

# MediaEdge

User Manual

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### Warranty

Your MediaEdge-LEB options are covered by a limited warranty when you register your Canopus product. This warranty is for a period of three years from the date of purchase from Canopus or an authorized Canopus agent. This warranty applies only to the original purchaser of the Canopus product and is not transferable. Canopus Co., Ltd warrants that for this period the product will be in good working order. Should our product fail to be in good working order, Canopus will, at its option, repair or replace it at no additional charge, provided that the product has not been subjected to misuse, abuse or non-Canopus authorized alterations, modifications and/or repair. Proof of purchase is required to validate your warranty.

Canopus is not responsible for any lost profits, lost savings or other incidental or consequential damages arising out of the use of, or inability to use, this product. This includes damage to property and, to the extent permitted by law, damages for personal injury. This warranty is in lieu of all other warranties of merchantability and fitness for a particular purpose.

### Cautions

Please observe the following cautions when using this product. If you have any questions regarding the method of usage, the descriptions herein, or any other concerns, please contact the local Canopus office or distributor.

### WARNING

The following conditions indicate the potential for serious bodily injury or loss of life.

#### Health precautions

In rare cases, flashing lights or stimulation from the bright light of a computer monitor display may trigger temporary epileptic seizures or loss of consciousness. It is believed that even individuals whom have never experienced such symptoms may be susceptible. If you or close relatives have experienced any of these symptoms, consult a doctor before using this product.

Do not use in environments requiring a high degree of reliability and safety

This product is not to be used in medical devices or life support systems. The characteristics of this product are not suited for use with such systems.

### Protect against static electricity

An electrostatic discharge may damage components of this product. Do not directly touch any of the connectors or component surfaces.

Static electricity can be generated on clothing and on people. Before handling the product, discharge static electricity from your body by touching a grounded metal surface.

### Do not disassemble

Do not remove the cover or modify the MediaEdge-LEB. Fire, electric shock or malfunction may result. For internal inspection or repair, please contact your system integrator or Canopus directly.

### Do not operate at other than the specified voltage

Do not operate at other than the specified voltages of AC 100-240V. Operation at other than the rated voltage may result in fire or malfunction.

### Do not operate with other than the specified power supply

Do not operate with other than the specified AC adapter, or with a car power supply. Such operation may result in fire or malfunction.

### Handle the AC adapter cord carefully

Do not place heavy objects on top of the cord, or place it near hot objects. Doing so may damage the cord and result in fire, electrical shock, or malfunction. Altering the cord, or excessively bending or pulling the cord may result in fire or electrical shock. If the cord is damaged, please contact your local retail outlet or Canopus directly.

\* Replacement of damaged parts, unless defective due to manufacturing, will be charged at actual cost plus handling fees.

### Do not use the product in a dusty or humid environment

It may cause a short-circuit or a build-up of heat, resulting in fire or electric shock.

### Do not let foreign matters enter the inside of the product

If water or any foreign matter enters the inside of the product, it may cause fire or electric shock. In the case where water or foreign matter is allowed to enter the product, pull out the power cable from the receptacle.

### Do not use the product when you hear thunder

Do not touch the product body or its plug on such occasions. It may result in electric shock.

### Stop using the product when it is smoking

Do not use the product in an abnormal condition like when it is smoking or emitting an odor. It may result in fire or malfunction of the product. If any anomaly is found, disconnect the power cable, making sure that the product is not smoking any more.

## Notices & Warranties

Do not use the product in a damaged condition

Do not drop the product nor use the product with its cover broken.

It may result in fire or malfunction of the product. In case the product is damaged, pull out the power cable from the receptacle.

Do not touch AC adapter with wet hands

Do not disconnect or plug in the AC adapter when your hands are wet. Contact with water may result in electric shock, fire or damage.

Do not setup in an area that becomes hot

Do not setup in an area exposed to direct sunlight or near a heating apparatus. The heat can accumulate, causing burns, fire or damage. Also, the unit may become deformed or change color.

### CAUTION

The following conditions indicate the potential for bodily harm, damage to hardware or loss of data.

Do not pull AC adapter cord when disconnecting from electrical outlet

When disconnecting the AC adapter cord, pull on the plug, not the cord itself. Pulling on the cord can damage the cord and may result in fire or electric shock.

Do not setup other than the Described method

Do not setup in a manner other than prescribed. Do not use while wrapped in cloth or plastic. Heat can accumulate, causing burns, fire or damage.

If product will not be used for an extended period

If this product will not to be used for an extended period of time, disconnect the AC adapter from the electrical outlet.

Do not place the product on an unstable place

Do not place the product on an unstable table or slanted surface. The product may fall from it, resulting in injuries or malfunction of the product.

Turn OFF the power when cleaning the product

When making connections with the product or cleaning the product, be sure to disconnect the power plug beforehand. Failure to do so may result in electric shock or malfunction of the product. When cleaning the product, do not use volatile solvents such as thinner.

### Route the cables properly

Route the power cable and AV cables properly. If they catch on something, it may result in injuries or malfunction of the product.

### Lower The Volume Of The Audio Equipment

Please lower your audio equipment speaker level that is connected with the MediaEdge-LEB when you turn the power of the MediaEdge-LEB ON/OFF. You may hear a loud noise when you turn the power ON/OFF.

## FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

## CE Notice

### WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### Declaration of Conformity

#### According to FCC Part 15

**Responsible Party Name:** Canopus Co.,Ltd.  
**Address:** 1-2-2 Murotani Nishi-ku, Kobe-city Hyogo 651-2241 Japan  
**Declares that product Model:** MediaEdge-LEB  
Complies with Part 15 of the FCC Rules.

### Product Notes

1. Unauthorized copying of a portion or the entirety of this product is prohibited.
2. The description and specifications of this product are subject to future change without notice.
3. The description of this product has been prepared to be as complete as possible. If the reader is aware of any questionable points, errors or omissions, please contact Canopus.
4. The company assumes no liability for the results of practical application, regardless of item (3) above.
5. Regardless of whether negligence occurs during usage, the company assumes no liability, even if there is a claim, for extraordinary, incidental or derivative loss, including the loss of profits, that arise during practical application of this product.
6. The analysis, reverse engineering, decompiling and disassembling of the software, hardware or manuals that accompany this product, and all other related products including miscellaneous supplemental items, are prohibited.
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8. MediaEdge-LEB is a trademark of Canopus Co., Ltd.
9. Microsoft and Windows are registered trademarks of Microsoft Corporation, USA. Other product names and the like are trademarks or registered trademarks of the respective companies.

### About the Documentation

This document is the MediaEdge-LEB User Manual.

Information not listed in this document may be listed elsewhere.

In cases where there is a difference between a description in this document and an actual operation method, the actual operation method takes precedence.

This document is written for users capable of performing basic PC operations. If there is no special description of an operation, perform that operation in the same manner as a general PC operation.

In this manual, Microsoft® Windows® XP Operating System is referred to as Windows XP (both Home and Professional Editions) respectively.

To simplify the descriptions, the actual product may differ from the illustrations and screenshots.

# MediaEdge

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**MediaEdge**

# Chapter 1

Introduction

## Introduction

### Notes regarding usage

Regardless of whether negligence occurs during usage, the company assumes no liability, even if there is a claim, for extraordinary, incidental or derivative loss, including the loss of profits, that arise during practical application of this product.

Operation of this product is not guaranteed for use other than the original intended use, nor is operation guaranteed in an environment different from the one provided by this company.

Operation of this product is not guaranteed if used with other than the rated CPU or other non-rated devices.

### Verify package contents

Please verify that the following accompanying components are included in the MediaEdge-LEB package. Product packaging is implemented with stringent quality assurance measures.

- MediaEdge-LEB Unit
- AC Adapter and Cable
- Serial cable
- BNC-RCA Conversion connector
- MediaEdge-LEB User Manual

## GNU General Public License

This product utilizes the free software that uses GNU General Public License (hereinafter "GPL") in a part of the software. The following articles are applied to each free software (hereinafter "this program") that uses GPL.

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

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**MediaEdge**

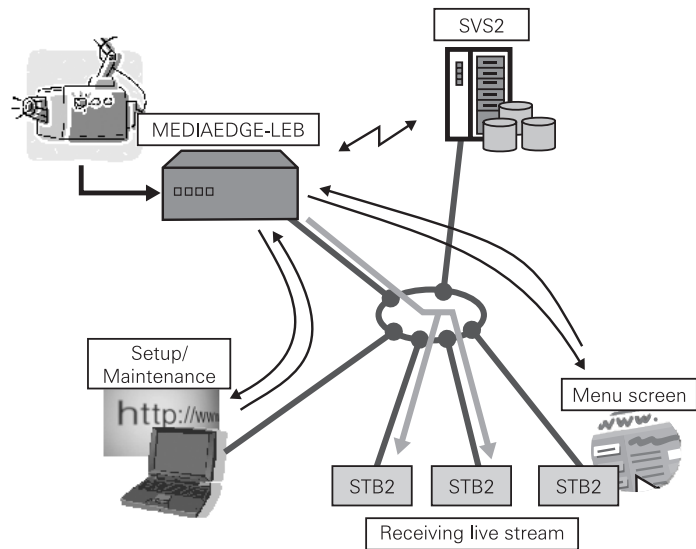
# Chapter 2

Basic Instructions

## Overview of the MediaEdge-LEB

### Overview

MediaEdge-LEB is a live distribution device that can encode video input signal to MPEG format in real-time, then distributes to network. As a MediaEdge-LEB unit can work as a stream server, you can use it with MediaEdge-STB2 or MediaEdge-SWT2 to establish the live distribution system. When used with the MediaEdge-SVS2 server, MediaEdge-LEB can work as a part of the video distribution system.



## Features

- **Real-time encoding and distribution**

Encodes video and audio signal to MPEG-1/2/4 in real-time and streams.

- **2 distribution modes**

On-demand distribution mode where live streams are delivered in response to the request from terminals, and Auto-distribution mode where multicast distribution automatically starts at the startup, are selectable. For the on-demand mode, unicast or multicast distribution mode is selectable.

- **5 encode modes**

You can set 5 different encode modes to the MediaEdge-LEB unit with the different encode type and bitrate. Those encode modes can be selected by the buttons on MediaEdge-LEB front panel. For on-demand distribution mode, you can choose the encode mode from the terminal such as MediaEdge-STB2.

Detailed parameters can be adjusted on the Web console.

- **Web server functions**

MediaEdge-LEB utilizes the HTML menu, and provides the contents menu to each terminal.

By using terminals such as MediaEdge-STB2, MediaEdge-LEB can build the live distribution system without using MediaEdge-SVS2. MediaEdge-LEB can also adjust the detailed settings, monitor the status and update the firmware by the Web browser.

- **Serial pass-through function**

You can set two individual parameters to COM1 and COM2 ports so that you can simultaneously control two devices which are connected to the serial ports.

- **Maintenance mode**

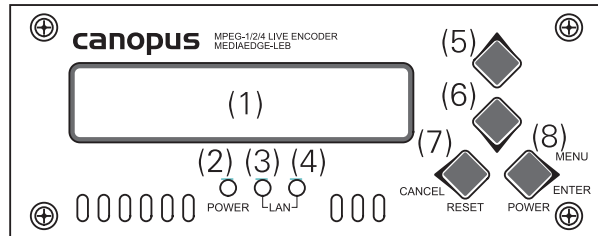
Recovery mode when firmware update is failed and then MediaEdge-LEB no longer functions, are available.

- **Remote wake up**

Supports WOL (Wake On LAN). You can start the MediaEdge-LEB up via network, when it's in Standby mode.

## MediaEdge-LEB Part Names and Functions

### Front Panel



- **LCD**

(1) LCD ----- Displays the current status and setting menus.

- **LED**

(2) POWER ----- Lights while MediaEdge-LEB operates.

Unlit : Power plug is off, or the unit is in Standby mode.  
Lit : Main Power is on.

(3) LAN1 ----- Displays the Ethernet (LAN connector on the Back Panel) status.

Unlit : Not linked  
Lit : Linked  
Flashing: Active (Sending/Receiving data)

(4) LAN2 ----- Always unlit in normal operations.

- **Operational buttons (4 buttons)**

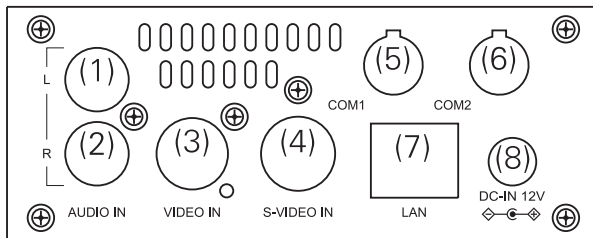
(5) UP button ----- Use to select menus and operate the MediaEdge-LEB unit.

(6) DOWN button ---- Use to select menus and operate the MediaEdge-LEB unit.

(7) LEFT button ----- Use to select menus and operate the MediaEdge-LEB unit.

(8) RIGHT button ---- Use to select menus and operate the MediaEdge-LEB unit.

## Back Panel



### • Input Ports

- (1) AUDIO IN-LEFT -----Stereo line-in (RCA pin jack)
- (2) AUDIO IN-RIGHT -----Stereo line-in (RCA pin jack)
- (3) VIDEO IN -----Composite video signal input (BNC connector)
- (4) S-VIDEO IN -----S-video signal input (S connector)

### • I/O Interface

- (5) COM1 -----Serial Connector. Requires a Serial Cable. Can be used in Maintenance mode.
- (6) COM2 -----Serial Connector. Requires a Serial Cable. Cannot be used in Maintenance mode.
- (7) LAN -----Ethernet connector for 100BASE-TX

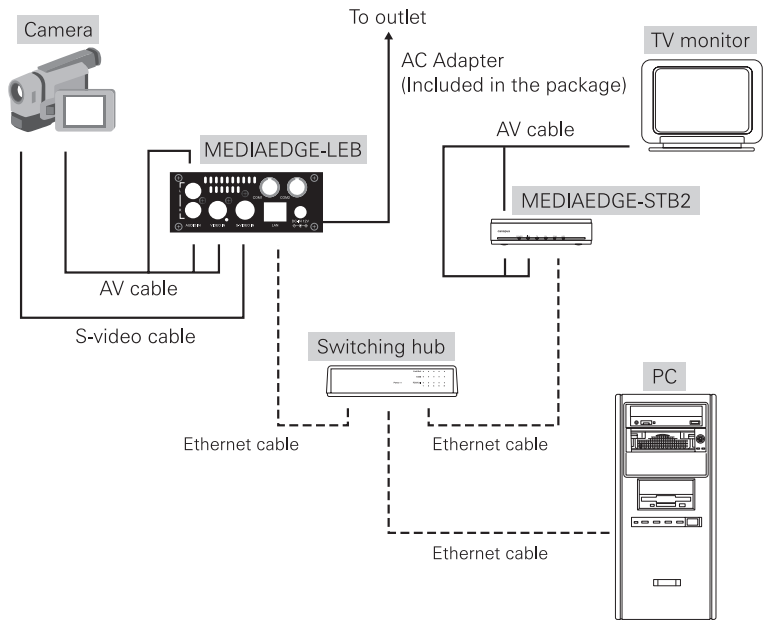
### • Power terminal

- (8) Power terminal -----Connects to the accompanying AC adapter. Never connect anything here other than the accompanying AC adapter.

## Connections and Setup

### Connections

Refer to the connection examples shown below and connect the peripheral devices to the MediaEdge-LEB.



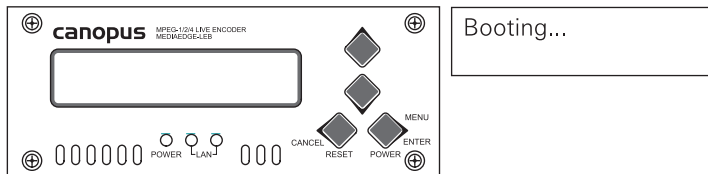
- PC is used to modify settings of MediaEdge-LEB and MediaEdge-STB2.

## Network settings

At the factory default, "AUTO (use DHCP)" is set for the IP address setting. Follow the steps below to setup the MediaEdge-LEB if you have never installed it before or if you move it from another network environment.

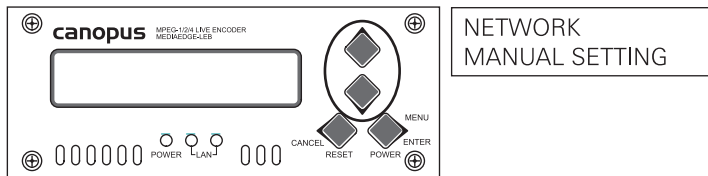
1. When the power to the MediaEdge-LEB is turned on, MediaEdge-LEB automatically starts up.

"Booting..." is displayed on the LCD.



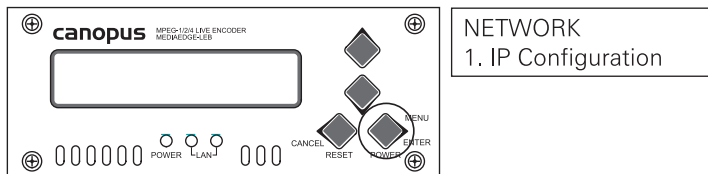
2. Keep pressing the UP and DOWN buttons on the front panel of MediaEdge-LEB for more than 3 seconds.

The LCD changes to "NETWORK MANUAL SETTING".



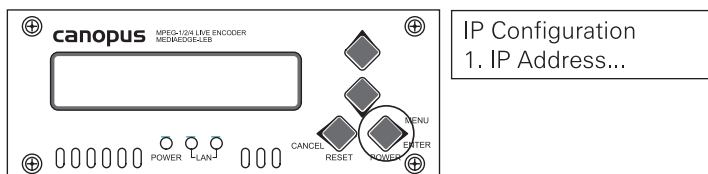
3. Press the RIGHT button.

The LCD changes to "1. IP Configuration".



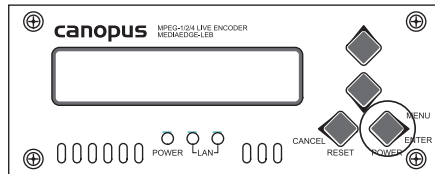
4. Press the RIGHT button.

The LCD changes to "1. IP Address...".



## 5. Press the RIGHT button.

The LCD changes to the screen prompting you to enter the IP address for MediaEdge-LEB.

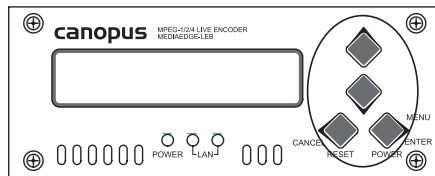


IP Address  
000.000.000.000

## 6. Specify the IP address.

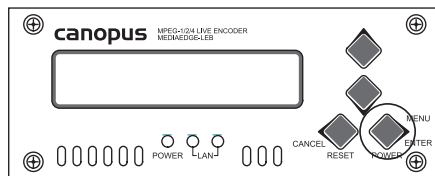
Press the LEFT/RIGHT buttons to move the cursor. Press the UP/DOWN buttons to adjust the digit.

In this example, enter 192.168.0.17.



IP Address  
192.168.000.017

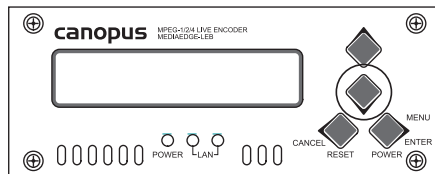
## 7. Press the RIGHT button to return to the previous screen.



IP Configuration  
1. IP Address ...

## 8. Press the DOWN button.

The LCD changes to "2. Subnet Mask...".

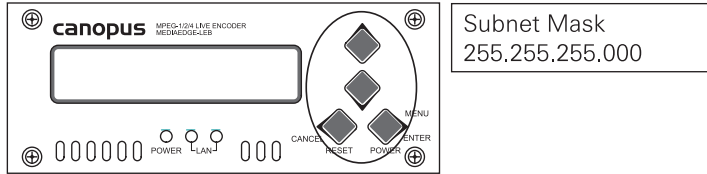


IP Configuration  
2. Subnet Mask...

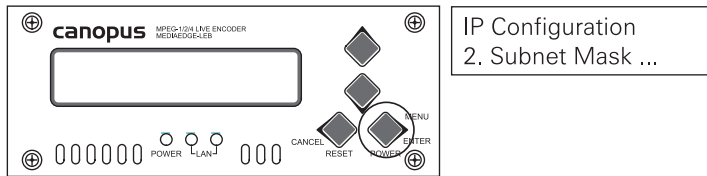
## 9. Press the RIGHT button to set the subnet mask.

Press the LEFT/RIGHT buttons to move the cursor. Press the UP/DOWN buttons to adjust the digit.

In this example enter 255.255.255.0.

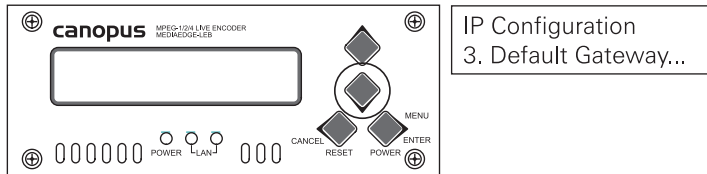


## 10. Press the RIGHT button to return to the previous screen.



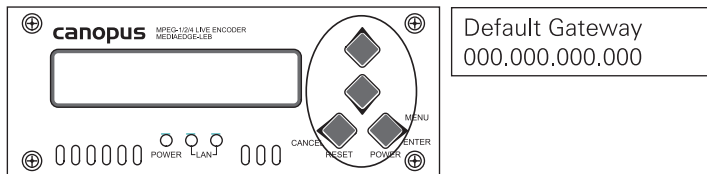
## 11. Press the DOWN button.

The LCD changes to "3. Default Gateway...".

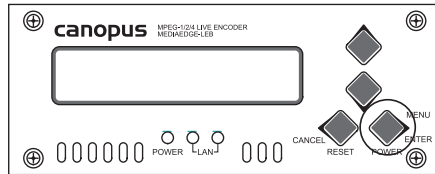


## 12. Like IP address or subnet mask settings, press the UP/DOWN/LEFT/RIGHT buttons to specify the Default Gateway.

In this example, enter 0.0.0.0.

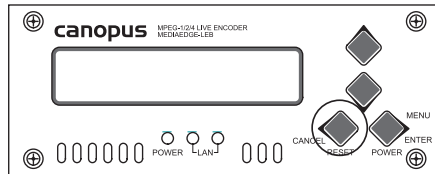


13. Press the **RIGHT** button to return to the previous screen.



IP Configuration  
3. Default Gateway...

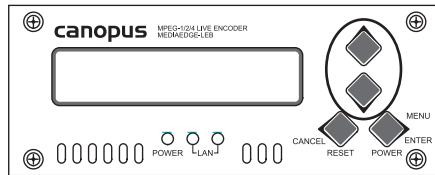
14. Press the **LEFT** button and return to Step 3.



NETWORK  
1. IP Configuration

15. Press the **UP (or DOWN)** button.

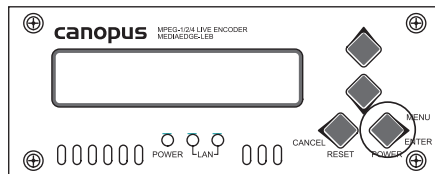
The LCD changes to "3. EXIT NETWORK".



NETWORK  
3. EXIT NETWORK

16. Press the **RIGHT** button.

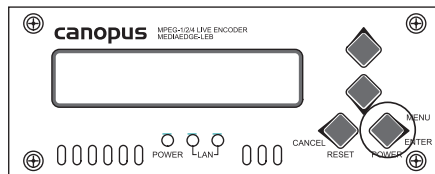
The LCD changes to "SAVE & RESTART [ENTER] to continue".



SAVE & RESTART  
[ENTER] to continue

17. Press the **RIGHT** button.

"Now saving" is displayed on the LCD, and then the MediaEdge-LEB restarts.



Now saving

**MediaEdge**

# Chapter 3

Using MediaEdge-LEB

## Startup and shutdown

### Startup

Here's how to start up the MediaEdge-LEB.

- 1. When the power to the MediaEdge-LEB is turned on, MediaEdge-LEB automatically starts up.**

"Booting..." is displayed on the LCD at the startup.



Booting...

- 2. If the MediaEdge-LEB is installed and setup correctly on the network, the LCD changes to "MEDIAEDGE-LEB", followed by the operation status.**

If the LCD keeps displaying "Booting...", the network could not be found, or DHCP server could not be found in the Automatic IP address acquiring mode.

Keep pressing the UP and DOWN buttons simultaneously for more than 3 seconds to move to the Network Setting mode. Refer to "Network settings (P.21)" and setup the network.



MediaEdge-LEB

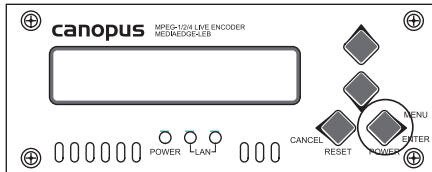


On-demand (Unicast)  
STANDBY

## Shutdown

Here's how to shut down the MediaEdge-LEB.

1. Keep pressing the **RIGHT** button more than 3 seconds.



### Caution

If you shut down the MediaEdge-LEB in this procedure, the settings will not be saved. To shut down after saving the setting, refer to "7. SHUTDOWN (P.36)", or "8. EXIT MENU (P.37)".

2. The MediaEdge-LEB Power LED is unlit and the MediaEdge-LEB shuts down. "STANDBY" is displayed on the LCD.



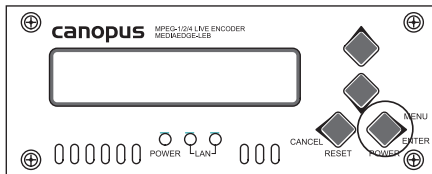
### Caution

Do not shut down the MediaEdge-LEB while it is saving the file or is updating the firmware. The data may be broken.

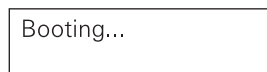
## Startup from standby state

Here's how to start up the MediaEdge-LEB from standby state (when "STANDBY" is displayed on LCD).

1. Keep pressing the **RIGHT** button more than 3 seconds.



2. The **POWER** LED is lit and the MediaEdge-LEB starts up. "Booting..." is displayed on the LCD.



### Tip

MediaEdge-LEB automatically starts up, if it detects the Wake On LAN signal from other devices.

## Reset

Here's how to reset the MediaEdge-LEB.

1. Keep pressing the LEFT button for more than 3 seconds.



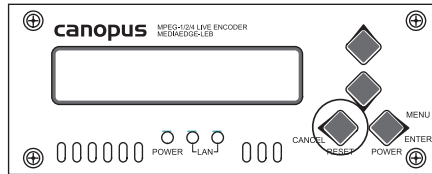
### Tip

Aside from pressing the LEFT button, MediaEdge-LEB can be reset via Web console.



### Caution

Do not reset the MediaEdge-LEB while it is saving the file or is updating the firmware. The data may be broken.



2. The MediaEdge-LEB is reset and restarts. "Booting..." is displayed on the LCD.

Booting...

## MediaEdge-LEB settings

### How to setup MediaEdge-LEB

There are two ways to setup MediaEdge-LEB.

- Setup using operational buttons ..... P.30
- Setup using Web browser ..... P.38



### Caution

Regardless of the method or settings, once the settings are changed, MediaEdge-LEB will restart automatically, stopping the current live distribution.

### Setting menus

See below for the items can be specified using the buttons on the front panel or using the Web console.

Setting menu	WEB	MediaEdge-LEB unit
<b>Network setting</b>		
IP address automatic configuration	<input type="radio"/>	<input type="radio"/>
IP address	<input type="radio"/>	<input type="radio"/>
Subnet mask	<input type="radio"/>	<input type="radio"/>
Default Gateway	<input type="radio"/>	<input type="radio"/>
DNS address automatic configuration	<input type="radio"/>	<input type="radio"/>
Primary DNS	<input type="radio"/>	<input type="radio"/>
Secondary DNS	<input type="radio"/>	<input type="radio"/>
Host name string	<input type="radio"/>	
<b>Operation settings</b>		
Video source	<input type="radio"/>	<input type="radio"/>
Video standard	<input type="radio"/>	<input type="radio"/>
Distribution mode	<input type="radio"/>	<input type="radio"/>
Distribution method	<input type="radio"/>	<input type="radio"/>
Volume level	<input type="radio"/>	
Noise filter	<input type="radio"/>	
Encode mode *1	<input type="radio"/>	<input type="radio"/>
<b>Serial port settings</b>		
Enable/Disable remote serial	<input type="radio"/>	
Host URL	<input type="radio"/>	
Host port number	<input type="radio"/>	
Protocol	<input type="radio"/>	
Enable/Disable serial keyboard	<input type="radio"/>	
Baud rate	<input type="radio"/>	
Data bits	<input type="radio"/>	
Parity bits	<input type="radio"/>	
Stop bits	<input type="radio"/>	
Flow control	<input type="radio"/>	
<b>Other settings</b>		
Status display	<input type="radio"/>	<input type="radio"/>
Version information display	<input type="radio"/>	<input type="radio"/>
Initialization	<input type="radio"/>	
Updating firmware	<input type="radio"/>	
Restart	<input type="radio"/>	<input type="radio"/>

\*1 Encode modes can be specified in detail changing its parameters on the WEB console.

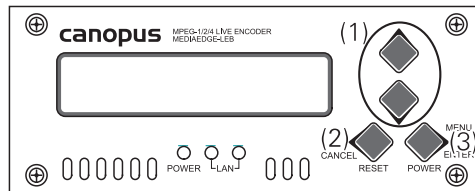
## Setup using operational buttons

### Setting menu

When the MediaEdge-LEB is running, press the RIGHT button to go to the menu mode.

- 1. DISTRIBUTION MODE**  
Sets the distribution mode. .... P.31
- 2. ENCODE MODE**  
Sets the encode mode. .... P.32
- 3. INPUT SIGNAL**  
Sets the input signal. .... P.33
- 4. NETWORK**  
Sets the network. .... P.34
- 5. INFORMATION**  
Displays the current settings. .... P.35
- 6. OTHER**  
Locks the buttons on the front panel. .... P.36
- 7. SHUTDOWN**  
Shuts down MediaEdge-LEB. .... P.36
- 8. EXIT MENU**  
Exits menu mode. .... P.37

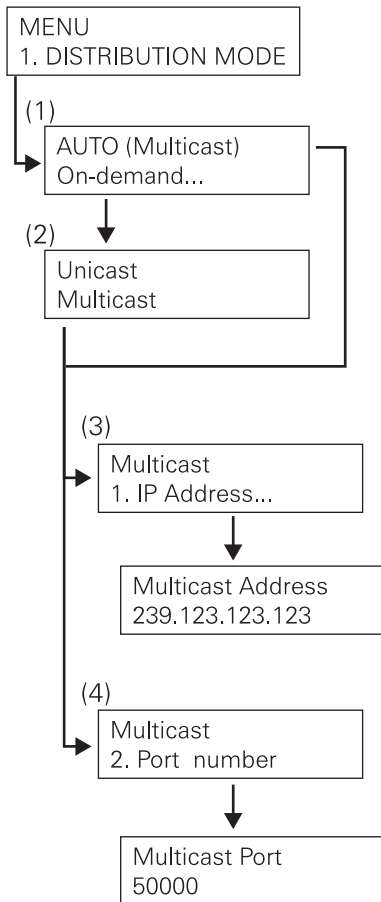
### Operational buttons



- (1) UP/DOWN buttons ----- Selects the menu item
- (2) LEFT button ----- Goes back to the previous screen/  
Moves the cursor to the left
- (3) RIGHT button ----- Enters the setting/Moves to the sub  
menu/Moves the cursor to the right

\* You can setup the MediaEdge-LEB using the Web console.  
Refer to "Setup using Web Browser (P.38)" for details.

## 1. DISTRIBUTION MODE

**(1) Select Auto distribution mode by multicast traffic (AUTO) or On-demand distribution mode (On-demand).**

- **AUTO (Multicast)**  
Sets automatic distribution mode.  
After selecting the Automatic distribution mode, specify the IP address of multicast destination, and the port of multicast destination (Step 3, 4).
- **On-demand...**  
Sets on-demand distribution mode.

**(2) Select Unicast or Multicast.**

\* Not selectable in auto distribution mode.

**(3) Specify the IP address of multicast destination.**

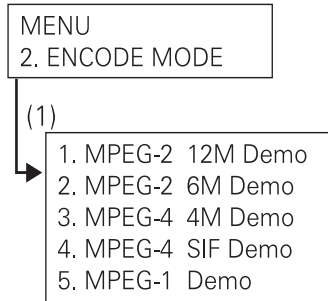
Permitted address ranges 239.192.0.0 to 239.255.255.255 or 232.0.0.0 to 232.255.255.255.

**(4) Specify the port of multicast destination.**

It is recommended to use an even port between 49152 and 65535.

Two ports are required to distribute a MPEG-4 stream. (Specified port number + 1 will additionally be used)

## 2. ENCODE MODE



### (1) Select the video encode mode.

\* Not selectable in on-demand distribution mode.

#### 1. MPEG-2 12M Demo

Encodes in MPEG-2 with the bitrate of 12Mbps.

#### 2. MPEG-2 6M Demo

Encodes in MPEG-2, with the bitrate of 6Mbps.

#### 3. MPEG-4 4M Demo

Encodes in MPEG-4, with the bitrate of 4Mbps.

#### 4. MPEG-4 SIF Demo

Encodes in SIF-sized MPEG-4 (NTSC=352 x 240, PAL=352 x 288) with the bitrate of 1.5Mbps.

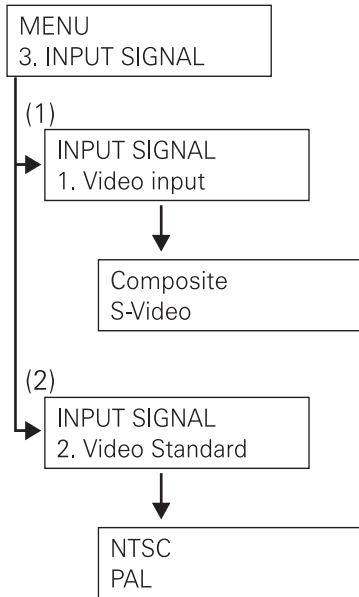
#### 5. MPEG-1 Demo

Encodes in MPEG-1.

\* Listed above are the default settings.

Name of the encode mode shown on the LCD and the detailed encode parameters can be changed on the Web console. Refer to "Setup using Web Browser (P.38)" for details.

## 3. INPUT SIGNAL

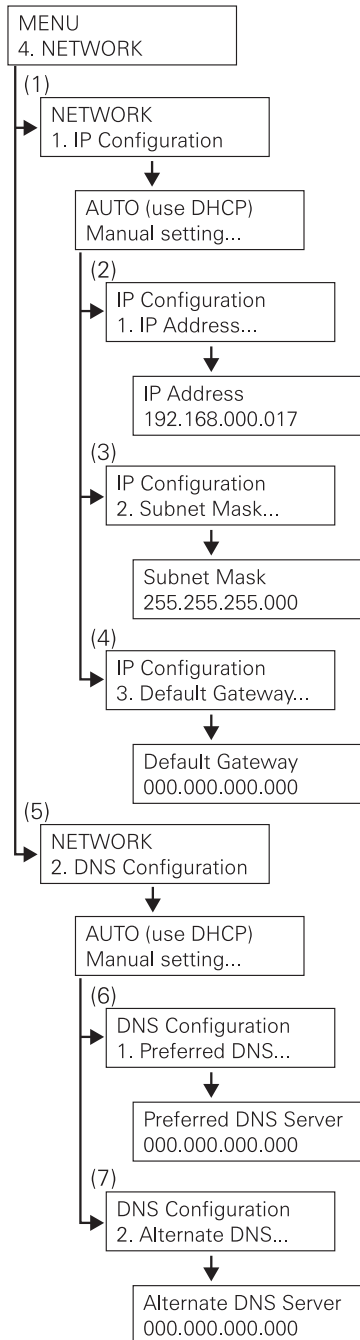
**(1) Select the video input signal.**

- Composite  
Uses the input signal from the Composite connector on the back panel.
- S-Video  
Uses the input signal from the S-video connector on the back panel.

**(2) Select the video standard.**

- NTSC  
Sets NTSC.
  - PAL  
Sets PAL.
- \* Select the video standard that conforms to that of your video devices.

## 4. NETWORK



### (1) Sets the IP address.

- **AUTO(use DHCP)**  
Utilizes the automatic configuration by DHCP.  
Press the **RIGHT** button to set AUTO and go back to the previous menu.
- **Manual setting...**  
Sets the IP address manually.  
Select "Manual Setting..." and then press the **RIGHT** button.

### (2) Specify the IP address.

In this example, enter 192.168.0.17.

### (3) Specify the subnet mask.

In this example, enter 255.255.255.0.

### (4) Specify the default gateway.

In this example, enter 0.0.0.0.

### (5) Specify the DNS.

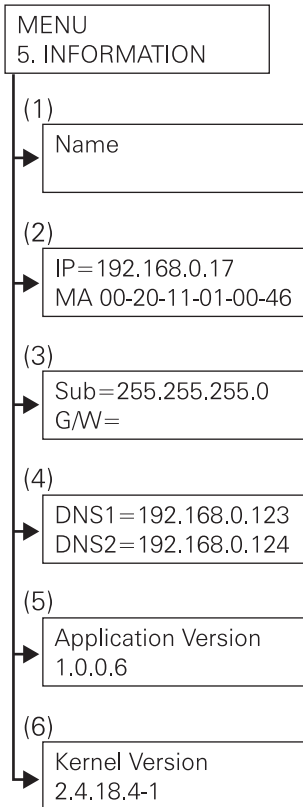
- **AUTO(use DHCP)**  
Utilizes the automatic configuration by DHCP.  
Press the **RIGHT** button to set AUTO and go back to the previous menu.  
You cannot utilize the automatic configuration by DNS if you specify the IP address manually (Refer to step 1).
- **Manual setting...**  
Specify the DNS manually.  
Select "Manual Setting..." and then press the **RIGHT** button.

### (6) Specify the preferred DNS server.

### (7) Specify the alternate DNS server.

## 5. INFORMATION

Displays the MediaEdge-LEB settings.



**(1) Displays the host name.**

\* You can set the host name on the Web console.  
Refer to "Setup using Web Browser (P.38)" for details.

**(2) Displays the IP address and the product number (this varies depending on the unit).**

**(3) Displays the subnet mask and the default gateway.**

**(4) Displays the preferred DNS server and the alternate DNS server.**

**(5) Displays the application version.**

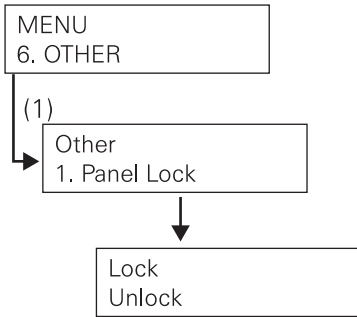
**(6) Displays the Kernel version.**



**Tip**

Items set manually are displayed with "=" symbol, while the items set by the automatic configuration by DHCP are displayed without "=" symbol.

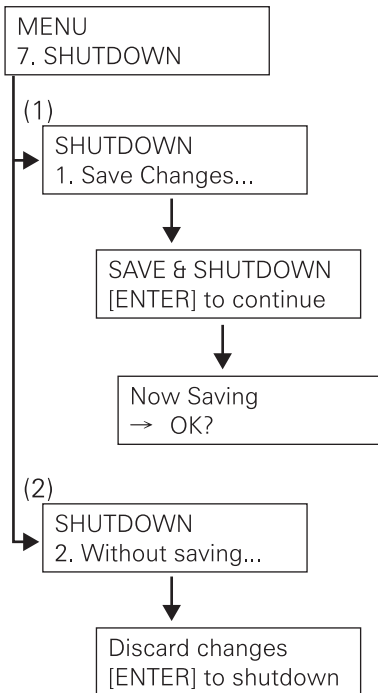
## 6. OTHER



### (1) Locks/Unlocks the operational buttons.

- Lock  
Locks the operational buttons.  
To cancel the locked state, open the Local Settings on the Web console, and sets "Panel Lock" in "The Others section" to Off. (Refer to P.44)
- Unlock  
Allows the operation by the operational buttons on the front panel.

## 7. SHUTDOWN



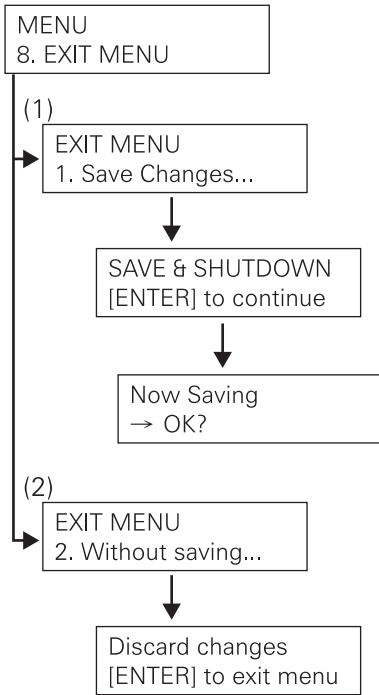
### (1) Saves the changed settings and shuts down the MediaEdge-LEB.

Confirmation message appears on the LCD.  
Press the RIGHT (ENTER) button again to proceed. Confirmation message appears on the LCD, and then the MediaEdge-LEB shuts down.

### (2) Discards the changed settings and shuts down the MediaEdge-LEB.

Confirmation message appears on the LCD.  
Press the RIGHT (ENTER) button again to shut down the MediaEdge-LEB without saving.

## 8. EXIT MENU

**(1) Saves the changed settings and exits the menu mode.**

Confirmation message appears on the LCD.  
Press the RIGHT (ENTER) button again to proceed. Confirmation message appears on the LCD, and then restarts the MediaEdge-LEB.

**(2) Discards the changed settings and exits the menu mode.**

Confirmation message appears on the LCD.  
Press the RIGHT (ENTER) button again to exit the menu mode without saving.

## Setup using Web Browser

### Accessing MediaEdge-LEB Setup Page

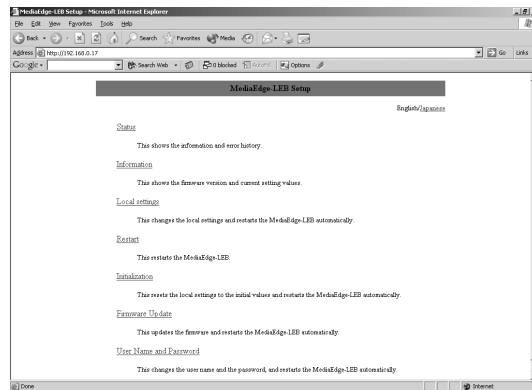
Use a computer on the same network as the MediaEdge-LEB. Start your Web browser and then access the Setup screen (Web page) of the MediaEdge-LEB you want to set up.

Example: If the MediaEdge-LEB IP address is 192.168.0.17, type in as follows.  
`http://192.168.0.17/`

"MediaEdge-LEB Setup" window opened.

### MediaEdge-LEB Setup Page

- **Main Screen**



**[Status]**

The current status and the error history of the MediaEdge-LEB are displayed.

**[Information]**

The firmware version and settings that are currently in effect are displayed.

**[Local Settings]**

Use this to change the local settings saved on the MediaEdge-LEB unit. You can also use this to check local settings because it displays values that have been saved locally.

## [Restart]

Restarts the MediaEdge-LEB.

## [Initializing]

Initializes the setting to their factory state.

## [Updating the firmware]

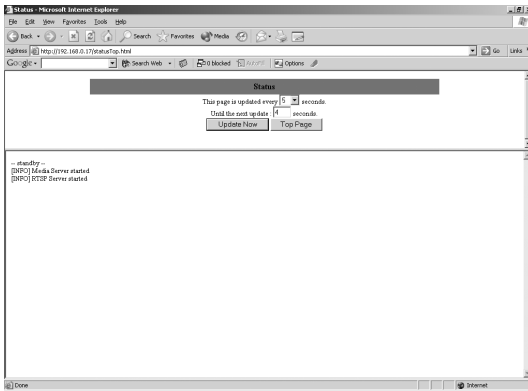
Updates the MediaEdge-LEB firmware.

## [Changing the User name and Password]

Changes the user name and password required to modify settings.

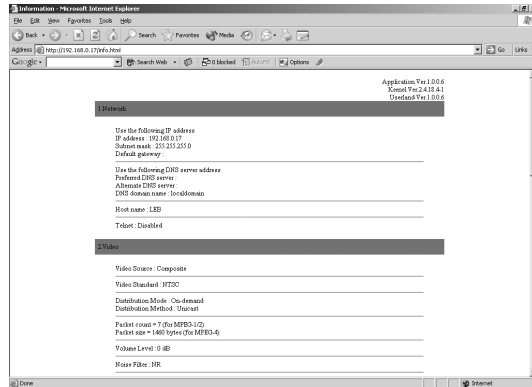
The default user name is "admin" and no password is set.

## • Status



The current status and the error history of the MediaEdge-LEB are displayed.

- Information



### [Network]

Displays the current IP address setting, DNS setting, Host name and Telnet status.

### [Video]

Displays the current Video Source, Video Standard, Distribution Mode, Distribution Method, Packet count, Packet size, Volume level, Noise Filter and Encode Mode.

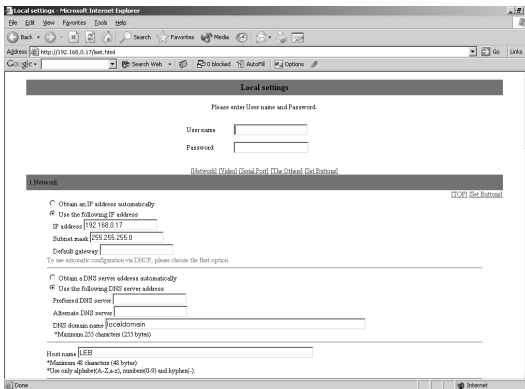
### [Serial Port]

Displays the current status of 2 Serial Ports (COM1, COM2).

### [The Others]

Displays the Panel Lock status.

## • Local Settings



### [Network]

#### • IP address settings

Sets the method for acquiring an IP address and makes other detailed settings.

An error will occur if you choose "Use the following IP address" option and you do not enter it. If you do not enter a subnet mask, the default (255.0.0.0) will be set.

#### • DNS server settings

Sets the method for acquiring the address of the DNS server and makes other detailed settings. If "Use the following IP Address" is selected, it is not possible to automatically acquire the address of the DNS server.

The DNS domain name cannot be left blank. If nothing is entered, the default name "localdomain" will be set.

#### • Host name

You can set the host name for MediaEdge-LEB.

#### • Telnet

Enables/Disables the Telnet.

### [Video]

#### • Video Source

Sets the video source. Select Composite or S-Video.

#### • Video Standard

Sets the video standard. Select NTSC or PAL.



### Caution

Check "Obtain an IP address automatically" to activate the automatic configuration by DHCP.

- **Distribution Mode**  
Sets the distribution mode. Select Auto (multicast) or On-demand.
- **Distribution Method**  
Sets the distribution method. Select Multicast or Unicast.
- **Packet count**  
Sets the MPEG-2 TS packet count stored in the distributed IP packet. For MPEG-1/2, specify a value between 7 and 256.
- **Packet size**  
Sets the maximum size (byte) of the MPEG-4 ES stored in the distributed IP packet. For MPEG-4, specify a value between 1460 and 49152 bytes.
- **Volume Level**  
Sets the volume level.
- **Noise Filter**  
Sets the video noise filter setting. Select None, YC Separation or Noise Reduction.

### **[Encode Mode]**

- **Name**  
Sets the name for the encode mode 1 to 5.
- **Stream Form**  
Sets the stream format.
- **Aspect Ratio**  
Sets the aspect ratio.
- **Bitrate**  
Sets the video bitrate.
- **Frame Skip**  
Disables/Enables the frame skip.

**Tip****Frame Skip**

By using the Frame Skip, the MediaEdge-LEB encodes the stream dropping the number of the specified frames from the source video.

Example: Supposing that the frame is numbered, 1.2.3.4.5.6.7.8.9.....  
when the number of the frame skip is set to 3, only the frame 1, 5, 9...  
will be encoded.

- Maximum number of frame skip that can be specified

- MPEG-2 D1

bitrate (Mbps)	3	4	5	6	7	8	9	10	11	12	13	14	15
Frames to skip	8	8	6	5	4	3	3	2	2	2	2	1	1

- MPEG-2 Half D1

bitrate (Mbps)	2	3	4	5	6	7	8
Frames to skip	8	8	8	6	5	4	3

- MPEG-2 SIF

bitrate (Mbps)	1	2	3	4
Frames to skip	8	8	8	6

- MPEG-2 QCIF

bitrate (kbps)	256	512	768	1000	1280	1536	1792	2000
Frames to skip	8	8	8	8	8	8	8	8

- Audio Bitrate

Sets the audio bitrate.

- Sampling Rate

Sets the audio sampling rate.

- Audio Channel

Sets the audio channel. Select Stereo or Mono.

- Saturation

Sets the saturation.

- Hue

Sets the hue.

- Sharpness

Sets the sharpness.

- Sharpness Coring  
Sets the sharpness coring.
- Sharpness Knee  
Sets the sharpness of the knee.
- Contrast  
Sets the contrast.

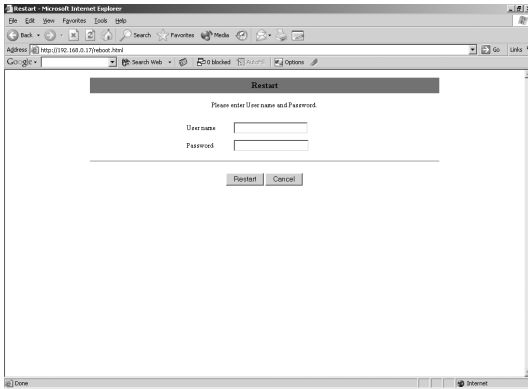
### [Serial Port]

- Remote Serial  
Disables/Enables the remote serial communication.
- Host Name or IP Address  
Sets the IP address or host name of the host computer for remote serial communication.
- Host Port Number  
Sets the port number of the host computer for remote serial communication.
- Protocol  
Sets the communication protocol. Select TCP or UDP.
- Listen Port Number  
Sets the communication port number.
- Baud rate  
Sets the communication speed.
- Data Bits  
Sets the data bit length.
- Parity Bits  
Sets parity (technique for detecting data errors).
- Stop Bits  
Sets the stop bit length.
- Flow Control  
Sets flow control.

### [The Others]

- Panel Lock  
Turn On/Off the panel lock.

- Restart screen



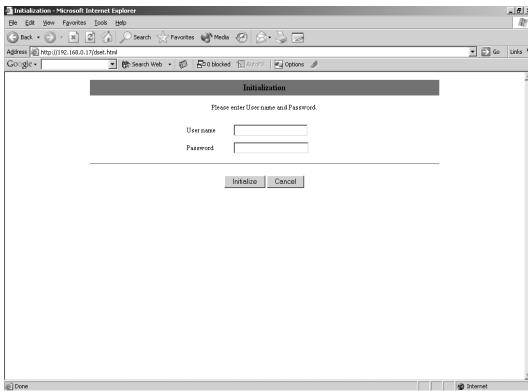
**[User name]**

Enter your user name. (You must enter your user name to restart.)  
The default user name is "admin".

**[Password]**

Enter your password. (You must enter your password to restart.)  
No password is set in the default setting.

- Initialization screen



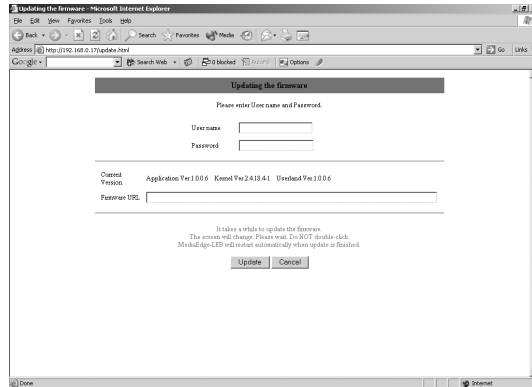
**[User name]**

To restore default setting, enter "canopus". This user name cannot be changed.

**[Password]**

To restore default setting, Leave Password blank.

## • Updating the firmware screen



### [User name]

Enter the current user name.

The default user name is "admin".

### [Password]

Enter the current password.

No password is set in the default setting.

### [Current version]

Displays the current version.

### [Firmware URL]

Sets the firmware URL.

MediaEdge-LEB downloads the firmware from the specified URL and then automatically updates the flash memory of the MediaEdge-LEB unit.

## • User Name and Password

**User Name and Password**

Please enter the current user name and password

User name:

Password:

---

Please enter the new user name and password

New User name:

New Password:

Retype New Password:

\*New name and password must be equal to or less than 16 characters  
\*The characters (a-z, A-Z and numbers 0-9)

### [User name]

Enter the currently set user name.

### [Password]

Enter the currently set password.

### [New User name]

Enter the new user name to register.

### [New Password]

Enter the new password to register.

### [Retype New Password]

Re-enter the new password to register.

## WEB Server Functions

MediaEdge-LEB provides the menu (Web page) accessible from a terminal such as STB2 to deliver live stream. On the menu page, stream that MediaEdge-LEB delivers can be selected. Follow the steps below to set the menu page URL to the STB2, and check if the MediaEdge-LEB menu page is displayed via STB2.

- 1. Refer to "Connections (P.20)" and connect a STB2 on the same network as the MediaEdge-LEB. And then activate the STB2.**

In this explanation, examples are described with the following IP address settings.

STB2: 192.168.0.16

LEB: 192.168.0.17

- 2. Activate the Internet Explorer, and open the STB2 Setup page.**

Type in the IP address for the STB2 in Address.

In this example, type `http://192.168.0.16/`



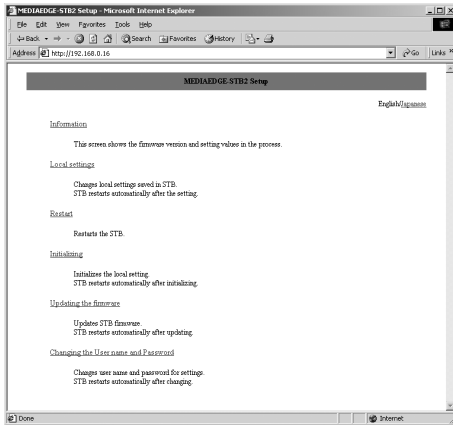
"MEDIAEDGE-STB2 Setup" window will be opened. Confirm that English is selected.



### 3. Click Local settings.

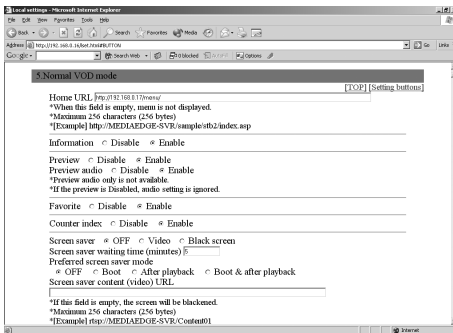
To modify the Local settings, User name and Password are required.

\* Until a user name and password are set after factory shipment, "admin" can be used for the user name and there will be no password.



### 4. In the Home URL field of Normal VOD mode, enter the URL for the menu page.

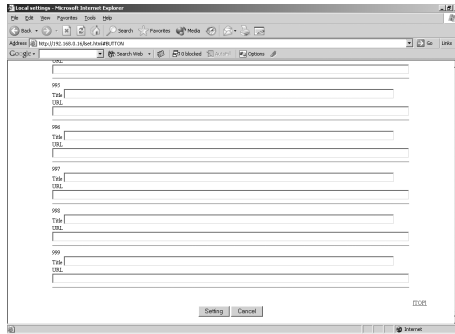
If the IP address for the MediaEdge-LEB is 192.168.0.17, the URL to be accessed from a STB2 is as follows:  
<http://192.168.0.17/menu/>



## 5. Click the Setting button.

STB2 will restart.

\* Clicking the Setting buttons link jumps to the Setting button on the very bottom of the page.



If MediaEdge-LEB is properly installed and set up, the following STB2 menu screen will appear.



## Maintenance Mode

### MediaEdge-LEB Maintenance Mode

MediaEdge-LEB maintenance mode is the recovery program when firmware update is failed and then MediaEdge-LEB no longer functions.

MediaEdge-LEB maintenance mode has functions for updating firmware over the network or a serial port, displaying firmware version information, and resetting MediaEdge-LEB.

Firmware updates in this case are performed with a special maintenance mode firmware binary file rather than an archive file.

- \* When using maintenance mode's FTP server function to upload and update firmware, set the connection timeout setting on the FTP client to variable. (FTP clients using the Windows command prompt can update firmware, but they will not confirm whether the update succeeded.)
- \* Set the timeout setting to 90 seconds or more.
- \* During firmware updates using the FTP server function, do not use the menu (on the PC connected via the serial port). Doing so will not only interrupt the firmware update process on the server, it will also disable any further firmware update operations. (Pressing the reset button will recover maintenance mode, but the pre-update firmware and MediaEdge-LEB functions will not recover.)

### Functional Overview

Maintenance mode has the following functions:

- (1) Firmware updating over the network
  1. Method that uses MediaEdge-LEB as an FTP client (FTP client function)
  2. Method that starts an FTP server on MediaEdge-LEB and then uses a different FTP client (FTP server function)
- (2) Firmware updating over a serial connection

Uses MediaEdge-LEB to receive and update firmware sent from a PC via a serial port.
- (3) PING command

Sends Ping (ICMP echo request) from MediaEdge-LEB.
- (4) Firmware version information display function

Displays version information for the downloaded firmware, the IP address currently set on MediaEdge-LEB, and its MAC address.

## (5) MediaEdge-LEB reset function

Restarts MediaEdge-LEB.

\* Using the firmware update function and PING command over the network requires that you first set the IP address of MediaEdge-LEB. It can either be set automatically by DHCP or manually.

## Connections and Settings

(1) Use a serial cross cable and connect a computer featuring an RS-232C port with the COM1 port of the MediaEdge-LEB.

(2) Choose Start > Programs > Accessories > Communications > Hyper Terminal to start a terminal program on the computer.

The communication parameters to use are as follows:

Baud rate : 115200bps

Data bits : 8bit

Stop bits : 1

Parity : None

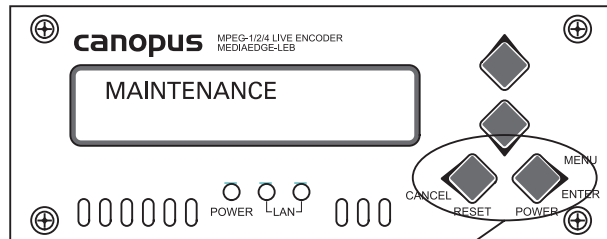
Flow control : Hardware

## Starting MediaEdge-LEB in Maintenance Mode

With power connected, keep pressing the LEFT and RIGHT buttons for more than 3 seconds.

The maintenance mode top menu will appear on the terminal program's screen.

\* MAINTENANCE is displayed on the LCD.



Press more than 3 seconds.

## Maintenance Mode Startup Screen (Top Menu Screen)

The following top menu screen will appear when you start MediaEdge-LEB maintenance mode.

```

+----- Maintenance mode TOP MENU -----+
| 1: Firmware Download via Ethernet(FTP)   |
| 2: Firmware Download via Serial port     |
| 3: Ping (Sending ICMP echo Request)     |
| 4: FTP Server Startup (only once)       |
| 8: Display MediaEdge-LEB Version Info   |
| 0: Restart MediaEdge-LEB               |
+-----+
Select Command ->

```

- 1: Firmware Download via Ethernet(FTP)  
Use the FTP client function to download firmware placed on another FTP server over the network.
- 2: Firmware Download via Serial port  
Downloads firmware from a PC via serial ports.
- 3: Ping (Sending ICMP echo Request)  
Sends Ping (ICMP echo request) other servers and MediaEdge-LEB.
- 4: FTP Server Startup(only once)  
Use the FTP server function to upload firmware from another PC connected to the network.
- 8: Display MediaEdge-LEB Version Info  
Displays version information for the downloaded firmware, the IP address currently set on MediaEdge-LEB, and its MAC address.
- 0: Restart MediaEdge-LEB  
Restarts MediaEdge-LEB.

## IP Address Setting

The following screen will appear if you select 1:Firmware Download via Ethernet (FTP), 3:Ping (Sending ICMP echo Request), or 4:FTP Server Startup(only once) from the top menu screen and no IP address has been set.

```
>>> Please Setup IP address FIRST! <<<

=== IP address Setup ===
1: Use DHCP (Automatic Setup)
2: Manual Setup
9: Back to TOP MENU
Select Command >
```

- 1: Use DHCP(Automatic Setup)  
Automatically sets the IP address of MediaEdge-LEB using DHCP. (See "Results Screen for Automatic IP Address Setup Using DHCP".)
- 2: Manual Setup  
Manually sets the IP address of MediaEdge-LEB. (See "Manual Entry Screen".)
- 9: Back to TOP MENU  
Displays the top menu screen.

## Results Screen for Automatic IP Address Setup Using DHCP

Displays the IP address that was automatically set using DHCP.

```
... DHCP is setting IP address ...
[Ethernet Address ] : [00-20-11-01-00-06]
[IP Address       ] : [192.168.0.17]
[Subnet Mask      ] : [255.255.255.0]
[Default Gateway  ] : [0.0.0.0]
[DNS Address      ] : [10.0.1.0]
```

## Manual Entry Screen

Screen for manually entering an IP address and information. Enter values for the specified items. Manual setup consists of five items: IP address, subnet mask, gateway address, DNS server address, and DNS domain name.

- \*1 Enter the IP address, subnet mask, gateway address, and DNS server address using four period-delimited numbers, for example, 192.168.0.17, and enter the DNS domain name using a character string, for example, localdomain.
- \*2 If you enter improper numbers or characters in the manual entry screen, a menu will appear automatically.

```

Please input following addresses :
IP address ----- >
subnet mask ----- >
gateway address ----- >
DNS Server address --- >
DNS domain name ----- >
  
```

## Firmware Update by FTP Client Function Screen

The following screen will appear when you select 1:Firmware Download via Ethernet (FTP) on the top menu screen. This function operates MediaEdge-LEB as an FTP client and downloads firmware (binary file) from another FTP server.

```

=== Firmware Download via Network(FTP) ===
  1: Download from FTP Server (using URL)
  9: Back to TOP MENU
Select Command >
  
```

- 1: Download from FTP Server (using URL)  
Downloads firmware from an FTP server.
- 9: Back to TOP MENU  
Displays the top menu screen.

The following command line is displayed in the Firmware Update by FTP Client Function Screen.

- (1) URL entry message

```
input URL -> ftp://
```

- (2) Writing to flash ROM message

```
... Flash ROM Writing Now ...
```

- (3) Flash ROM write completion message

```
Flash ROM Write Completed
```

- (4) Flash ROM write failure message

```
Flash ROM Write Error  
FTP Download Failed!
```

- (5) Firmware update completion message

```
FTP Firmware Download OK!
```

- (6) Firmware update failure message

```
Flash ROM Compare Error  
FTP Download Failed!
```

To download firmware from an FTP server, specify its path in the URL entry screen. Enter the relative path from the login folder set on the FTP server.

**Example:**

FTP Server: mediaedge-svr01

Folder to log into using FTP: C:\temp\ftpwork

Firmware absolute path:

C:\temp\ftpwork\firm\lebmnt\_x.x.x.x.img

(lebmnt\_1.0.0.9.img for the version 1.00)

-> URL to enter: ftp://mediaedge-svr01/firm/lebmnt\_x.x.x.x.x.img  
(There is no need to enter the "ftp://" portion. Enter everything after that.)

## Firmware Update by Serial Communication Function Screen

Selecting 2:Firmware Download via Serial port in the top menu screen displays the following screen. This function connects MediaEdge-LEB to another PC using a serial connection and then updates firmware by sending it from the connected PC using the XMODEM protocol.

```

=== Firmware Download via Serial port ===
1: Download by XMODEM (using Checksum option)
9: Back to TOP MENU
Select Command >
  
```

- 1: Download by XMODEM(using Checksum option)  
Updates firmware from the connected PC.
- 9: Back to TOP MENU  
Displays the top menu.

The following command line is displayed in the Firmware Update by Serial Communication Function Screen.

After (1) Start XMODEM reception message appears, update firmware using the checksum option of the XMODEM protocol, one of the file transfer functions of the terminal program.

- (1) Start XMODEM reception message

```
... Firmware Receive Ready! Send Now! ...
```

- (2) Writing to flash ROM message

```
... Flash ROM Writing Now ...
```

- (3) Flash ROM write completion message

```
Flash ROM Write Completed
```

- (4) Flash ROM write failure message

```
Flash ROM Write Error
Do you want to Retry? (back to Flash ROM Erase) [Y|N] >
```

- (5) Firmware update completion message

```
XMODEM Firmware Download OK!
```

- (6) Firmware update failure message

```
Flash ROM Compare Error  
Do you want to Retry? (back to Flash ROM Erase) [Y|N] >
```

- (7) Firmware update failure message when no retry

```
XMODEM Download Failed!
```

\* Firmware updates by serial communication take about 30 minutes.

## Ping Screen

Selecting 3:Ping (Sending ICMP echo Request) in the top menu displays the following screen. This function sends ping packets (ICMP echo requests) from MediaEdge-LEB to check the network state and settings.

```
=== Ping (ICMP echo Request) ===  
1: Ping  
9: Back to TOP MENU  
Select Command >
```

- 1: Ping  
Checks network state and settings.
- 9: Back to TOP MENU  
Displays the top menu.

The following command line is displayed in the Ping screen.

Enter the IP address of the device you want to ping.

- (1) Enter ping target IP address message

```
input target IP address ->
```

## Firmware Update by FTP Server Function Screen

The following screen will appear when you select 4:FTP Server Startup (only once) on the top menu screen. This function updates firmware by starting an FTP server on MediaEdge-LEB and then uploading the firmware file from another FTP client.

```

=== FTP Server Startup ===
FTP Server Startup OK!

```

### NOTE

The FTP server function does not implement functions other than those necessary for uploading firmware. Entering other commands (such as for viewing directories and downloading files) will simply return the message "202 Unimplemented command" to the FTP client.

This means that it may not run properly on some FTP clients that have a GUI.

## Firmware Version Information Display Screen

Selecting 8:Display MediaEdge-LEB Version Info in the top menu screen displays the following screen displaying the firmware version and IP address of MediaEdge-LEB among other information. IP Address will display 0.0.0.0 if no IP address has been set.

```

=== Display MediaEdge-LEB Version Info ===
[Application Version ] : [1.0.0.6]
[Kernel Version     ] : [2.4.18.4-1]
[Userland Version   ] : [1.0.0.0]
[IP Address         ] : [192.168.0.17]
[Ethernet Address   ] : [00-20-11-01-00-46]

```

## MediaEdge-LEB Reset Function

Selecting 0:Restart MediaEdge-LEB in the top menu screen displays the following screen and restarts MediaEdge-LEB (same as resetting using the reset button on the MediaEdge-LEB main unit). Note that only the reset button can perform a maintenance mode restart.

```

... Now Restarting MediaEdge-LEB ...

```



**MediaEdge**

# Chapter 4

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Version 2, June 1991

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**MediaEdge**

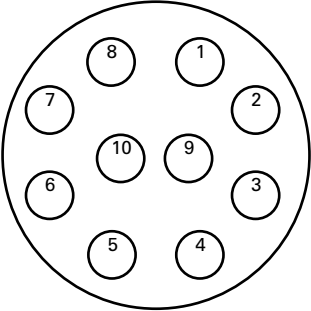
# Chapter 5

Specifications

## Specifications

Input/Output	Network I/F	Format	100BaseTX Fast Ethernet IEEE802.3 frame format Auto negotiation supported Full-duplex supported
		Connector	RJ45 modular connector x1
	Video Input	Format	NTSC/PAL
		Connector	BNC 4pin mini-DIN (for S cable connection)
		Input impedance	75Ω
	Audio Input	Format	Stereo line input
		Connector	RCA pin jack (red/white)
		Input impedance	100kΩ
	General input/output	Format	EIA-232 serial port
		Connector	Push-lock, 10 Pos, Round x2
Spec	Voltage	AC adaptor	Input: AC100V~240V (50Hz/60Hz) Output: DC12V 3A (max)
		LEB	Input: DC12V 0.7A (max)
	Max Power Consumption	Operating	14.8W
	Waiting	2.6W	
	Temperature	0°C~40°C	
Dimensions	W 112mm x D 200mm x H 44mm (excluding protrusion)		
Weight	820g (w/o attachment)		
Stream Format	Video Compression	MPEG4 : Simple Profile MPEG2 : MP@ML MPEG1	
	Audio Compression	MPEG Layer1, Layer 2 16 bit stereo Sampling frequency 32k/44.1k/48k	
	Transmission	MPEG4 : ISMA MPEG1/2 : RTSP/RTP (TS)	
	Video bitrate	MPEG-4 D1 / VGA NTSC = 2.0 Mbps - 15 Mbps PAL = 2.0 Mbps - 14 Mbps MPEG-4 Half D1 = 1.5 Mbps - 8 Mbps MPEG-4 SIF = 512 kbps - 4 Mbps MPEG-4 QCIF = 128 kbps - 2 Mbps MPEG-2 D1 / VGA = 3.0 Mbps - 15 Mbps MPEG-2 Half D1 = 2.0 Mbps - 8 Mbps MPEG-2 SIF = 1.0 Mbps - 4 Mbps MPEG-2 QCIF = 256 kbps - 2 Mbps MPEG-1 SIF = 1.0 Mbps - 1.856 Mbps	

## • Pins

Pin number	Signal	
1		 <p>Connector type: HIROSE HR10A-10R-10S Applied plug type: HR10A-10P-10P</p>
2	RD	
3	TD	
4	DTR <sup>+</sup>	
5	GND	
6	DSR <sup>+</sup>	
7	RTS	
8	CTS	
9		
10		

\*Internal short circuit

