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Description Notes on Using LAN Adapter for E6000/E8000 Emulator (HS6000ELN01H)

ADE-702-326

Rev. 1.0
07/08/02
Hitachi, Ltd.

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READ FIRST

• READ this user's manual before using this emulator product.

• KEEP the user's manual handy for future reference.

Do not attempt to use the emulator product until you fully understand its mechanism.

Emulator Product:

Throughout this document, the term "emulator product" shall be defined as the following products produced only by Hitachi, Ltd. excluding all subsidiary products.

- E6000 series emulator station or E8000 series emulator station
- LAN adapter
- User system interface cables
- SIMM memory module
- Optional boards

The user system or a host computer is not included in this definition.

Purpose of the LAN Adapter:

When Hitachi Debugging Interface (hereinafter referred to as HDI), a software debugging tool that runs on Windows®, is used, when LAN-connecting the LAN adapter this LAN adapter is used for LAN-connecting an E6000 series emulator or an E8000 series emulator to an host computer, and supports software and hardware development. This LAN adapter must only be used for the above purpose.

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Figures:

Some figures in this user's manual may show items different from your actual system.

Limited Anticipation of Danger:

Hitachi cannot anticipate every possible circumstance that might involve a potential hazard. The warnings in this user's manual and on the emulator product are therefore not all inclusive. Therefore, you must use the emulator product safely at your own risk.

SAFETY PAGE

READ FIRST

• READ this user's manual before using this emulator product.

• KEEP the user's manual handy for future reference.

Do not attempt to use the emulator product until you fully understand its mechanism.

DEFINITION OF SIGNAL WORDS

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER **DANGER** indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION **CAUTION** indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

CAUTION **CAUTION** used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTE emphasizes essential information.

⚠ WARNING

Observe the precautions listed below. Failure to do so will result in a FIRE HAZARD and will damage the user system and the emulator product or will result in PERSONAL INJURY. The USER PROGRAM will be LOST.

1. **Do not repair or remodel the emulator product by yourself for electric shock prevention and quality assurance.**
2. **Always switch OFF the E6000 and E8000 emulator and user system before connecting or disconnecting any CABLES or PARTS.**
3. **Supply power according to the power specifications and do not apply an incorrect power voltage. Use only the provided power cable.**

Preface

The LAN adapter for the E6000 / E8000 emulators is described in this description notes. Read this notes and the User's manuals for the E6000 and E8000 emulators.

This LAN adapter provides LAN connection of the E6000/E8000 emulator to an host computer, enabling program debugging through an HDI.

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3. The TCP/IP communication functions of this product include the AVE-TCP™ of ACCESS CO., LTD. AVE-TCP is a trademark of ACCESS CO.,LTD.
4. Displays in this notes are examples at using the Windows® 98.
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Section 1 Overview

This section describes the system configuration at LAN connection and the LAN adapter.

1.1 System Configuration

Figure 1 shows the system configuration when connecting the E6000 emulator and the LAN adapter. The E8000 emulator can be connected in the same way. Refer to figure 7 when connecting the E8000 emulator and the LAN adapter.

The host computer containing Windows® and the LAN adapter are connected via the LAN interface (10BASE-T or 100BASE-TX).

The LAN adapter and the E6000/E8000 emulator are connected through the PC interface cable.

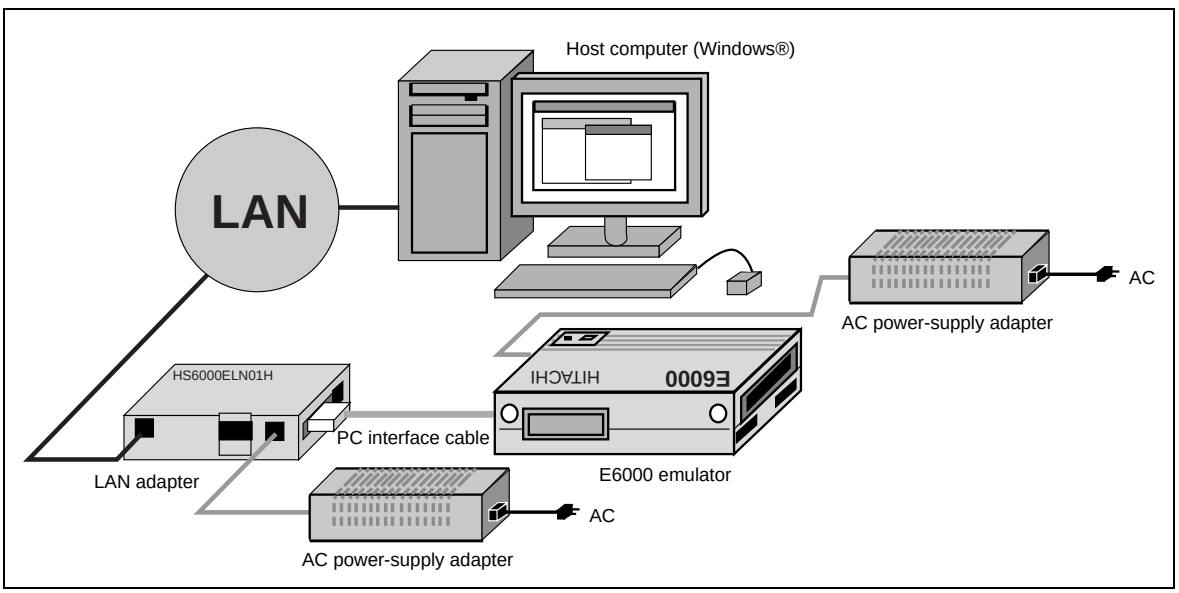


Figure 1 System Configuration of E6000 Emulator Connection

1.2 Operating Environments

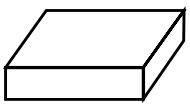
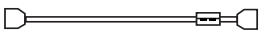
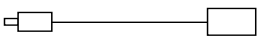
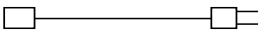
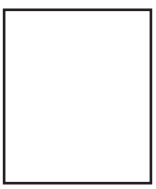
Table 1 Operating Environments

Item	Description
Host computer	Built-in Pentium or higher-performance CPU (166 MHz or higher recommended)
OS	Windows® 95, Windows® 98, or Windows NT® 4.0 (Not operated in Windows® 3.1)
Minimum memory capacity	32 Mbytes (double of the load-module file size recommended)
Hard-disk capacity	Installation disk capacity: 10 Mbytes or more At initiation: At least double the memory capacity (four-times or more recommended)
Floppy disk drive	3.5 inches (2 HD) for installation
Display	Resolution: 640 x 480 or more (800 x 600 or more recommended)
LAN type	10 BASE-T/100 BASE-TX based on IEEE 802.3
Protocol	TCP/IP (when using the LAN adapter configuration (setting the IP), UDP)
Others	Mouse (or a pointing device such as a mouse)

Section 2 Components

Table 2 lists the components of the LAN adapter.

Table 2 Components

Item	Product Name	Configuration	Quantity	Remarks
Hardware	LAN adapter		1	Number of printed circuit boards mounted: 1
	PC interface cable		1	Cable length: 1.5 m With a ferrite core (for EMI* disturbance)
	AC power-supply adapter		1	Cable length: 1.8 m
	AC power-supply cable		1	Cable length: 2.5 m
Documen-tation	Description Notes on Using LAN Adapter for E6000/E8000 Emulator (HS6000ELN01H) (This manual)		1	HS6000ELN01HE(A)

Note: EMI is an abbreviation of electrical magnetic interference.

2.1 LAN Adapter

Figure 2 shows each part of the LAN adapter.

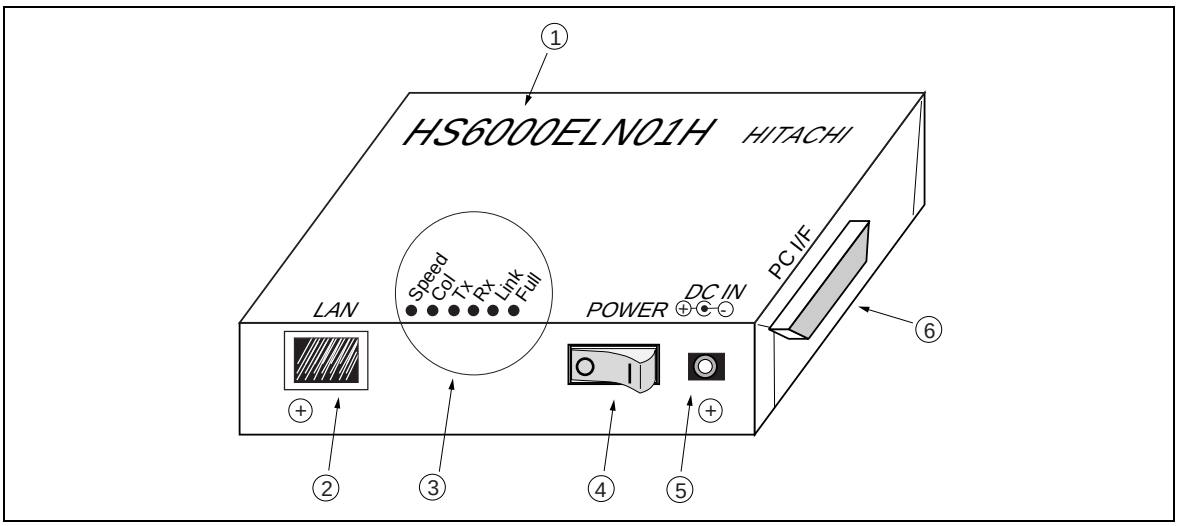


Figure 2 LAN Adapter

Numbers in figure 2 indicate the following:

(1) Product name: Product name (HS6000ELN01H) of the LAN adapter.

(2) 100BASE-TX/10BASE-T port: Connects the LAN cable.

(3) LED displaying the communication state: Table 3 shows the LED names, contents, and states at power-on.

Table 3 LED Names, Contents, and States at Power-on

LED Name	LED Contents
Speed	During 100BASE-TX mode communication: Lit During 10BASE-T mode communication: Unlit
Col	During collision detection in half-duplex mode (with Monostable function): Lit
Tx	During data transmission (with Monostable function): Lit
Rx	During data receiving (with Monostable function): Lit
Link	During normal linking (communication with the connected hub enabled): Lit
Full	During full-duplex mode communication: Lit

Note: The LAN adapter only lights "Speed" if the LAN cable is not connected at power-on.

(4) Power switch: Power switch for the LAN adapter (Pressing the O–side powers-on the adapter. Pressing the I-side powers-off the adapter.).

(5) Power input connector: Inputs the external AC power supply by using the power adapter of the LAN adapter.

(6) PC interface cable connector: Connects the emulator.

Figure 3 shows the label on the back of the LAN adapter. The MAC address of the LAN adapter is printed on the back label.

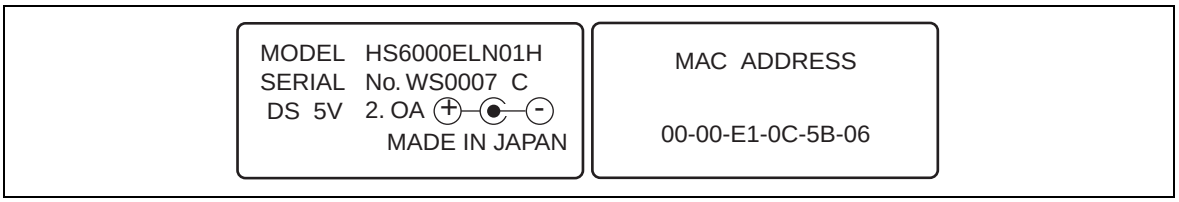


Figure 3 LAN Adapter Label

Section 3 Preparation Before Use

3.1 Power Supply

3.1.1 AC Adapter

The AC adapter supplied with the E6000 emulator must be used at all times.

3.1.2 Polarity

Figure 4 shows the polarity of the power-supply plug.

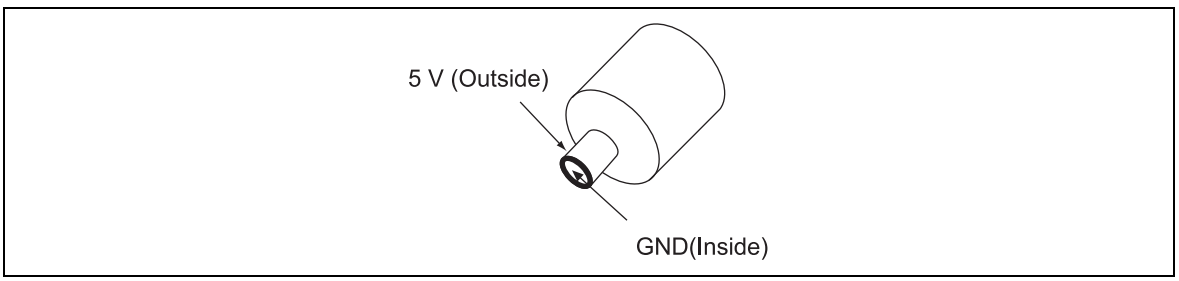


Figure 4 Polarity of Power Supply Plug

3.2 Connecting LAN Cable to LAN Adapter

⚠ WARNING

Always switch OFF the emulator product and user system before connecting or disconnecting the LAN adapter. Failure to do so will result in a FIRE HAZARD and will damage the user system, LAN adapter, and emulator product or will result in PERSONAL INJURY.
Use the AC power-supply adapter provided in the package.

(1) Connect the LAN cable to the LAN socket as shown in figure 5.
(2) Connect the AC power-supply adapter to the DCIN socket.

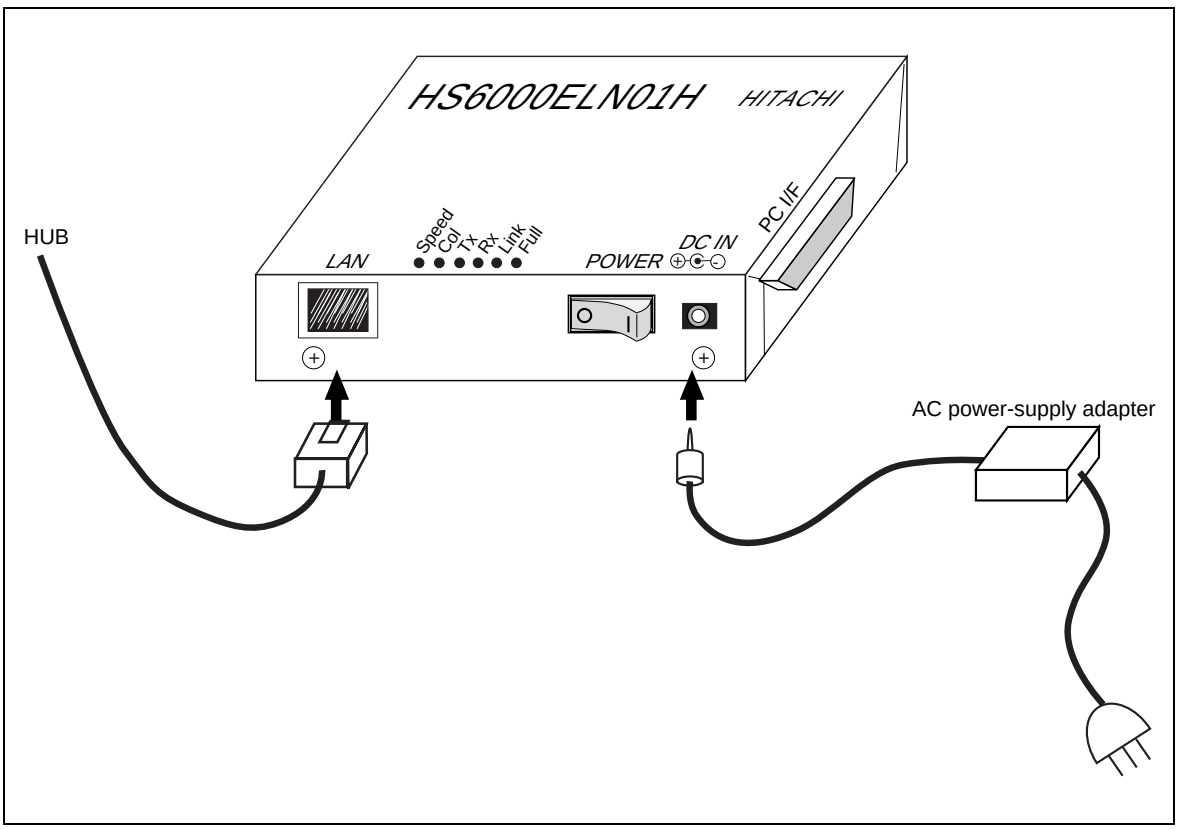


Figure 5 Connecting LAN Cable to LAN Adapter

3.3 Connecting LAN Adapter to E6000 Emulator

⚠ WARNING

Always switch OFF the emulator product and user system before connecting or disconnecting the LAN adapter. Failure to do so will result in a FIRE HAZARD and will damage the user system, LAN adapter, and emulator product or will result in PERSONAL INJURY.

To use the E6000 emulator, connect the LAN adapter to the E6000 emulator station via the supplied PC interface cable, as shown in figure 6. Connect the PC interface cable connector with a ferrite core to the E6000 emulator.

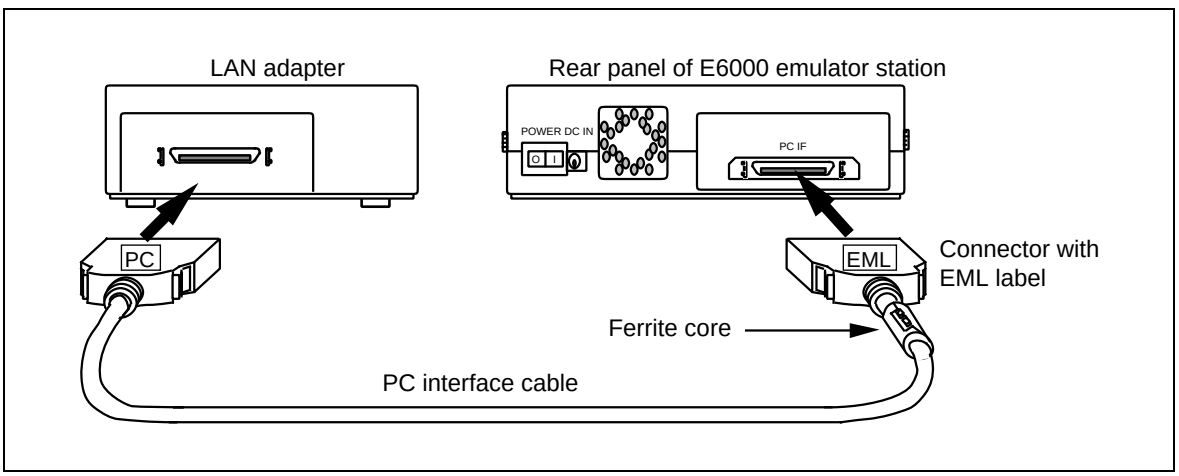


Figure 6 Connecting LAN adapter to E6000 Emulator

3.4 Connecting LAN Adapter to E8000 Emulator

⚠ WARNING

Always switch OFF the emulator product and user system before connecting or disconnecting the LAN adapter. Failure to do so will result in a FIRE HAZARD and will damage the user system, LAN adapter, and emulator product or will result in PERSONAL INJURY.

NOTE: When connecting the E8000 emulator to the host computer using a LAN adapter, select host computerinterface (S7: ON, S8: ON) for the console setting. For details, refer to 3.3 System Connection in the E8000 emulator user's manual.

To use the E8000 emulator, connect the LAN adapter to the E8000 emulator station via the supplied PC interface cable, as shown in figure 7. Connect the PC interface cable connector with a ferrite core to the E8000 emulator.

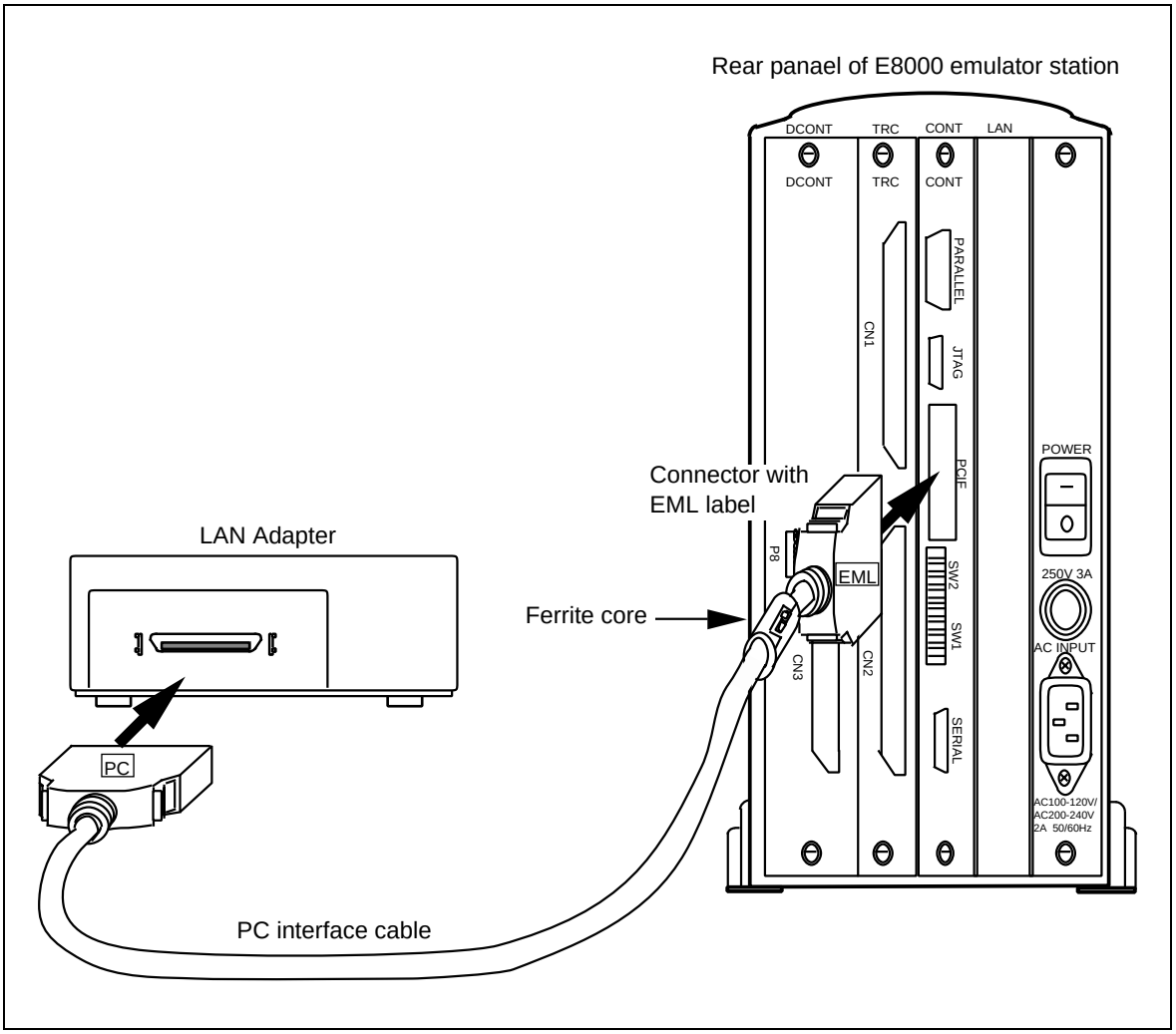


Figure 7 Connecting LAN Adapter to E8000 Emulator

Section 4 Setting up the LAN Adapter

4.1 Procedures

Figure 8 shows the setup procedures of the LAN adapter.

Since the IP address and the subnet mask are not set in the LAN adapter, set them to the LAN adapter before using.

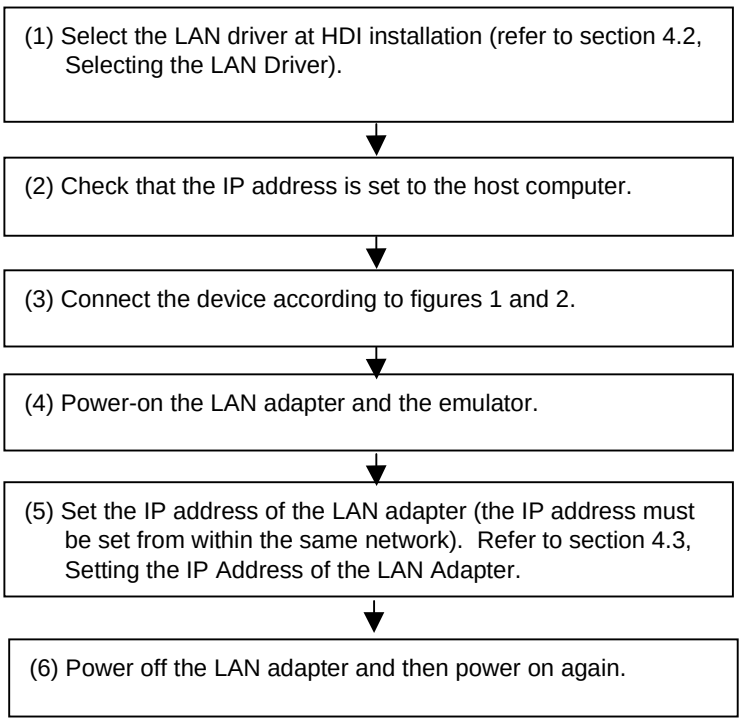


Figure 8 Setup Procedures

4.2 Selecting the LAN Driver

During HDI installation, select 'LAN' in the [Select Driver Type] dialog box.

Figure 9 [Select Driver Type] Dialog Box

4.3 Setting the IP Address of the LAN Adapter

To set the IP address to the LAN adapter, the LAN adapter configuration (LAC) in the HDI is needed.

1. Initiating the LAN adapter configuration
   Select 'LAN adapter configuration' from the installed HDI program menu.

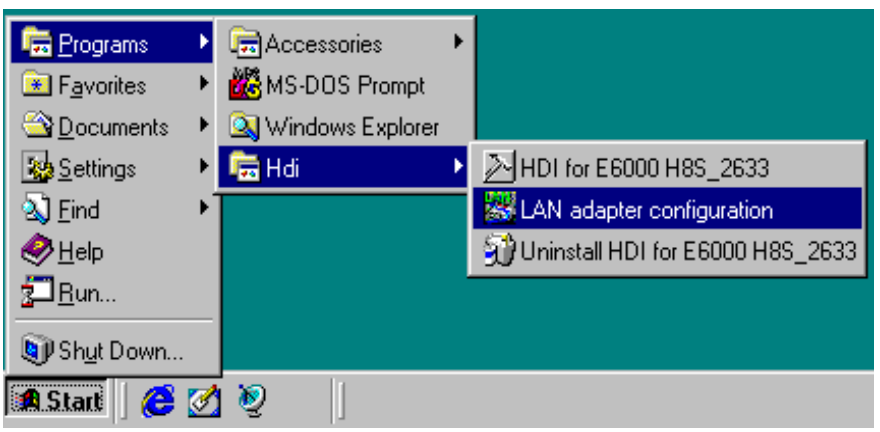


Figure 10 HDI Program Menu

2. After initiating 'LAN adapter configuration', the following dialog box is displayed.

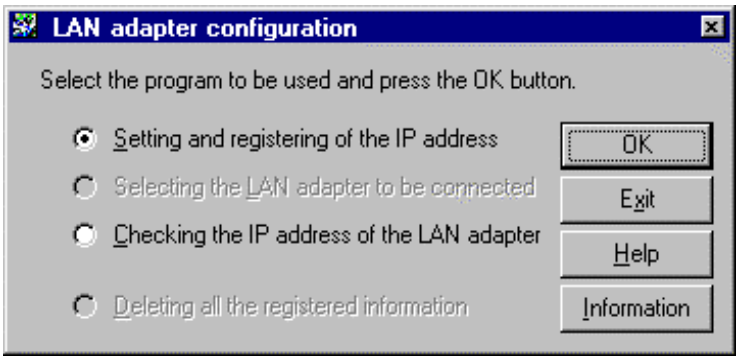


Figure 11 [LAN adapter configuration] Dialog Box

3. The IP address for the LAN adapter can be set and the setting information can be defined from the PC used in setting up, by selecting 'Setting and registering of the IP address'.
4. The LAN adapter to be connected can be selected from the LAN adapter information in the configuration database defined in the PC by selecting 'Selecting the LAN adapter to be connected'.
5. The IP address set for the LAN adapter, subnet mask, and the default gateway can be checked by selecting 'Checking the IP address of the LAN adapter'. On-line help can be displayed by clicking the Help button in any LAN adapter configuration dialog box. Refer to the on-line help for assistance with usage or troubleshooting.

NOTE: To set the IP address of the LAN adapter, connect the host computer and LAN adapter to the same network. After the IP address is set in the LAN adapter, be sure to power-off the adapter, and on again before continuing to use it.

Section 5 Troubleshooting

The problems that may occur when using the LAN adapter and the measures to be taken are as follows.

1. When the LAN adapter configuration is used, the IP address cannot be set in the LAN adapter or the IP address that has been set cannot be checked
   - Check that the LAN adapter and the host computer using the adapter configuration are connected to the same network.
   - Check that the LAN adapter is powered on.
2. The HDI will not start.
   - If the LAN adapter and the emulator are not both powered-on, a time out error will occur after one minute.
   - Check that the IP address, subnet mask, and default gateway in the LAN adapter are correctly set. Refer to on-line help for the LAN adapter configuration for details on the adapter settings.
   - After setting the IP address in the LAN adapter, power off the adapter and power it on again.
3. The HDI stops operating.
   - Check that the LAN adapter and emulator are correctly connected.
   - Check that the LAN adapter and emulator are powered on.

The LAN adapter has diagnostic LEDs' as shown in figure 12.

If these problems are not resolved by taking the specified corrective action, contact the Hitachi sales agency. Be prepared to advise the agency of the status of these LEDs.

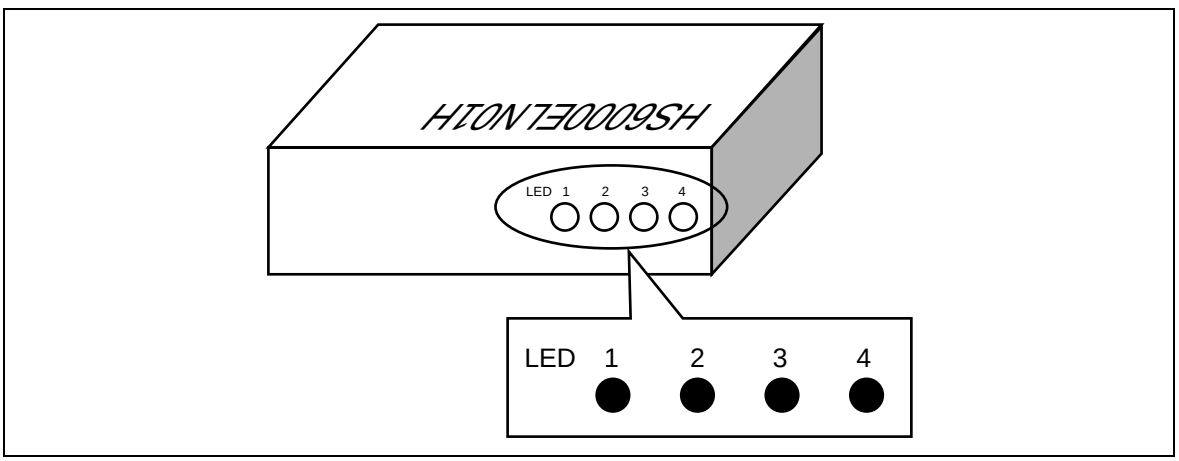


Figure 12 Diagnostic LED

Section 6 Environmental Conditions

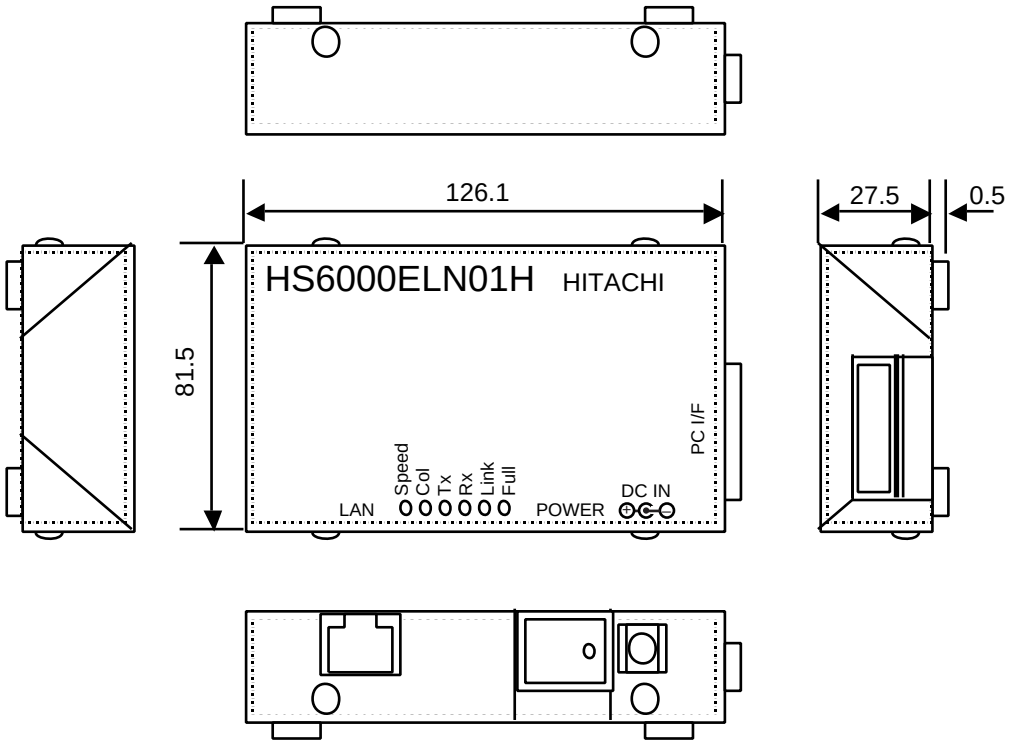
CAUTION

Observe the conditions listed in table 4 when using the LAN adapter. Failure to do so will damage the LAN adapter, the emulator product, and the user system.

Table 4 Environmental Conditions

No.	Item	Specification
1	Temperature	Operating: +10°C to +35°C Storage: -10°C to +50°C
2	Humidity	Operating: 35% RH to 80% RH, no condensation Storage: 35% RH to 80% RH, no condensation
3	Vibration	Operating: 2.45m/S^2 max. Storage: 4.9m/S^2 max. Transportation: 14.7m/S^2 max.
4	AC power-supply	Voltage: AC 100-240 V Current: 61-70 VA Frequency: 50/60 Hz
5	Ambient gases	There must be no corrosive gasses present.

Section 7 External Dimensions of the LAN Adapter



Unit: mm
Tolerance: ±1.0mm