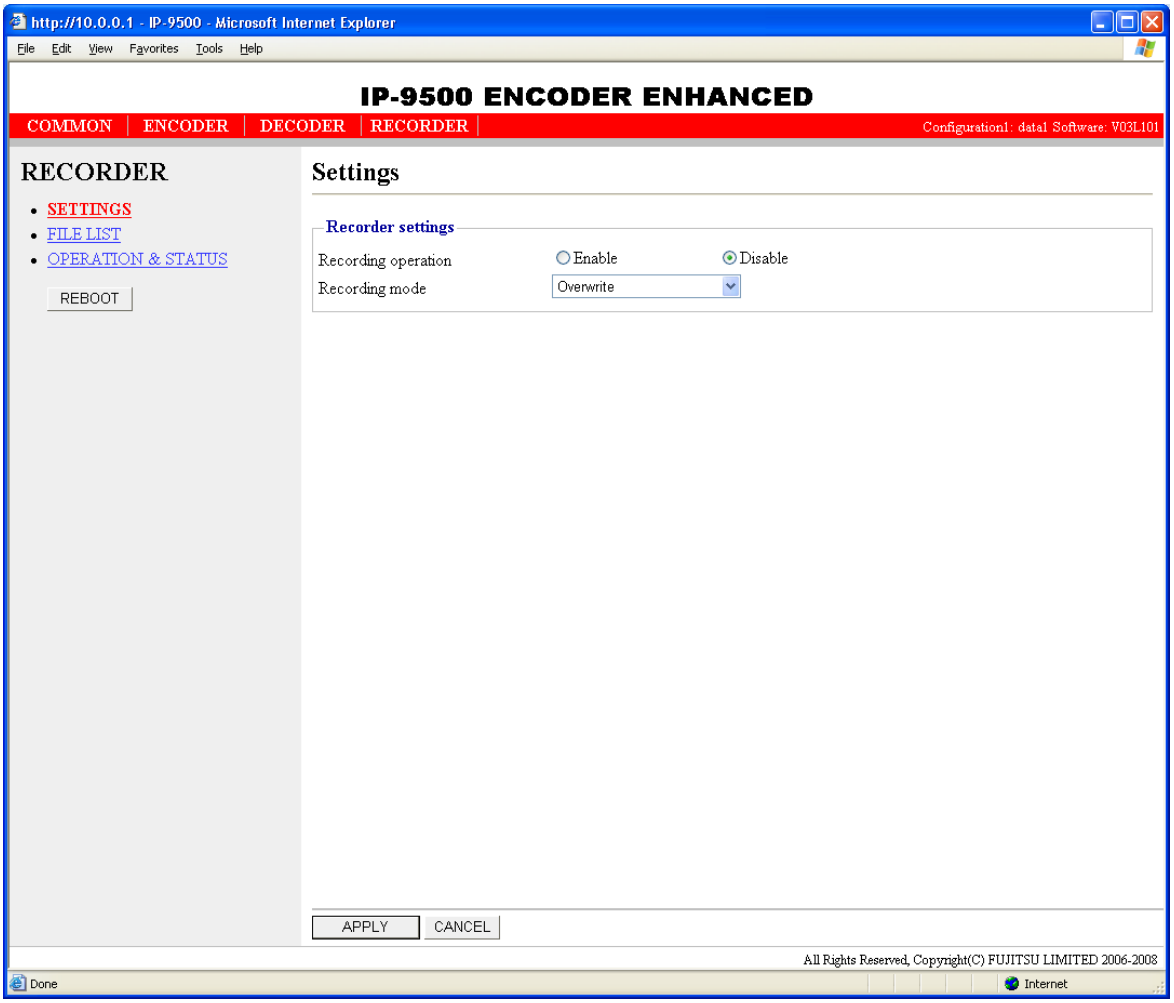


Figure 3-25 Setting (Recorder) Window

After the completion of the settings, click the APPLY button. The message below appears. Click OK to apply the settings. * Reboot is not required.

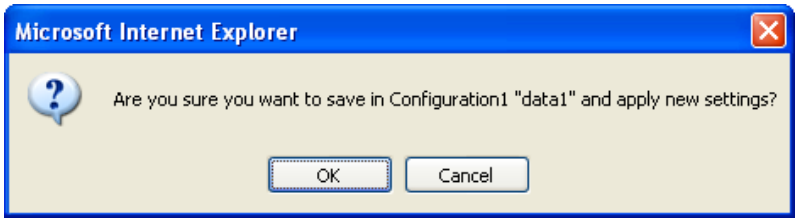


Table 3-19 Recorder Setting Items

	Item	Description	Parameter
Operation after power-on/reboot	Recording operation	Specify whether to perform recording operation upon start of the device.	- Enable - Disable (Default)
	Recording mode	Select the recording mode.	- Record until full - Overwrite (Default) - Record until start position

⚠ CAUTION

Recorded data is destroyed if the device power is turned off during recording. Be sure to stop recording before turning off the device power.

⚠ CAUTION

If the device is started as an encoder with an unused CF card inserted, the CF card is formatted unconditionally.

⚠ CAUTION

When the DVB-ASI interface is selected as an output interface in **3.3.1 Setting (Encoder)**, the recording is unavailable.

⚠ CAUTION

In case that 'TS' is selected as streaming format, recording is not supported.

⚠ CAUTION

The maximum system bit rate to record into CF card is limited up to 14.0499 Mbps. It is possible to stream and record into CF card simultaneously but impossible to record and read to/from CF card.

3.4.2 File List

*** This function is enabled only when the device operation mode is encoder mode.**

Click FILE LIST in the left frame of the Web screen. The MPEG Data List window appears in the right frame.

In this window, you can check the file list or download files.

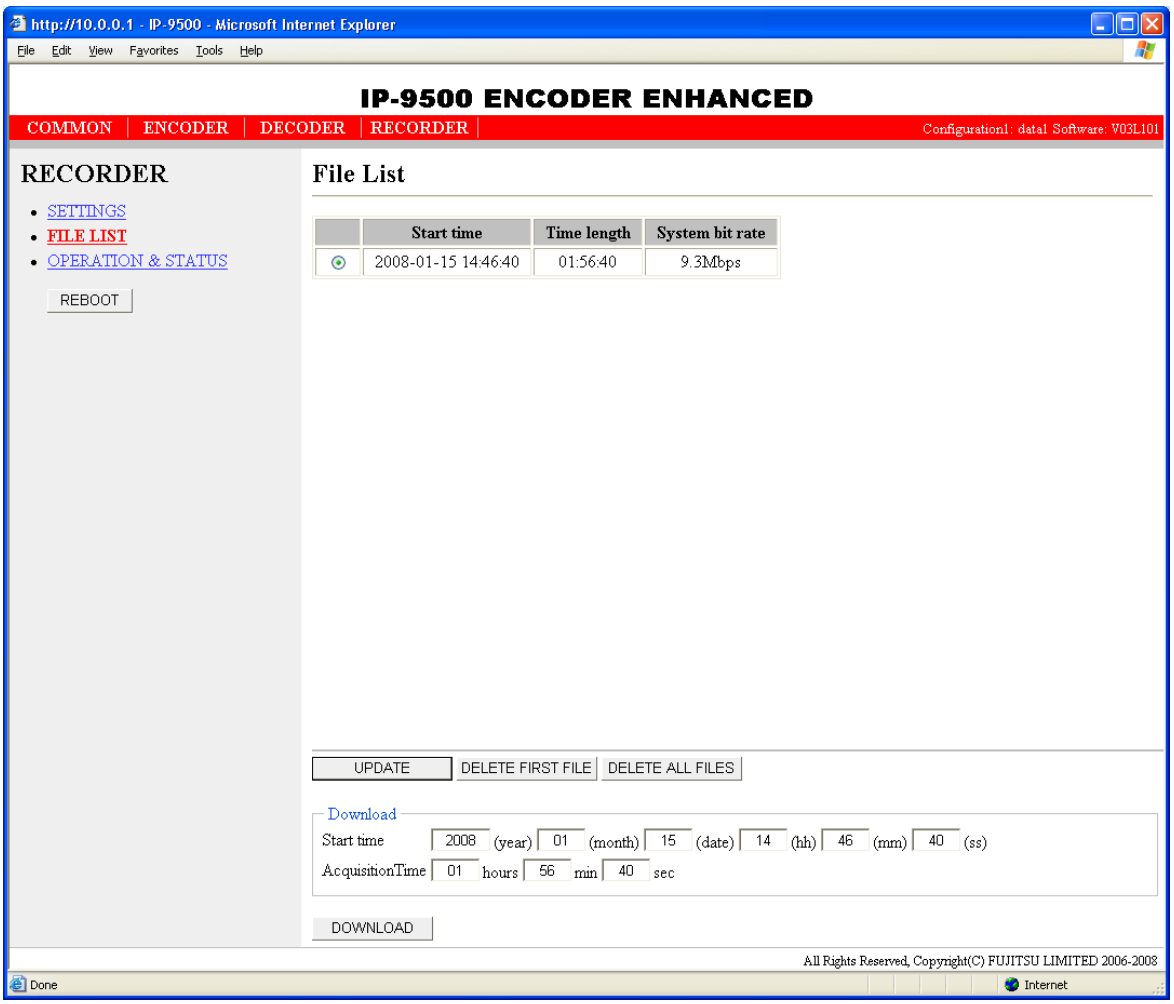


Figure 3-26 File List Window

Clicking the UPDATE button updates the list.

To download a file, check the relevant check column at the left end of the list and confirm that the start time and acquisition time are automatically set in the Download field, and then click the DOWNLOAD button.

Clicking the DELETE FIRST FILE button deletes the first file in the list. Clicking the DELETE ALL FILES button deletes all files.

Recorded data can be downloaded by specifying any time range within the range indicated for each file in the list. Note, however, that data with the specified time range spanning two or more files cannot be downloaded.

Data is downloaded with a file name in the following format:

yyyymmddhhmmssHHMMSS.mpg

<Description>

yyyy = Year

mm = Month

dd = Day

hh = Hour

mm = Minute

ss = Second

HH = Hours (acquisition duration specified in hours)

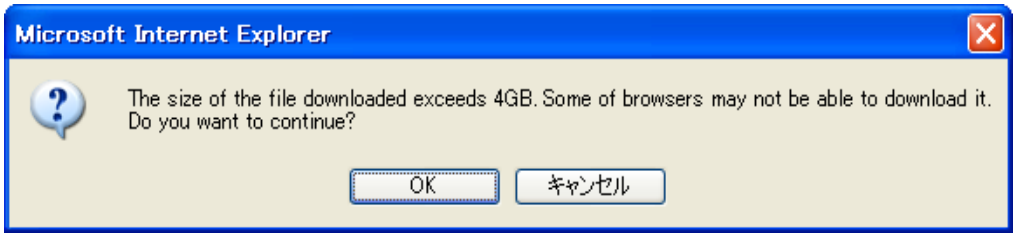
MM = Minutes (acquisition duration specified in minutes)

SS = Seconds (acquisition duration specified in seconds from 0 to 59)

Note: The time for which data can be recorded depends on the system bit rate and the capacity of the CF card.

⚠ CAUTION

The following dialog box appears in case that the file download size exceeds 4GB. Some of browsers may not be able to download it.



3.4.3 Operation & Status (Recorder)

*** This function is enabled only when the device operation mode is encoder mode.**

Operation & Status related to recording are displayed.

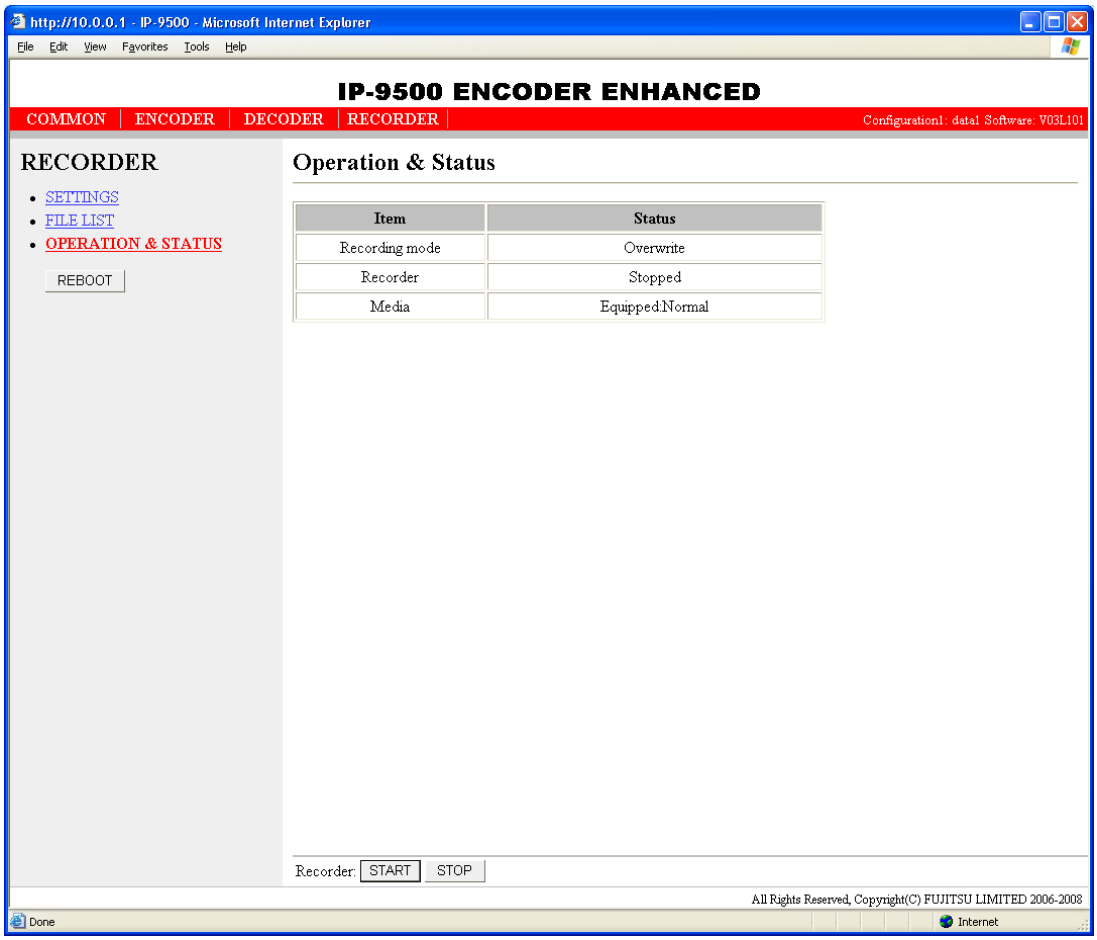


Figure 3-27 Operation & Status (Recorder)

You can control the recording operation. When the recording operation is "Stopped," clicking the START button starts recording. To stop recording, click the STOP button.

Table 3-20 Recorder Operation & Status Display Items

Item	Display
Recording mode	**{Recording until full / Overwrite / Record until start position}** Displays the recording mode selected in the Settings window.
Recording operation	**{Recording / Stopped}** Displays the operation status caused by the setting in the Settings window or by the operation of the recording START or STOP button.
Media	**{Equipped: Normal / Equipped: Fault / Equipped: Media Full /Unequipped}** Displays whether the device is equipped with an auxiliary storage media and whether an error occurred during recording to the auxiliary storage media.

* Notation: **{A/B}** indicates that either **A** or **B** is displayed.

⚠ CAUTION

The maximum system bit rate to record into CF card is limited up to 14.0499 Mbps.

3.5 Decoder

3.5.1 Setting (Decoder)

*** Settings is a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuration Data.**

Set parameters related to stream receiving. Make the required settings by referring to **Table 3-21 Decoder Setting Items**.

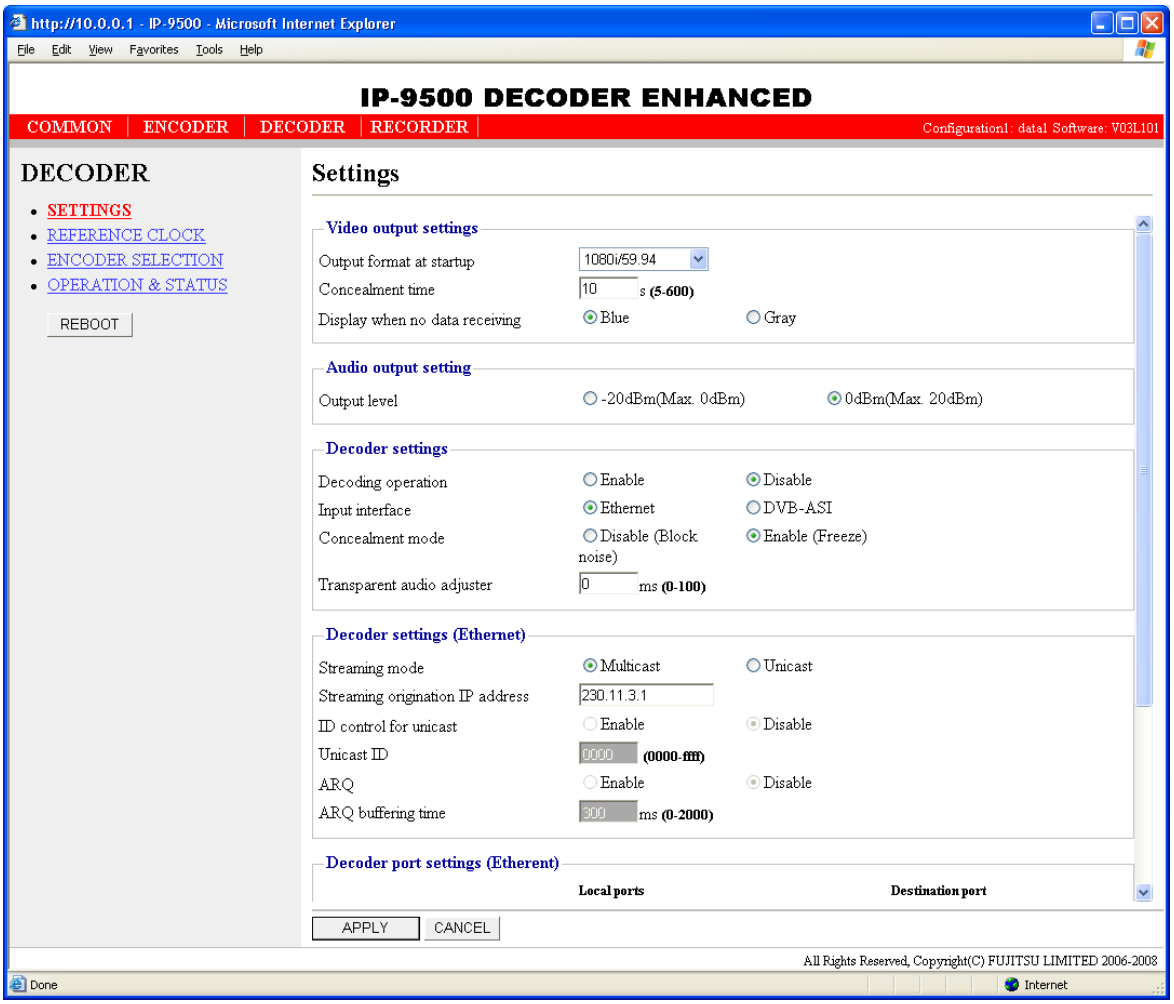


Figure 3-28 Setting (Decoder) Window 1

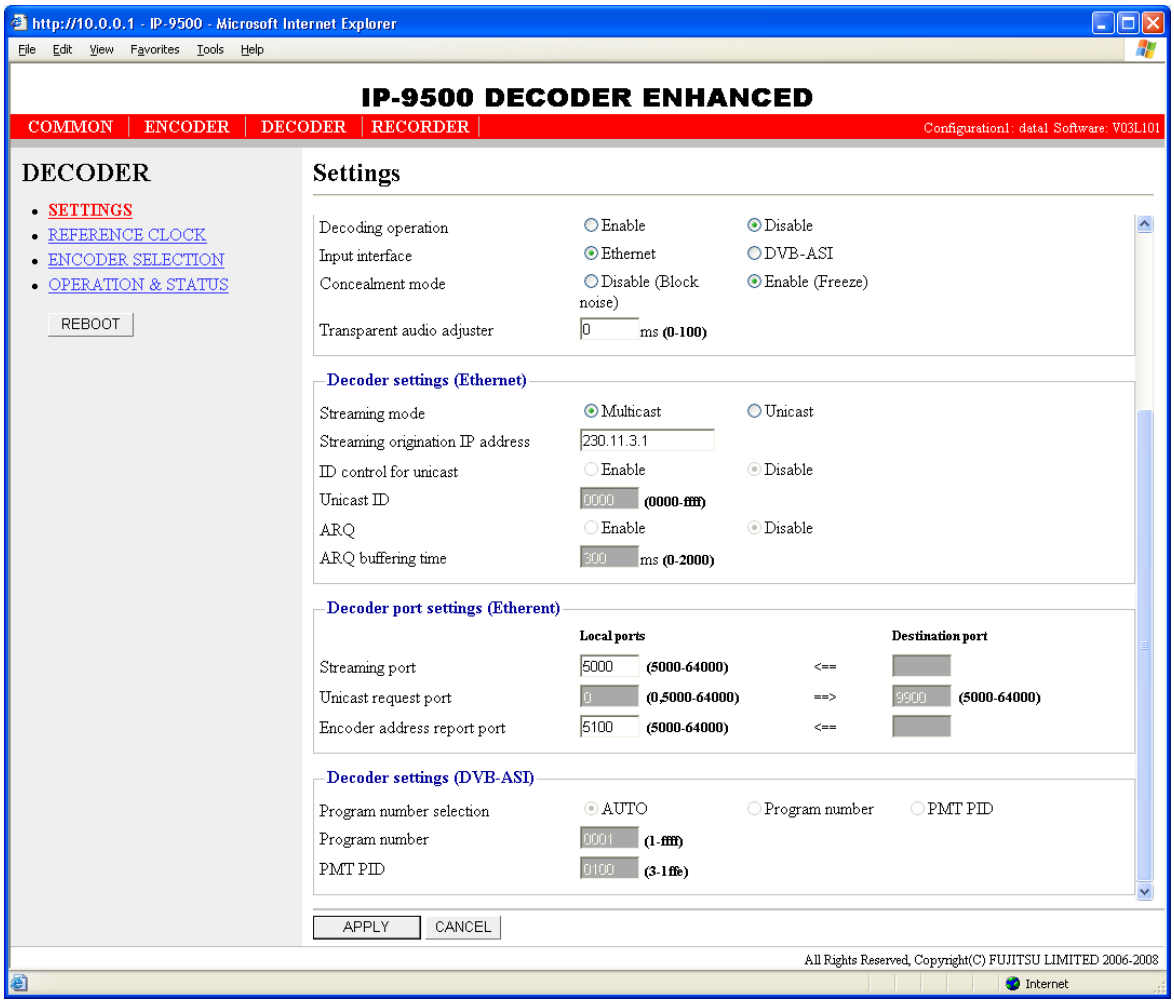


Figure 3-29 Setting (Decoder) Window 2

After the completion of the settings, click the APPLY button. The message below appears. Click OK to apply the settings. * Reboot is not required.

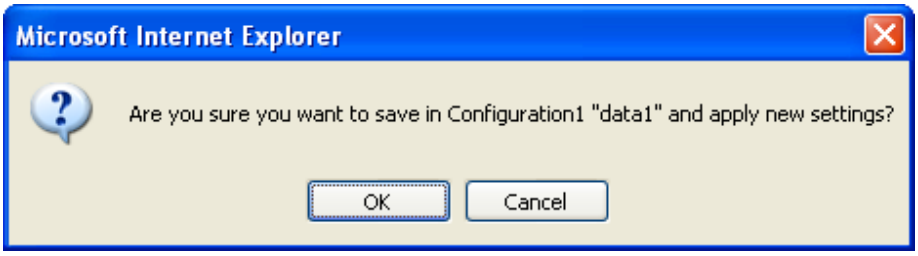


Table 3-21 Decoder Setting Items

	Item	Description	Parameter
Video output settings	Output format at startup	Set the video output format for when the component starts up. *After receiving packets, the input format for the encoder is followed.	・1080i/59.94 Hz (Default) ・1080i/50 ・720p/59.94 ・720p/50 ・480i/59.94 ・576i/50
	Concealment time	Set the time it takes until it is recognized that packets have not been received.	・5 to 600 seconds (Default: 10 seconds)
	Display when no data receiving	Set the video signal to be output when no data is received.	・Blue (Default) ・Gray
Audio output settings	Output level	Set the analog audio output level.	・ -20 dBm (0 dBm max.) ・ 0 dBm (20 dBm max.) (Default)
Decoder settings	Decoding operation	Specify whether to enable receiving and decoding streaming video upon starting.	・Enable. ・Disable. (Default)
	Input interface	Specify the input interface.	・ Ethernet (Default) ・ DVB-ASI* (*Option card is required.)
	Concealment mode	Set whether to enable freeze control so that block noise is not generated when packet losses occur.	・Disable (Block noise) ・Enable (Freeze) (Default)
	Transparent audio adjustor	Set the delay for audio output when transparent audio is selected.	・0 to 100ms (Default: 0ms)
Decoder settings (Ethernet)	Streaming mode	Select multicast receiving or unicast receiving.	・Multicast (Default) ・Unicast
	Streaming origination IP address	Set the streaming origination IP address for receiving streams.	Default: 230.11.3.1 Setting the following values is inhibited: 240.0.0.0 to 255.255.255.255 (Class E) 0.0.0.0,127.0.0.0 to 127.255.255.255
	ID control for unicast	Specify whether to enable checking for identity between the unicast streaming request destination and streaming origination device.	・Enable ・Disable (Default)

	Unicast ID	This item is enabled when Unicast ID control is enabled. Set the same ID code as the encoder.	0000 to ffff (Default: 0000)
	ARQ	Specify whether to enable ARQ operation.	・Enable ・Disable (default)
	ARQ buffering time	Specify the wait time in msec for an ARQ retransmitted packet.	0 to 2000ms (Default: 300ms)
Decoder port settings (Ethernet)	Streaming port	Specify the own device port number used to receive streams.	1024 to 64000 (Default: 5000)
	Unicast request port	Specify the streaming request source port number (own device) in unicast streaming mode.	0, or10240 to 64000 (Default: 0) * If 0 is specified, one of the port numbers from 32768 to 61000 is automatically selected.
		Specify the streaming request destination port number in unicast streaming mode.	1024 to 64000 (Default: 9900)
	Encoder address report port	Specify the own device port number used to receive an encoder address report.	1024 to 64000 (Default: 5100)
Decoder settings (DVB-ASI)	Program number selection	Set the method for selecting programs to receive. It is possible to select from automatically obtaining PMT PID, specifying a program number to select a PID, or individually specifying a video/audio PID.	- AUTO (Default) - Program number - PMT PID - Individual specification
	Program number	Specify the number of the program to receive when program number is selected for Program number selection.	Hexadecimal number from 1 to ffff (Default: 0001)
	PMT PID	Specify the PID value for the PMT to receive when PMT PID is selected for Program number selection.	Hexadecimal number from 1 to 1ffe (Default: 0100)
	Video PID	Set the Video PID value to be received when “Individual specification” is selected for [Program number selection].	Hexadecimal number from 1 to 1fff (Default: 1011) * When 1fff is set, video receiving is not performed.
	Audio PID1-4	Set the Audio PID value to be received when “Individual specification” is selected for [Program number selection].	Hexadecimal number from 1 to 1fff (Default: 1100, 1101, 1102, 1103) * When 1fff is set, audio receiving is not performed.
	PCR PID	Set the PCR PID value to be received when “Individual specification” is selected for [Program number selection].	Hexadecimal number from 1 to 1fff (Default: 1001)
	Ancillary data PID	Set the Ancillary data PID value to be received when “Individual specification” is selected for [Program number selection].	Hexadecimal number from 1 to 1fff (Default: 1200) * When 1fff is set, ancillary data receiving is not performed.

Note) Video stream from IP-9500e encoder, which stream format is configured as TS, can not be received.

3.5.2 Reference Clock (GENLOCK)

*** This function is enabled only when the device operation mode is decoder mode.**

*** Reference Clock Settings is a group of setting items, of which 10 sets can be registered independently by selecting data numbers as in 3.2.1 Configuration Data.**

Set parameters related to external clock synchronization. Make the required settings by referring to **Table 3-22 Reference Clock Setting Items**.

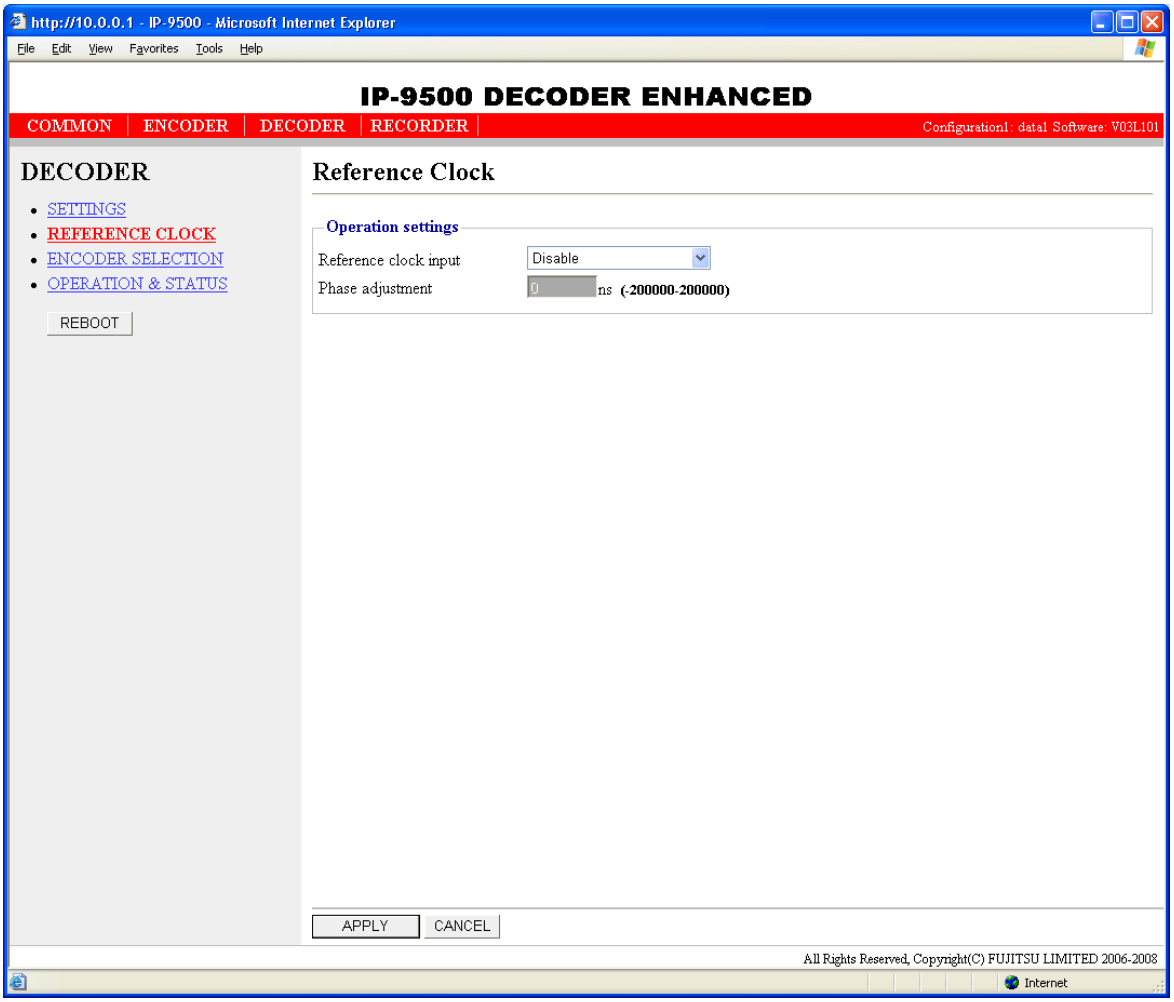


Figure 3-30 Reference Clock Window

After the completion of the settings, click the APPLY button. The message below appears. Click OK to apply the settings. * Reboot is not required.

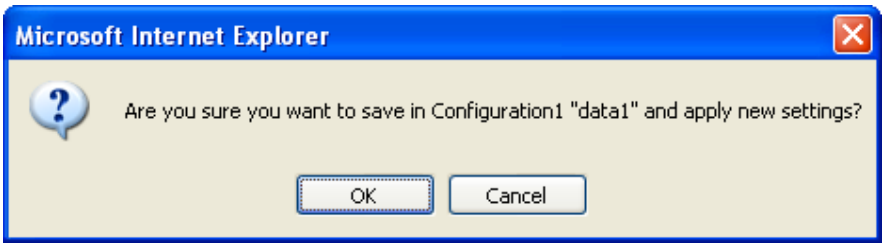


Table 3-22 Reference Clock Setting Items

	Item	Description	Parameter
Operation settings	Reference clock input	Specify the type of external clock synchronization signal. When Disable is selected, synchronization with the line occurs, and when Internal is selected, synchronization with the internal transmitter occurs and videos are output.	- Tri-sync (HDSYNC) - Bi-sync (Black Burst) - Disable (Default) - Internal * Please set this parameter Disable when receiving Dolby-E pass through audio.
	Phase adjustment	Specify the phase to be adjusted in units of ns.	Default: 0 ns -200000～+200000ns

⚠ CAUTION

Do not input any signal other than Tri-sync (HDSYNC) or Bi-sync (Black Burst) as reference input.

3.5.3 Encoder Selection

*** This function is enabled only when the device operation mode is decoder mode.**

Click ENCODER SELECTION in the left frame of the Web screen. The Encoder Selection window appears in the right frame.

This window displays the status and IP address of the encoder ready to perform streaming. Specifying the encoder in unicast distribution starts receiving stream. Specify in advance the IP address of the decoder in the encoder as the destination. See Section 3.3.3 for encoder setting. **Table 3-23 Encoder Selection Items** lists the display items.

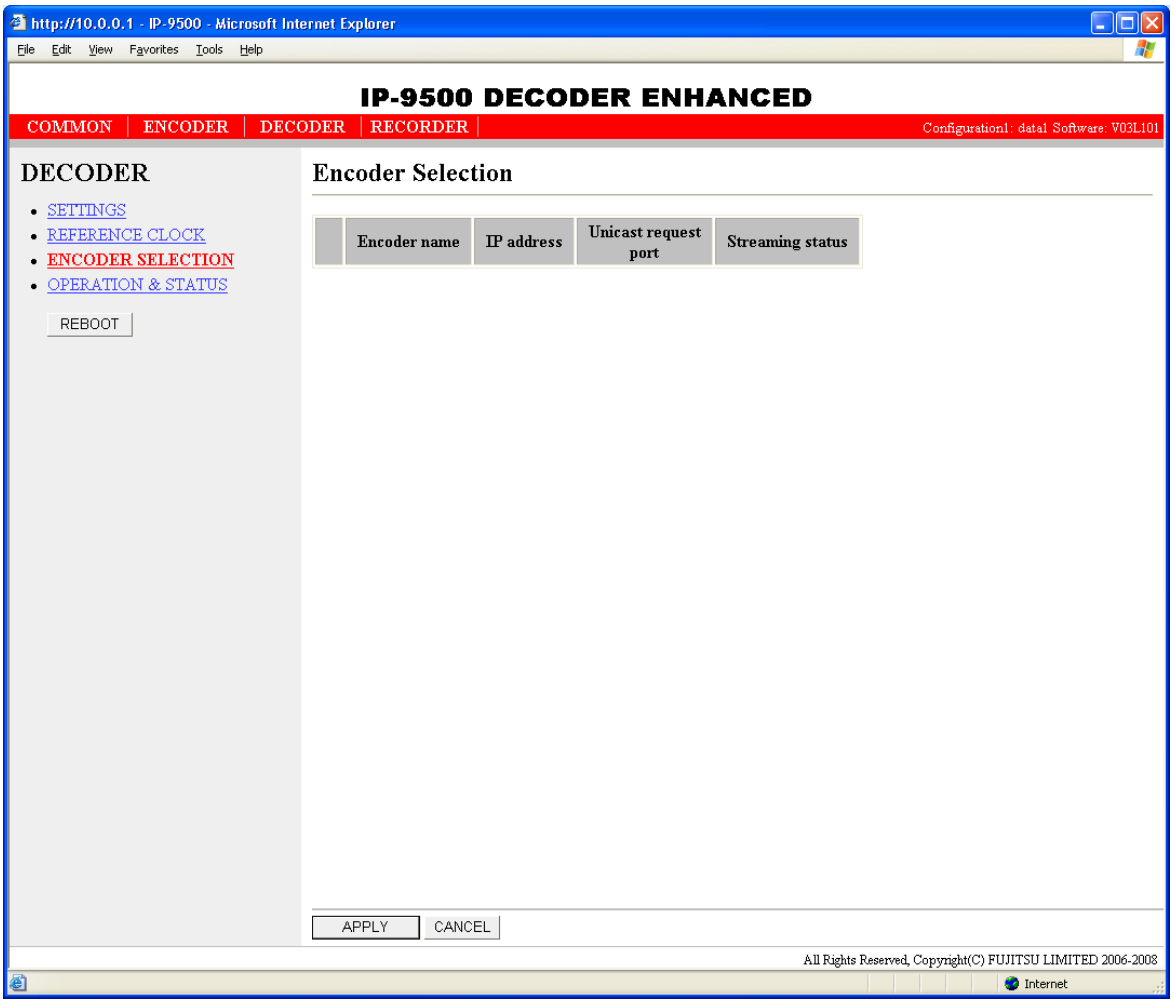


Figure 3-31 Encoder Selection Window

The message below is displayed when the APPLY button is clicked after selecting the radio button for the encoder you want to select.Click OK to send a streaming request to the selected encoder. * Reboot is not required.

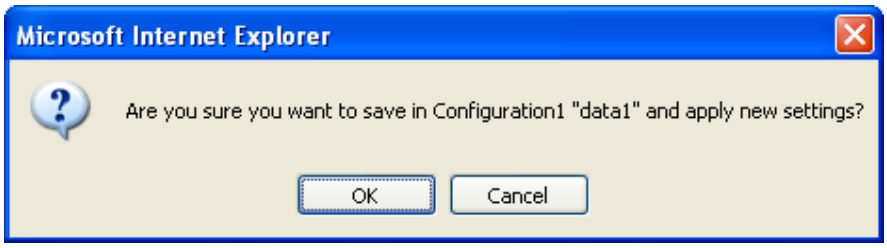


Table 3-23 Encoder Selection Items

Item	Display
Radio Button	Specify the encoder you want to select. If one is currently selected, “Selected” is displayed.
Encoder name	Displays the name assigned to the encoder.
IP address	Displays the IP address of the encoder.
Unicast request port number	Displays the Unicast request port number defined in the encoder.
Streaming status	**{Streaming / Number of possible streams: x / Stopped}** Displays the streaming status of the encoder. Number of possible streams for encoder

* Notation: **{A / B}** indicates that either **A** or **B** is displayed.

3.5.4 Operation & Status (Decoder)

*** This function is enabled only when the device operation mode is decoder mode.**

Click OPERATION & STATUS in the left frame of the Web screen. The Operation & Status window appears in the right frame.

Operation & Status information related to the decoder, including the stream receiving status and statistical information, can be checked.

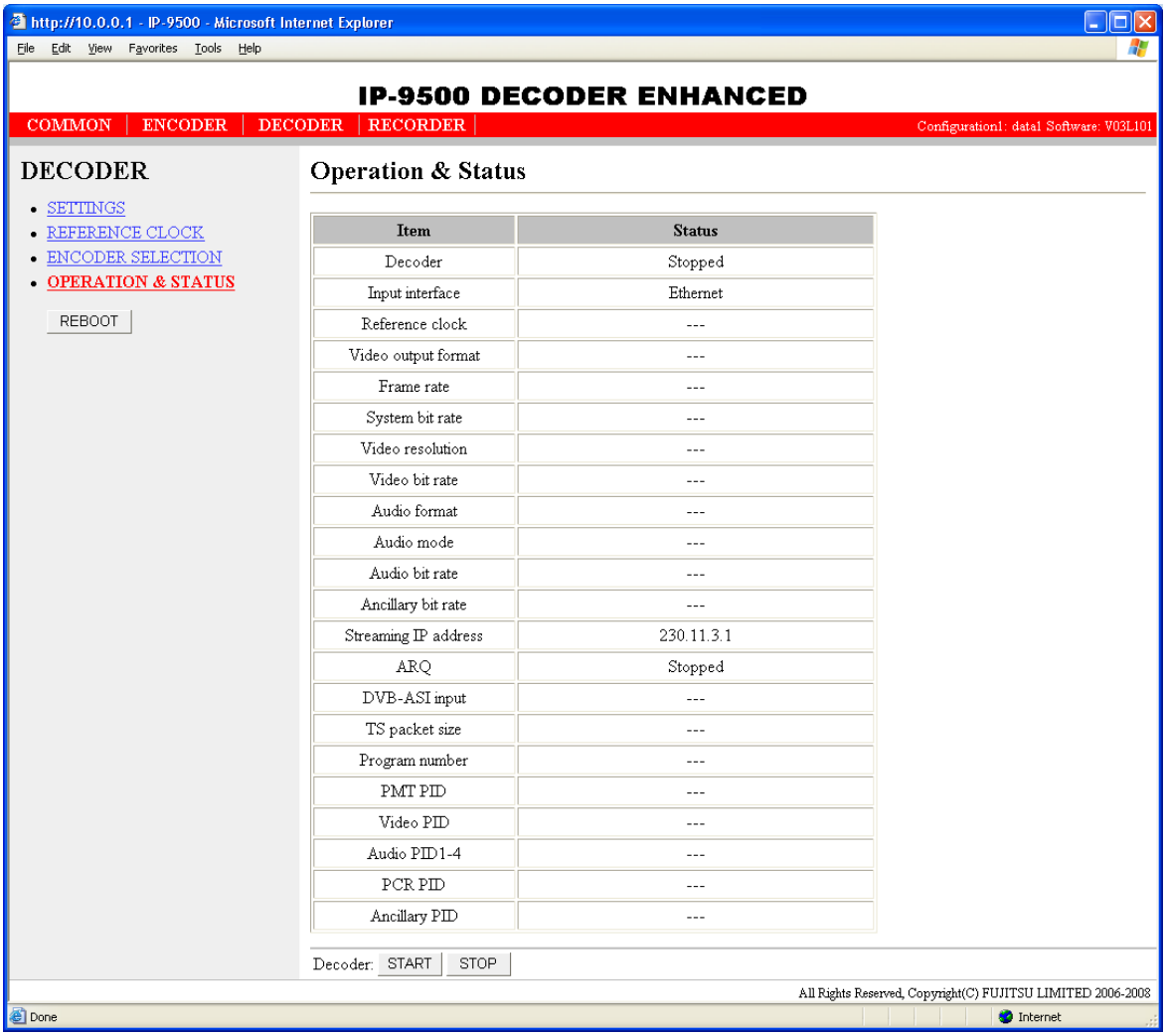


Figure 3-32 Operation & status (Decoder) Window

You can control starting and stopping of the receiving and decoding operation. When the decoding operation is "Stopped," click the START button to start decoding. To stop decoding, click the STOP button.

Table 3-24 Decoder Operation & Status Display Items

Item	Display
Decoding	**{Normal (Receiving) / Normal (No stream receiving) / Stopped}** Displays the decoder's operation status as a result of settings in the Setting screen or operation of the START/STOP button for receiving streaming.
Input interface	**{Ethernet / DVB-ASI}** **Displays the stream input interface.**
Reference clock	**{Synchronizing / No reference clock signal input / Fault / ---}** Displays the operation status of the reference clock.
Video output format	{1080i /720p/**480i**/**576i**} Displays the video output format information.
Frame rate	**{29.97Hz/25Hz/59.94Hz/50Hz}** Displays the frame rate of received streams.
System bit rate	**{--.- Mbps / ---}** Displays the system bit rate of received streams.
Video resolution	**{1920x1080 / 1440x1080/960x1080/1280x720/640x720/960×720/720×480/720×576/---}** Displays the video resolution of received streams.
Video bit rate	**{-- Mbps/---}** Displays the video bit rate of received streams.
Audio 1-4	**{XXX1/YY1 kbps/---}** **{XXX1/YY2 kbps/---}** **{XXX1/YY3 kbps/---}** **{XXX1/YY4 kbps/---}** XXX1: Audio 1 encoding formatYY1: Audio 1 bit rate XXX2: Audio 2 encoding formatYY2: Audio 2 bit rate XXX3: Audio 3 encoding formatYY3: Audio 3 bit rate XXX4: Audio 4 encoding formatYY4: Audio 4 bit rate XXX: **{MPEG1 Layer 2 /MPEG2 AAC/** Transparent**}** Displays the audio encoding format of received streams. YY: **{---Kbps}** Displays the audio bit rate of received streams.
Ancillary bit rate	**{Avg. --- Kbps/Max. ---Kbps/---}** Displays the average rate and maximum rate for ancillary data.
Streaming IP address	**{--.--.--.-- / ---}** Displays the IP address of the streaming origination device.
ARQ	**{Operating (RTT=XXXmsec) / Stopped / ---}** Displays the ARQ operation status. During operation, the Round Trip Time is also displayed. XXX: Round Trip Time
DVB-ASI input	**{Normal / Fault / No input signal / ---}** Displays the input status of the DVB-ASI signal.
TS packet size	**{188 bytes / 204 bytes / ---}** Displays the TS packet size of the DVB-ASI signal.
Program number	{XXXX / ---} Displays the receiving program number. XXXX: Hexadecimal value for program number
PMT PID	**{XXXX / ---}** Displays the PID for the receiving program map table. XXXX: Hexadecimal number of PMT PID
Video PID	**{XXXX / ---}** Displays the PID for the receiving video. XXXX: Hexadecimal number of Video PID
Audio PID	**{XXXX, XXXX, XXXX, XXXX / ---}** Displays the PID for the receiving audio. XXXX: Hexadecimal number of Audio PID Only the amount for received channels is displayed.

PCR PID	**{XXXX / ---}** Displays the PID for the receiving PCR. XXXX: Hexadecimal number of PCR PID
Ancillary PID	**{XXXX／---}** Displays the PID for ancillary data. XXXX: Hexidecimal value of ancillary PID

* Notation: **{A / B}** indicates that either **A** or **B** is displayed.

Chapter 4
Front Panel Operation

This chapter explains how to make settings on the front panel and how to operate the panel.

note As for IP-9500e, IP-9000De and IP-9000e specification, see Appendixes “IP-9500e/IP-9500De Specifications” and “IP-9000e Specifications”

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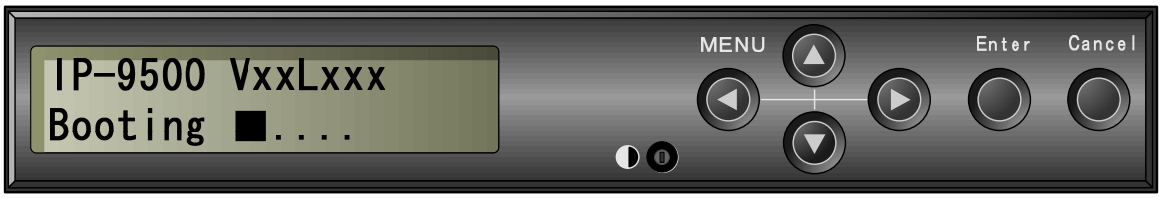
4.1 Functions of Control Keys

IP-9500e Series has six control keys: [▲], [▼], [◄], [►], [Enter], and [Cancel]. Use these keys to make settings.

The front panel consists of two lines, 20 characters per line.



Front Panel and Control Keys

■Function description of each key

Functions of the [▲] and [▼] keys

- Each key is used to change menu items or setting items displayed on the front panel.
- The displayed item changes each time either key is pressed. [▲] and [▼] change items in the opposite directions.

Functions of the [◄] and [►] keys

- One key is used to move the cursor displayed on the front panel to the left and the other key is used to move it to the right.
- The cursor moves by one column for each item each time either key is pressed.

[Enter] key

- Pressing the [Enter] key while the maintenance initial page is displayed proceeds to the maintenance menu page.
- Pressing the [Enter] key on the maintenance menu page allows you to display status information or make shutdown settings.

[Cancel] key

- Pressing the [Cancel] key while the maintenance menu page is displayed proceeds to the maintenance initial page. Pressing the [Cancel] key on the setting item selection page returns to the page displayed immediately before you pressed the [Enter] key.

Others

- If you do not make any key input for at least 30 seconds on any page, the backlight of the front panel is turned off.
- If you do not make any key input for 60 at least seconds on any page, the current page proceeds to the maintenance initial page.

4.2 Setting Menu

4.2.1 Three Type of Front Panel Menu

Three types of front panel menu are available for IP-9500e Series: Factory shipment firmware, Encoder and Decoder.

◆**Front panel menu of factory shipment firmware**

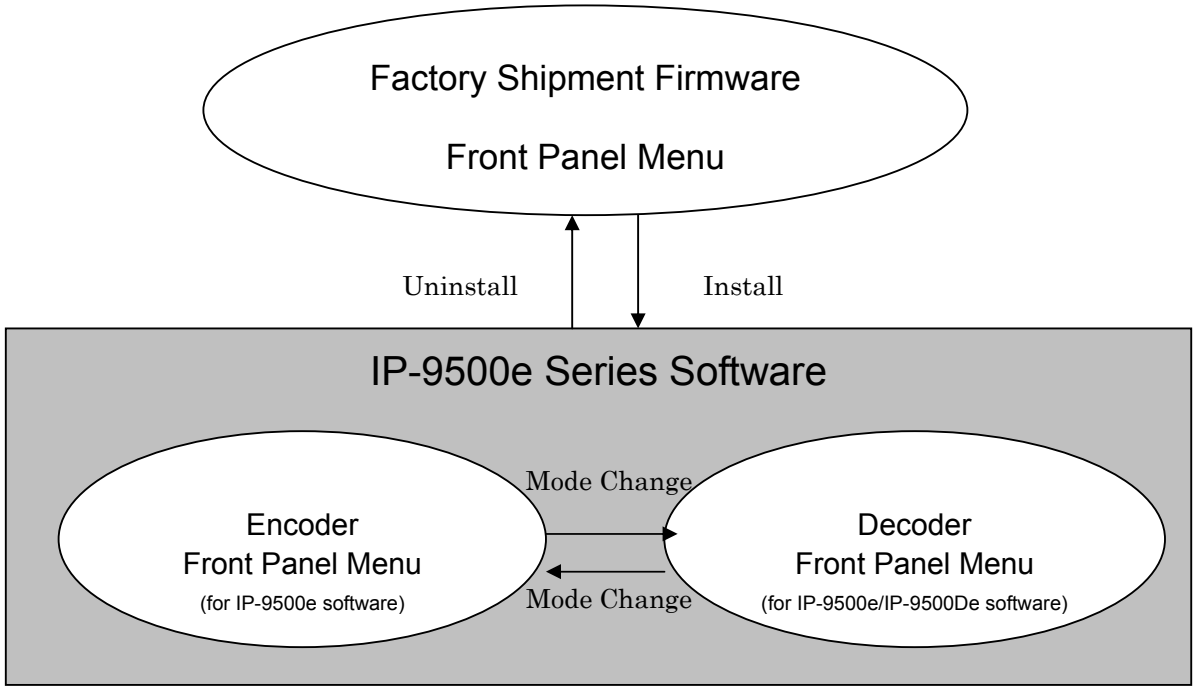
See the IP-9500e / IP-9500De / IP-9000e User's Guide.

◆**Front panel menu of Encoder**

See 4.2.2 Encoder front panel menu, 4.3 Overview of Panel Display and 4.4 Front Panel Operation Encoder

◆**Front panel menu of Decoder**

See 4.2.3 Decoder front panel menu, 4.3 Overview of Panel Display and 4.5 Front Panel Operation Decoder



4.2.2 Encoder Front Panel Menu

The table below lists the setting menu items applicable for encoder operation.

Table 4-1 Setting Menu Items : (1) Encoder

Note: x in the table indicates a number from 0 to 9, and N indicates a number from 1 to 10.

Menu	Submenu 1	Submenu 2	Parameter	Function	Refer to
0.Initial page				Displays the version of the software. - ENCODER VxxLxxx - Configuration name (Default: data1)	4.3.2
1.Status	1 LAN		1 IP address mode	Displays the LAN port operation mode. - Static IP / DHCP / PPPoE	4.4.1
			2 IP address	Displays the IP address. - xxx.xxx.xxx.xxx / ---	
			3 Subnetmask	Displays the subnet mask. - xxx.xxx.xxx.xxx / ---	
			4 Default gateway	Displays the default gateway. - xxx.xxx.xxx.xxx / ---	
			5 Ethernet type	Displays the LAN connection mode. - 1000Base-T Full / 1000Base-T Half / 100Base-TX Full / 100Base-TX Half / 10Base-T Full / 10Base-T Half / ---	
			6 Link	Displays the link status. - Connected / Disconnected	
	2 Console		1 IP address	Displays the IP address. - xxx.xxx.xxx.xxx	4.4.2
			2 Subnetmask	Displays the subnet mask. - xxx.xxx.xxx.xxx / ---	
			3 Gateway	Displays the gateway address. - xxx.xxx.xxx.xxx / ---	

			4 Ethernet type	Displays the LAN connection mode. - 1000Base-T Full / 1000Base-T Half / 100Base-TX Full / 100Base-TX Half / 10Base-T Full / 10Base-T Half / ---	
			5 Link	Displays the link status. - Connected / Disconnected	
	3 Main Encoder		1 Encoding	Displays the encoder operating status. - Operating / Stopped	4.4.3
			2 Video input port	Displays the video input port. - HD-SDI / SD-SDI / HDMI	
			3 Output interface	Displays the output interface. - Ethernet / DVB-ASI	
			4 Video input	Displays video input status. - Normal / No input signal / Fault	
			5 Audio input port	Displays the audio input port. - Analog / HD-SDI / SD-SDI / HDMI	
			6 Profile	Displays the encoding profile. - High profile/Main Profile	
			7 System bit rate	Displays the system bit rate. xxx.xxxx Mbps	
			8 Video resolution	Displays the video resolution. - 1920x1080i/59.94Hz 1440x1080i/59.94Hz 960x1080i/59.94Hz 1280x720p/59.94Hz 960×720p/59.94Hz 640x720p/59.94Hz 1920x1080i/50Hz 1440x1080i/50Hz 960x1080i/50Hz 1280×720p/50Hz 960×720p/50Hz 640×720p/50Hz 720×480i/59.94Hz 720×576i/50Hz	

			9 Video bit rate	Displays the video bit rate. - xxx Mbps	
			10 Audio1 format	Displays the audio1 encoding format. - MPEG1 Layer 2/ MPEG2 AAC/ Pass-thru/None	
			11 Audio bit rate	Displays the audio 1 bit rate. - xxx Kbps/---	
			12 Audio mode	Displays the audio 1 mode. - Stereo/Dual monaural/---	
			13 Audit 2 format	Displays the audio2 encoding format. - MPEG1 Layer 2/ MPEG2 AAC/ Pass-thru/None	
			14 Audi 2 bit rate	Displays the audio2 bit rate. - xxxKbps/---	
			15 Audit 2 mode	Displays the audio2 mode. - Stereo/Dual monoaural/---	
			16 Audit 3 format	Displays the audio3 encoding format. - MPEG1 Layer 2/ MPEG2 AAC/ Pass-thru/None	
			17 Audit 3 bit rate	Displays the audio3 bit rate. - xxx Kbps/---	
			18 Audit 3 mode	Displays the audio3 mode. - Stereo/Dual monaural/---	
			19 Audit 4 format	Displays the audio4 encoding format. - MPEG1 Layer 2/ MPEG2 AAC/ Pass-thru/None	
			20 Audit 4 bit rate	Displays the audio4 bit rate. - xxx Kbps/---	
			21 Audit 4 mode	Displays the audio4 mode. - Stereo/Dual monaural/---	
			22 Encoding control	Displays the encoding control mode. - Standard (IBBP)/Motion (IBP)/Low Latency (PPPP)	
			23 Pre-filter	Displays ON/OFF for the pre-filter. ·ON / OFF	

			24 Refresh Cycle	Displays the refresh cycle. ・xx Frames	
			25 ANC data	Displays the transmission status of ancillary data. ・VU data VITC/CC VU data VITC VU data CC VU data Private PES ---	
			26 Max Streams	Displays the maximum number of streams possible. ・XX / ---	
			27 Destination IP#N	Displays the destination IP address. - xxx.xxx.xxx.xxx / ---	
			28 FEC	Displays the FEC operating status. - Operating (1/xx) / Stopped	
			29 ARQ	Displays the ARQ operating status. - Operating / Stopped	
			30 TOS	Displays the TOS (Type Of Service) value of the set IP packet. - xx/---	
			31 Protocol	Displays the streaming protocol to IP. - RTP/UDP/---	
			32 Stream format	Displays the stream format. ・Time stamped TS / Standard TS / ---	
			33 Pro-MPEG FEC	Displays the Pro-MPEG FEC operating status. ・Operating(NxN) / Stopped / ---	
			34 DVB-ASI sync	Displays the DVB-ASI synchronization status. - Internal / Subordination / ---	
			35 DVB-ASI input	Displays the DVB-ASI input status. - Normal / No input signal / Fault / ---	

			36 TS packet size	Displays the TS packets side on DVB-ASI output. - 188 Bytes / 204 Bytes / ---	
			37 PCR interval	Displays the PCR insertion interval. ·xx ms / ---	
			38 program number	Displays the sending program number. ·XXXX / ---	
			39 PMT PID	Display the PMT PID sending. - XXXX / ---	
			40 Video PID	Displays the Video PID sending. - XXXX / ---	
			41 Audio1 PID	Display the Audio1 PID sending. - XXXX / ---	
			42 Audio2 PID	Displays the Audio2 PID sending. - XXXX / ---	
			43 Audio3 PID	Displays the Audio3 PID for sending. ·XXXX / ---	
			44 Audio4 PID	Displays the Audio4 PID for sending. ·XXXX / ---	
			45 PCR PID	Displays the PCR PID sending. - XXXX / ---	
			46 ANC PID	Displays the ancillary PID for sending. ·XXXX / ---	
	4 Sub Encoder		1 Encoding	Displays the encoder operation status. ·Operating / Stopped	4.4.4
			2 Video input port	Displays the video input port. ·HD-SDI / HDMI	
			3 Video input	Displays the video input status. ·Normal / No input signal / Fault	
			4 Audio input port	Displays the audio input port. ·Analog / HD-SDI / SD-SDI / HDMI	
			5 Profile	Displays the encoding profile. - High profile/main profile/---	
			6 System bit rate	Displays the system bit rate. ·xxx . x Kbps	

			7 Video resolution	Displays the video resolution. ・352×240i/59.94Hz 352×288i/50Hz 720×480i/59.94Hz 720×576i/50Hz	
			8 Video bit rate	Displays the video bit rate. ・xxx Kbps/VBR xxx Mbps	
			9 Audio 1 format	Displays the audio1 encoding format. - MPEG1 Layer 2/ MPEG2 AAC/ None	
			10 Audio 1 bit rate	Displays the audio 1 bit rate. - xxx Kbps/---	
			11 Audio 1 mode	Displays the audio mode. - Stereo/Dual monaural/---	
			12 Encoding control	Displays the encoding control mode. - Standard (IBBP)/ Motion (IBP)/Low Latency (PPPP)	
			13 Pre-filter	Displays ON/OFF for the pre-filter. ・ON / OFF	
			14 Refresh Cycle	Displays the refresh cycle. ・xx Frames	
			15 ANC data	Displays the transmission status of ancillary data. ・Activated / Not activated / ---	
			16 Max streams	Displays the maximum number of streams possible. ・XX / ---	
			17 Destination IP#1	Displays the destination IP address. ・xxx.xxx.xxx.xxx / ---	
			18 FEC	Displays the FEC operation status. ・Operating (1/xx) / Stopped / ---	
			19 ARQ	Displays the ARQ operation status. ・Operating / Stopped / ---	

			20 TOS	Displays the TOS (Type Of Service) value of the set IP packet. - xx/---	
			21 Protocol	Displays the streaming protocol to IP. - RTP/UDP/---	
			22 Stream format	Displays the stream format. ・Time stamped TS / TS / ---	
			23 Pro-MPEG FEC	Displays the operating status of Pro-MPEG FEC. ・Operating(NxN) / Stopped / ---	
	5 Intercom		1 Status	Displays the setting for intercom. - Activated or Not activated	4.4.5
			2 Destination IP	Displays the IP address set for intercom. - xxx.xxx.xxx.xxx / ---	
	6 Data port		1 Status	Displays the setting for data communication. - Activated / Not activated	4.4.6
			2 Destination IP	Displays the IP address set for data communication. - xxx.xxx.xxx.xxx / ---	
			3 Mode	Displays the data communication mode. - Server / Server (recv only) / Client / ---	
			4 RS-232C mode	Displays the RS-232C communication settings (five items shown below). ・(1)/(2)/(3)/(4)/(5) (1) Bit rate: 38.4, 19.2, 9.6, 4.8, 2.4 or 1.2 (2) Data length: 7 or 8 (3) Parity: None, odd or even (4) Stop bit: 1 or 2 (5) Flow control: f:Non / f:R/C	
	7 SNMP		1 Status	Displays the SNMP settings. - Activated / Not activated	4.4.7
	8 Equipment		1 Current time	Displays the equipment time. - DD-MM-YYYY hh:mm:ss	4.4.8

			2 Option card	Displays the option card status. - DVB-ASI / Unequipped / Fault / Unknown	
			3 Temperature	Displays the temperature inside the equipment. - xx degC	
	9 Software		1 Software	Displays the version of the software. - VxxLxxCxx	4.4.9
			2 Configuration	Displays the configuration name. - DataName	
2.Setting	1 Load configuration		1 Configuration#N	Selects the configuration number. N is a number from 1 to 10.	4.4.10
	2 Network	1 LAN IP mode		Sets the acquisition method of IP address - DHCP/PPPoE/Static IP	
		2 LAN	1 IP address	Sets the IP address. - xxx.xxx.xxx.xxx	4.4.11
			2 Subnetmask	Sets the subnet mask. - xxx.xxx.xxx.xxx	
			3 Default gateway	Sets the default gateway address. - xxx.xxx.xxx.xxx	
		3 Console	1 IP address	Sets the IP address. - xxx.xxx.xxx.xxx	4.4.12
			2 Subnetmask	Sets the subnet mask. - xxx.xxx.xxx.xxx	
			3 Gateway	Set the gateway address	
	3 Encoder	1 AV input	1 Video input port	Sets the video input port. - HD-SDI/SD-SDI/HDMI	
			2 Video format	Sets the video format. - 1080i/59.94/1080i/50/720p/59.94/720p/50/480i/59.94/ 576i/50	
			3 Audio input	Sets the audio input port. - HD-SDI/Analog/HDMI/SD-SDI	

		2 Main encoder	1 Encoding	Sets the operation status of the main encoder. - Enable/Disable	
			2 Output interface	Sets the streaming output destination. - Ethernet/DVB-ASI	
		3 Main encoder video	1 Video resolution	Sets the video resolution. - 1920x1080/1440x1080/960x1080/1280x720/ 960x720/640x720/720x480/720x576	
			2 Encoding control	Sets the encoding control mode. - Standard (IBBP)/Motion (IBP)/Low latency (PPPP)	
			3 System bit rate	Sets the system bit rates - xx.xxxxMbps	
		4 Main encoder audio	1 Audio1 format	Sets the audio 1 encoding format. - MPEG1 Layer 2/MPEG2 AAC/Pass-thru/None	
			2 Audio1 bit rate	Sets the audio1 bit rates. - 384 Kbps/256 Kbps/128 Kbps/64 Kbps/2304 Kbps/---	
			3 Audio1 mode	Displays the audio1 mode. - Stereo/Dual monaural/---	
			4 Audio2 format	Sets the audio2 encoding format. - MPEG1 Layer 2/MPEG2 AAC/Pass-thru/None	
			5 Audio2 bit rate	Sets the audio2 bit rates. - 384 Kbps/256 Kbps/128 Kbps/64 Kbps/2304 Kbps/---	
			6 Audio2 mode	Displays the audio2 mode. - Stereo/Dual monaural/---	
			7 Audio3 format	Sets the audio3 encoding format. - MPEG1 Layer 2/MPEG2 AAC/Pass-thru/None	

			8 Audio3 bit rate	Sets the audio3 bit rates. - 384 Kbps/256 Kbps/128 Kbps/64 Kbps/2304 Kbps/---	
			9 Audio3 mode	Displays the audio3 mode. - Stereo/Dual monaural/---	
			10 Audio4 format	Sets the audi4 encoding format. - MPEG1 Layer 2/MPEG2 AAC/Pass-thru/None	
			11 Audio4 bit rate	Sets the audio4 bit rates. - 384 Kbps/256 Kbps/128 Kbps/64 Kbps/2304 Kbps/---	
			12 Audio4 mode	Displays the audio4 mode. - Stereo/Dual monaural/---	
		5 Sub encoder	1 Encoding	Sets the operation status of the sub encoder. - Enable/Disable	
		6 Sub encoder video	1 Video resolution	Sets the video resolution. - 720x480/352x240/720x576/352x288	
			2 Encoding control	Sets the encoding mode. - Standard(IBBP)/Motion(IBP)/Low Latency(PPPP)	
			3 System bit rate	Sets the system bit rate. - xx.xxxxMbps	
		7 Sub encoder audio	1 Audio1 format	Sets the audio1 encoding format. - MPEG1 Layer 2/MPEG2 AAC/ None	
			2 Audio1 bit rate	Sets the audio1 bit rates. - 384 Kbps/256 Kbps/128 Kbps/64 Kbps/---	
			3 Audio1 mode	Sets the audio1 mode. - Stereo/Dual monaural/---	
	4 Recorder	1 Operation	1 Recording	Sets the recording operation. - Enable/Disable	
			2 Recording mode	Sets the recording operation mode. - Until full/Overwrite/Until start position	
3.Alarm	1 View			Displays the current alarm. - Alarm detail	4.4.13

4.Log	1 View			Displays the log (up to 100 records). - DD-MMM HH:MM log code	4.4.14
	2 Clear all		[Enter] key	Deletes all logs.	4.4.15
5.Shutdown	1 Shutdown		[Enter] key	Shuts down the system.	4.4.16
	2 Reboot		[Enter] key	Reboots the system.	4.4.17

4.2.3 (2) Decoder Front Panel Menu

The table below lists the setting menu items applicable for decoder operation.

Table 4-2 Setting Menu : (2) Decoder

Note: x in the table indicates a number from 0 to 9, and N indicates a number from 1 to 10.

Menu	Submenu	Parameter	Function	Refer to
0. Initial page			Displays the version of the software. - DECODER VxxLxx - Configuration name (Default: data1)	4.3.2
1.Status	1 LAN	1 IP address mode	Displays the LAN port operation mode. - Static IP / DHCP / PPPoE	4.5.1
		2 IP address	Displays the IP address. - xxx.xxx.xxx.xxx / ---	
		3 Subnetmask	Displays the subnet mask. - xxx.xxx.xxx.xxx / ---	
		4 Default gateway	Displays the default gateway. - xxx.xxx.xxx.xxx / ---	
		5 Ethernet type	Displays the LAN connection mode. - 1000Base-T Full / 1000Base-T Half / 100Base-TX Full / 100Base-TX Half / 10Base-T Full / 10Base-T Half / ---	
		6 Link	Displays the link status. - Connected / Disconnected	
	2 Console	1 IP address	Displays the IP address. - xxx.xxx.xxx.xxx	4.5.2
		2 Subnetmask	Displays the subnet mask. - xxx.xxx.xxx.xxx / ---	
		3 Gateway	Displays the gateway address. - xxx.xxx.xxx.xxx / ---	

		4 Ethernet type	Displays the LAN connection mode. - 1000Base-T Full / 1000Base-T Half / 100Base-TX Full / 100Base-TX Half / 10Base-T Full / 10Base-T Half / ---	
		5 Link	Displays the link status. - Connected / Disconnected	
	3 Decoder	1 Decoding	Displays the decoder operating status. - Normal / No stream receiving / Stopped	4.5.3
		2 Reference clock	Displays the reference clock settings. - BB / HDSYNC / Not activated / Internal	
		3 Ref clock status	Displays the reference clock input status. - Normal / No input signal / Fault / ---	
		4 Input interface	Displays the input interface. - Ethernet / DVB-ASI	
		5 System bit rate	Displays the system bit rate. - xxx.xxxx Mbps	
1.Status	3 Decoder	6 Video resolution	Displays the video resolution. - 1920x1080i/59.94Hz 1440x1080i/59.94 Hz 960x1080i/59.94Hz 1280x720p/59.94Hz 960×720p/59.94Hz 640x720p/59.94Hz/ 1920x1080i/50Hz 1440x1080i/50Hz 960x1080i/50Hz 1280×720p/50Hz 960×720p/50Hz 640×720p/50Hz 720×480i/59.94Hz 720×576i/50Hz ---/---	4.5.3
		7 Video bit rate	Displays the video bit rate. - xxx Mbps/---	

		8 Audio1 format	Displays the audio1 encoding format. - MPEG1 Layer 2/MPEG2 AAC/ Pass-thru/---
		9 Audio1 bit rate	Displays the audio1 bit rate. - xxx Kbps/---
		10 Audio2 format	Displays the audio2 encoding format. -MPEG1 Layer 2/MPEG2 AAC/ Pass-thru/---
		11 Audio2 bit rate	Displays the audio2 bit rate. - xxx Kbps/---
		12 Audio3 format	Displays the audio3 encoding format. - MPEG1 Layer 2/MPEG2 AAC/ Pass-thru/---
		13 Audio3 bit rate	Displays the audio3 bit rate. - xxx Kbps/---
		14 Audio4 format	Displays the audio4 encoding format. - MPEG1 Layer 2/MPEG2 AAC/ Pass-thru/---
		15 Audio4 bit rate	Displays the audio4 bit rate. - xxx Kbps/---
		16 ANC avg bit rate	Displays the average bit rate of the ancillary data. - xxx Kbps/---
		17 ANC max bit rate	Displays the maximum bit rate of the ancillary data. - xxx Kbps/---
		18 Source IP	Displays the origination IP address. - xxx.xxx.xxx.xxx / ---
		19 ARQ status	Displays the ARQ operating status. - Operating / Stopped / ---
		20 DVB-ASI input	Displays the DVB-ASI input status. - Normal / No input signal / Fault / ---
		21 TS packet size	Displays the TS packet size on DVB-ASI interface. - 188 Bytes / 204 Bytes / ---
		22 Program number	Displays the number of received program numbers. ･XXXX / ---

		23 PMT PID	Displays the PMT PID receiving. - XXXX / ---	
		24 Video PID	Displays the Video PID receiving. - XXXX / ---	
		25 Audio1 PID	Displays the Audio1 PID receiving. - XXXX / ---	
		26 Audio2 PID	Displays the Audio2 PID receiving. - XXXX / ---	
		27 Audio3 PID	Displays the Audio3 PID for receiving. ▪XXXX / ---	
		28 Audio4 PID	Displays the Audio4 PID for receiving. ▪XXXX / ---	
		29 PCR PID	Displays the PCR PID receiving. - XXXX / ---	
		30 ANC PID	Displays the ancillary PID for receiving. ▪XXXX / ---	
	4 Intercom	1 Status	Displays the setting for intercom. - Activated / Not activated	4.5.4
		2 Destination IP	Displays the IP address set for intercom. - xxx.xxx.xxx.xxx / ---	
	5 Data port	1 Status	Displays the setting for data communication. - Activated / Not activated	4.5.5
		2 Destination IP	Displays the IP address set for data communication. - xxx.xxx.xxx.xxx / ---	
		3 Mode	Displays the data communication mode. - Server / Server (recv only) / Client / ---	

			4 RS-232C mode	Displays the RS-232C communication settings (five items shown below). ・(1)/(2)/(3)/(4)/(5) (1) Bit rate: 38.4, 19.2, 9.6, 4.8, 2.4 or 1.2 (2) Data length: 7 or 8 (3) Parity: None, odd or even (4) Stop bit: 1 or 2 (5) Flow control: f:Non / f:R/C	
	6 SNMP		1 Status	Displays the SNMP operation status. - Activated / Not activated	4.5.6
	7 Equipment		1 Current time	Displays the equipment time. - DD-MM-YYYY hh:mm:ss	4.5.7
			2 Option card	Displays the option card status. - DVB-ASI / Unequipped / Fault / Unknown	
			3 Temperature	Displays the temperature inside the equipment. - xx degC	
	8 Software		1 Software	Displays the version of the software. - VxxLxxCxx	4.5.8
			2 Configuration	Displays the configuration name. - DataName	
2.Setting	1 Load configuration		N Configuration#N	Selects the configuration number. N is a number from 1 to 10.	4.5.9
	2 Network	1 LAN IP mode		Sets the acquisition method of the IP address. - DHCP/PPPoE/Static IP	
		2 LAN	1 IP address	Sets the IP address. - xxx.xxx.xxx.xxx	4.5.10
			2 Subnetmask	Sets the subnet mask. - xxx.xxx.xxx.xxx	
			3 Default gateway	Sets the gateway address. - xxx.xxx.xxx.xxx	
		3 Console	1 IP address	Sets the IP address. - xxx.xxx.xxx.xxx	4.5.11

			2 Subnetmask	Sets the subnet mask. - xxx.xxx.xxx.xxx	
			3 Gateway	Sets the gateway address. - xxx.xxx.xxx.xxx	
	3 Decoder	1 AV output	1 Concealment time	Sets the time for suspending output due to error occurrence and communication line failure. - XXX s	
		2 Operation:	1 Decoding	Sets the decoder operation status. - Enable/Disable	
			2 Input interface	Sets the stream input interface. - Ethernet/DVB-ASI	
			3 Error concealment	Sets whether to perform freezing not to cause any block noise at the error occurrence in decoding. - Enable/Disable	
3.Alarm	1 View			Displays the current alarm. - Alarm detail	4.5.12
4.Log	1 View			Displays the log (up to 100 records). - DD-MMM HH:MM log code	4.5.13
	2 Clear all		[Enter] key	Deletes all logs.	4.5.14
5.Shutdown	1 Shutdown		[Enter] key	Shuts down the system.	4.5.15
	2 Reboot		[Enter] key	Reboots the system.	4.5.16

4.3 Overview of Panel Display

This section explains the data displayed on the front panel.

4.3.1 Starting Up

After power-on, the front panel displays the following message in any of the factory shipment firmware, encoder and decoder modes until the RDY LED goes on. About one minute later, when IP-9500e Series hardware starts and the RDY LED goes on, the display changes to the initial menu.

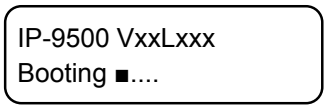


Figure 4-2 Booting Message

4.3.2 Regular Operation

In either of encoder or decoder mode, the initial menu showing the operation data number (data X) is displayed as shown below. For details on the display, see Section 4.4, "Front Panel Operation Encoder," and Section 4.5, "Front Panel Operation Decoder." Note that if no such panel operation as button control is performed for more than 1 minute while another menu is being displayed, the menu automatically returns to this initial menu.

(1) Encoder (2) Decoder

Figure 4-3 Initial Menu

4.3.3 Menu Selection

The menu consists of four layers: initial menu > main menu > submenu > setting item. When a submenu is selected, the main menu item is displayed on the upper row of the front panel and a submenu item is displayed on the lower row. When a setting item is selected, the name of the setting item is displayed on the upper row, and a value that can be selected for the item is displayed on the lower row. (A display example is shown below.)

Main menu Sub menu Setting item

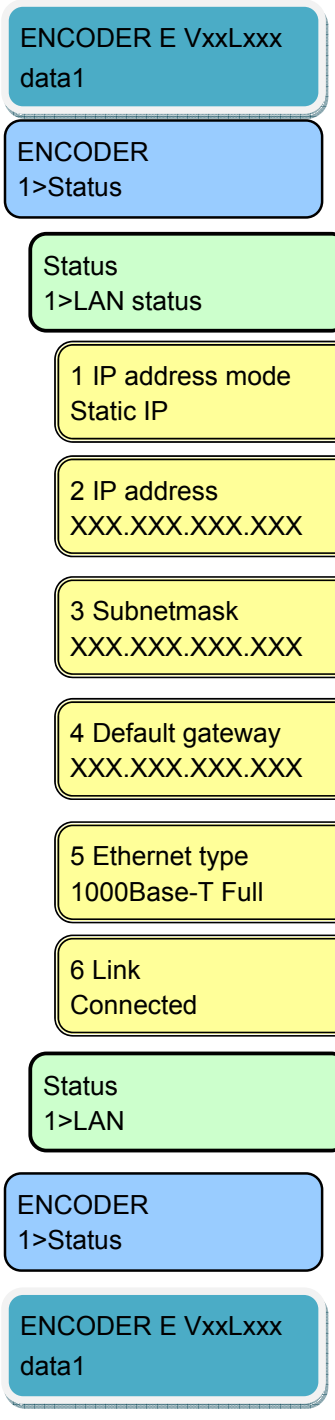
Figure 4-4 Menu Hierarchy

4.4 Front Panel Operation Encoder

* In the explanation, X represents an arbitrary number from 0 to 9, and N represents an arbitrary number from 1 to 10.

4.4.1 Status (LAN)

This Status menu displays the current status of the LAN port.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press [Enter] once.

3. The Status submenu - LAN status appears as shown on the left. Press [Enter].

4. The setting item appears with "Static IP," "DHCP" or "PPPoE" displayed as shown on the left. Press [▼].

5. "IP address" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

6. "Subnetmask" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

7. "Gateway address" appears with "XXX.XXX.XXX.XXX displayed as shown on the left. Press [▼].

8. "Ethernet type" appears as shown on the left. Press [▼].

9. "Link" appears with "Connected" or "Disconnected" displayed as shown on the left. Press [Cancel].

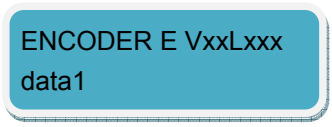
10. The Status submenu - LAN status appears as shown on the left. Click [Cancel] once.

11. The Main menu - Status is displayed as shown on the left. Press [Cancel] once.

12. The Initial menu appears.

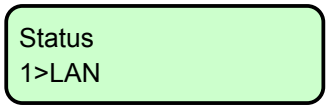
4.4.2 Status (CONSOLE)

This Status menu displays the current status of the CONSOLE port.

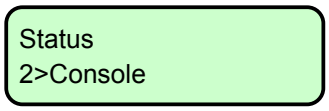


1. Press [Enter] at the initial menu.

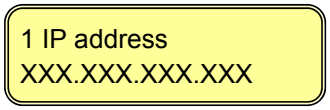
2. The Main menu - Status appears as shown on the left. Press [Enter] once.



3. The Status submenu - LAN status appears as shown on the left. Press [Enter].

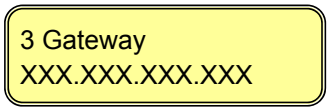


4. The Status submenu - Console status appears as shown on the left. Press [Enter].

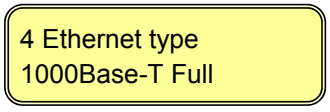


5. "IP address" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

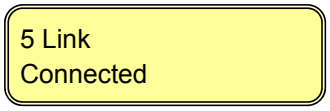
6. "Subnetmask" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].



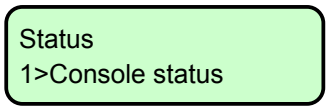
7. ”Gateway” appears with “XXX.XXX.XXX.XXX” displayed as shown on the left. Press [▼].



8. "Ethernet type" appears as shown on the left. Press [▼].

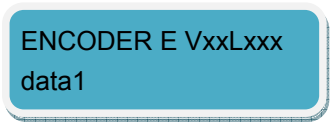


9. "Link" appears with "Connected" or "Disconnected" displayed as shown on the left. Press [Cancel].



10. The Status submenu - Console status appears as shown on the left. Click the [Cancel] key once.

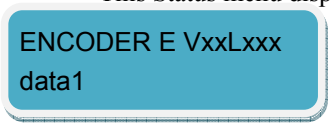
11. The Main menu - Status is displayed as shown on the left. Press the [Cancel] key once.



12. The Initial menu appears.

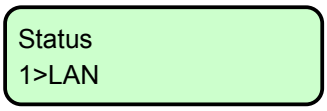
4.4.3 Status (Main Encoder)

This Status menu displays the current status of the Main encoder.

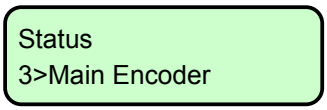


1. Press [Enter] at the initial menu.

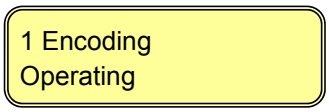
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.



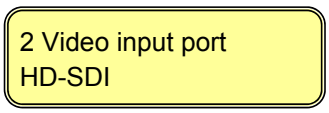
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key twice.



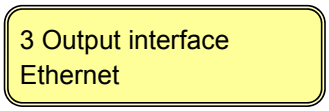
4. The Status submenu – Main Encoder status appears as shown on the left. Press [Enter].



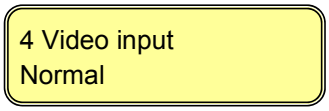
5. The encoder operating status ("Encoding") appears with "Operating" or "Stopped" displayed as shown on the left. Press [▼].



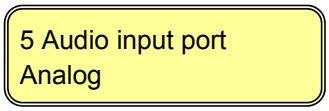
6. "Video input port" appears with "HD-SDI," "SD-SDI," or "HDMI" displayed as shown on the left. Press [▼].



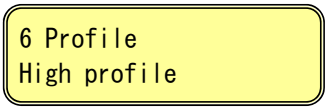
7. "Output interface" appears with "Ethernet" or "DVB-ASI" displayed as shown on the left. Press [▼].



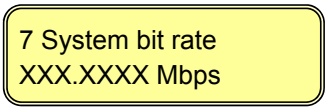
8. "Video input" appears with "Normal," "No signal" or "Fault". When the display is as shown on the left, press [▼].



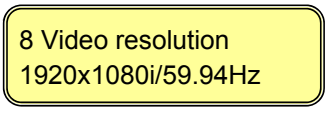
9. "Audio input port" appears with "Analog," "HD-SDI," "SD-SDI," or "HDMI". When the display is as shown on the left, press [▼].



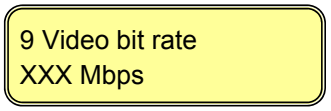
10. "Profile" appears with either "High profile" or "Main profile." When the display is as shown on the left, press [▼].



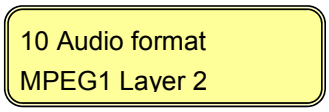
11. "System bit rate" appears with "XXX.XXXX Mbps". When the display is as shown on the left, press [▼].



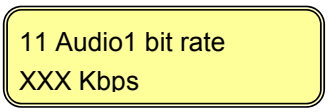
12. "Video resolution" appears with "1920x1080i/59.94Hz,". When the display is as shown on the left, press [▼].



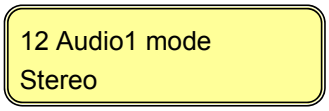
13. "Video bit rate" appears with "XXX Mbps". When the display is as shown on the left, press [▼].



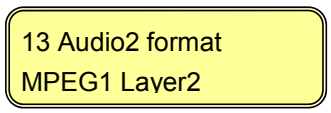
14. "Audio1 format" appears with "MPEG1 Layer2," "MPEG2 AAC," "Pass-thru," or "None". When the display is as shown on the left, press [▼].



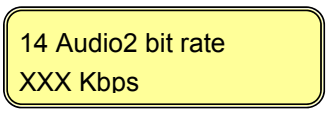
15. "Audio1 bit rate" appears with "XXX kbps" or "---". When the display is as shown on the left, press [▼]



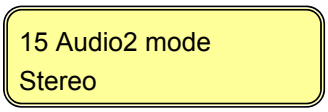
16. "Audio1 mode" appears with "Stereo" or "Dual monaural" or "---" is displayed. When the display is as shown on the left, press [▼].



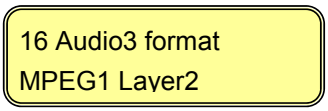
17. "Audio2 format" appears with "MPEG1 Layer2," "MPEG2 AAC," "Pass-thru," or "None". When the display is as shown on the left, press [▼].



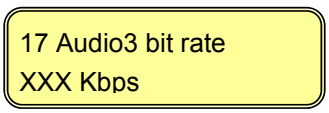
18. "Audio2 bit rate" appears with "XXX kbps" or "---". When the display is as shown on the left, press [▼]



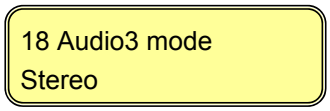
19. "Audio2 mode" appears with "Stereo" or "Dual monaural" or "---" is displayed. When the display is as shown on the left, press [▼].



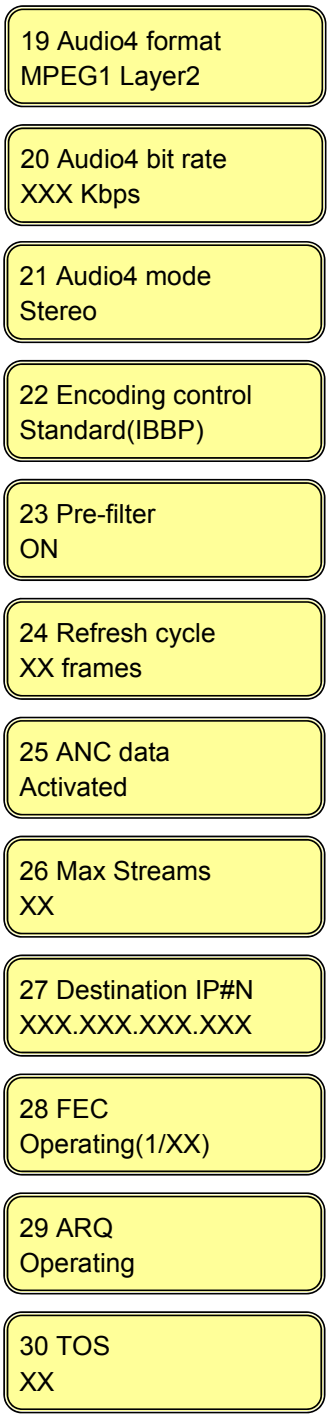
20. "Audio3 format" appears with "MPEG1 Layer2," "MPEG2 AAC," "Pass-thru," or "None". When the display is as shown on the left, press [▼].



21. "Audio3 bit rate" appears with "XXX kbps" or "---". When the display is as shown on the left, press [▼]



22. "Audio3 mode" appears with "Stereo" or "Dual monaural" or "---" is displayed. When the display is as shown on the left, press [▼].



23. "Audio4 format" appears with "MPEG1 Layer2," "MPEG2 AAC," "Pass-thru," or "None". When the display is as shown on the left, press [▼].

24. "Audio4 bit rate" appears with "XXX kbps" or "---". When the display is as shown on the left, press [▼]

25. "Audio4 mode" appears with "Stereo" or "Dual monaural" or "---" is displayed. When the display is as shown on the left, press [▼].

26. The encoding control mode screen is displayed with "Standard (IBBP)," "Motion (IBP)" or "Low latency (PPPP)". When the display is as shown on the left, press [▼].

27. The Pre-filter status screen is displayed. "ON" or "OFF" is displayed. When the display is as shown on the left, press [▼].

28. The Refresh cycle status screen is displayed. "XX frames" or "---" is displayed. When the display is as shown on the left, press [▼].

29. The ancillary data transmission status screen is displayed with "Activated," "Not activated" or "---". When the display is as shown on the left, press [▼].

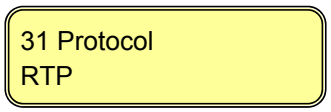
30. The Max Streams screen is displayed. "XX" is displayed. When the display is as shown on the left, press [▼].

31. "Destination IP#N" appears with "XXX.XXX.XXX.XXX". When the display is as shown on the left, press [▼].

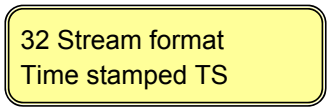
32. "FEC" appears with "Operating (1/XX)," "Stopped" or "---". When the display is as shown on the left, press [▼].

33."ARQ" appears with "Operating," "Stopped," or " ---" displayed as shown on the left. Press [Cancel]. When the display is as shown on the left, press [▼]

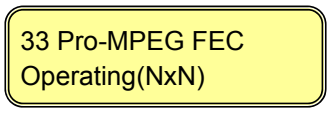
34. "TOS" appears with "xx" or "---". When the display is as shown on the left, press [▼].



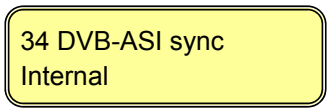
35. “Protocol” appears with “RTP,” “UDP” or “---”.
When the display is as shown on the left, press [▼].



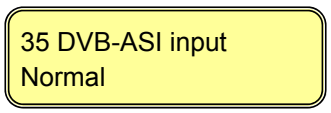
36. The Stream format screen is displayed.
“Time stamped TS,” “TS,” or “---” is displayed.
When the display is as shown on the left, press [▼].



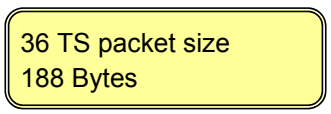
37. The Pro-MPEG FEC screen is displayed.
“Operating (NxN),” “Stopped,” or “---” is displayed. When the display is as shown on the left, press [▼].



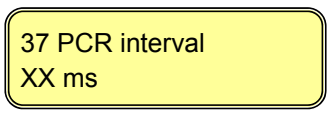
38. "DVB-ASI sync" appears with "Internal," "Slave" or "---".
When the display is as shown on the left, press [▼].



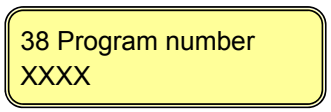
39. "DVB-ASI input" appears with "Normal," "No input signal," "Fault" or "---". When the display is as shown on the left, press [▼].



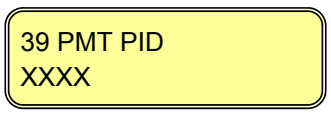
40. "TS packet size" appears with "188 Bytes," "204 Bytes" or "---".
When the display is as shown on the left, press [▼].



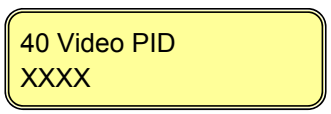
41. The PCR interval screen is displayed.
“XX ms” or “---” is displayed.
When the display is as shown on the left, press [▼].



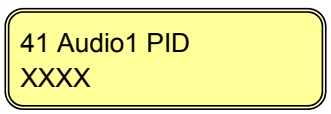
42. The Program number screen is displayed.
“XXXX” or “---” is displayed.
When the display is as shown on the left, press [▼].



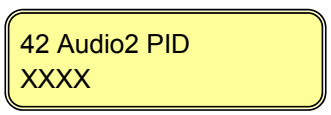
43. "PMT PID" appears with "XXXX" or "---". When the display is as shown on the left, press [▼].



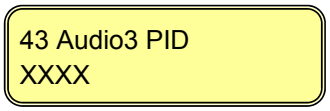
44. "Video PID" appears with "XXXX" or "---" . When the display is as shown on the left, press [▼].



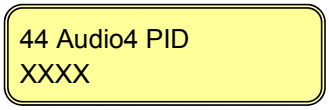
45. "Audio1 PID" appears with "XXXX" or "---". When the display is as shown on the left, press [▼].



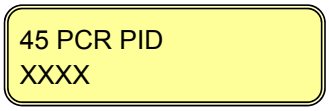
46. "Audio2 PID" appears with "XXXX" or "---". When the display is as shown on the left, press [▼].



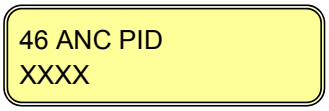
47. The Audio3 PID screen is displayed.
"XXXX" or "---" is displayed.
When the display is as shown on the left, press [▼].



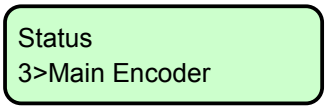
48 The Audio4 PID screen is displayed.
"XXXX" or "---" is displayed.
When the display is as shown on the left, press [▼].



49. "PCR PID" appears with "XXXX" or "---" displayed as shown on the left. Press [▼]..

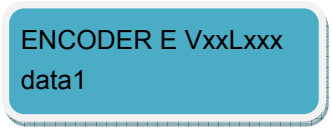


50. The ANC PID screen appears with "XXXX" or "---" displayed as shown on the left..
Press [Cancel] once.



51. The Status submenu – HD Encoder status appears as shown on the left. Press [Cancel] once.

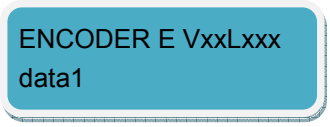
52. The Main menu - Status appears as shown on the left. Press [Cancel] once.



53. The initial menu appears.

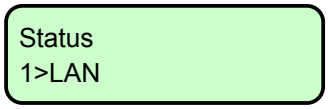
4.4.4 Status (Sub Encoder)

This Status menu displays the current status of the Sub encoder.

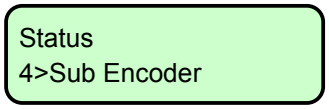


1. Press [Enter] on the intial menu.

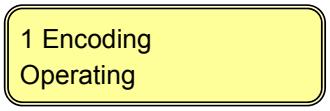
2. The Main menu – Status screen is displayed.
When the display is as shown on the left, press [Enter] once.



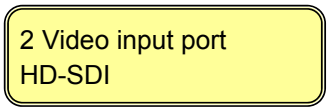
3. The Status submenu – LAN status screen is displayed.
When the display is as shown on the left, press [▼] three times.



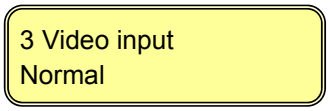
4. The Status submenu – Sub Encoder status screen is displayed.
When the display is as shown on the left, press [Enter].



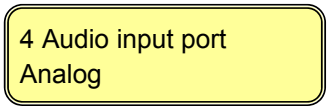
5. The Encoding status display screen is displayed.
"Operating" or "Stopped" is displayed.
When the display is as shown on the left, press [▼].



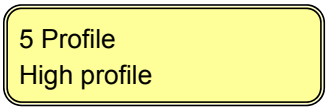
6. The Video input port screen is displayed.
"HD-SDI," "SD-SDI," or "HDMI" is displayed.
When the display is as shown on the left, press [▼].



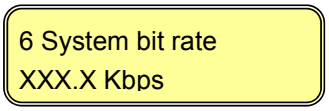
7. The Video input status screen is displayed.
"Normal," "No input signal," or "Fault" is displayed. When the display is as shown on the left, press [▼].



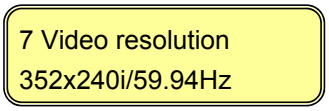
8. The Audio input port screen is displayed.
"Analog," "HD-SDI," "SD-SDI," or "HDMI" is displayed.
When the display is as shown on the left, press [▼].



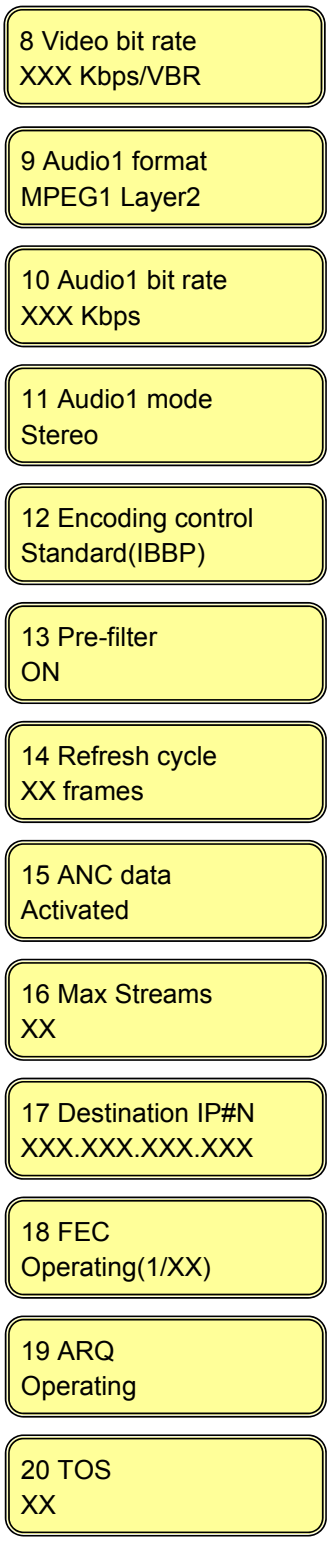
9. The profile screen of encoder is displayed.
"High profile", "Main profile" or "---" is displayed.
When the display is as shown on the left, press [▼].



10. The System bit rate screen is displayed.
"XXX.X Kbps" or "XXX.XXXX Mbps" is displayed.
When the display is as shown on the left, press [▼].



11. The Video resolution screen is displayed.
"352x240i/59.94Hz," "352x288i/50Hz," "720x480i/59.94Hz," or "720x576i/50Hz" is displayed.
When the display is as shown on the left, press [▼].



12. The Video bit rate screen is displayed.
"XXX Kbps/VBR" or "XXX.XXX Mbps" is displayed.
When the display is as shown on the left, press [▼].

13. The Audio1 format screen is displayed.
"MPEG1 Layer2," "MPEG2 AAC," or "None"
is displayed. When the display is as shown on the left, press [▼].

14.. The Audio bit rate screen is displayed.
"XXX Kbps" or "---" is displayed.
When the display is as shown on the left, press [▼].

15. The Audio mode screen is displayed.
"Stereo," "Dual monaural" or "---" is displayed.
When the display is as shown on the left, press [▼].

16. The Encoding control mode screen is displayed.
"Standard (IBBP)," "Motion (IBP)" or "Low Latency (PPPP)" is displayed.
When the display is as shown on the left, press [▼].

17. The Pre-filter status screen is displayed.
"ON" or "OFF" is displayed.
When the display is as shown on the left, press [▼].

18. The Refresh cycle status screen is displayed.
"XX frames" or "---" is displayed.
When the display is as shown on the left, press [▼].

19. The ANC data (VITC, CC) status screen is displayed.
"Activated" or "---" is displayed.
When the display is as shown on the left, press [▼].

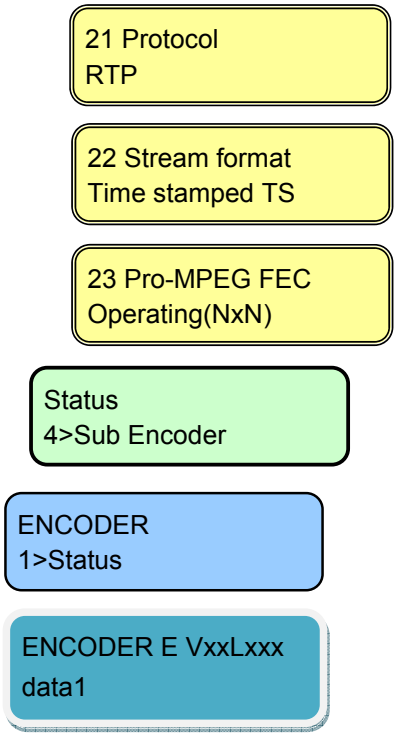
20. The Max Streams screen is displayed.
"XX" is displayed.
When the display is as shown on the left, press [▼].

21. The Desintaion IP adress screen is displayed.
"XXX.XXX.XXX.XXX" is displayed.
When the display is as shown on the left, press [▼].

22. The FEC screen is displayed.
"Operating (1/XX)," "Stopped," or "---" is displayed.
When the display is as shown on the left, press [▼].

23. The ARQ screen is displayed.
"Operating," "Stopped," or "---" is displayed.
When the display is as shown on the left, press [▼].

24. The "TOS" screen appears with "xx" or "---".
When the display is as shown on the left, press [▼].



25. The "Protocol" screen appears with "RTP," "UDP" or "---". When the display is as shown on the left, press [▼].

26. The Stream format screen is displayed.
"Time stamped TX," "TS," or "---" is displayed.
When the display is as shown on the left, press [▼].

27. The Pro-MPEG FEC screen is displayed.
"Operating (XXxXX)," "Stopped," or "---" is displayed.
When the display is as shown on the left, press [Cancel] once.

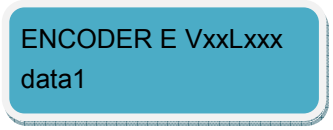
28. The Status submenu – Sub Encoder status screen is displayed.
When the display is as shown on the left, press [Cancel] once.

29. The Main menu – Status screen is displayed.
When the display is as shown on the left, press [Cancel] once.

30. The initial menu is displayed.

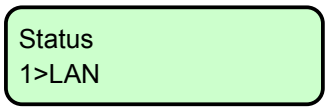
4.4.5 Status (Intercom)

This Status menu displays the current settings for the intercom.



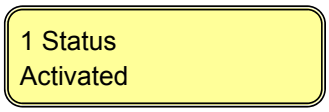
1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.

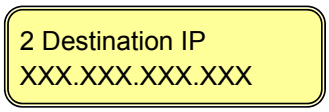


3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key four times.

4. The Status submenu - Intercom status appears as shown on the left. Press [Enter].



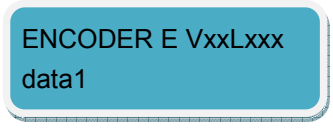
5. "Status" (Intercom) appears with "Activated" or "Not activated" displayed as shown on the left. Press [▼].



6. "Destination IP" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [Cancel].

7. The Status submenu - Intercom status appears as shown on the left. Press [Cancel] once.

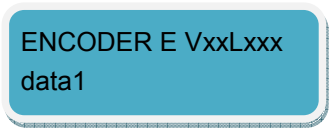
8. The Main menu - Status appears as shown on the left. Press [Cancel] once.



9. The initial menu appears.

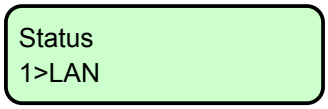
4.4.6 Status (Data Port)

This Status menu displays the current settings for the data port.

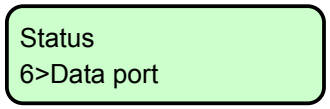


1. Press [Enter] at the initial menu.

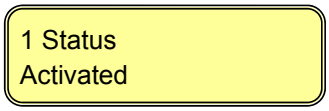
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.



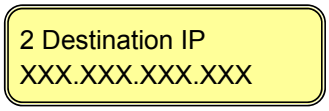
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key five times.



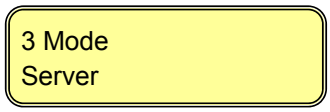
4. The Status submenu - Data port status appears as shown on the left. Press [Enter].



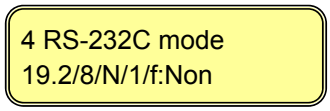
5. "Status" (Data port) appears with "Activated" or "Not activated" displayed as shown on the left. Press [▼].



6. "Destination IP" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

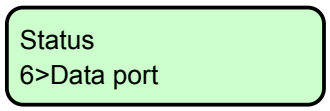


7. "Mode" (Data port operation mode) appears with "Server," "Server (recv only)" or "Client" displayed as shown on the left. Press [▼].



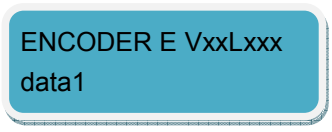
8. "RS-232C mode" appears with the settings displayed in the (1)/(2)/(3)/(4)/(5) format as shown on the left.

(1) Bit rate: 38.4, 19.2, 9.6, 4.8, 2.4 or 1.2
(2) Data length: 7 or 8
(3) Parity: NONE, ODD or EVEN
(4) Stop bit: 1 or 2
(5) Flow control: f:Non or f:R/C
Press [Cancel].



9. The Status submenu - Data port status appears as shown on the left. Press the [Cancel] key once.

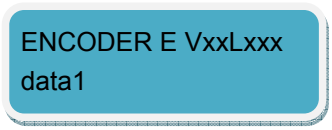
10. The Main menu - Status appears as shown on the left. Press the [Cancel] key once.



11. The initial menu appears.

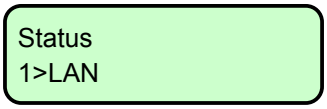
4.4.7 Status (SNMP)

This Status menu displays the current settings for SNMP.

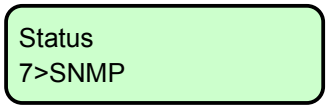


1. Press [Enter] at the initial menu.

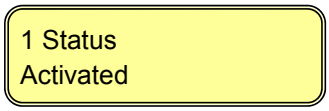
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.



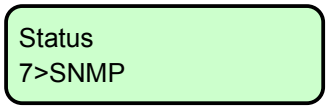
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key six times.



4. The Status submenu - SNMP status appears as shown on the left. Press [Enter].

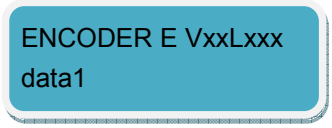


5. "Status" (SNMP) appears with "Activated" or "Not activated" displayed as shown on the left. Press [Cancel].



6. The Status submenu - SNMP status appears as shown on the left. Press the [Cancel] key once.

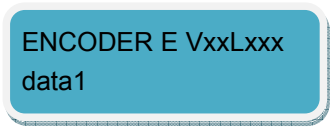
7. The Main menu - Status appears as shown on the left. Press the [Cancel] key once.



8. The initial menu appears.

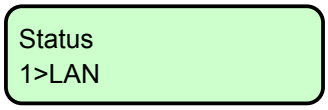
4.4.8 Status (Equipment)

This Status menu displays the current settings for equipment.

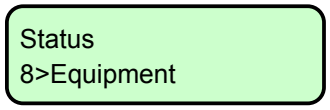


1. Press [Enter] at the initial menu.

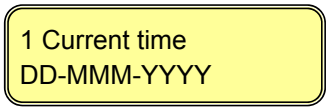
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.



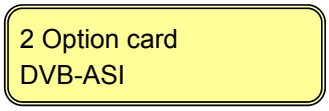
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key seven times.



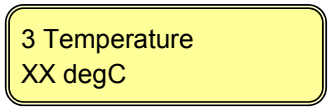
4. The Status submenu – Equipment status appears as shown on the left. Press [Enter].



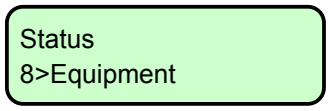
5. "Current time" appears with "DD-MMM-YYYY hh:mm:ss" displayed as shown on the left. Press [▼].



6. "Option card" appears with "DVB-ASI," "Unequipped," "Fault" or "Unknown" displayed as shown on the left. Press [▼].

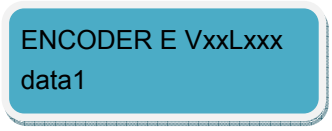


7. "Temperature" appears with "XX degC" displayed as shown on the left. Press [Cancel].



8. The Status submenu - Equipment status appears as shown on the left. Press the [Cancel] key once.

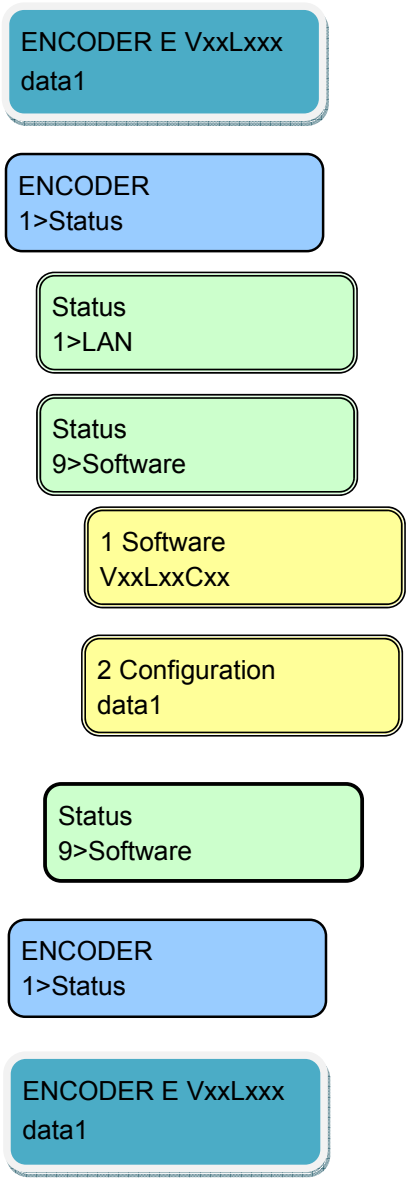
9. The Main menu - Status appears as shown on the left. Press the [Cancel] key once.



10. The initial menu appears.

4.4.9 Status (Software)

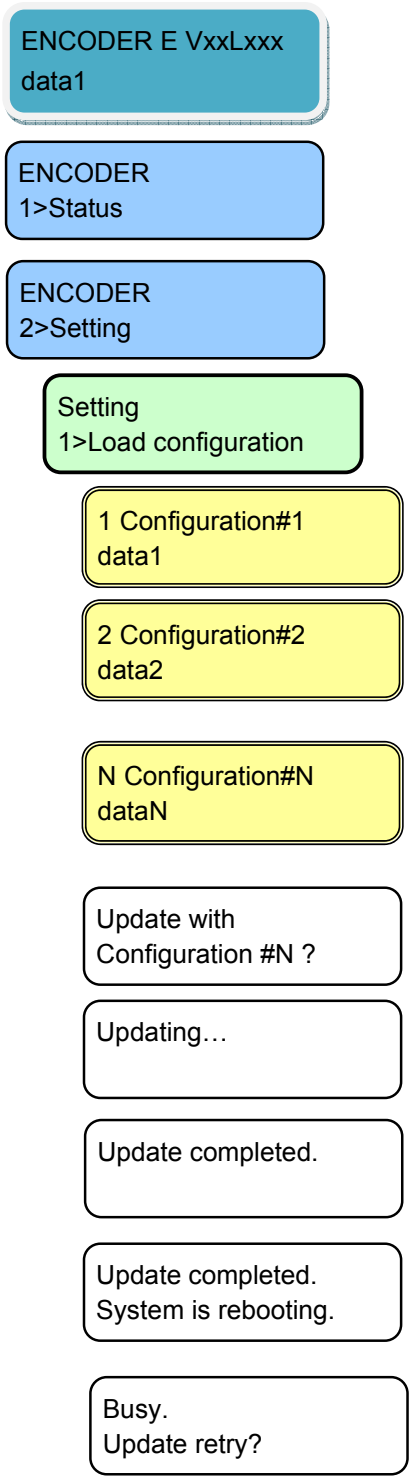
This Status menu displays the current software settings.



1. Press [Enter] at the initial menu.
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key eight times.
4. The Status submenu - Software status appears as shown on the left. Press [Enter].
5. "Software" appears with "VxxLxxCxx" displayed as shown on the left. Press [▼].
6. "Configuration" appears with the current configuration name displayed as shown on the left. Press [Cancel].
7. The Status submenu - Software status appears as shown on the left. Press the [Cancel] key once.
8. The Main menu - Status appears as shown on the left. Press the [Cancel] key once.
9. The initial menu appears.

4.4.10 Setting (Configuration)

This menu is used to select configuration data.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key once.

3. The Main menu - Setting appears as shown on the left. Press the [Enter] key once.

4. The Setting submenu - Load configuration appears as shown on the left. Press [Enter].

5. "Configuration#1" appears with a selectable operation data name followed by a number [#1] displayed as shown on the left. Press [▼].

6. "Configuration#2" appears with a selectable operation data name followed by a number [#2] displayed as shown on the left. Press [▼].

7. "Configuration#N" appears with a selectable operation data name followed by a number [#N] displayed as shown on the left. If the data number is the target one, press [Enter].

8. The confirmation message shown on the left appears. Press [Enter].

9. The message shown on the left appears.

10. If the configuration loading is successful, the message shown on the left or that in step **11** appears. Press [Enter], and the initial menu is displayed.

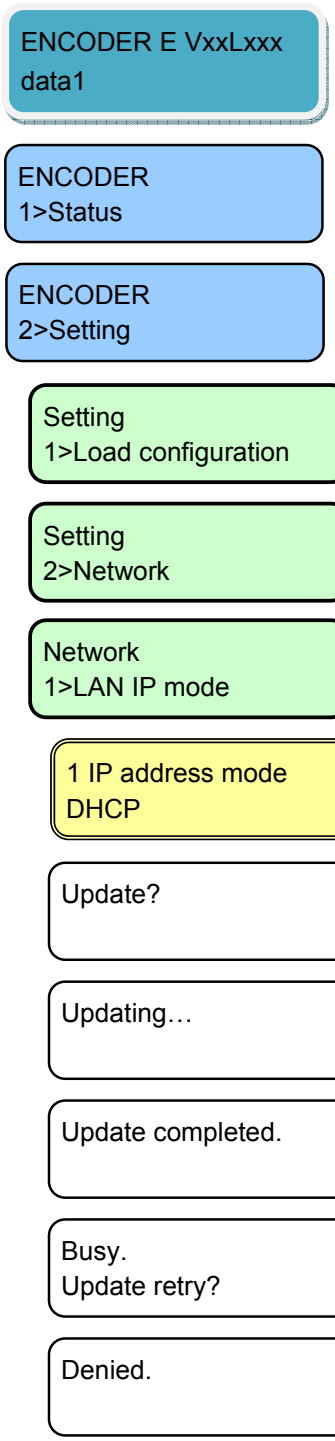
11. If the configuration loading is successful, the message shown on the left appears. The system automatically reboots.

12. If the configuration loading fails because the system is busy, the message shown on the left appears. Wait for a while and press [Enter], and the screen in step **9** appears.

This ends the procedure for changing the configuration.

4.4.11 Setting (LAN Port IP Address Mode)

This menu is used to set up the LAN port IP address mode.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key.

3. The Main menu - Setting appears as shown on the left. Press [Enter].

4. The Setting submenu - Load configuration appears as shown on the left. Press the [▼] key once.

5. The Setting submenu - Network setting appears as shown on the left. Press [Enter].

6. The Network submenu – LAN IP mode appears as shown on the left. Press [Enter].

7. The IP address setting appears as shown on the left. Set by selecting either one of "DHCP," "PPPoE" or "Static IP" with the [▼] and [▲] keys. After setting the IP address, press [Enter].

8. "Update?" appears as shown on the left. Press [Enter].

9. "Updating…" appears as shown on the left.

10. If the "Updating" is successful, the message "Update completed" appears. Press [Enter], and the Network submenu – LAN IP mode appears.

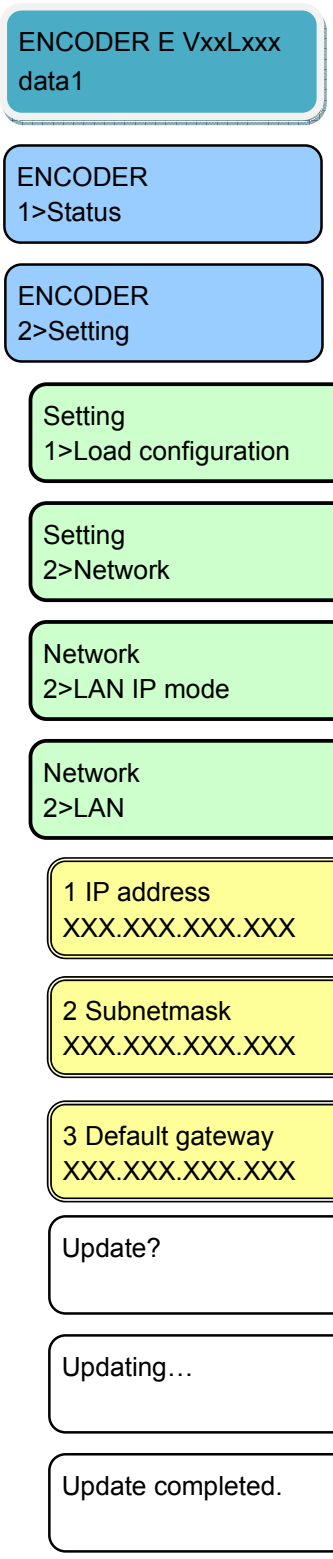
11. When the system is busy, the message "Busy. Update retry?" may appear. Wait for a while and press [Enter], and the screen in step **9.** appears.

12. If the "Updating" fails, the message "Denied" may appear. Perform the Web-based operation as shown in 3.2.4 Basic, and press [Enter]. Then, the Network submenu – LAN IP mode appears.

This ends the change in the setting of LAN port IP address mode.

4.4.12 Setting (LAN Port)

This menu is used to set up the LAN port address.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key once.

3. The Main menu - Setting appears as shown on the left. Press [Enter].

4. The Setting submenu - Load configuration appears as shown on the left. Press the [▼] key once.

5. The Setting submenu – Network appears. Press [Enter].

6. The Setting submenu – LAN IP mode appears. Press the [▼] key.

7. The Network submenu – LAN appears. Press [Enter].

8. "IP address" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the IP address, press [Enter].

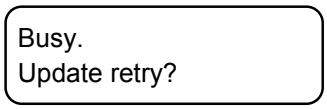
9. "Subnetmask" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the subnet mask, press [Enter].

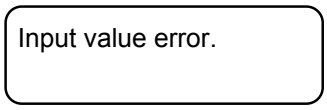
10. "Default gateway" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the gateway address, press [Enter].

11. The message "Update?" appears. Press [Enter].

12. The message "Updating…" appears.

13. If the updating is successful, the message "Update completed" appears as shown on the left. Press, [Enter], and the Network submenu – LAN shown in **7.** appears.





14. When the system is busy, the message "Busy. Update retry?" may appear. Wait for a moment, and press [Enter]. Then, the screen in **12** appears.

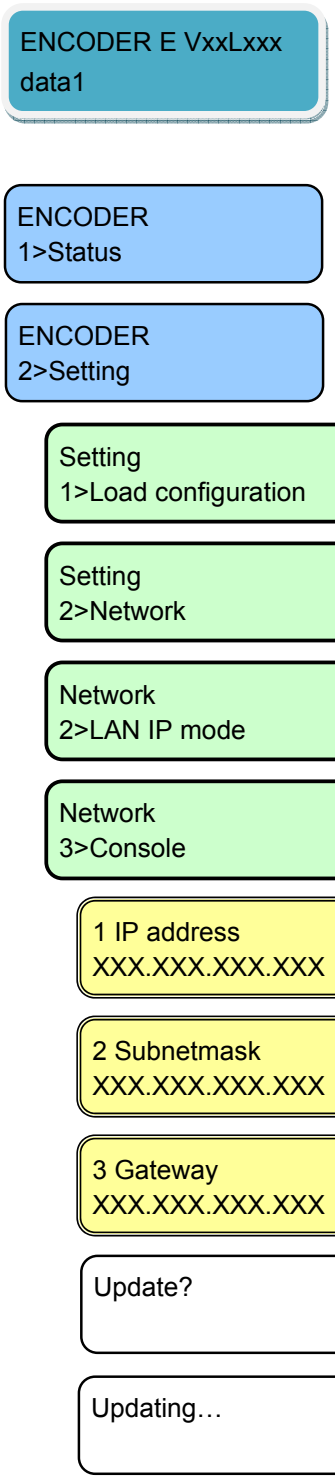
15. If the set value is wrong, the message "Input value error" may appear. Press [Enter], and the screen in **8** appears. Review the set value and retry.

16. If the updating fails, the message "Denied." may appear. Perform the Web-based operation as shown in 3.2.4 Basic to confirm the values of all items. Press [Enter] and then, the Network submenu – LAN appears.

This ends the changing in the IP address setting of the LAN port IP address.

4.4.13 Setting (CONSOLE)

This menu is used to set up the CONSOLE port address.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key once.

3. The Main menu - Setting appears as shown on the left. Press the [Enter].

4. The Setting submenu - Load configuration appears as shown on the left. Press the [▼] key twice.

5. The Setting submenu – Network appears. Press [Enter].

6. The Network submenu – LAN IP mode appears. Press the [▼] key twice.

7. The Network submenu - Console appears as shown on the left. Press [Enter].

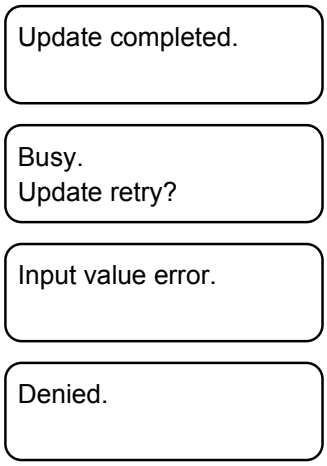
8. "IP address" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the IP address, press [Enter].

9. "Subnetmask" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the subnet mask, press [Enter].

10. "Gateway" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the gateway, press [Enter].

11. The message "Update?" appears. When the screen is as shown on the left, press [Enter].

12. The message "Updating…" appears.



13. If the update processing is successful, the message "Update completed" appears. Press [Enter] to display the Network submenu - Console as in step 7**.**

14. If the processing fails because the system is busy, the message "Busy. Update retry?" appears. Wait for while and press [Enter] to display the screen as in step **12.**

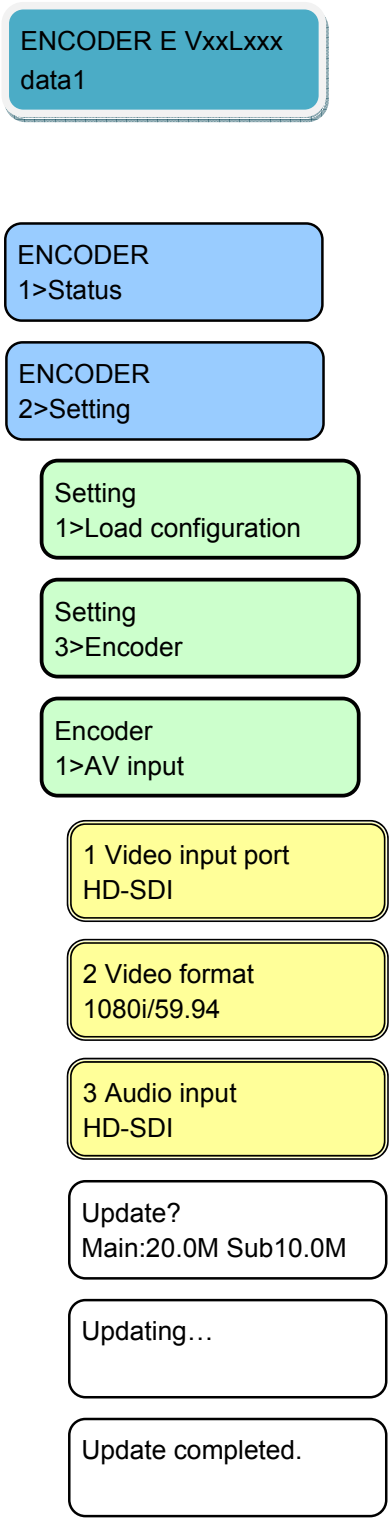
15. If an invalid value is set, the message "Input value error" may appear. Press [Enter] to display the Setting submenu - Console setting as in step **8.** Set a valid value and retry the operation.

16. If the processing fails, the message "Denied" may appear. Perform the Web-based operation as in 3.2.4 Basic, and confirm the set values of all items. Press[Enter], and the Netwoek submenu – Console as in **7** appears.

This ends the procedure for changing the Console port IP address settings.

4.4.14 Setting (Video/Audio Input)

This menu is used to set the encoder video/audio input.



1. Press [Enter] from the initial menu.
2. The Main menu - Status appears.
   Press the [▼] key.
3. The Main menu - Setting appears.
   Press the [Enter] key.
4. The Setting submenu - Configuration setting appears.
   Press the [▼] key twice.
5. The Setting submenu - Encoder setting setting appears.
   Press the [Enter] key.
6. The Encoder submenu - AV input setting appears.
   Press the [Enter] key.
7. The Video input port setting appears.
   Select HD-SDI, SD-SDI or HDMI with the [▼] and [▲] keys, and press [Enter].
8. The Video input format setting appears.
   Select 1080i/59.94, 1080i/50, 720p/59.94, 720p/50, 480i/59.94 or 576i/50 with the [▼] and [▲] keys, and press [Enter].
9. The Audio input port setting appears.
   Select HD-SDI, SD-SDI, HDMI or Analog with the [▼] and [▲] keys, and press [Enter].
10. The message “Update” and the system bit rates of the main encoder and the sub-encoder are displayed.
    Press the [Enter] key.
11. The message “Updating...” appears.
12. If the updating is successful, the message “Update completed.” appears. Press [Enter], and the Encoder submenu - AV input as in 6 appears.

Busy.
Update retry?

13. If the processing fails when the system is busy, the message "Busy. Update retry?" may appear. Wait for a moment and press [Enter]. Then, the screen shown in 11 appears.

Denied.

Denied.
Parameter duplicate.

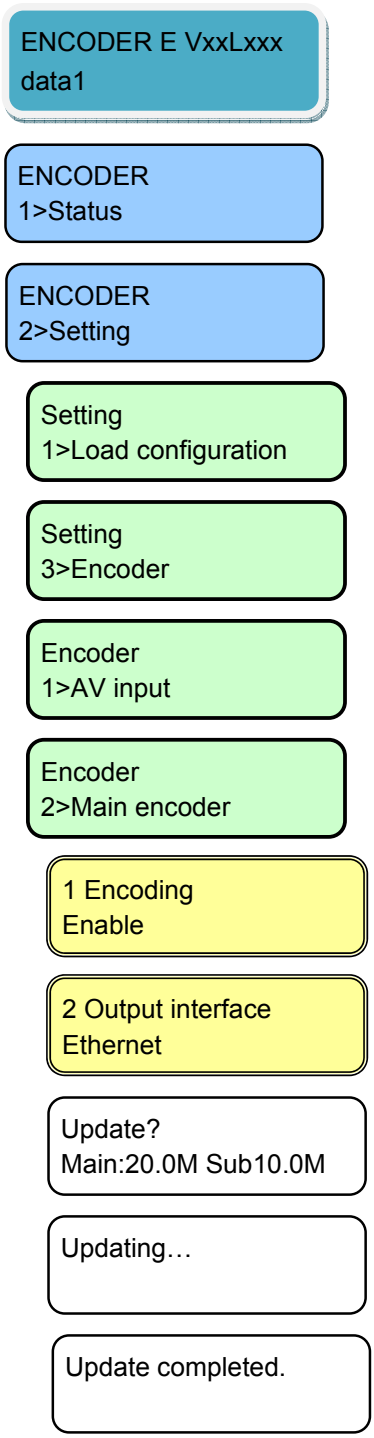
Denied.
Operation limitation.

14. If the updating processing fails, the message "Denied," "Denied. Parameter duplicate," or "Denied. Operation limitation." may appear.
Perform the Web-based operation as in **3.3.1 Set-up (Encoder)**, and confirm the set values of all items. Press [Enter], and the Encoder submenu - AV input as in 6 appears.

This ends the setting change of the encoder video/audio input.

4.4.15 Setting (Main Encoder)

This menu is used to set the operation of the main encoder.



1. Press [Enter] from the initial menu.

2. The Main menu - Status appears.
Press the [▼] key once.

3. The Main menu - Setting appears.
Press the [Enter] key.

4. The Setting submenu - Configuration appears.
Press the [▼] key twice.

5. The Setting submenu - Encoder appears.
Press the [Enter] key.

6. The Setting submenu - AV input appears.
Press the [▼] key.

7. The Setting submenu - Main encoder appears.
Press the [Enter] key.

8. The Encoding Enable/Disable setting appears.
Select Enable or Disable with the [▼] and [▲] keys, and press [Enter].

9. The Stream output interface setting appears.
Select Ethernet or DVB-ASI with the [▼] and [▲] keys, and pres [Enter].

10. The message “Update?”, the system bit rates and the video rates are displayed.
Press the [Enter] key.

11. The message “Updating...” appears.

12. If the updating is successful, the message “Update completed.” appears. Press [Enter], and the Setting submenu – Main encoder as in 7 appears.

Busy.
Update retry?

Denied.

Denied.
Parameter duplicate.

Denied.
Operation limitation.

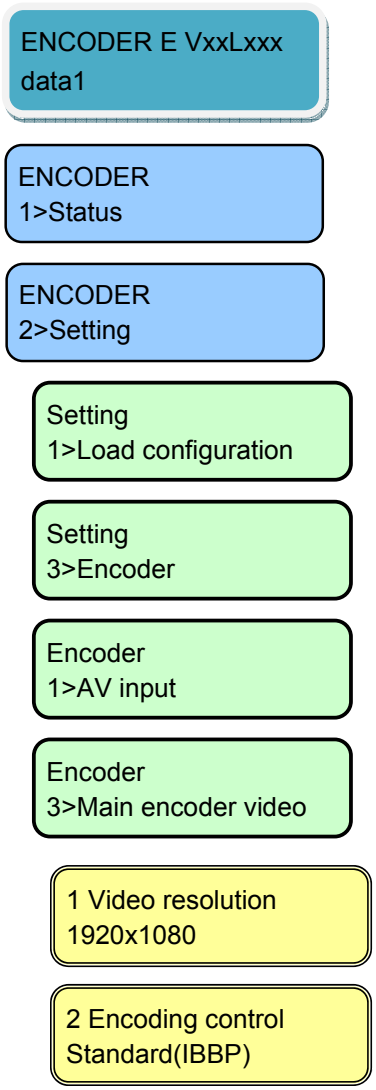
13. If the processing fails when the system is busy, the message "Busy. Update retry?" may appear. Wait for a moment and press [Enter]. Then, the screen shown in 11 appears.

14. If the updating processing fails, the message "Denied," "Denied. Parameter duplicate," or "Denied. Operation limitation." may appear.
Perform the Web-based operation as in **3.3.1 Set-up (Encoder)**, and confirm the set values of all items. Pres [Enter], and the Setting submenu - Main encoder as in **7** appears.

This ends the change in the setting of the Main encoder operation.

4.4.16 Setting (Main Encoder Video)

This menu is used to set the video encoding format of the main encoder.



1. Press [Enter] from the initial menu.

2. The Main menu - Status appears.
Press the [▼] key.

3. The Main menu - Setting appears.
Press the [Enter] key.

4. The Setting submenu - Configuration appears.
Press the [▼] key twice.

5. The Setting submenu - Encoder appears.
Press the [Enter] key.

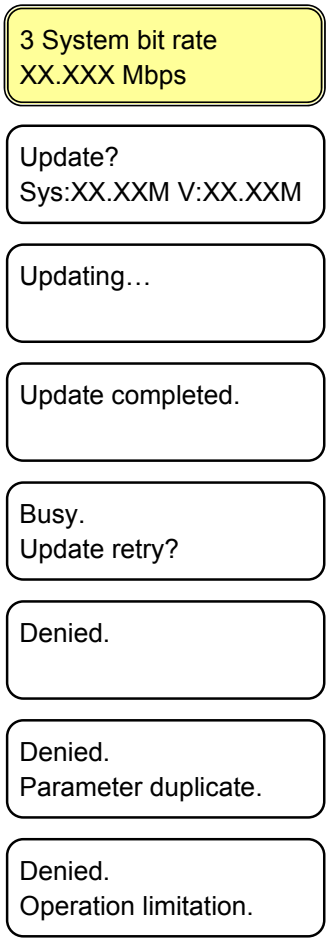
6. The Encoder submenu - AV input appears.
Press the [▼] key twice.

7. The Encoder submenu -Main encoder video setting appears.
Press the [Enter] key.

8. The Video encoding resolution setting appears. Select the following combination for "AV input" - "Video format," and press [Enter].

Video format	Video resolution
1080i/59.94 1080i/50	1920x1080 1440x1080 960x1080
720p/59.94 720p/50	1280x720 960x720 640x720
480i/59.94	720x480
576i/50	720x576

9. The Encoding control method setting appears.
Select Standard (IBBP), Motion(IBP) or Low latency (PPPP) with the [▼] and [▲] keys, and press [Enter].



10. The System bit rate setting appears.
Select the digits with the [<] and [>] keys, numeric values with the the [▼] and [▲] keys, and press [Enter].
You can set the following system rates for "Video resolution".

Video resolution	System bit rate
1920x1080 1280x720	Up to 43.000Mbps The Video bit rate range of 6 to 27Mbps can be set for the system bit rate.
1440x1080 960x1080 960x720 640x720	Up to 43.000Mbps The Video bit rate range of 4 to 27Mbps can be set for the system bit rate.
720x480 720x576	Up to 24.000Mbps The Video bit rate range of 2 to 10Mbps can be set for the system bit rate.

11. The message "Update?", the system bit rates and the video rates are displayed.
Press the [Enter] key.

12. The message "Updating..." appears.

13. If the updating is successful, the message "Update completed." appears. Press [Enter], and the Encoder submenu -Main encoder video setting as in **7** appears.

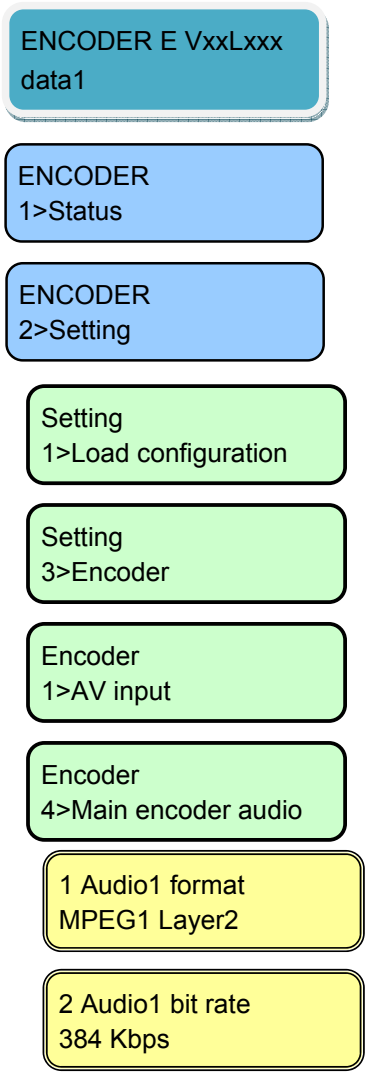
14. If the processing fails when the system is busy, the message "Busy. Update retry?" may appear. Wait for a moment and press [Enter]. Then, the screen shown in 11 appears.

15. If the updating processing fails, the message "Denied," "Denied. Parameter duplicate," or "Denied. Operation limitation." may appear.
Perform the Web-based operation as in **3.3.1 Set-up (Encoder),** and confirm the set values of all items. Press [Enter], and the Encoder submenu -Main encoder video setting as in **7** appears.

This ends the change in setting the main encoder video encoding.

4.4.17 Setting (Main Encoder Audio)

This menu is used to set the audio encoding method of the main encoder.



1. Press [Enter] from the initial menu.

2. The Main menu - Status appears.
Press the [▼] key.

3. The Main menu - Setting appears.
Press the [Enter] key.

4. The Setting submenu - Configuration appears.
Press the [▼] key twice.

5. The Setting submenu - Encoder appears.
Press the [Enter] key.

6. The Encoder submenu - AV input appears.
Press the [▼] key three times.

7. The Encoder submenu - Main encoder audio setting appears.
Press the [Enter] key.

8. The Audio1 encoding format setting appears.
Select MPEG1 Layer2, MPEG2 AAC, Pass-thru or None with the the [▼] and [▲] keys, and press [Enter].

9. The Audio bit rate setting appears.
Select either one of the following combinations for each "Audio1 format" with the the [▼] and [▲] keys, and press [Enter].

Audio1 format	Audio1 bit rate
MPEG1 Layer2	384 Kbps/256 Kbps/128 Kbps
MPEG2 AAC	256 Kbps/128 Kbps/64 Kbps
Pass-thru	2304 Kbps
None	---

3 Audio1 mode
Stereo

10. The Audio1 mode setting appears.
Select either one of the following combinations for each "Audio1 format" with the the [▼] and [▲] keys, and press [Enter].

Audio1 format	Audio1 mode
MPEG1 Layer2	Stero/Dual mono
MPEG2 AAC	Stero
Pass-thru	Stero
None	---

11. The Audio2 encoding format setting appears.
Select MPEG1 Layer2, MPEG2 AAC, Pass-thru or None with the the [▼] and [▲] keys, and press [Enter].

4 Audio2 format
MPEG1 Layer2

5 Audio2 bit rate
384 Kbps

12. The Audio2 bit rate setting appears.
Select either one of the following combinations for each "Audio2 format" with the the [▼] and [▲] keys, and press [Enter].

Audio2 format	Audio2 bit rate
MPEG1 Layer2	384 Kbps/256 Kbps/128 Kbps
MPEG2 AAC	256 Kbps/128 Kbps/64 Kbps
Pass-thru	2304 Kbps
None	---

6 Audio2 mode
Stereo

13. The Audio2 mode setting appears.
Select either one of the following combinations for each "Audio2 format" with the the [▼] and [▲] keys, and press [Enter].

Audio2 format	Audio2 mode
MPEG1 Layer2	Stero/Dual mono
MPEG2 AAC	Stero
Pass-thru	Stero
None	---

7 Audio3 format
MPEG1 Layer2

14. The Audio3 encoding format setting appears.
Select MPEG1 Layer2, MPEG2 AAC, Pass-thru or None with the the [▼] and [▲] keys, and press [Enter].

8 Audio3 bit rate
384 Kbps

15. The Audio3 bit rate setting appears.
Select either one of the following combinations for each "Audio3 format" with the the [▼] and [▲] keys, and press [Enter].

Audio3 format	Audio3 bit rate
MPEG1 Layer2	384 Kbps/256 Kbps/128 Kbps

MPEG2 AAC	256 Kbps/128 Kbps/64 Kbps
Pass-thru	2304 Kbps
None	---

9 Audio3 mode
stereo

16. The Audio3 mode setting appears.
Select either one of the following combinations for each "Audio3 format" with the the [▼] and [▲] keys, and press [Enter].

Audio3 format	Audio3 mode
MPEG1 Layer2	Stero/Dual mono
MPEG2 AAC	Stero
Pass-thre	
None	---

10 Audio4 format
MPEG1 Layer2

17. The Audio4 encoding format setting appears.
Select MPEG1 Layer2, MPEG2 AAC, Pass-thru or None with the the [▼] and [▲] keys, and press [Enter].。

11 Audio4 bit rate
384 Kbps

18. The Audio4 bit rate setting appears.
Select either one of the following combinations for each "Audio4 format" with the the [▼] and [▲] keys, and press [Enter].

12 Audio4 mode
stereo

Audio4 format	Audio4 bit rate
MPEG1 Layer2	384 Kbps/256 Kbps/128 Kbps
MPEG2 AAC	256 Kbps/128 Kbps/64 Kbps
Pass-thru	2304 Kbps
None	---

19. The Audio4 mode setting appears.
Select either one of the following combinations for each "Audio4 format" with the the [▼] and [▲] keys, and press [Enter].

Audio4 format	Audio4 mode
MPEG1 Layer2	Stero/Dual mono
MPEG2 AAC	Stero
Pass-thru	Stero
None	---

Update?
Main:20.0M Sub10.0M

20. The message "Update?", the system bit rates and the video rates are displayed.
Press the [Enter] key.

Updating…

21. The message "Updating..." appears.

Update completed.

22. If the updating is successful, the message "Update completed." appears. Press [Enter], and the Encoder submenu - Main encoder audio setting as in **7** appears.

Busy.
Update retry?

23. If the processing fails when the system is busy, the message "Busy. Update retry?" may appear. Wait for a moment, and press [Enter]. The screen as in **21** appears.

Denied.

24. If the updating processing fails, the message "Denied," "Denied. Parameter duplicate," or "Denied. Operation limitation." may appear.
Perform the Web-based operation as in **3.3.1 Set-up (Encoder),** and confirm the set values of all items. Press [Enter], and the Encoder submenu - Main encoder audio setting as in **7** appears.

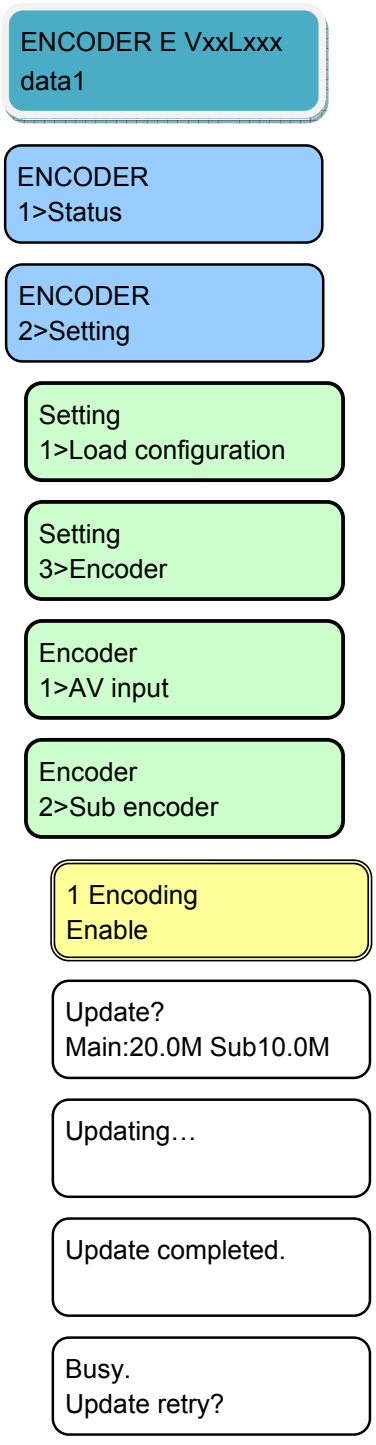
Denied.
Parameter duplicate.

Denied.
Operation limitation.

This ends the change in the settings of the Main encoder audio encoding.

4.4.18 Setting (Sub-encoder)

This menu is used to set the operation of the sub-encoder.



1. Press [Enter] from the initial menu.
2. The Main menu - Status appears.
   Press the [▼] key.
3. The Main menu - Setting appears.
   Press the [Enter] key.
4. The Setting submenu - Configuration appears.
   Press the [▼] key twice.
5. The Setting submenu - Encoder appears.
   Press the [Enter] key.
6. The Setting submenu - AV input appears.
   Press the [▼] key four times.
7. The Setting submenu - Sub-encoder appears.
   Press the [Enter] key.
8. The Encoding Enable/Disable setting appears.
   Select Enable or Disable with with the [▼] and [▲] keys, and pres [Enter].
9. The message “Update?”, the system bit rates and the video rates are displayed.
   Press the [Enter] key.
10. The message “Updating...” appears.
11. If the updating is successful, the message “Update completed.” appears. Press [Enter], and the Encoder submenu – Sub-encoder as in **7** appears.
12. If the processing fails when the system is busy, the message “Busy. Update retry?” may appear. Wait for a moment and press [Enter]. Then, the screen shown in 11 appears.

Denied.

Denied.
Parameter duplicate.

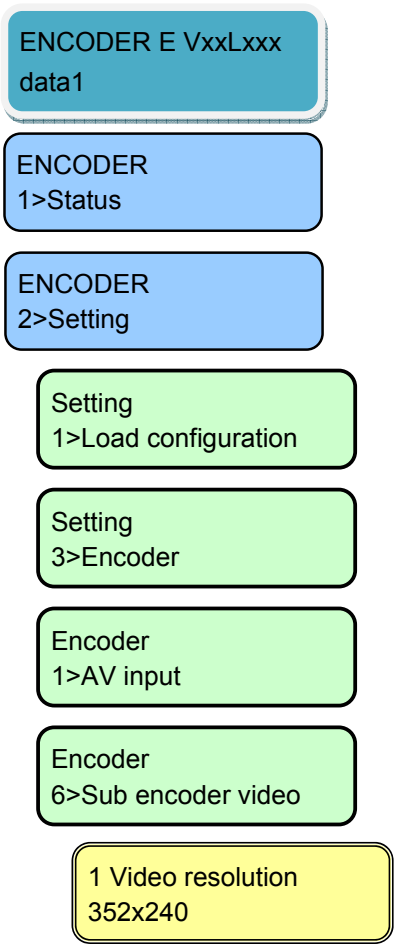
Denied.
Operation limitation.

13. If the updating processing fails, the message “Denied,” “Denied. Parameter duplicate,” or “Denied. Operation limitation.” may appear.
Perform the Web-based operation as in **3.3.1 Set-up (Encoder),** and confirm the set values of all items. Press [Enter], and the Encoder submenu – Sub-encoder as in **7** appears.

This ends the setting change in the operation of the sub-encoder.

4.4.19 Setting (Sub-encoder Video)

This menu is used to set the sub-encoder video encoding.



1. Press [Enter] from the initial menu.
2. The Main menu - Status appears.
   Press the [▼] key.
3. The Main menu - Setting appears.
   Press the [Enter] key.
4. The Setting submenu - Configuration appears.
   Press the [▼] key twice.
5. The Setting submenu - Encoder appears.
   Press the [Enter] key.
6. The Encoder submenu - AV input appears.
   Press the [▼] key five times.
7. The Encoder submenu – Sub-encoder video appears.
   Press the [Enter] key.
8. The Video encoding resolution setting appears. Select the following combination for “AV input” - “Video format,” and press [Enter].

Video format	Video resolution
1080i/59.94 720p/59.94 480i/59.94	740x480 352x240
1080i/50 720p/50 576i/50	720x576 352x288

2 Encoding control
Standeard(IBBP)

3 System bit rate
XXX Kbps

Update?
Sys:XX.XXM V:XX.XXM

Updating…

Update completed.

Busy.
Update retry?

Denied.

Denied.
Parameter duplicate.

Denied.
Operation limitation.

9. The Encoding control method setting appears.
Select Standard (IBBP), Motion(IBP) or Low latency (PPPP) with the [▼] and [▲] keys, and pres [Enter].

10. The System bit rate setting appears.
Select the digits with the [<] and [>] keys, numeric values with the the [▼] and [▲] keys, and pres [Enter].
You can set the following system rates for "Video resolution.

Video resolution	System bit rate
720x480 720x576	Up to 12.000Mbps The video bit rate range of 2 to 10Mbps can be set for the system bit rate.
352x240 352x288	Up to 500Kbps The video bit rate range of 256 to 384Kbps can be set for the system bit rate.

11. The message "Update?", the system bit rates and the video rates are displayed.
Press the [Enter] key.

12. The message "Updating..." appears.

13. If the updating is successful, the message "Update completed." appears. Press [Enter], and the Encoder submenu –Sub-encoder video as in **7** appears.

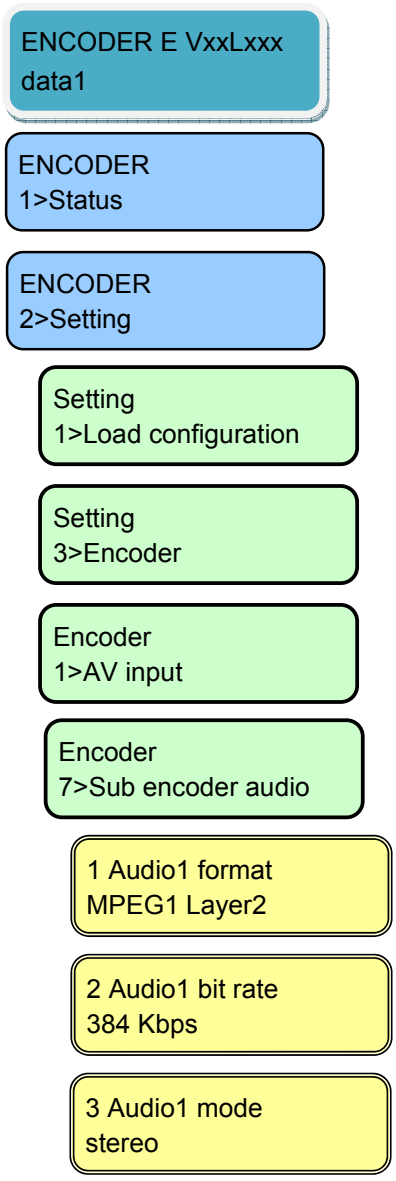
14. If the processing fails when the system is busy, the message "Busy. Update retry?" may appear. Wait for a moment and press [Enter]. Then, the screen shown in 11 appears.

15. If the updating processing fails, the message "Denied," "Denied. Parameter duplicate," or "Denied. Operation limitation." may appear.
Perform the Web-based operation as in **3.3.1 Set-up (Encoder),** and confirm the set values of all items. Press [Enter], and the Encoder submenu –Sub-encoder video as in **7** appears.

This ends the change in the settings of the sub-encoder video encoding.

4.4.20 Setting (Sub-encoder Audio)

This menu is used to set the sub-encoder audio encoding.



1. Press [Enter] from the initial menu.

2. The Main menu - Status appears.
Press the [▼] key.

3. The Main menu - Setting appears.
Press the [Enter] key.

4. The Setting submenu - Configuration appears.
Press the [▼] key twice.

5. The Setting submenu - Encoder appears.
Press the [Enter] key.

6. The Encoder submenu - AV input appears.。
Press the [▼] key six times.

7. The Encoder submenu – Sub-encoder audio setting appears.
Press the [Enter] key.

8. The Audio1 encoding format setting appears.
Select MPEG1 Layer2, MPEG2 AAC, Pass-thru or None with the the [▼] and [▲] keys, and press [Enter].

9. The Audio bit rate setting appears.
Select either one of the following combinations for each "Audio1 format" with the the [▼] and [▲] keys, and press [Enter].

Audio1 format	Audio1 bit rate
MPEG1 Layer2	384 Kbps/256 Kbps/128 Kbps
MPEG2 AAC	256 Kbps/128 Kbps/64 Kbps
None	---

10. The Audio1 mode setting appears.
Select either one of the following combinations for each "Audio1 format" with the the [▼] and [▲] keys, and press [Enter].

Audio1 format	Audio1 mode
MPEG1 Layer2	Stero/Dual mono
MPEG2 AAC	Stero
None	---

Update?
Sys:XX.XXM V:XX.XXM

Updating…

Update completed.

Busy.
Update retry?

Denied.

Denied.
Parameter duplicate.

Denied.
Operation limitation.

11. The message "Update?", the system bit rates and the video rates are displayed.
Press the [Enter] key.

12. The message "Updating..." appears.

13. If the updating is successful, the message "Update completed." appears. Press [Enter], and the Encoder submenu – Sub-encoder audio setting as in **7** appears.

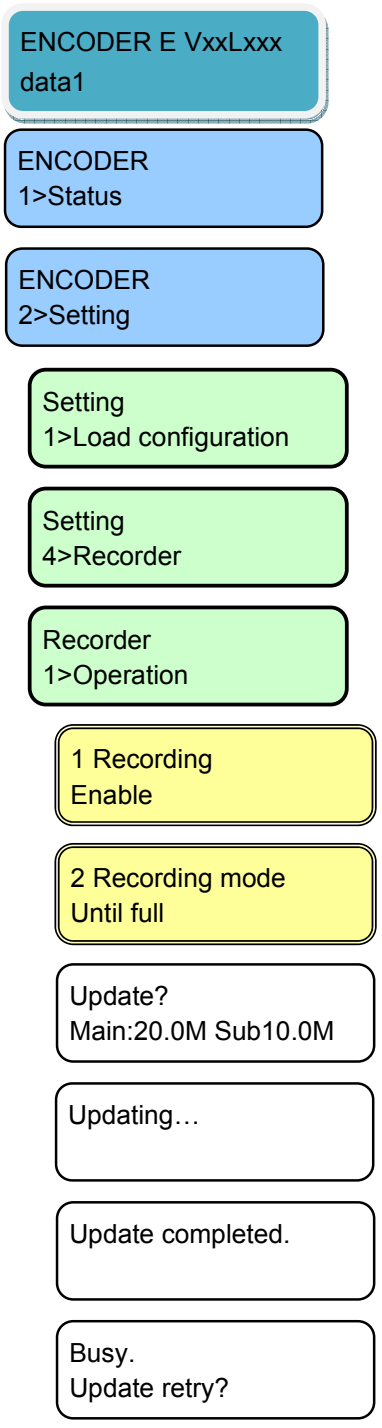
14. If the processing fails when the system is busy, the message "Busy. Update retry?" may appear. Wait for a moment and press [Enter]. Then, the screen shown in 11 appears.

15. If the updating processing fails, the message "Denied," "Denied. Parameter duplicate," or "Denied. Operation limitation." may appear.
Perform the Web-based operation as in **3.3.1 Set-up (Encoder),** and confirm the set values of all items. Press [Enter], and the Encoder submenu – Sub-encoder audio setting as in **7** appears.

This ends the change in the settings of the sub-encoder audio encoding.

4.4.21 Setting (Recording)

This menu is used to set the operation of the recording.



1. Press [Enter] from the initial menu.

2. The Main menu - Status appears.
Press the [▼] key.

3. The Main menu - Setting appears.
Press the [Enter] key.

4. The Setting submenu - Configuration appears.。
Press the [▼] key three times.

5. The Setting submenu – Recorder appears.
Press the [Enter] key.

6. The Recorder submenu – Operation setting appears.
Press the [Enter] key.

7. The Enable/Disable setting of the recording operation appears.
Select Enable or Disable with the [▼] and [▲] keys, and press [Enter].

8. The Recording operation mode setting appears.
Select Until full, Overwrite or Until start position with the [▼] and [▲] keys, and press [Enter].

9. The message “Update?” and the system bit rates of the main encoder and the sub-encoder are displayed.
Press the [Enter] key.

10. The message “Updating...” appears.

11. If the updating is successful, the message “Update completed.” appears. Press [Enter], and the Recorder submenu – Operation as in **6** appears.

12. If the processing fails when the system is busy, the message “Busy. Update retry?” may appear. Wait for a moment and press [Enter]. Then, the screen shown in 11 appears.

Denied.

Denied.
Parameter duplicate.

Denied.
Operation limitation.

13. If the updating processing fails, the message “Denied,” “Denied. Parameter duplicate,” or “Denied. Operation limitation.” may appear.
Perform the Web-based operation as shown in **3.4.1 Set-up (Recording)** to confirm the set values of all items. Press [Enter], and the Recorder submenu – Operation setting appears.

This ends the change in the settings of the recording operation.

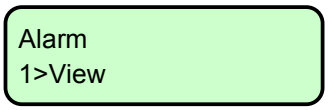
4.4.22 Alarm

This menu is used to display the alarm information.
The alarm information displays the number and the alarm code.
See Section 5.2, "Alarm LED Goes On" for the detail of the error code list.

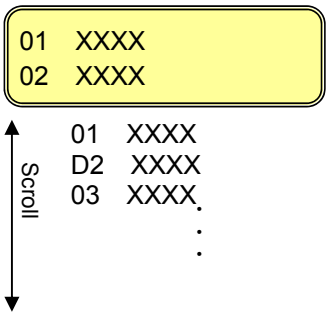
1. Press [Enter] at the initial menu.

2. The Main menu appears as shown on the left. Press [▼] key twice or [▲] key three times.

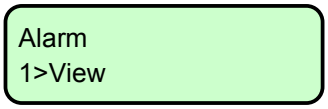
3. The main menu – Alarm appears as shown on the left. Press [Enter].



4. The Alarm submenu – View apprears as shown on the left. Press [Enter].



5. Alarm codes are displayed. Press the [▼] or [▲] key to scroll the alarm. At the view shown on the left, pressing the [▼] key displays record 2 and pressing the [▲] key displays record 99. This ends the operation. Press the [Cancel] key as many times as required to display the Operation & Status menu.



6. The Alarm submenu – View apprears as shown on the left. Press [Cancel] once.

7. The main menu – Alarm appears as shown on the left. Press [Cancel].

8. The initial menu appears.

4.4.23 Log - View

This menu is used to display the logs.

A log record is displayed with the date/time (month, day, hour and minute) of occurrence and information on the event that occurred. Up to 1,000 log records can be saved and records that exceed 1,000 records overwrite existing records beginning with the chronologically oldest records.

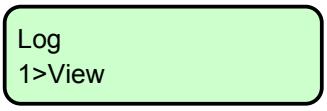
For log error codes, see Section 5.2, "Alarm LED Goes On."

* The log records that can be viewed on the front panel are limited to the latest 100 records. For information on logs exceeding 100 records, see 3.2.7 Log.

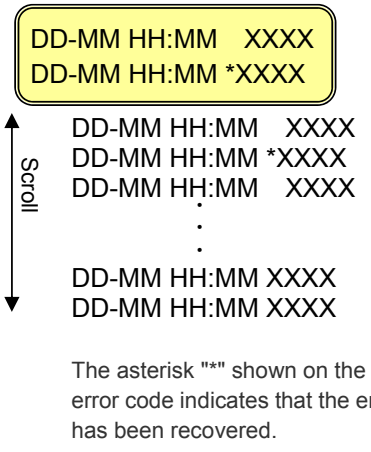
1. Press [Enter] at the initial menu.

2. The Main menu appears as shown on the left. Press the [▼] key three times or the [▲] key twice.

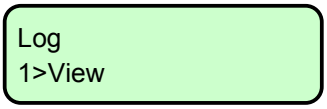
3. The main menu - Log appears as shown on the left. Press [Enter].



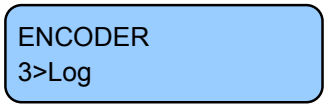
4. The Log submenu - View appears as shown on the left. Press [Enter].



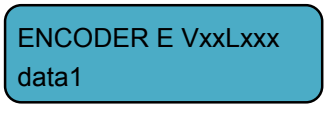
5. Log detail is displayed. Press the [▼] or [▲] key to scroll the log. At the view shown on the left, pressing the [▼] key displays record 2 and pressing the [▲] key displays record 99. This ends the operation. Press the [Cancel] key as many times as required to display the Operation & Status menu.



6. The Log submenu - View appears as shown on the left. Press the [Cancel] key once.



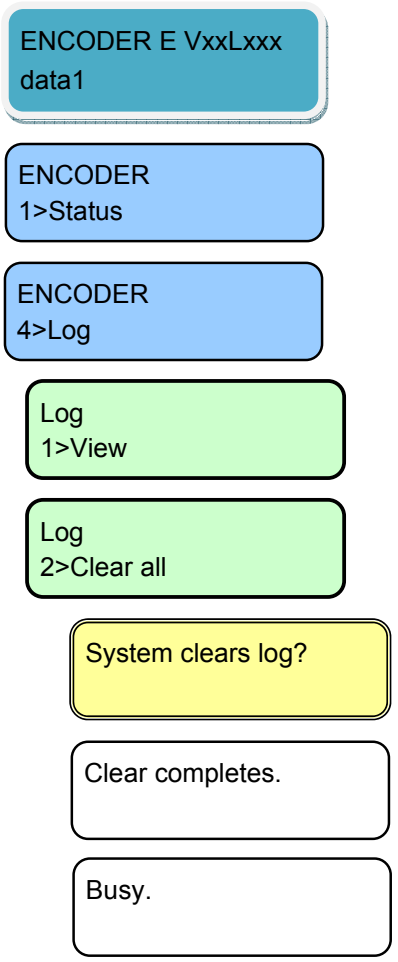
7. The Main menu - Log appears as shown on the left. Press the [Cancel] key once.



8. The initial menu appears.

4.4.24 Log - Clear

This menu is used to clear the log.



1. Press [Enter] at the initial menu.

2. The Main menu appears as shown on the left. Press the [▼] key three times or the [▲] key twice.

3. The Main menu - Log appears as shown on the left. Press [Enter].

4. The Log submenu - View appears as shown on the left. Press [▼].

5. The Log submenu - Clear all appears as shown on the left. Press [Enter].

6. The message "System clear log?" appears. If you want to clear the log, press [Enter].

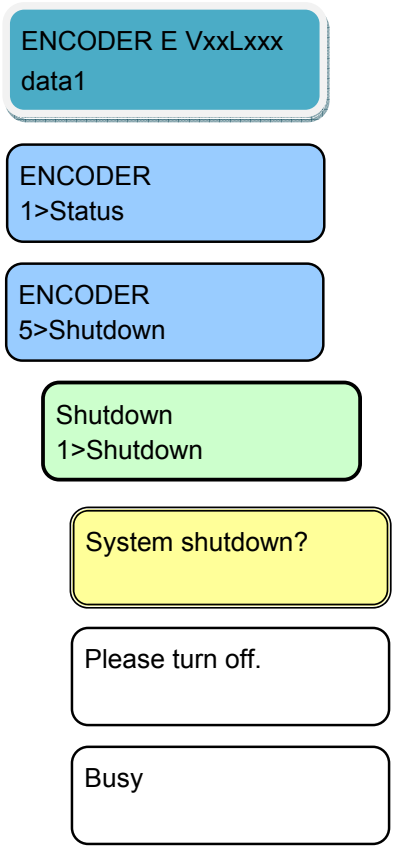
7. If the log clearing is successful, the message "Clear completes." appears.
Press [Enter], and the Log submenu –Clear all as in 5 appears.

8. If the log clearing fails because the system is busy, the message "Busy." may appear. Press [Enter]. The Log submenu - Clear all appears as in step **5.** Retry the operation later.

This ends the procedure for clearing the log.

4.4.25 Shutdown

This menu is used to shut down.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key four times or the [▲] key once.

3. The Main menu - Shutdown appears as shown on the left. Press [Enter].

4. The Shutdown submenu - Shutdown appears as shown on the left. Press [Enter].

5. The message "System shutdown?" appears. Press [Enter].

6. If the Shutdown is successful, the message "Please turn off." appears. Press [Enter].

7. The confirmation message shown on the left appears. Press [Enter].

8. If shutdown processing is successful, the message shown on the left appears. Turn off the power.

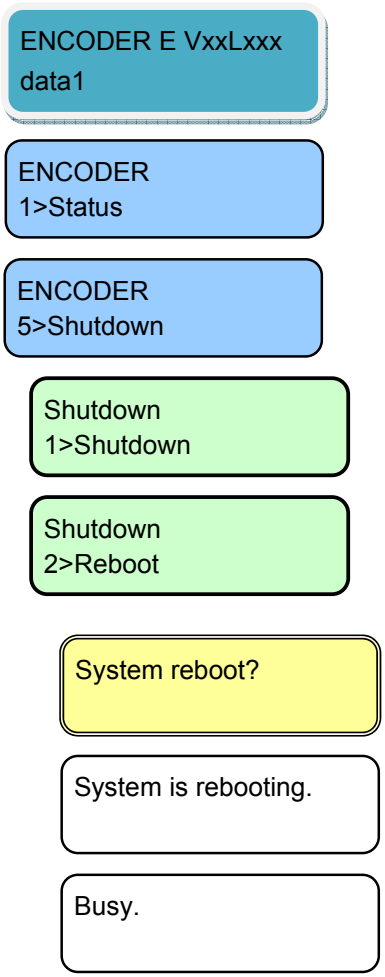
9. If the processing is unsuccessful as the system is busy, the message "Busy." appears. Press [Enter]. The Shutdown submenu - Shutdown appears as in step **4.** Retry the operation later.

⚠ CAUTION

When the PPPoE connection is established, the shutdown sequence disconnects the PPPoE connection too. If turn off the power without the shutdown sequence, it may take some time to establish the next PPPoE connection.

4.4.26 Reboot

This menu is used to reboot.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key four times or the [▲] key once.

3. The Main menu - Shutdown appears as shown on the left. Press [Enter].

4. The Shutdown submenu - Shutdown appears as shown on the left. Press [▼].

5. The Shutdown submenu - Reboot (Shutdown & Reboot) appears as shown on the left. Press [Enter].

6. The confirmation message shown on the left appears. Press [Enter].

7. If the command processing is successful, the message shown on the left appears while the system automatically reboots.

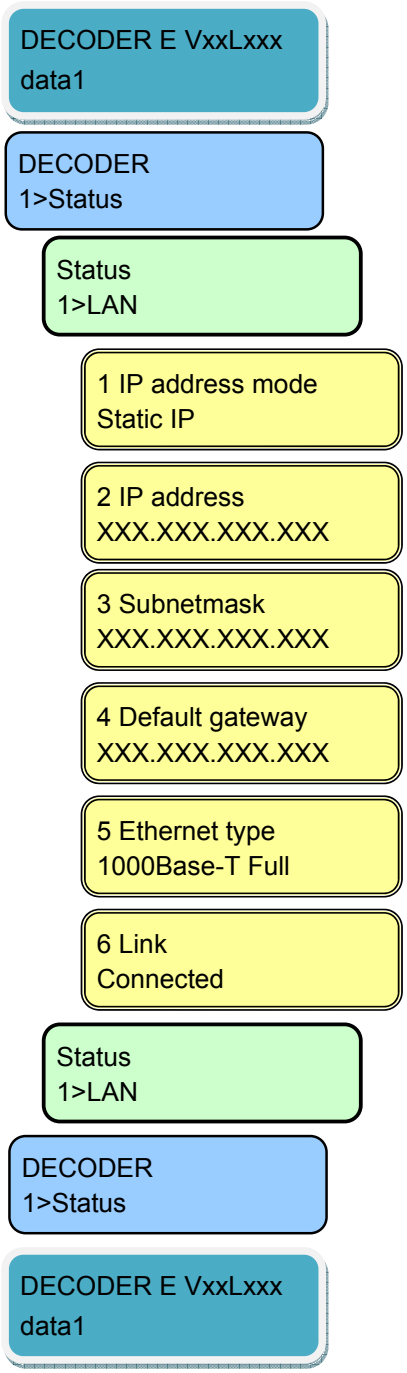
8. If the reboot processing fails because the system is busy, the message "Busy." may appear. Press [Enter]. The Shutdown menu - Reboot appears as in step **5.** Retry the operation later.

4.5 Front Panel Operation (2) Decoder

* In the explanation, X represents an arbitrary number from 0 to 9, and N represents an arbitrary number from 1 to 10.

4.5.1 Status (LAN)

This Status menu displays the current status of the LAN port.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key once.

3. The Status submenu - LAN status appears as shown on the left. Press [Enter].

4. The setting item appears with "Static IP," "DHCP" or "PPPoE" displayed as shown on the left. Press [▼].

5. "IP address" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

6. "Subnetmask" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

7. "Gateway address" appears with "XXX.XXX.XXX.XXX displayed as shown on the left. Press [▼].

8. "Ethernet type" appears as shown on the left. Press [▼].

9. "Link" appears with "Connected" or "Disconnected" displayed as shown on the left. Press [Cancel].

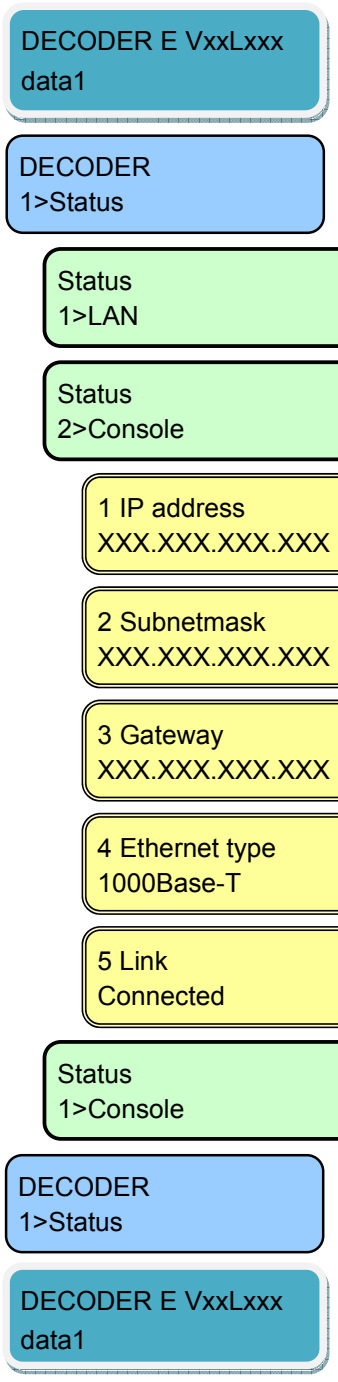
10. The Status submenu - LAN status appears as shown on the left. Click the [Cancel] key once.

11. The Main menu - Status is displayed as shown on the left. Press the [Cancel] key once.

12. The Initial menu appears.

4.5.2 Status (CONSOLE)

This Status menu displays the current status of the CONSOLE port.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.

3. The Status submenu - LAN status appears as shown on the left. Press [▼].

4. The Status submenu - Console status appears as shown on the left. Press [Enter].

5. "IP address" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

6. "Subnetmask" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

7. “Gateway” appears with “XXX.XXX.XXX.XXX” displayed as shown on the left. Press [▼].

8. "Ethernet type” appears as shown on the left. Press [▼].

9. "Link" appears with "Connected" or "Disconnected" displayed as shown on the left. Press [Cancel].

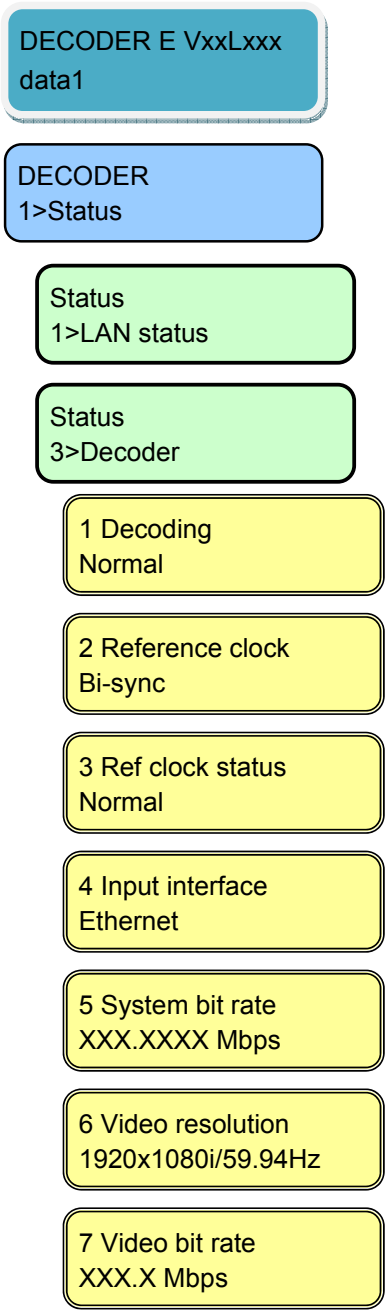
10. The Status submenu - CONSOLE status appears as shown on the left. Click the [Cancel] key once.

11. The Main menu - Status is displayed as shown on the left. Press the [Cancel] key once.

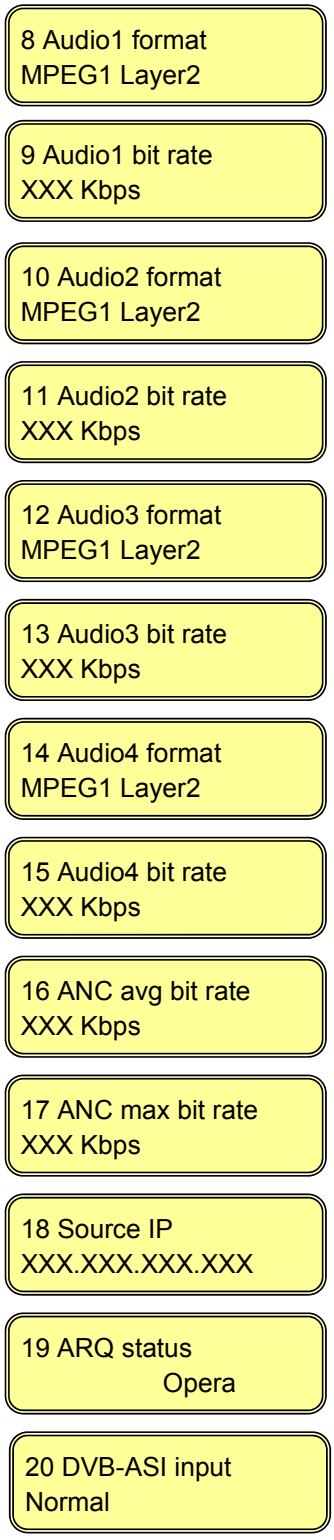
12. The Initial menu appears.

4.5.3 Status (Decoder)

This Status menu displays the current status of the decoder.



1. Press [Enter] at the initial menu.
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key twice.
4. The Status submenu – Decoder status appears as shown on the left. Press [Enter].
5. The decoder operating status ("Decoding") appears with "Normal," "No stream receiving" or "Stopped" displayed as shown on the left. Press [▼].
6. "Reference clock" appears with "Bi-sync", "HDSYNC", "Internal" or "Not activated" displayed as shown on the left. Press [▼].
7. "Ref clock status" appears with "Normal," "No input signal", "Fault" or "---" displayed as shown on the left. Press [▼].
8. "Input interface" appears with "Ethernet" or "DVB-ASI" displayed as shown on the left. Press [▼].
9. "System bit rate" appears with "XXX.XXXX Mbps" or "---" displayed as shown on the left. Press [▼].
10. "Video resolution" appears as shown on the left. Press [▼].
11. "Video bit rate" appears with "XXX .XMbps" or "---" is displayed as shown on the left. Press [▼].



12. The Audio1 encoding format screen appears. “MPEG1 Layer 2,” “MPEG2 AAC,” “Pass-thru,” or “---” is displayed. Press [▼].

13. The Audio1 bit rate appears with “XXX Kbps” or “---“ appears. Press [▼].

14. The Audio2 encoding format screen appears. “MPEG1 Layer 2,” “MPEG2 AAC,” “Pass-thru,” or “---” is displayed. Press [▼].

15. The Audio2 bit rate appears with “XXX Kbps” or “---“ appears. Press [▼].

16. The Audio3 encoding format screen appears. “MPEG1 Layer 2,” “MPEG2 AAC,” “Pass-thru,” or “---” is displayed. Press [▼].

17. The Audio3 bit rate appears with “XXX Kbps” or “---“ appears. Press [▼].

18. The Audio4 encoding format screen appears. “MPEG1 Layer 2,” “MPEG2 AAC,” “Pass-thru,” or “---” is displayed. Press [▼].

19. The Audio4 bit rate appears with “XXX Kbps” or “---“ appears. Press [▼].

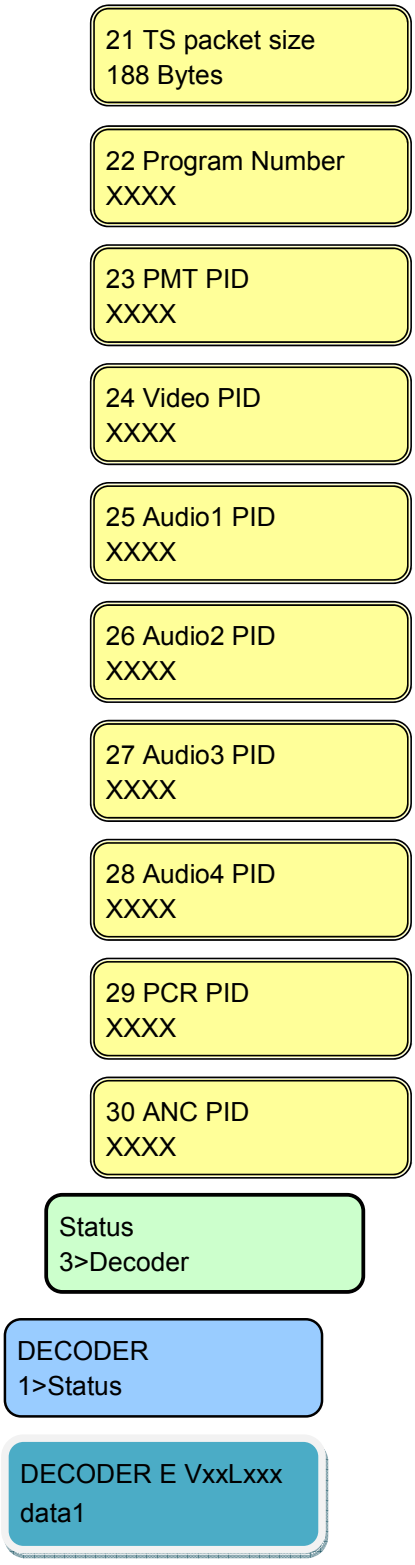
20. “ANC avg bit rate” appears with “XXX Kbps” or “---” displayed as shown on the left. Press [▼].

21. “ANC max bit rate” appears with “XXX Kbps” or “---” displayed as shown on the left. Press [▼].

22. "Source IP#N" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

23. "ARQ status" appears with "Operating," "Stopped" or "---" displayed as shown on the left. Press [▼].

24. "DVB-ASI input" appears with "Normal," "No input signal," "Fault" or "---" displayed as shown on the left. Press [▼].



25. "TS packet size" appears with "188 Bytes," "204 Bytes" or "---" displayed as shown on the left. Press [▼].

26. The Program Number screen is displayed. "XXXX" or "---" is displayed. Press [▼].

27. "PMT PID" appears with "XXXX" or "---" displayed as shown on the left. Press [▼].

28. "Video PID" appears with "XXXX" or "---" displayed as shown on the left. Press [▼].

29. "Audio1 PID" appears with "XXXX" or "---" displayed as shown on the left. Press [▼].

30. "Audio2 PID" appears with "XXXX" or "---" displayed as shown on the left. Press [▼].

31. The Audio3 PID screen is displayed. "XXXX" or "---" is displayed. Press [▼].

32. The Audio4 PID screen is displayed. "XXXX" or "---" is displayed. Press [▼].

33. "PCR PID" appears with "XXXX" or "---" displayed as shown on the left. Press [Cancel] once.

34. Ancillary "PID" appears with "XXXX" or "---" displayed as shown on the left. Press [Cancel] once.

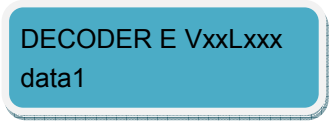
35. The Status submenu - Decoder status appears as shown on the left. Press [Cancel] once.

36. The Main menu - Status appears as shown on the left. Press [Cancel] once.

37. The initial menu appears.

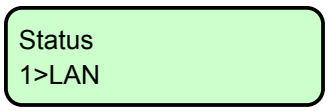
4.5.4 Status (Intercom)

This Status menu displays the current settings for the intercom.



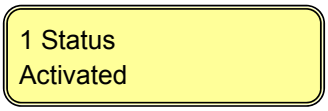
1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.

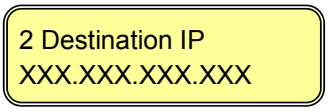


3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key three times.

4. The Status submenu - Intercom status appears as shown on the left. Press [Enter].



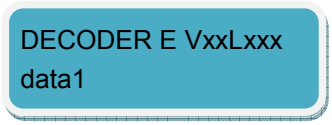
5. "Status" (Intercom) appears with "Activated" or "Not activated" displayed as shown on the left. Press [▼].



6. "Destination IP" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [Cancel].

7. The Status submenu - Intercom status appears as shown on the left. Press [Cancel] once.

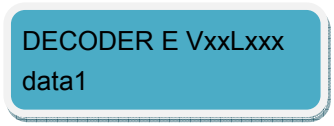
8. The Main menu - Status appears as shown on the left. Press [Cancel] once.



9. The initial menu appears.

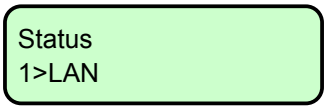
4.5.5 Status (Data Port)

This Status menu displays the current settings for the data port.

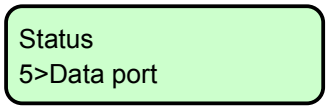


1. Press [Enter] at the initial menu.

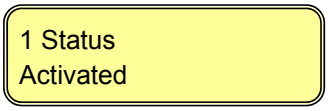
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.



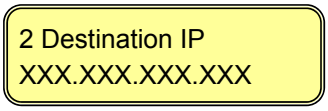
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key four times.



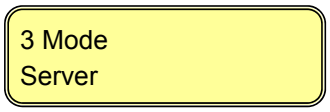
4. The Status submenu - Data port status appears as shown on the left. Press [Enter].



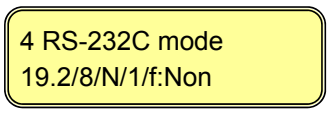
5. "Status" (Data port) appears with "Activated" or "Not activated" displayed as shown on the left. Press [▼].



6. "Destination IP" appears with "XXX.XXX.XXX.XXX" displayed as shown on the left. Press [▼].

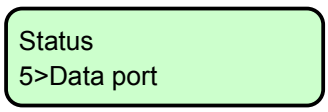


7. "Mode" (Data port operation mode) appears with "Server," "Server (recv only)" or "Client" displayed as shown on the left. Press [▼].



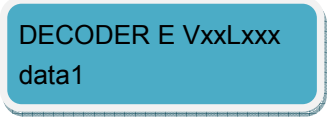
8. "RS-232C mode" appears with the settings displayed in the (1)/(2)/(3)/(4)/(5) format as shown on the left.

(1) Bit rate: 38.4, 19.2, 9.6, 4.8, 2.4 or 1.2
(2) Data length: 7 or 8
(3) Parity: NONE, ODD or EVEN
(4) Stop bit: 1 or 2
(5) Flow control: f:Non or f:R/C
Press [Cancel].



9. The Status submenu - Data port status appears as shown on the left. Press the [Cancel] key once.

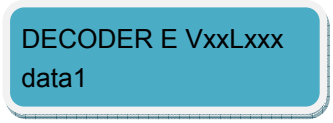
10. The Main menu - Status appears as shown on the left. Press the [Cancel] key once.



11. The initial menu appears.

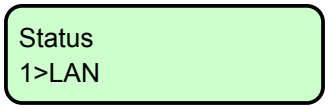
4.5.6 Status (SNMP)

This Status menu displays the current settings for SNMP.

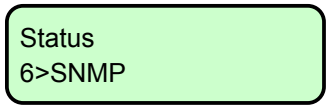


1. Press [Enter] at the initial menu.

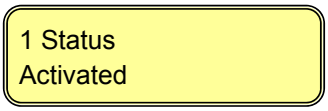
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.



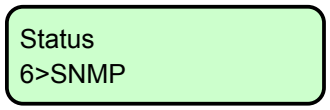
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key five times.



4. The Status submenu - SNMP status appears as shown on the left. Press [Enter].

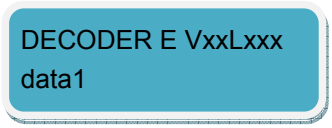


5. "Status" (SNMP) appears with "Activated" or "Not activated" displayed as shown on the left. Press [Cancel].



6. The Status submenu - SNMP status appears as shown on the left. Press the [Cancel] key once.

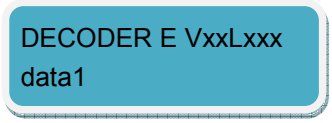
7. The Main menu - Status appears as shown on the left. Press the [Cancel] key once.



8. The initial menu appears.

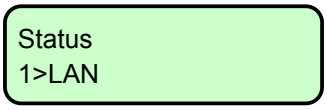
4.5.7 Status (Equipment)

This Status menu displays the current settings for equipment.

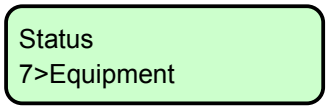


1. Press [Enter] at the initial menu.

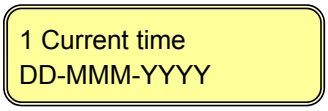
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.



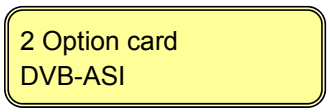
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key six times.



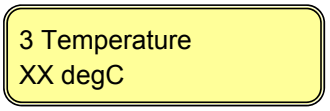
4. The Status submenu – Equipment status appears as shown on the left. Press [Enter].



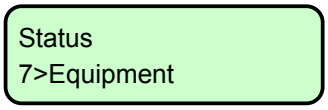
5. "Current time" appears with "DD-MMM-YYYY hh:mm:ss" displayed as shown on the left. Press [▼].



6. "Option card" appears with "DVB-ASI," "Unequipped," "Fault" or "Unknown" displayed as shown on the left. Press [▼].

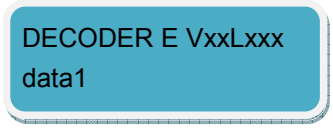


7. "Temperature" appears with "XX degC" displayed as shown on the left. Press [Cancel].



8. The Status submenu - Equipment status appears as shown on the left. Press the [Cancel] key once.

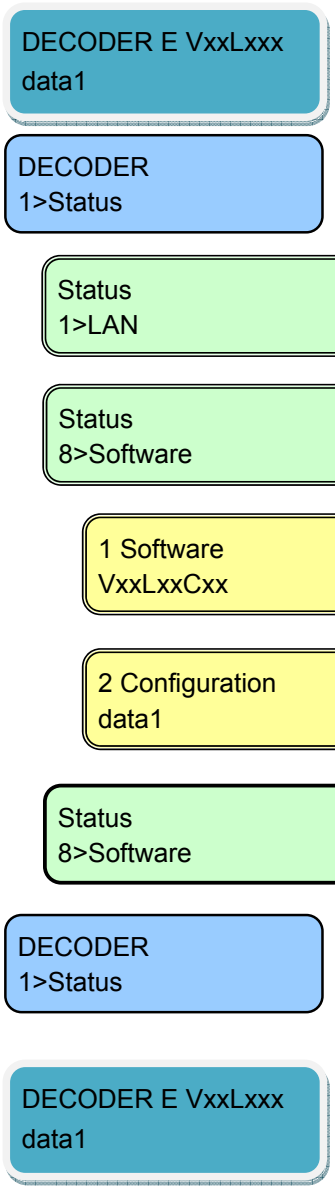
9. The Main menu - Status appears as shown on the left. Press the [Cancel] key once.



10. The initial menu appears.

4.5.8 Status (Software)

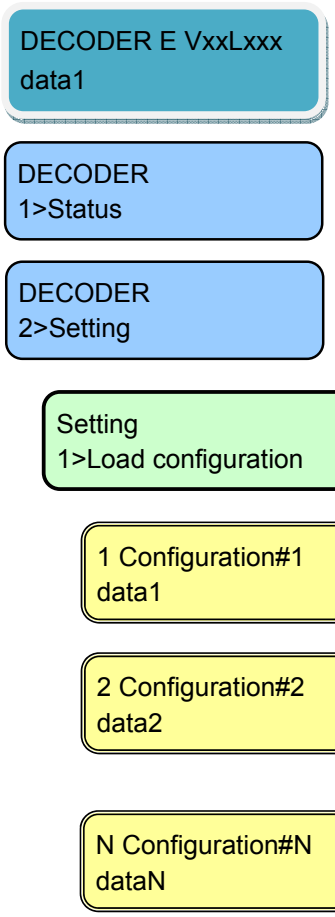
This Status menu displays the current software settings.



1. Press [Enter] at the initial menu.
2. The Main menu - Status appears as shown on the left. Press the [Enter] key once.
3. The Status submenu - LAN status appears as shown on the left. Press the [▼] key seven times.
4. The Status submenu - Software status appears as shown on the left. Press [Enter].
5. "Software" appears with "VxxLxxCxx" displayed as shown on the left. Press [▼].
6. "Configuration" appears with the current configuration name displayed as shown on the left. Press [Cancel].
7. The Status submenu - Software status appears as shown on the left. Press the [Cancel] key once.
8. The Main menu - Status appears as shown on the left. Press the [Cancel] key once.
9. The initial menu appears.

4.5.9 Setting (Configuration)

This menu is used to select configuration data.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key once.

3. The Main menu - Setting appears as shown on the left. Press the [Enter] key once.

4. The Setting submenu - Load configuration appears as shown on the left. Press [Enter].

5. "Configuration#1" appears with a selectable operation data name followed by a number [#1] displayed as shown on the left. Press [▼].

6. "Configuration#2" appears with a selectable operation data name followed by a number [#2] displayed as shown on the left. Press [▼].

7. "Configuration#N" appears with a selectable operation data name followed by a number [#N] displayed as shown on the left. If the data number is the target one, press [Enter].

Update with
Configuration #N ?

8. The confirmation message shown on the left appears. Press [Enter].

Updating…

9. The message shown on the left appears.

Update completed.
Please Enter Key.

10. If the configuration loading is successful, the message "Update completed." or in the step **11** appears. Press [Enter] to display the initial menu.

Update completed.
System is rebooting.

11. If the configuration loading is successful, the message "Update completed. System is rebooting." appears. The system automatically reboots.

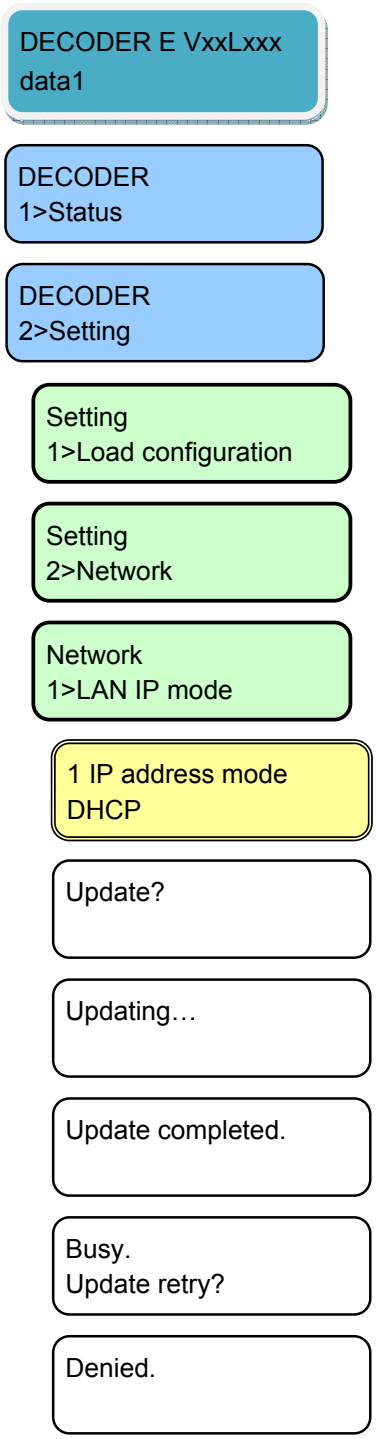
Busy.
Update retry?

12. If the configuration loading fails because the system is busy, the message "Busy. Update retry?" may appear. Wait for a moment, and press [Enter] to display the screen shown in step **9.**

This ends the procedure for changing the configuration.

4.5.10 Setting (LAN Port IP Address Mode)

This menu is used to set the IP address mode of the LAN port.



1. Press [Enter] from the initial menu.

2. The Main menu-Status setting screen appears.
Press [▼].

3. The Main menu - Setting appears.
Press [Enter].

4. The Setting submenu - Configuration appears.
Press [▼].

5. The Setting submenu - Network appears.
Press [Enter].

6. The Setting submenu - LAN IP mode appears.
Press [Enter].

7. The IP address setting appears.
Select "DHCP," "PPPoE," or "Static IP"with the [▼] and [▲] keys for setting. Press [Enter].

8. The message "Update?" appears.
Press [Enter].

9. The message "Updating…" appears.

10. If the updating is successful, the message "Update completed."appears. Press [Enter], and the Setting submenu - LAN IP mode as in **6** appears.

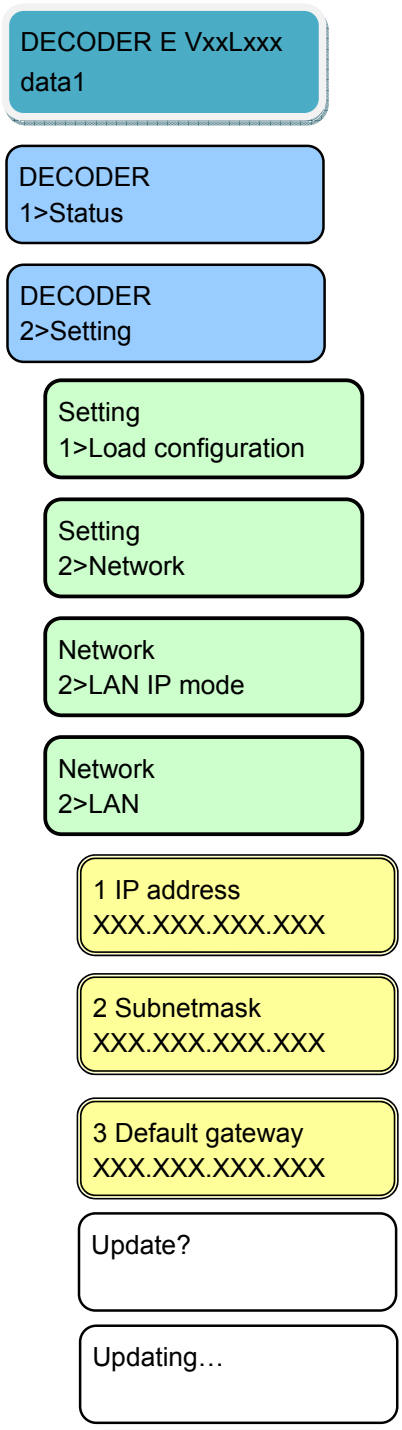
11. If the updating fails as the system is busy, the message "Busy. Update retry? May appear. Wait for a moment, and press [Enter] to display the screen in **9.**

12. If the processing fails, the message "Denied." may appear. Perform the Web-based operation shown in **3.2.4 Basic** and confirm the set values of all items. Press [Enter], and the Setting submenu - LAN IP mode as in **6** appears.

This ends the changing of LAN port IP address setting.

4.5.11 Setting (LAN Port)

This menu is used to set up the LAN port IP address.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key once.

3. The Main menu - Setting appears as shown on the left. Press [Enter].

4. The Setting submenu - Load configuration appears as shown on the left. Press the [▼] key once.

5. The Setting submenu – Network appears. Press [Enter].

6. The Network submenu – LAN IP mode setting appears. Press [Enter].

7. The Network submenu – LAN setting appears. Press [Enter].

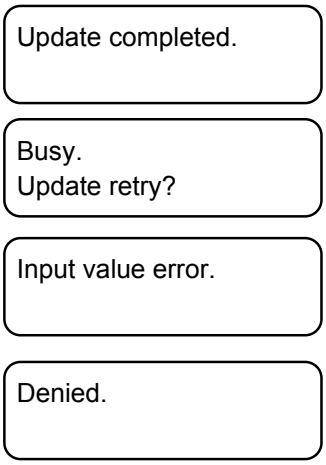
8. "IP address" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the IP address, press [Enter].

9. "Subnetmask" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the subnet mask, press [Enter].

10. " Default gateway" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the gateway address, press [Enter].

11. The message "Update?" appears. Press [Enter].

12. The message "Updating…" appears.



13. If the update processing is successful, the message "Update completed." appears. Press [Enter] to display the Network submenu - LAN setting as in step **7.**

14. If the processing fails because the system is busy, the message "Busy. Update retry?" appears. Wait for a while, and press [Enter] to display the screen as in step **12.**

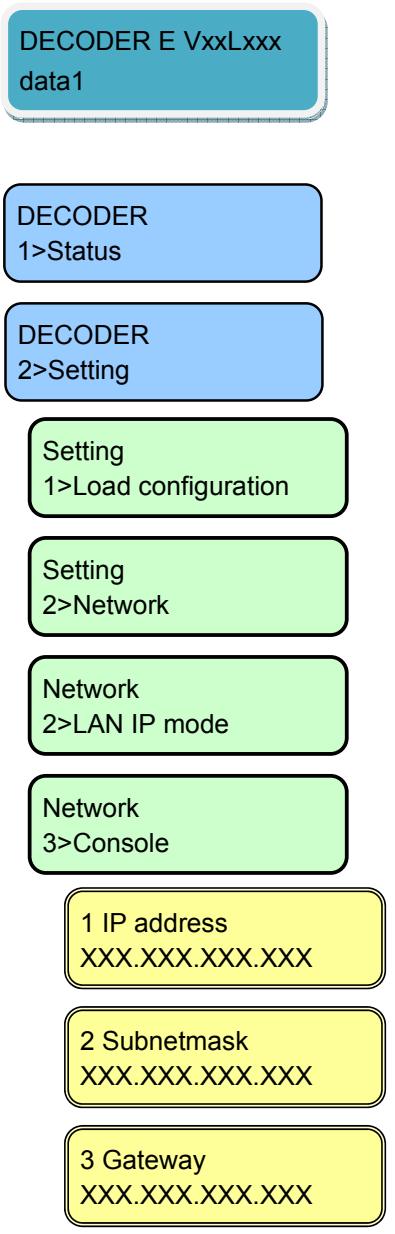
15. If an invalid value is set, the message "Input value error." may appear. Press [Enter] to display the screen as in step **8.** **C**onfirm the set values of all items and retry.

16. If the processing fails, the message "Denied." may appear. Perform the Web-based operation shown in **3.2.4 Basic** to confirm the set values of all items. Press [Enter], and the Network submenu – LAN setting as in **7** appears.

This ends the procedure for changing the LAN port IP address settings.

4.5.12 Setting (CONSOLE Port)

This menu is used to set the CONSOLE port IP address.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key once.

3. The Main menu - Setting appears as shown on the left. Press the [Enter] key once.

4. The Setting submenu - Load configuration appears as shown on the left. Press the [▼].

5. The Setting submenu – Network appears. Press [Enter].

6. The Network submenu – LAN IP mode setting appears. Press the [▼] twice.

7. The Network submenu – Console setting appears. Press [Enter].

8. "IP address" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the IP address, press [Enter].

9. "Subnetmask" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the subnet mask, press [Enter].

10. "Gateway" appears as shown on the left. Set "XXX.XXX.XXX.XXX" by selecting digits with the [▼] and [▲] keys and selecting column positions with the [◄] and [►] keys. After setting the gateway, press [Enter].

Update?

11. The message “Update?” appears. Press [Enter].

12. The message “Updating…” appears.

Updating…

Update completed.

13. If the update processing is successful, the message “Update completed.” may appear. Press [Enter] to display the Network submenu - Console setting as in step **7.**

Busy.
Update retry?

14. If the processing fails because the system is busy, the message “Busy. Update retry?" may appear. Press [Enter] after a while to display the screen as in step **12.**

Input value error.

15. If an invalid value is set, the message “Input value error.” may appear. Press [Enter] to display the Setting submenu - Console setting as in step **8.** Review the set values and retry.

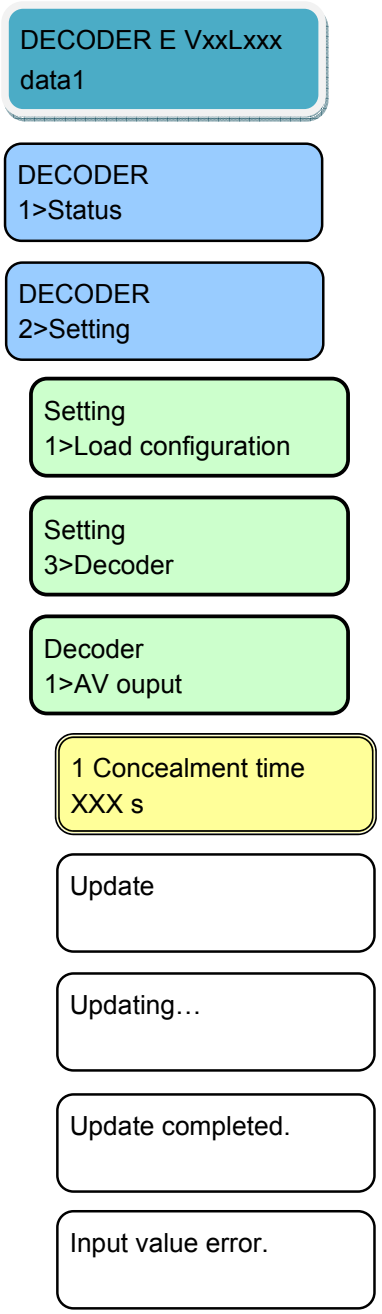
Denied.

16. If the processing fails, the message “Denied.” may appear. Perform the Web-based operation shown in **3.2.4 Basic** to confirm the set values of all items. Press [Enter], and the Network submenu – Console as in **7** appears.

This ends the procedure for changing the Console port IP address settings.

4.5.13 Setting (Video/Audio)

This menu is used to set the decoder video/audio output.



1. Press [Enter] from the initial menu.

2. The Main menu - Status appears.
Press [▼].

3. The Main menu - Setting appears.
Press [Enter].

4. The Setting submenu - Configuration appears.
Press [▼] twice.

5. The Setting submenu - Decoder appears.
Press [Enter].

6. The Decoder submenu - AV output appears.
Press [Enter].

7. The Static video concealment time setting appears.
Select digits with the [◄] and [►] keys and the value (5 to 600) with the [▼] and [▲] keys and press [Enter].

8. The message “Update?” appears.
Press [Enter].

9. The message “Updating...” appears.

10. If the updating is successful, the message “Update completed.” appears. Press [Enter], and the Decoder submenu - AV output setting as in **6** appears.

11. If the updating fails as the system is busy, the message “Busy. Update retry?” may appear. Press [Enter] after a while, and the screen as in **9** appears.

12. If the invalid value is set, the message “Input value error.” may appear. Press [Enter], and the screen as in **7** appears. Review the set value and retry.

Denied.

Denied.
Parameter duplicate.

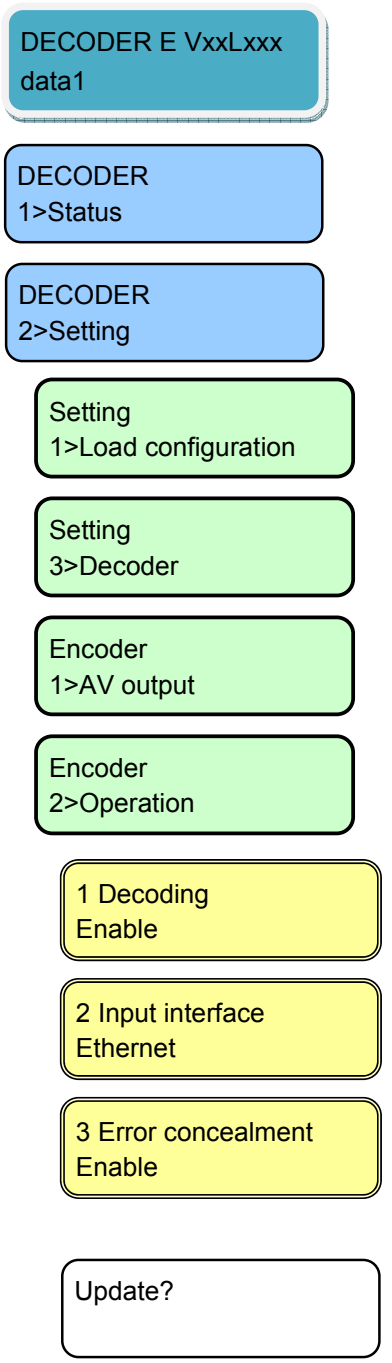
Denied.
Operation limitation.

13. If the processing fails, the message “Denied,” “Denied. Parameter duplicate.” or “Denied. Operation limitation.” may appear.
Perform the Web-based operation shown in **3.5.1 Set-up (Decoder)**, and confirm the set values of all items. Press [Enter], and the Decoder submenu - AV output setting as in 6 appears.

This ends the change in the settings of the Decoder video/audio input.

4.5.14 Setting (Decoder)

This menu is used to set the decoder operation.



1. Press [Enter] from the initial menu.

2. The Main menu - Status appears.
Press [▼].

3. The Main menu - Setting appears.
Press [Enter].

4. The Setting submenu - Configuration appears.
Press [▼] twice.

5. The Setting submenu - Decoder appears.
Press [Enter].

6. The Decoder submenu - AV output setting appears.
Press [▼].

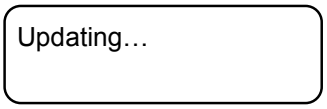
7. The Decoder submenu - Operation setting appears.
Press [Enter].

8. The Encoder operation Enable/Disable setting appears.
Select Enable or Disable with the [▼] and [▲] keys, and press [Enter].

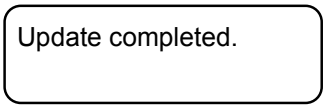
9. The Stream input interface setting appears.
Select Ethernet or DVB-ASI with the [▼] and [▲] keys, and press [Enter].

10. The Error concealment setting for received error stream appears.
Select Enable or Disable with the [▼] and [▲] keys, and press [Enter].

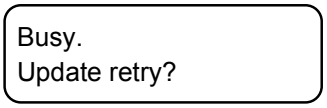
11. The message “Update?” appears.
Press [Enter].



12. The message “Updating...” appears.

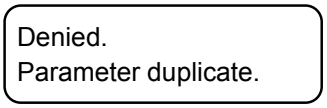


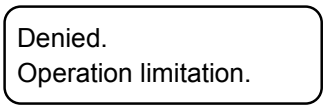
13. If the updating is successful, the message “Update completed.” appears. Press [Enter], and the Decoder submenu - Operation setting as in **7** appears.



14. If the updating fails as the system is busy, the message “Busy. Update retry?” may appears. Wait for a moment and press [Enter], and the screen as in **12** appears.

15. If the processing fails, the message “Denied,” “Denied. Parameter duplicate.” or “Denied. Operation limitation.” may appear.
Perform the Web-based operation shown in **3.5.1 Set-up (Decoder)**, and confirm the set values of all items. Press [Enter], and the Decoder submenu – Operation as in **7** appears.

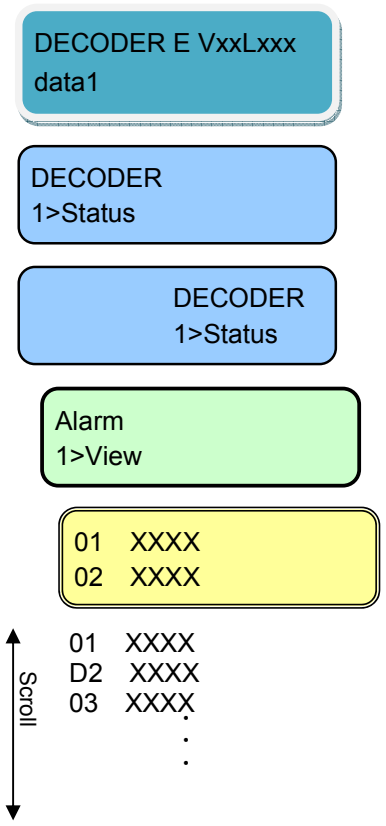




This ends the change in the settings of the decorder operation.

4.5.15 Alarm

This menu is used to display the alarm information.
The alarm information displays the number and the alarm code.
See Section 5.2, "Alarm LED Goes On" for the detail of the error code list.



1. Press [Enter] at the initial menu.

2. The Main menu appears as shown on the left. Press [▼] key twice or [▲] key three times.

3. The main menu – Alarm appears as shown on the left. Press [Enter].

4. The Alarm submenu – View apprears as shown on the left. Press [Enter].

5. Alarm codes are displayed. Press the [▼] or [▲] key to scroll the alarm. At the view shown on the left, pressing the [▼] key displays record 2 and pressing the [▲] key displays record 99. This ends the operation. Press the [Cancel] key as many times as required to display the Operation & Status menu.

6. The Alarm submenu – View apprears as shown on the left. Press [Cancel] once.

7. The main menu – Alarm appears as shown on the left. Press [Cancel].

8. The initial menu appears.

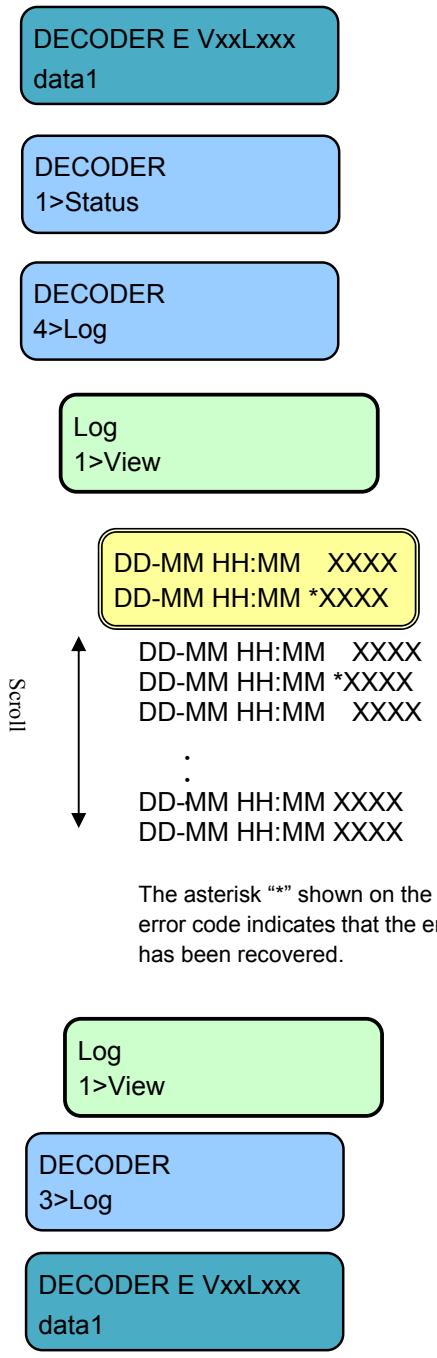
4.5.16 Log - View

This menu is used to display the logs of IP-9500e Series.

A log record is displayed with the date/time (month, day, hour and minute) of occurrence and information on the event that occurred. Up to 1,000 log records can be saved and records that exceed 1,000 records overwrite existing records beginning with the chronologically oldest records.

For log error codes, see Section 5.2, "Alarm LED Goes On."

* The log records that can be viewed on the front panel are limited to the latest 100 records. For information on logs exceeding 100 records, see 3.2.7 Log.



1. Press [Enter] at the initial menu.

2. The Main menu appears as shown on the left. Press the [▼] key three times or the [▲] key twice.

3. The main menu - Log appears as shown on the left. Press [Enter].

4. The Log submenu - View appears as shown on the left. Press [Enter].

5. Log detail is displayed. Press the [▼] or [▲] key to scroll the log. At the view shown on the left, pressing the [▼] key displays record 2 and pressing the [▲] key displays record 99. This ends the operation. Press the [Cancel] key as many times as required to display the Operation & Status menu.

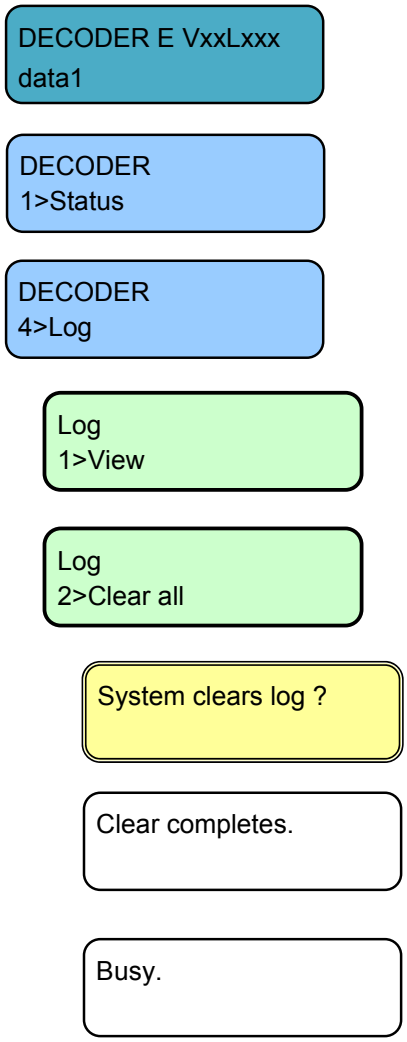
6. The Log submenu - View appears as shown on the left. Press the [Cancel] key once.

7. The Main menu - Log appears as shown on the left. Press the [Cancel] key once.

8. The initial menu appears.

4.5.17 Log - Clear

This menu is used to clear the log.



1. Press [Enter] at the initial menu.

2. The Main menu appears as shown on the left. Press the [▼] key twice or the [▲] key twice.

3. The Main menu - Log appears as shown on the left. Press [Enter].

4. The Log submenu - View appears as shown on the left. Press [▼].

5. The Log submenu - Clear all appears as shown on the left. Press [Enter].

6. The message "System clears log?" appears. If you want to clear the log, press [Enter].

7. If the Log clear is successful, the message "Clear completes." Appears. Press [Enter], and the Log menu – Log clear as in **5** appears.

6. A confirmation message for the log clearing appears. To clear the log, press [Enter].

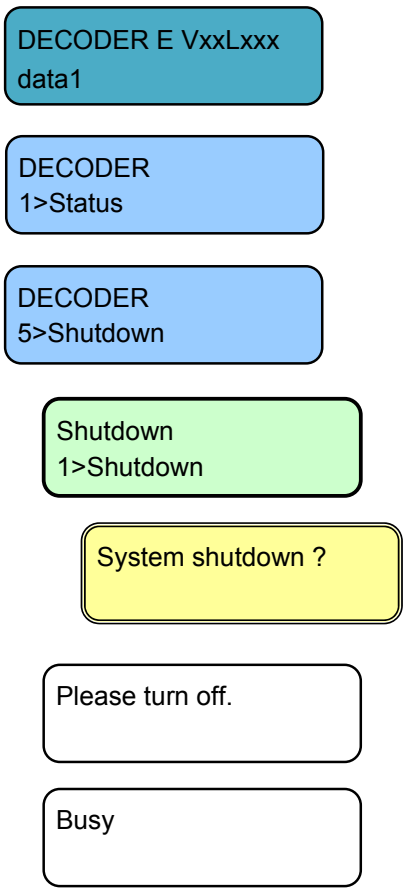
7. If the log has been cleared successfully, the message shown on the left appears. Press [Enter]. The Log submenu - Clear all appears as in step **5.**

8 If the Log clear fails as the system is busy, the message "Busy." may appear. Press [Enter]. The Log submenu - Clear all appears as in step **5.** Retry the operation later.

This ends the procedure for clearing the log.

4.5.18 Shutdown

This menu is used to shut down.



1. Press [Enter] at the initial menu.

2. The Main menu - Status appears as shown on the left. Press the [▼] key four times or the [▲] key once.

3. The Main menu - Shutdown appears as shown on the left. Press [Enter].

4. The Shutdown submenu - Shutdown appears as shown on the left. Press [Enter].

5. The message "System shutdown?" appears. Press [Enter].

6. If the System shutdown is successful, the message "Please turn off." appears. Turn off the system power.

5. The confirmation message shown on the left appears. Press [Enter].

6. If shutdown processing is successful, the message shown on the left appears. Turn off the power to the IP-9500e Series.

7. If the processing is unsuccessful as the system is busy, the message "Busy." may appear. Press [Enter]. The Shutdown submenu - Shutdown appears as in step **4.** Retry the operation later.

⚠ CAUTION

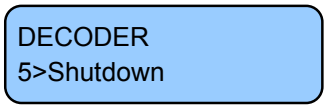
When the PPPoE connection is established, the shutdown sequence disconnects the PPPoE connection too. If turn off the power without the shutdown sequence, it may take some time to establish the next PPPoE connection.

4.5.19 Reboot

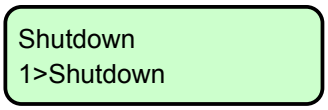
This menu is used to reboot.

1. Press [Enter] at the initial menu.

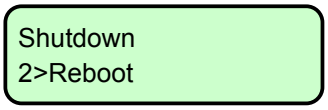
2. The Main menu - Status appears as shown on the left. Press the [▼] key four times or the [▲] key once.



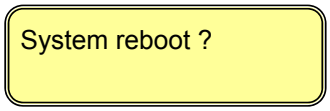
3. The Main menu - Shutdown appears as shown on the left. Press [Enter].



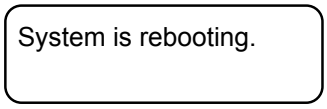
4. The Shutdown submenu - Shutdown appears as shown on the left. Press [▼].



5. The Shutdown submenu - Reboot appears as shown on the left. Press [Enter].



6. The confirmation message shown on the left appears. Press [Enter].



7. If the command processing is successful, the message shown on the left appears while the system automatically reboots.

8. If the reboot processing fails because the system is busy, the message “Busy.” may appear. Press [Enter]. The Shutdown menu - Reboot appears as in step **5.** Retry the operation later.

4.6 Special Use of Cancel Key

You can start IP-9500e Series by turning on the power while holding down the [Cancel] key (for about 10 seconds) until the RDY LED starts blinking in orange. Doing so starts it with the initial IP address and subnet mask with which it is shipped from the factory (CONSOLE: IP address 192.168.255.253, subnet mask 255.255.255.252, LAN: IP address 10.0.0.1, subnet mask 255.0.0.0).

Use this function when making initial settings from a control terminal (such as a PC having a LAN interface) (*1)

*1 When you operate IP-9500e Series with the default IP address, connect it to the control terminal and make settings from the terminal with it disconnected from your network.

After making settings according to the requirements for your network, connect the device to the network. If IP-9500e Series with the default settings made at the factory is connected to the network, an unexpected problem may occur in your network.

If you start it while holding down the [Cancel] key, set the IP address and subnet masks of the control terminal as follows:

- CONSOLE IP address : 192.168.255.254
- CONSOLE subnet mask : 255.255.255.252
- LAN IP address : 10.aaa.bbb.ccc
  (aaa or bbb is any number from 0 to 255 and ccc is any number from 2 to 255, excluding 10.255.255.255.)
- LAN subnet mask : 255.0.0.0

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Chapter 5

Troubleshooting

This chapter explains how to respond in case audio/video is not output or an alarm LED goes on.

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5.1 Troubleshooting

If you think your IP-9500e Series is malfunctioning, follow the corresponding corrective action in the table below, according to the applicable conditions.
If a problem persists, contact the Fujitsu Service Center.

⚠WARNING

Electric shock
Contact your system administrator before checking the voltage of a power outlet. Otherwise, an electric shock may occur.

Table 5-1 Check Items and Corrective Action

Classification	Symptom	Check	Corrective action
Power / Starting up	Power cannot be turned on.	Is the power cable connected?	Make sure that the power cable is properly connected to the outlet.
		Is the outlet voltage normal?	Measure the voltage with a tester to confirm that the voltage is normal. If another device is connected to the same outlet, check the operation of the device.
Hardware	The ALM LED is on.	IP-9500e Series is faulty.	Troubleshoot from the control terminal.
	The LEDs excluding LAN and CONSOLE are on.	Is the ambient temperature of IP-9500e Series higher than that in the specifications?	Adjust the temperature conditions so that the ambient temperature of IP-9500e Series meets the specifications.
		Is there any shielding material in the installation area?	Remove the shielding material.
Operation	Commands via a LAN cannot be used (the setup menu cannot be displayed).	Is the RDY LED blinking?	The hardware system is operating while the RDY LED is blinking. Wait until the LED remains on.
		Is the IP address displayed normally in the status menu on the front panel? For information on the checking procedure, see Section 4.4.1, "Status (LAN) or 4.5.1, "Status (LAN).	Invalid IP addresses may be set or an address collision may be present between the LAN and CONSOLE ports. By referring to Section 2.2, "Equipment Operation," restarts IP-9500e Series with the default IP address, connect it to the Web, and check for the following: (1) The LAN port IP address is set to “Static IP,” and “L00C IP address collision” is logged. -> The IP addresses set for the CONSOLE and LAN ports conflict with each other. Review the settings. (2) The LAN port IP address is set to “DHCP” or “PPPoE” and “L00C IP address collision” is logged. -> The obtained IP address conflicts with the CONSOLE IP address. Review the CONSOLE IP address setting. (3) The LAN port IP address is set to "DHCP" or "PPPoE" and "L008 PPPoE connection failure" is logged. -> Check for problems in the DHCP or PPPoE server.
		Are the LINK LEDs on IP-9500e Series and hub on?	If not, the UTP cable is not connected. Check the UTP cable.

Classification	Symptom	Check	Corrective action
Operation	Commands via a LAN cannot be used (the setup menu cannot be displayed).	Issue a PING command to the IP address of IP-9500e Series. Does it respond?	If not: - Check the TCP/IP settings (to see whether the net mask and gateway address are valid) on the client PC. - Start IP-9500e Series with the default IP address and check the IP address by referring to Section 2.2, "Equipment Operation." If the problem persists, check the operation on the network side.
		Are the browser used and its settings valid?	- Make sure that IE6.0 SP2 or a later version is used. - Set "Disable proxy" on the browser, and retry the operation.
Video	No video is output (black screen)	Is the monitor power on?	Check the monitor power and operation.
		Is IP-9500e Series power on?	Confirm that the PWR-LED is on.
		Is IP-9500e Series correctly connected to the monitor?	Check the connection between the IP-9500e Series and monitor.
	Blue/gray screen is output.	Has decoding started?	See Section 3.5.4, "Operation & Status (Decoder)," and confirm that "Normal (Receiving)" is displayed for "Decoding."
		Is the setup normal?	Check the streaming address and port number settings.
		Is "Operating" displayed for "Encoding" on the streaming source device?	Confirm that the streaming source device is distributing streams. In the case of the IP-9500 encoder, see Section 3.3.4, "Operation & Status (Encoder)" and confirm that "Operating" is displayed for "Encoding." In the case of Unicast, confirm that the number of possible streams of encoder is observed.
	Only color bars are displayed.	Is the video input of the source device normal?	In the case of IP-9500e encoder, if video input is not received, the encoder outputs color bars or gray view according to the setting of "Display when no video signal input" on the AV input setup page. Check video input.
		Is the copy protected content like DVD input to HDMI interface?	The HDMI signal protected by HDCP (High-bandwidth Digital Copy Protection system) cannot be input to IP-9500e Series from the view point of the copy right protection. Check video input.
	Receiving video sometime stops or video image is unstable.	Is a receiving error present?	Check the number of data packets received (decoder information) according to Section 3.2.8, "Performance Statistics." Display the Performance Summary frame several times. If the number of data packets lost is counted up, the network load may be high or there may be a problem with the setting. Consult your network administrator.
		Is the MTU size too small?	Use the size recommended for the network used.

Classification	Symptom	Check	Corrective action
Audio	No sound is generated.	Is IP-9500e Series power on?	Confirm that the PWR LED is on.
		Is IP-9500e Series correctly connected to the speaker?	Check the connection between IP-9500e Series and speaker.
		Is the volume of the speaker used too low?	Check the volume of the speaker.
		Is an alarm generated on the streaming source device?	If an alarm is generated, see the operating manual of the streaming source device.
		Is the streaming source device correctly connected to the audio source?	Check the connection of the audio cable.
	Noise is generated.	Disconnect the audio output cable from IP-9500e Series. Does it eliminate the noise?	If noise does not disappear even after the cable is disconnected, check the audio cable and audio output equipment.
		Is a receiving error present?	Check the number of data packets received (decoder information) according to Section 3.2.8, "Performance Statistics." Display the Performance Statistics frame several times. If the number of data packets lost is counted up, the network load may be high or there may be a problem with the setting. Consult your network administrator.
Data	Data communication is disabled.	Is the port setting normal? Is the port setting consistent with the destination device?	Check the setting according to Section 3.2.4, "Data Port."
		Is the operation mode consistent with the destination device?	Check the setting according to Section 3.2.4, "Data Port."
		Is the RS-232C setting consistent with the data input/output device?	Check the setting according to Section 3.2.4, "Data Port."
		Is the data input/output device operating normally?	Check the operation of the data input/output device.
Preparation	Software cannot be installed.	Are IP-9500e Series IP address, subnet mask and gateway address properly set?	Start IP-9500e Series with the default IP address according to Section 2.2, "Equipment Operation," and check the IP address. If the problem persists, check the operating status on the network side.
		Is the file specification valid? Is the license key entered correctly?	If the message "Installation was denied (incorrect file or license) Please try again here" is displayed, the file specification is invalid or the license key is entered incorrectly.

5.2 Alarm LED Goes On

This section explains corrective action to be taken if an alarm LED (ALM or INDWN) goes on. The appropriate corrective action depends on the alarm code displayed. See the table below for this information.

Note: For information on how to check the alarm log, see Section 3.4.15, "Log - View" in this document.

Table 5-2 Alarm Codes and Corrective Action

Code	Corrective action
Lxxx	Check the network and partner device. If an error cannot be identified, contact your system administrator.
Exxx	Turn off the device and then turn it on again. If the device is still operating abnormally after being powered on again, contact your maintenance personnel. Then, he/she may ask the alarm code.
Ixxx	This indicates a loss of video input. Check the video output device and video cable connected to the video input terminal.

xxx: Indicates three alphanumeric characters. See Table 5-3, "Alarm Code List," for details.

Table 5-3 Alarm Code List

Error No.	Error information	Description
0001	Boot (Power On)	Normally started by the power switch
0002	Boot (Reset)	Normally started by reboot
0006	Software update	Software updated
0007	Boot (Restart)	Restarted due to a CPU error
0008	Boot (Others)	Restarted due to a software error
0009	Shutdown	Shutdown by LCD operation
000A	RTC initialization	RTC battery backup failure
000B	CF card initialization	CF card formatting error
000C	Configuration update	Configuration data updated
000D	Basic settings change	Change basic setting
000E	Configuration data switching	Switch configuration data
L001	LINK error (LAN)	Disconnected from network equipment
L002	LINK error (CONSOLE)	Disconnected from network equipment
L006	Time server synchronization failure	Time synchronization with the time server failed
L009	DHCP connection failure	Disconnection recognized by DHCP
L00A	PPPoE connection failure	Disconnection recognized by PPPoE
L00C	IP address collision	Collision between IP addresses on the LAN and CONSOLE sides
L00E	DHCP connection update	IP address recognized during DHCP connection
L00F	PPPoE connection update	IP address recognized during PPPoE connection
I001	SDI input down	HD/SD-SDI input signal not detected
I002	HDMI input down	HDMI input signal not detected
I005	DVB-ASI input down	DVB-ASI input signal not detected
I006	Reference clock input down	GENLOCK signal not input

I011	Video synchronization error	Video input synchronization failure
I015	DVB-ASI synchronization error	DVB-ASI synchronization failure
I016	Reference clock synchronization error	GENLOCK input PLL synchronization failure
I021	Input data error (*9)	Statistics error count-up
E001	Power failure (*1)	Power failure occurred
E003	Temperature error occurrence (*4)	Abnormal temperature (shutdown processing started)
E00A	Flash ROM check sum error (*1)	Invalid data set in built-in Flash ROM
E010	FAN1 error (*2)	FAN1 failed (low speed) or stopped
E011	FAN2 error (*2)	FAN2 failed (low speed) or stopped
E013	Temperature warning (*5)	Temperature alarm generated (warning only)
E082	CODEC1 error (*4)	Main CODEC LSI error occurred
E083	CODEC2 error (*4)	Sub CODEC LSI error occurred
E084	CF card access error (*3)	CF card access error occurred
E08B	SUBCPU error (*4)	SUB CPU error occurred
E08E	Clock error (*1)	Clock error or disconnection occurred
E08F	Memory error (*1)	SDRAM memory check error occurred
E090	Downconversion error (*6)	Downconversion error occurred
E091	Voice communication error (*4)	Voice communication error occurred
E092	Version mismatch (*3)	Version mismatch between hardware and software
E093	Sending buffer overflow (*7)	Sending buffer overflow occurred
E0A1	Option card failure (*3)	Option card error occurred
E0A4	Option card selection (Unequipped) (*8)	Option card is unequipped

If an alarm recovery occurs after an alarm occurrence, "*" is provided to the left of the relevant error code.

*1 After an alarm occurs, the ALM LED remains on. The device needs to be rebooted to turn off the LED.

*2 The ALM LED blinks while an alarm factor is present. The LED goes off upon recovery from the alarm state.

*3 After an alarm occurs, the ALM LED keeps blinking.

*4 After an alarm occurs, the relevant operation is retried for recovery. If the retry fails, the ALM LED remains on. The device needs to be rebooted to turn off the LED.

*5 When a temperature error occurs, all LEDs excluding LINK/ACT and 100/1000 go on. The device needs to be rebooted to turn off the LEDs.

*6 The ALM LED is on while an alarm factor is present. The LED goes off upon recovery from the alarm state.

*7: The ALM LED blinks while this alarm is active. The LED goes off when the alarm cause is recovered. In case that the settings exceeds the capacity of the IP network, please reconfigure them to meet the network requirement

*8 The ALM LED is on while this alarm is active. The LED goes off when the error cause is recovered. The IN DWN LED lights when the DVB-ASI interface is selected at decoder or with the subordination for the reference clock at encoder.

*9 The IN DWN LED is on while this alarm is active. The LED goes off 10 seconds after the error cause is recovered. See 3.2.12 Statistics for the details of the statistics counter of the alarm occurrence.

The following table summarizes the LED display detail.

Table 5-4 Alarm LED Detail

LED	Description
PWR	Goes on when the device is powered on.
RDY	Blinks in green when the device ready for operation and stays on when the device runs in operation state.
IN DWN	Remains off during normal operation, and goes on in orange when input signals are interrupted. LED also blinks when DVB-ASI is selected with the communication line-dependent setting of the decoder or encoder under the non-installation of option boards. It blinks for 10 seconds also when the statistics input error counter is incremented.
ALM	Alarm LED, which goes on when a device alarm occurs. (*1)

*1: This LED stays on even after recovery from the alarm state. The device must be rebooted to turn off the LED.

Appendixes

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IP-9500e/IP-9500De Specifications

Item					Parameters
Interface	Video			IN (Encoder only)	HD-SDI (SMPTE 292M, 1080i(59.94/50) / 720p(59.94/50))
					SD-SDI (SMPTE 259M, 480i(59.94) / 576i(50))
					HDMI (1080i(59.94/50) / 720p(59.94/50) / 480i(59.94)/576i(50))
				OUT	HD-SDI (SMPTE 292M, 1080i(59.94/50) / 720p(59.94/50))
					SD-SDI (SMPTE 259M, 480i(59.94) / 576i(50))
					HDMI (1080i(59.94/50) / 720p(59.94/50) / 480i(59.94) / 576i(50))
				Monitor Output (Down converted)	Analog (NTSC / PAL)
					Letter box / Side cropped
	Audio			IN (Encoder only)	SDI Embedded (8ch)
					HDMI (2ch)
					Analog (2ch)
				OUT	SDI Embedded (8ch)
					HDMI (2ch)
					Analog (2ch)
	Network			DVB-ASI	(1 port)
				Ethernet (LAN)	10BASE-T/100BASE-TX/1000BASE-T (1 port)
					Auto MDI/MDI-X
	Console				10BASE-T/100BASE-TX/1000BASE-T (1 port)
					Auto MDI/MDI-X
	Reference Clock (GENLOCK)				Tri-Sync (HDSYNC), Bi-sync (Black Burst) or Internal
	Data Communication				RS-232C
	IP Intercom				RJ-25 (G.711)
	Relay Contact				RJ-11 (1 Loop, Output only)
Video & Audio Coding	Main Encoder	Video	HD	Profile	HP@L4, MP@L4
				Resolution	1080i x 1920/1440/960 (59.94/50)
					720p x 1280/960/640 (59.94/50)
				Bit Rate	1080i x 1920: 6/7/8/9/10/11/12/14/16/18/20/27 Mbps
					1080i x 1440: 4/5/6/7/8/9/10/11/12 Mbps
					1080i x 960: 4/5 Mbps
					720p x 1280: 6/7/8/9/10/11/12/14/16/18/20/27 Mbps
					720p x 960: 4/5/6/7/8/9/10/11/12 Mbps
					720p x 640: 4/5 Mbps
			SD	Profile	MP@L3
				Resolution	480i x 720 (59.94)
					576i x 720 (50)
				Bit Rate	480i: 2/3/4/6/10 Mbps
					576i: 2/3/4/6/10 Mbps
			Common	Encoding Control (Latency)	Standard (IBBP)
					Motion (IBP)
					Low latency (PPPP)
				Noise Reduction	Low pass filter (@Encoder)
				Video CBR/VBR	CBR
				GOP (Refresh Cycle)	15/30 frames (59.94)
					12/24 frames (50)
		Audio		Encoding Mode / Bit Rate	MPEG-1 Layer-2: 128/256/384 kbps/pair
					MPEG-2 AAC: 64/128/256 kbps/pair
					Pass Thrugh (SMPTE 302M): 2,304 kbps/pair
				Number of Channels	1/2/3/4 stereo pairs
				Sampling	48 kHz
				Quantization	16 bits
					20 bits (Pass through)
	Sub Encoder	Video	SD	Profile	MP@L3
					MP@L1.3 (Encoder only)
				Resolution & Bit Rate	480i x 720 (59.94): 2/3/4/6/10 Mbps
					576i x 720 (50): 2/3/4/6/10 Mbps
					SIF (7.5fps): 256/384 kbps (Encoder only)
			Common	Encoding Control (Latency)	Standard (IBBP)
				*D1 resolution only	Motion (IBP)
					Low latency (PPPP)
				Noise Reduction	Low pass filter (@Encoder)
				*D1 resolution only	
				Video CBR/VBR	CBR
					VBR (SIF only)
				GOP (Refresh Cycle)	15/30 frames (59.94)
				*D1 resolution only	12/24 frames (50)
		Audio		Encoding Mode / Bit Rate	MPEG-1 Layer-2 (1 stereo pair)
				*D1 resolution only	MPEG-2 AAC (1 stereo pair)
				Sampling	48 kHz
				Quantization	16 bits

Function	SystemMux	DVB-ASI	MPEG-2 TS
		IP	MPEG-2 TTS
			MPEG-2 TS (Encoder only)
	DVB-ASI	TS Packet Size	188/204 Bytes
		Synchronization	Internal
			Subordinating
		PCR Interval	30~100 ms
		PID	Program# / PMT / Video / Audio / PCR / Ancillary
	IP	Error Correction	FEC: 4~24 packets (Insertion Interval)
			ARQ: 0~2,000 ms (Buffering Time)
			ProMPEG FEC (Encoder only): 4x4~20x20
		Streaming Protocol	Unicast
			Multicast
			MPEG-2 TTS over RTP/UDP/IP
			MPEG-2 TS over RTP/UDP/IP (Encoder only)
	Reference Clock (GENLOCK) (Decoder only)		Bi-Sync (Black Burst)
			Tri-Sync (HDSYNC)
			Internal Clock
	Local Loopback		Video(Encoder only) / Audio(Encoder ony) / DVB-ASI(Decoder only)
	Ancillary Data	Video User Data	VITC: Max.16 words/field
			CC: Max.80 words/field
		Private PES	2000 words/field (Interlace)
			1000 words/field (Progressive)
	Data Communication (RS-232C)		1200/2400/4800/9600/19200/38400 bps
	IP Intercom	Encoding	G711
		Sampling	8 kHz
		Rate	64 kbps
	Local Recording Storage (Option)		4 GB / 8GB
	Operating Interface		LCD Panel
			http-based GUI
	Operation & Maintenance		ID / Password user authentication (http-based GUI)
			Network statistical information
			Alarm logging
			10 Preprogrammed Configuration Data / Backup & Restore
			Remote Software Update
			SNMP agent
			Relay Contact Output
	Network connection		Static IP
			DHCP
			PPPoE
	Time Management		SNTP Client
			Timezone Setting
			Direct input setting

IP-9000e Specifications

Itaric: Effective After Upgrading

Item					Parameters
Interface	Video			IN	*HD-SDI (SMPTE 292M, 1080i(59.94/50) / 720p(59.94/50))*
					SD-SDI (SMPTE 259M, 480i(59.94) / 576i(50))
					HDMI (1080i(59.94/50) / 720p(59.94/50) / 480i(59.94)/576i(50))
				OUT	*HD-SDI (SMPTE 292M, 1080i(59.94/50) / 720p(59.94/50))*
					SD-SDI (SMPTE 259M, 480i(59.94) / 576i(50))
					HDMI (1080i(59.94/50) / 720p(59.94/50) / 480i(59.94) / 576i(50))
				Monitor Output (Down converted)	Analog (NTSC / PAL)
					Letter box / Side cropped
	Audio			IN	SDI Embedded (8ch)
					HDMI (2ch)
					Analog (2ch)
				OUT	SDI Embedded (8ch)
					HDMI (2ch)
					Analog (2ch)
	Network			DVB-ASI	(1 port)
				Ethernet (LAN)	10BASE-T/100BASE-TX/1000BASE-T (1 port)
					Auto MDI/MDI-X
	Console				10BASE-T/100BASE-TX/1000BASE-T (1 port)
					Auto MDI/MDI-X
	Reference Clock (GENLOCK)				Tri-Sync (HDSYNC), Bi-sync (Black Burst) or Internal
	Data Communication				RS-232C
	IP Intercom				RJ-25 (G.711)
	Relay Contact				RJ-11 (1 Loop, Output only)
Video & Audio Coding	Main Encoder	Video	HD	Profile	*HP@L4*
				Resolution	*1080i x 1920/1440/960 (59.94/50)*
					720p x 1280/960/640 (59.94/50)
				Bit Rate	*1080i x 1920: 6/7/8/9/10/11/12/14/16/18/20/27 Mbps*
					1080i x 1440: 4/5/6/7/8/9/10/11/12 Mbps
					1080i x 960: 4/5 Mbps
					720p x 1280: 6/7/8/9/10/11/12/14/16/18/20/27 Mbps
					720p x 960: 4/5/6/7/8/9/10/11/12 Mbps
					720p x 640: 4/5 Mbps
			SD	Profile	MP@L3
				Resolution	480i x 720 (59.94)
					576i x 720 (50)
				Bit Rate	480i: 2/3/4/6/10 Mbps
					576i: 2/3/4/6/10 Mbps
			Common	Encoding Control (Latency)	Standard (IBBP)
					Motion (IBP)
					Low latency (PPPP)
				Noise Reduction	Low pass filter (@Encoder)
				Video CBR/VBR	CBR
				GOP (Refresh Cycle)	15/30 frames (59.94)
					12/24 frames (50)
		Audio		Encoding Mode / Bit Rate	MPEG-1 Layer-2: 128/256/384 kbps/pair
					MPEG-2 AAC: 64/128/256 kbps/pair
					Pass Thrugh (SMPTE 302M): 2,304 kbps/pair
				Number of Channels	1/2/3/4 stereo pairs
				Sampling	48 kHz
				Quantization	16 bits
					20 bits (Pass through)
	Sub Encoder	Video	SD	Profile	MP@L3
					MP@L1.3 (Encoder only)
				Resolution & Bit Rate	480i x 720 (59.94): 2/3/4/6/10 Mbps
					576i x 720 (50): 2/3/4/6/10 Mbps
					SIF (7.5fps): 256/384 kbps (Encoder only)
			Common	Encoding Control (Latency) *D1 resolution only	Standard (IBBP)
					Motion (IBP)
					Low latency (PPPP)
				Noise Reduction *D1 resolution only	Low pass filter (@Encoder)
				Video CBR/VBR	CBR
					VBR (SIF only)
				GOP (Refresh Cycle) *D1 resolution only	15/30 frames (59.94)
					12/24 frames (50)
		Audio		Encoding Mode / Bit Rate *D1 resolution only	MPEG-1 Layer-2 (1 stereo pair)
					MPEG-2 AAC (1 stereo pair)
				Sampling	48 kHz
				Quantization	16 bits

Function	SystemMux	DVB-ASI	MPEG-2 TS
		IP	MPEG-2 TTS
			MPEG-2 TS (Encoder only)
	DVB-ASI	TS Packet Size	188/204 Bytes
		Synchronization	Internal
			Subordinating
		PCR Interval	30~100 ms
		PID	Program# / PMT / Video / Audio / PCR / Ancillary
	IP	Error Correction	FEC: 4~24 packets (Insertion Interval)
			ARQ: 0~2,000 ms (Buffering Time)
			ProMPEG FEC (Encoder only): 4x4~20x20
		Streaming Protocol	Unicast
			Multicast
			MPEG-2 TTS over RTP/UDP/IP
			MPEG-2 TS over RTP/UDP/IP (Encoder only)
	Reference Clock (GENLOCK) (Decoder only)		Bi-Sync (Black Burst)
			Tri-Sync (HDSYNC)
			Internal Clock
	Local Loopback		Video(Encoder only) / Audio(Encoder ony) / DVB-ASI(Decoder only)
	Ancillary Data	Video User Data	VITC: Max.16 words/field
			CC: Max.80 words/field
		Private PES	2000 words/field (Interlace)
			1000 words/field (Progressive)
	Data Communication (RS-232C)		1200/2400/4800/9600/19200/38400 bps
	IP Intercom	Encoding	G711
		Sampling	8 kHz
		Rate	64 kbps
	Local Recording Storage (Option)		4 GB / 8GB
	Operating Interface		LCD Panel
			http-based GUI
	Operation & Maintenance		ID / Password user authentication (http-based GUI)
			Network statistical information
			Alarm logging
			10 Preprogrammed Configuration Data / Backup & Restore
			Remote Software Update
			SNMP agent
			Relay Contact Output
	Network connection		Static IP
			DHCP
			PPPoE
	Time Management		SNTP Client
			Timezone Setting
			Direct input setting

Glossary

AES/EBU

AES (Audio Engineering Society) and EBU (European Broadcasting Union) standardized for the professional digital audio input/output (IEC-60958 TYPE-1). It was applied to ANSI (American National Standard Institute) too.

Alarm Log

A record of errors that have occurred on devices and communication lines.

Ancillary Data

Transmitted kinds of data located in the blanking area of digital video interface.

i.e.: audio data, time code data and so on

ARQ（Automatic Repeat reQuest）

Error correction method that error packet will be resent automatically when packet error is detected at receiver (Decoder) side.

BB (Black Burst)

This is the black color level signal to use the synchronization.

BNC (Bayonet Neill Concelman)

One of the coaxial cable connecter which has the 75ohms impedance. It uses the lock called Bayonet Lock and is very easy and compact to use. It is used for the test gear and the digital audio because it supports up to 4GHz high frequency.

Browser

A generic name for programs that support a user who wants to fetch a desired option from a number of options. Using a browser, the user can trace links on the World Wide Web to access such multimedia information as text, audio, and video by the simple selection of items with a mouse or other pointing device.

CAT (Conditional Access Table)

This is the information table to support the limited receiving.

CC（Closed Captioning）

Data for Broadcast captioning. It is multiplexed at ancillary data area, virtual or horizontal blanking area of video signal, in HD/SD-SHI signal.

CF Card

This is the memory card of CompactFlash. It is used as media storage in this equipment.

Downconverter

Converting from HD-SDI signal to SD-SDI signal. Three modes are available, Squeeze, Side cropped and Letter box.

DVB-ASI (Digital Video Broadcasting - Asynchronous Serial Interface)

This is the standard interface in DVB (Digital Video Broadcasting: European Digital Broadcasting standardization organization) and used in MPEG CODEC most commonly. It is the asynchronous serial interface and standardized in ETSI 101 891.

Embedded Audio

Method to embed AES/EBU digital audio signal into the blank area of SDI (Serial Digital Interface) signal.

Factory Shipment Firmware

This is the firmware that is installed at factory before shipping and has the minimum function like the installer and so on.

FEC（Forward Error Correction）

Error correction methods that transmit side sends redundant packet in the sending packet

for error correction at receive side. Receiver does not have to request to resend error packet to transmit side. Receiver can correct error by using received packet. Ip-9500 provides Hybrid method which uses both FEC and ARQ effectively to realize high performance error correction and real time transmission.

Flow Control

A procedure for controlling the flow of data between two devices. Its purpose is to prevent data from being lost when a device buffer becomes full.

GATEWAY

Equipment that connects network systems that use different protocols. A gateway basically converts one protocol into another to support operation between two networks. In a looser sense, gateway sometimes means a machine that transfers information between any two networks.

HDCP (High-bandwidth Digital Content Protection system)

One of the copy protection technologies for the illegal content copy between the video player and the video display.

HD-SDI (High Definition television - Serial Digital Interface)

HD-SDI is the serial digital interface to transmit HD (High Definition) video signal, which transmission rate is 1.485 Gbps. It can transmit multiplexing HD video signal, PCM audio signal and data signal like time stamp.

HDMI (High Definition Multimedia Interface)

One of the multimedia interfaces integrated the audio, video and control and communicate each other.

H.264

This is one of the video compression coding systems standardized in ITU (International Telecommunication Union) in May, 2003. It is also standardized as a part of MPEG-4 (MPEG-4 part 10 Advanced Video Coding) in ISO (International Organization for Standard). Therefore, it is commonly called H.264/MPEG-4 AVC or H.264/AVC, showing both of parties.

This technology is used for the various applications from the low bit rate and low resolution like the mobile TV to the high bit rate, high resolution like HDTV. It is improved that the data capacity is half comparing MPEG-2 used wide spread.

HTTP (Hyper Text Transfer Protocol)

Abbreviation of HyperText Transfer Protocol. HTTP is used to transfer files and other data between a Web server and a browser.

HUB

A concentrator required to use 10Base-T or 100Base-TX as a local area network (LAN) standard. Twisted-pair cables are used to connect hubs. A high-speed hub conforms to 100Base-TX. A switching hub has switching functions.

IBBP/IBP/PPPP

Video encoding structure with using I, P, and B frame.

I frame: Intra frame. Frame encoded by using internal video information.

P frame: Prediction Picture frame. Frame encoded by using correlation with previous frame.

B frame: Bi-directional Interter frame. Frame encoded by using previous and next coming I frame or P frame

IP (Internet Protocol)

Abbreviation of Internet Protocol. IP is used to transfer packets between host computers anywhere on the Internet. The identifiers used to identify the destinations and senders for packet transfer are called IP addresses. An IP

address is a 32-bit value that can identify a network and a host on the network. Each host that communicates on the Internet must be assigned a unique IP address.

IP address

A numeric identifier that identifies a node (e.g., a computer) operating under TCP/IP. An IP address is a 32-bit value divided into four 8-bit segments separated by dots (for example, 200.10.101.1).

IP Multicast

A TCP/IP term that refers to a technology by which the same data is transmitted to many destinations at the same time. An address class, called Class D, is used for multicasting. The first four bits (1110) of a Class D address specify multicasting, and the remaining 28 bits specify a multicast group. Path control methods, such as PIM and DVMRP, exist for IP multicasting, but as yet, no one method has become standard.

I

LAN (Local Area Network)

Abbreviation of local area network. A LAN is a data communication system that covers a limited area of about 6 miles (10 kilometers) and provides transmission speeds in the mid to high range.

LED (Light-Emitting Diode)

Abbreviation of light-emitting diode.

IP-7000e has power LED and alarm LED lamps. The power LED lamp lights green to indicate that the power is on. The alarm LED lamp lights red to indicate that an alarm has occurred.

MPEG-4

A video data compression method that is a part of the MPEG standard. MPEG-4 was designed to distribute video images of low picture quality (due to a high compression ratio) over slow communication lines (for example, cellular phone and telephone lines). MPEG-4 was also designed to transmit video together with audio at about 64 kilobits per second.

PAT (Program Association Table)

This is the table included TS (Transport Stream) and the list in PMT PID. The PID of PMT is 0.

PES（Packetized Elementary Stream）

Packetized method provided by MPEG2 System. Encoded video or audio bit streams are called ‘Elementary Stream’. These streams are packetized by standard and are called ‘PES’.

PID

This is the packet identifier which has the 13 bits information, included in TS packet.

Ping

A command supported by operating systems such as UNIX, Windows 9x, and Windows NT that are used in a TCP/IP network to determine whether IP packets can reach or have reached a communication destination.

PMT (Program Map Table)

This is the ID table which identifies audio, video and so on.

PPPoE (Point to Point Protocol over Ethernet)

Abbreviation of Point-to-Point Protocol over Ethernet. PPPoE is a specification for connecting the users on an Ethernet to the Internet. PPPoE supports authentication and enables a point-to-point connection to be established in the normally multipoint architecture of Ethernet.

Pre-Filter

Filter that works before encoding video signal for an improvement of video quality with violent movement at low encoding rate.

Private PES

Packetized elementary stream standardized by MPEG2 System that user can use arbitrarily for data transmission.

Profile

This defines various encoding formats used for compressing the image. Profile can be changed depending on the use of the compressed image.

Proxy

A computer network service that allows clients to make indirect network connections to other network services.

Pro-MPEG FEC

FEC method standardized at Pro-MPEG Forum (Professional-MPEG Forum). Redundant packet consists of two dimensions (columns x rows) are sent for this method .

PS (Program Stream)

Abbreviation of Program Stream. An MPEG-2 method for multiplexing video, audio, and data, the PS method is used for transmission and storage in an error-free environment.

PSI (Program Specific Information)

This is the information which program each ES in TS packet belongs. For example, PAT, PMT, CAT and so on.

Refresh cycle

Frame cycle between I frames for Quality (IBBP) and Motion (IBP) of Encoding control mode. Frame cycle of updating one screen image by using intra-slice for Low Latency (PPPP) of Encoding control mode.

RS-232C

An interface standard that was mainly established by the Electronics Industry Association (EIA) for communication between data terminal and data communications equipment.

RTP

Abbreviation of Real time Transport Protocol. This transport protocol is for transferring the image data or the voice data in real time.

SD-SDI (Standard Definition television - Serial Digital Interface)

Standard definition digital video interface standardized in SMPTE259M.

Subnet mask

A mask value that is used to obtain the network address of a subnet from an IP address. The subnet address is obtained when the IP address is ANDed with the subnet mask.

System rate

The data amount per second of the encoding data including up to MPEG2 system. The data for the network packet or FEC packet is not included.

TCP (Transmission Control Protocol)

Abbreviation of Transmission Control Protocol, the protocol required for direct connection to the Internet. In the OSI reference model, TCP corresponds to the transport layer and IP corresponds to the network layer. TCP has been a global standard protocol that is supported by major operating systems, including UNIX, OS/2, Windows 95, and Windows NT.

TOS (Type Of Service)

Type of service that can be added within IP packets. It is used for controlling the order of priority of packets in the router etc.

Tri-sync

Sync signal used for High Definition TV. There is a feature of not generating the phase gap even if sync signal shrinks by the signal attenuation.

TS (Transport Stream)

Abbreviation of Transport Stream, which is an MPEG-2 systems for multiplexing video, audio,

and data. A stream consists of packets, each of which has a fixed length of 188 bytes. The TS method is used for transmission in an environment such as ATM communication or digital broadcasting where errors can occur.

TTL (Time To Live)

Abbreviation of Time To Live, which indicates the survival time of a packet on a network. If a packet sent to a network happens to enter a loop because of a setting error on a router, it will not survive forever, but will be discarded when the specified survival time is reached.

TTS (Time stamped Transport Stream)

192byte packet consist of basic 188byte MPEG TS and 4byte-timestamp counted by 27MHz clock.

UDP (User Datagram Protocol)

Abbreviation of User Datagram Protocol. UDP is a TCP/IP transaction protocol used for specific applications such as remote network management and naming service access.

Unicast

Communication with a station at a single address (that is, most general one-to-one communication).

UTP Cable

UTP is an abbreviation of unshielded twisted pair. A UTP cable is an unshielded pair of wires twisted together, and is used for Ethernet cabling and other purposes.

Video User Data

Data area standardized by H.264 video encoding method that user can use arbitrarily for data transmission.

VITC（Vertical Interval Time Code）

Time code signal embedded in the vertical blanking area of video sync signal.

10BASE-T

A LAN that uses unshielded twisted-pair (UTP) cables and complies with the IEEE 802.3 standard. 10Base-T connection is made simple by using a concentrator called a hub without any special cabling work required. For this reason, 10Base-T is the most widely used form. The maximum cable length is 100 meters.

100BASE-TX

One of the 100Base LAN standards (also called Fast Ethernet). 100Base-TX supports transfer rates of 100 megabits per second. Other 100Base standards are 100Base-T4 and 100Base-FX. 100Base-TX differs from the other 100Base standards in the type of cable used (UTP cable). It also uses RJ-45 connectors, which are similar to the modular jacks used for telephones.

1000BASE-T

One of the Gigabit Ethernet standards which have the maximum 1Gps speed. It was standardized as IEEE802.3ab in 1999. This is the standard that uses the UTP cable of the category 5 (CAT5) or the enhanced category 5 (CAT5e) and uses the all of 4 pairs signal wires. The maximum cable length is 1000 meters and the network topology is the star type.

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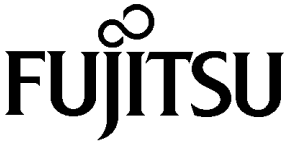
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