FUJITSU SEMICONDUCTOR
CONTROLLER MANUAL

CM41-00412-1E

F²MC FAMILY
10BASE-T LAN ADAPTER
MB2142-02
USER'S MANUAL

FUJITSU

PREFACE

■ Objectives and intended readership

The MB2142-02 support tool (10BASE-T LAN adapter) is designed to enable the development and evaluation of products based on the F^2MC* family.

The MB2142-02 is connected to the main unit (MB2141). This enables the main unit to perform LAN-based communication with the host machine (such as a personal computer or workstation).

This manual describes the handling and connection of the MB2142-02. It is aimed at engineers responsible for the development of products based on the F^2MC, using the MB2142-02.

- Related manual

  MB2141 2140 Main Unit User's Manual

*: F^2MC stands for FUJITSU Flexible Microcontroller.

■ Configuration of this manual

This manual consists of the following two chapters. Before attempting to use the adapter, read this manual to become familiar with the product.

Chapter 1 Handling and Specifications of the Product

Describes the handling and specifications of the 10BASE-T LAN adapter. Before attempting to use the adapter, read this chapter to become familiar with the product.

Chapter 2 Connections

Describes the connections of the 10BASE-T LAN adapter and power-on and power-off sequences of system.

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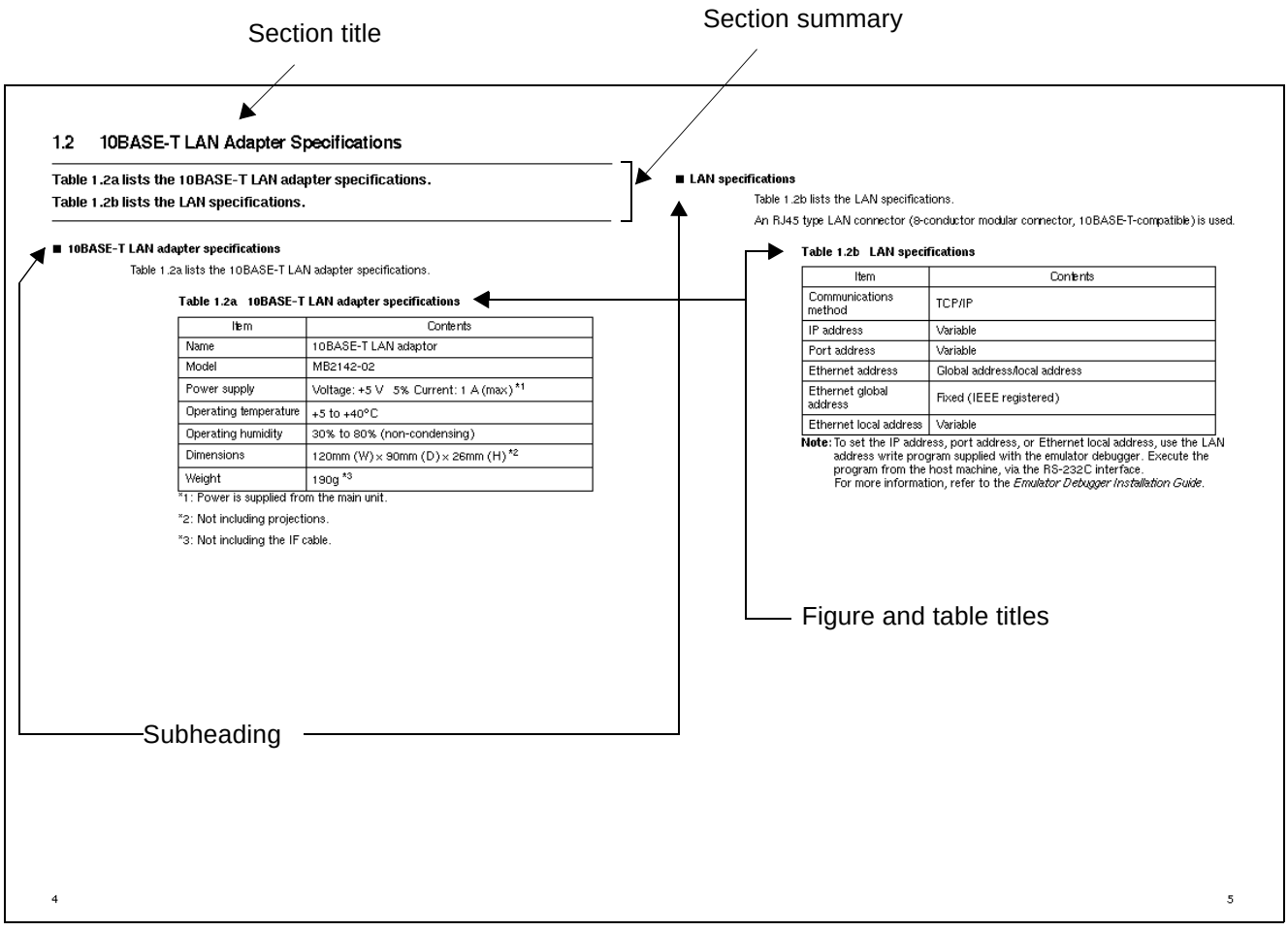
READING THIS MANUAL

■ Page layout

In this manual, an entire section is presented on a single page or spread whenever possible. The reader can thus view a section without having to flip pages. The contents of each section are summarized immediately below the title. You can obtain a rough overview of the 10BASE-T LAN adapter (MB2142-02) by reading through these summaries. The spread layout of this manual is described below.

■ Spread layout



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FIGURES

TABLES

CHAPTER 1 HANDLING AND SPECIFICATIONS OF THE PRODUCT

This chapter explains the handling and specifications of the 10BASE-T LAN adapter. Read this chapter and check the contents of the package before attempting to use the 10BASE-T LAN adapter.

1.1 Packing List

Before first using the 10BASE-T LAN adapter, check that the package contains the following components:

- **10BASE-T LAN adapter × 1**
- **IF cable × 1**

■ Appearance and names of parts

Figure 1.1 illustrates the 10BASE-T LAN adapter. For details of the necessary connections, see Chapter 2, “Connections.”

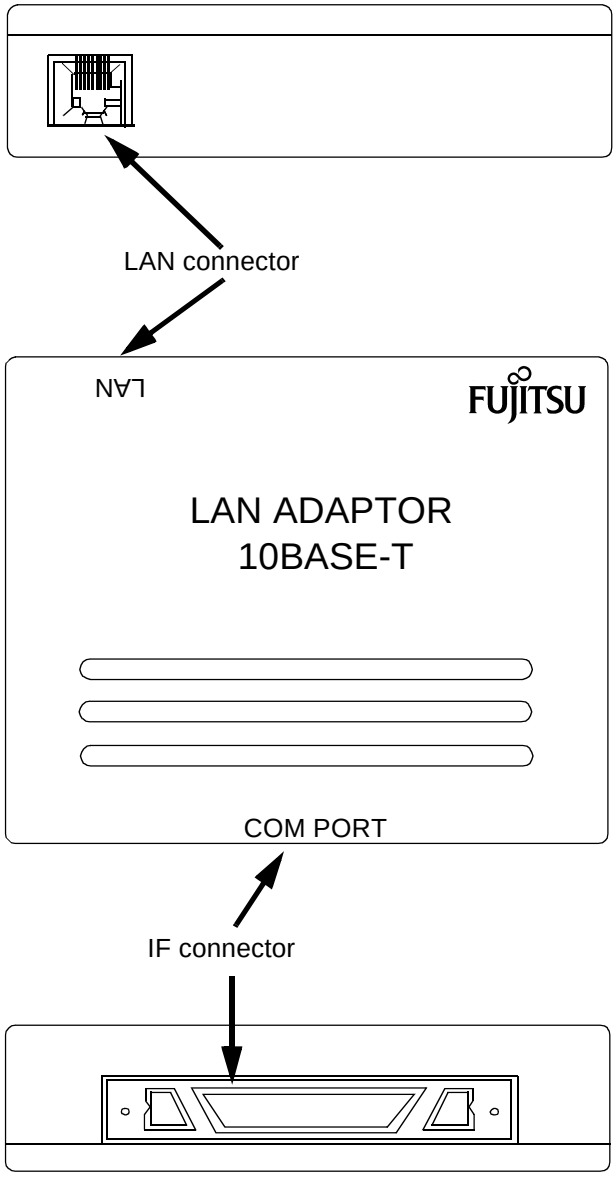

Figure 1.1 10BASE-T LAN adapter

The function of each part is described below:

IF connector: Used to connet the IF cable.

10BASE-T LAN connector: Used to connect the twisted pair LAN cable.

1.2 10BASE-T LAN Adapter Specifications

Table 1.2a lists the 10BASE-T LAN adapter specifications.

Table 1.2b lists the LAN specifications.

■ 10BASE-T LAN adapter specifications

Table 1.2a lists the 10BASE-T LAN adapter specifications.

Table 1.2a 10BASE-T LAN adapter specifications

Item	Contents
Name	10BASE-T LAN adaptor
Model	MB2142-02
Power supply	Voltage: +5 V ±5% Current: 1 A (max) *1
Operating temperature	+5 to +40°C
Operating humidity	30% to 80% (non-condensing)
Dimensions	120mm (W) × 90mm (D) × 26mm (H) *2
Weight	190g *3

*1: Power is supplied from the main unit.

*2: Not including projections.

*3: Not including the IF cable.

■ LAN specifications

Table 1.2b lists the LAN specifications.

An RJ45 type LAN connector (8-conductor modular connector, 10BASE-T-compatible) is used.

Table 1.2b LAN specifications

Item	Contents
Communications method	TCP/IP
IP address	Variable
Port address	Variable
Ethernet address	Global address/local address
Ethernet global address	Fixed (IEEE registered)
Ethernet local address	Variable

Note: To set the IP address, port address, or Ethernet local address, use the LAN address write program supplied with the emulator debugger. Execute the program from the host machine, via the RS-232C interface.
For more information, refer to the *Emulator Debugger Installation Guide*.

1.3 IF Cable Specifications

Table 1.3a lists the IF cable components, Table 1.3b lists the general specifications of the IF cable, and Figure 1.3 shows the dimensions of the IF cable.

■ IF cable specifications

For an explanation of connecting the adapter to the main unit, see Section 2.2, “Connection to Main Unit.”

Table 1.3a IF cable components

Part name	Remarks
FCN-237R068-G/E connector ×2	Fujitsu
FCN-230C068-C/E cover ×2	Fujitsu

Table 1.3b IF cable general specifications

Item		Contents
Rated current		DC1A
Temperature	Operating	–10 to +60°C
	Storage	–10 to +60°C
Weight		140g

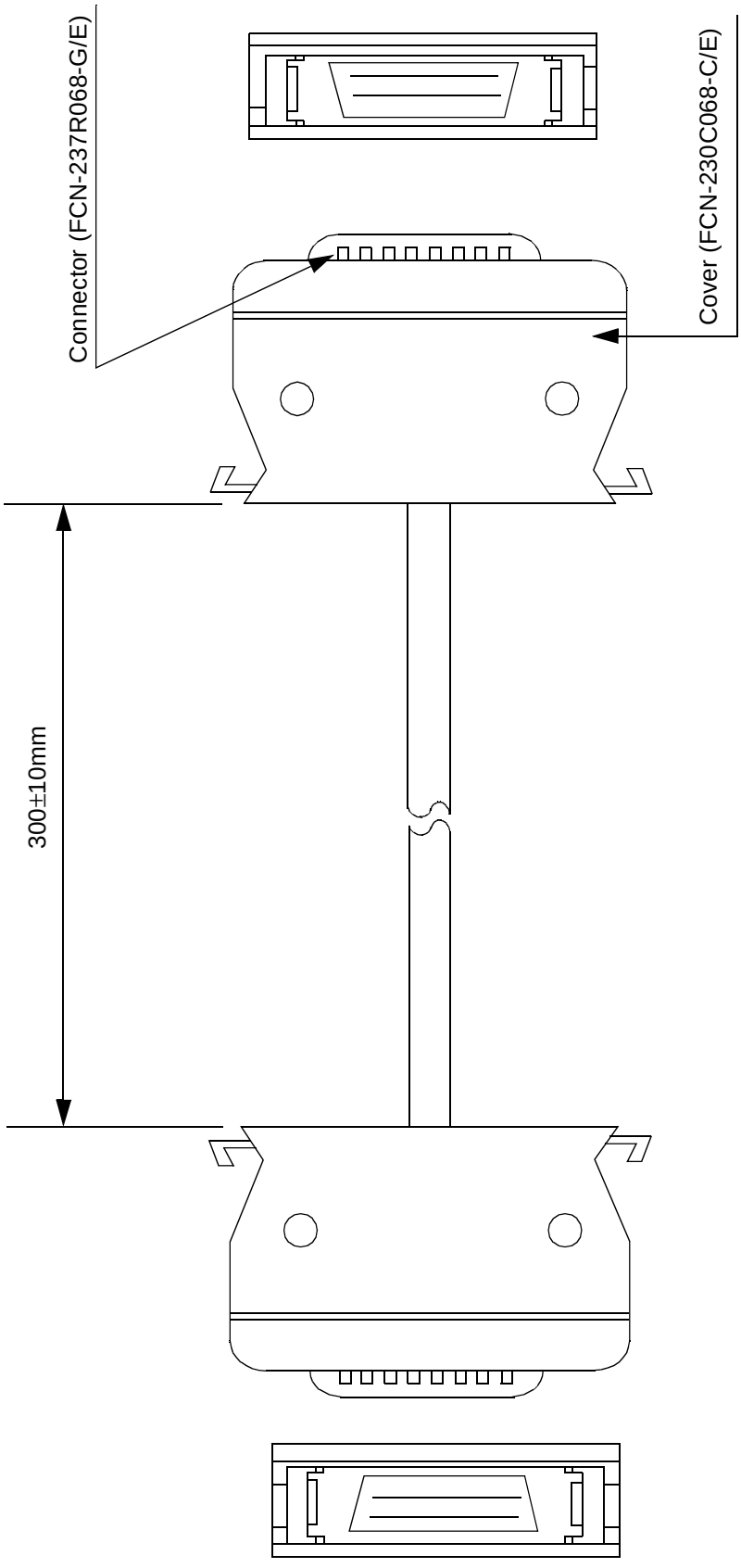

Figure 1.3 IF cable dimensions

1.4 Notes on Use

When using the 10BASE-T LAN adapter, keep the following points in mind:

■ **Operating considerations**

When using the 10BASE-T LAN adapter, always keep the following points in mind:

- ❍ Turn off the power before connecting or removing a cable.
- ❍ When removing a connector, do not pull the cable itself; grasp and pull the connector.
- ❍ To prevent electrostatic damage, be careful not to touch the connector pins, and do not allow the pins to come into contract with any objects.
- ❍ Refer to this manual for details of setting and usage.

■ **Storage**

To store the 10BASE-T LAN adapter, keep the following points in mind:

- ❍ Take whatever steps are necessary to prevent the 10BASE-T LAN adapter from being jolted or jarred in storage.
- ❍ Do not expose the 10BASE-T LAN adapter to direct sunlight, high temperatures, high humidity, or condensation.
- ❍ Do not keep the 10BASE-T LAN adapter in an intense electrical or magnetic field for an extended period.

Table 1.4 lists the temperature and humidity requirements for storage.

Table 1.4 Storage environment

Storage temperature	Storage humidity
−20 to +70°C	20% to 90% (non-condensing)

CHAPTER 2 CONNECTIONS

This chapter describes how to connect, turn on, and turn off the 10BASE-T LAN adapter. Familiarize yourself with the contents of this chapter before attempting to turn on the adapter.

2.1 System Configuration

Connecting the 10BASE-T LAN adapter to a network that includes a host machine enables LAN-based communication with the host machine.

■ System configuration

Connecting the 10BASE-T LAN adapter to a network that includes a host machine enables LAN-based communication with the host machine.

Figure 2.1 shows the hardware system configuration when the 10BASE-T LAN adapter is used.

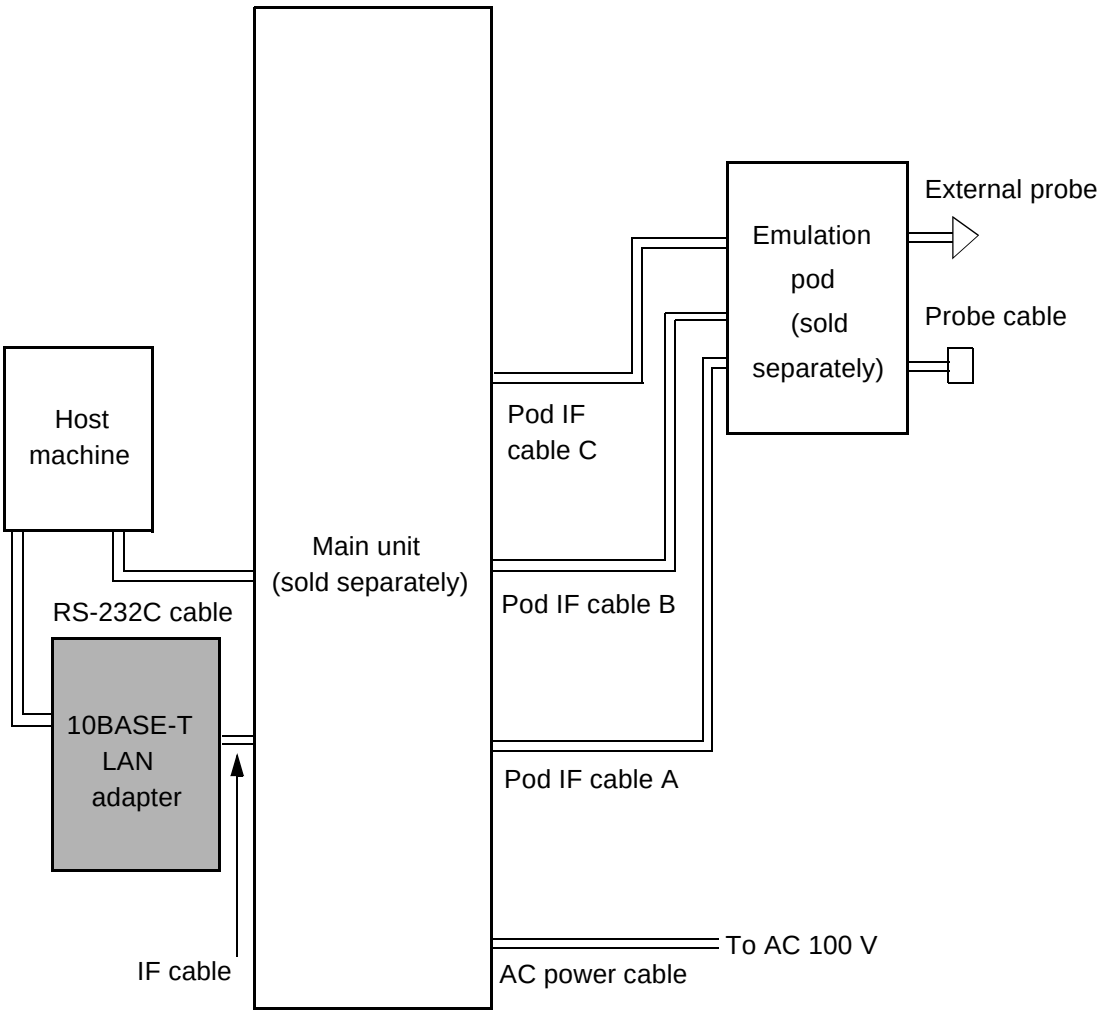

Figure 2.1 System configuration

Memo

2.2 Connection to Main Unit

As shown in Figure 2.2, use an IF cable to connect the 10BASE-T LAN adapter to the main unit (sold separately).

■ Connection to main unit

As shown in Figure 2.2, use an IF cable to connect the 10BASE-T LAN adapter to the main unit (sold separately).

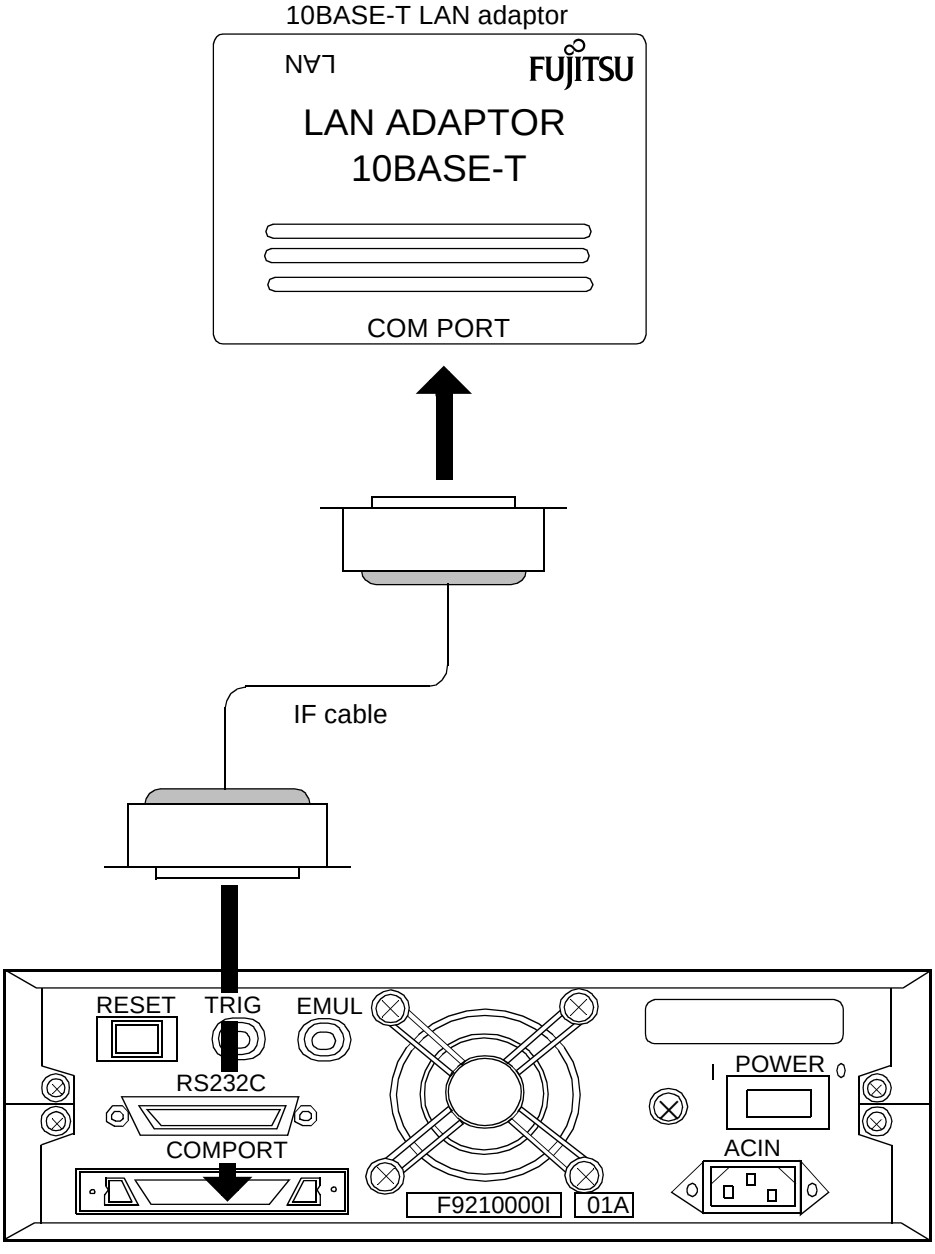

Figure 2.2 Connection to main unit

■ Notes

When connecting the 10BASE-T LAN adapter to the main unit (sold separately), keep the following points in mind:

- ❍ Turn off the power before connecting or removing a cable. While the power is turned on, connecting or removing a cable may cause a malfunction.
- ❍ To remove a cable, do not pull the cable itself; grasp and pull the connector. Pulling the cable itself may cause a conductor inside the cable to break.

2.3 Connection to Network

As shown in Figure 2.3, connect the LAN conector to the network that includes the host machine.

■ Connection to network

According to Figure 2.3, connect the LAN conector to the network that includes the host machine. Use a commercially available twisted pair LAN cable and hub; these parts are not supplied with the 10BASE-T LAN adapter.

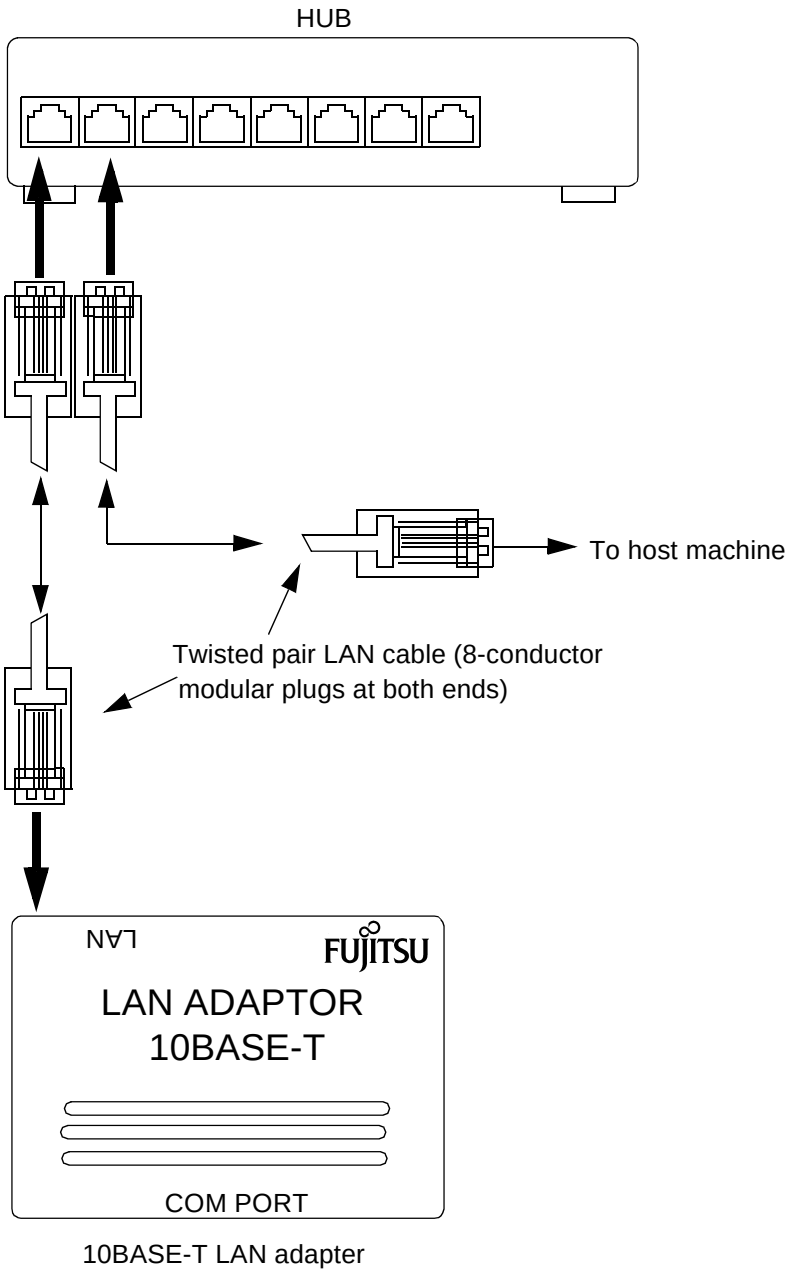

Figure 2.3 Connection to network

■ Notes

When connecting the LAN connector to the network that includes the host machine, keep the following points in mind:

- ❍ Turn off the power before connecting or removing a cable. While the power is turned on, connecting or removing a cable may cause a malfunction.
- ❍ To remove a cable, do not pull the cable itself; grasp and pull the connector. Pulling the cable itself may cause a conductor inside the cable to break.

2.4 Power-on Sequence

Before turning on the power, ensure that all connections are complete. Then, turn on the power in the order of the host machine, the main unit, then the target (user system).

■ Power-on sequence

Before turning on the power, ensure that all connections are complete. Then, turn on the power in the order of the host machine, the main unit, then the target (user system).

To turn on the power, set the power switch on the rear panel of the main unit to “1.” Turning on the main unit also turns on the 10BASE-T LAN adapter.

2.5 Power-off Sequence

Turn off the power in the order of the target (user system), the main unit, then the host machine.

■ **Power-off sequence**

Turn off the power in the order of the target (user system), the main unit, then the host machine.

To turn off the power, set the power switch on the rear panel of the main unit to “0.” Turning off the main unit also turns off the 10BASE-T LAN adapter.