ETHERNET
Operation Manual

Second Edition

Read this manual before using the instrument
Keep this manual with the instrument

Measurement Solutions
ANRITSU CORPORATION

Safety Symbols

To prevent the risk of personal injury or loss related to equipment malfunction Anritsu Corporation uses the following safety symbols to indicate safety-related information.   Insure that you clearly understand the meanings of the symbols BEFORE using the equipment.

(Some or all of the following symbols may not be used on all Anritsu equipment.   In addition, there may be other labels attached to products which are not shown in the diagrams in this manual.)

Safety Symbols Used in Manual

DANGER ⚠ This indicates a very dangerous procedure that could result in death or serious injury if not performed properly

WARNING ⚠ This indicates a hazardous procedure that could result in death or serious injury if not performed properly

CAUTION ⚠ This indicates a hazardous procedure or danger that could result in light-to-serve injury, or loss related to malfunction, if proper precautions are not taken.

Safety Symbols Used on Equipment and/or in Manual

The following safety symbols are used inside or on the equipment near operation location, and/or in manual to provide information about safety items and operation precautions.   Insure that you clearly understand the meanings of the symbols and take the necessary precautions BEFORE using the equipment.

🚫 This indicates a prohibited operation.   The prohibited operation is indicated symbolically in or near the barred circle.

◯ This indicates an obligatory safety precaution.   The obligatory operation is indicated in or near the circle.

△ This indicates warning or caution.   The contents are indicated symbolically in or near the triangle.

☐ This indicates a note.   The contents are described in box.

♳ This indicates that the marked part should be recycled.

ETHERNET
Operation Manual

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Conventions used in this manual

Convention	Description
Bold	Bold face represents commands and anything you are asked to type
Bold-italic	Bold-italic face represents command variable
[ ]	Brackets surround optional entries.
Italic	Italic face represents on-screen selections and fields, file names, directories, path name, and man page names. Also used to emphasize words in tex.

Trademark

CONTENTS

SECTION 1   GENERAL

ETHERNET option (hereafter simply called "this option") belongs to MP1632C 3.2G Digital Data Analyzer (hereafter simply called "the instrument").   This option allows to connect the instrument to LAN by 10M bit/s ethernet adapter.   This option conforms IEEE802.3 and allows data communication by TCP/IP protocol.

This option implements below functions by connecting the instrument to LAN.

Remote control by Ethernet interface

   To remote control this instrument as same as GPIB interface or RS-232C interface by using any PC connected to LAN as remote controller.   See MP1632C remote control operations manual "2.3 Ethernet interface" about settings of instruments control application.

File transfer using FTP

   FTP client and FTP server software are installed to the instrument.   These software allow to transfer Pattern files or Setting files between the instrument and any PCs or work stations on LAN.

1.2 Organization of the Operation Manual

This operation manual consists of the following four sections.

Table 1-1   Organization of operation manual

Chapter Number	Description
Chapter1 Overview	Product overview, organization of operation manual, instrument configuration
Chapter2 How to connect	Description of how to connect to the network, how to set network parameters, and network connection diagnostics
Chapter3 How to use FTP	Description of FTP client and FTP server software usage.
Chapter4 How to recover software	Description of recovery software

1.3 Product Configuration

Table 1-2 breaks down the configuration of this product.

Table 1-2   Configuration

Item	Model name and Symbol	Product Name	Quantity	Remarks
Instrument configuration	MP1632C*02	Ethernet LAN adapter	1	MP1630B*02 is for MP1630B. MP1632A*02 is for MP1623A It was already installed to the instrument.
	Z0398/Z0538	ETHERNET Installation DISK	4	Z0538 is attached when the ether card is 3 com CE.
	W1861AE	ETHERNET Operation Manual	1	

WARNING ⚠

Users should not replace any option by themselves.   Anritsu Service Department carries out replacement work.   Contact your nearest Anritsu branch office or distributor if you need to replace a option.   If you try to replace it by yourself, you may get injured or may receive electric shocks that could cause death.

SECTION 2   HOW TO CONNECT TO LAN

2.1 Connecting Cable

As shown in Fig.2-1, connect one end of non-shielded twist pare cable to the Ethernet connector.
And connect the other end of the cable to 10 BASE-T hub.
Insert a RJ-45 jack in the correct direction until you hear a click sound.

twisted pair cable

hub

RJ-45 jack
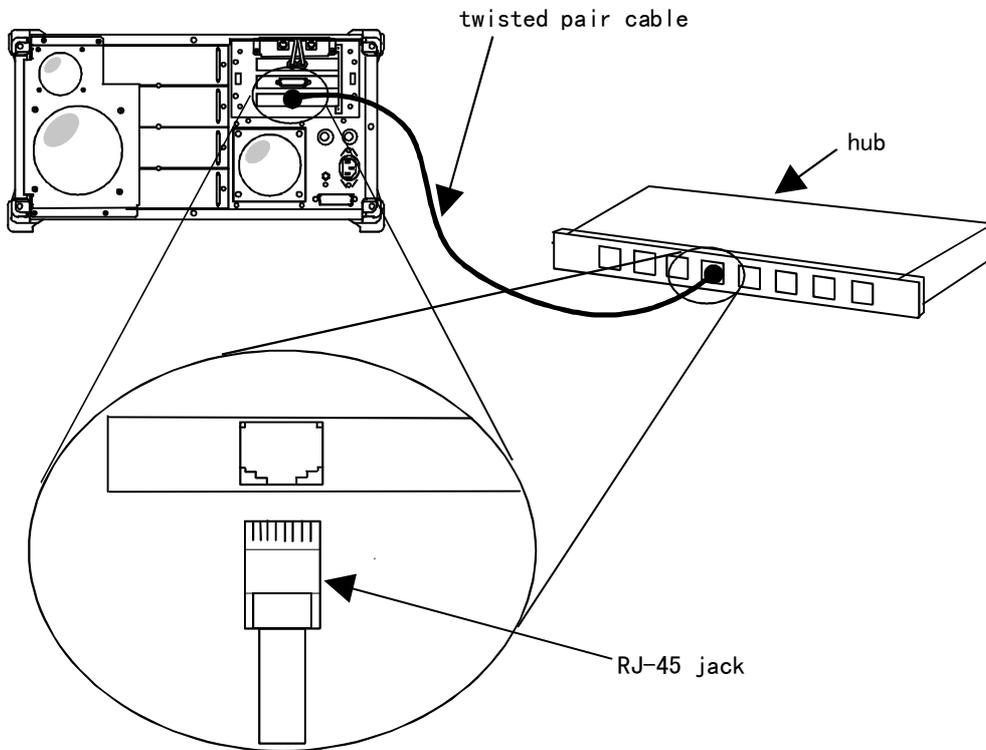
Fig. 2-1   Connecting the Ethernet Cable

Note

Keep the cable length between the instrument and the hub within 100m (328 feet).

2.2.1 Introduction

The instrument that is connected to LAN by this option behaves one host same as PCs or network printers.   So the instrument is needed to be set suitable for your LAN environment.   When the instrument is shipped, it is not set like that.   Make settings suitable by running utility program according to this section.

Utility program includes setting items that this operation manual does not mention about.   To set like that settings, see on-line help and ask your network administrator.

Setting items described in this manual are listed bellow.   For detail of each item, ask your network administrator of your organization.

(1) **User name**

   User name is your remote host login account name.   The user name is used when connecting with hosts that require user information (e.g. FTP server).

(2) **Computer name**

   A host (PC, workstation, the instrument, and so on) is uniquely identified on the network by its IP address.   Each host can also be identified by a one-word name that is associated with its IP address.   It is also called host name.

   The domain name (described below) is appended to the computer name to form your instrument official host name on the Internet.

   If your network uses a Domain Name Server, enter the host name exactly as specified for the server.

(3) **Domain name**

   Domain name is the name of the subnetwork or network within your organization.   Domain names end with a period followed by the name of one of the top-level Internet domains.   For example, Anritsu.com could be the domain name for the Anritsu Company, which belongs to the top-level domain .com, used for commercial establishments.

(4) **IP address**

   Internet protocol address of a host.   No two hosts in the world can share the same IP address.

(5) **Subnet mask**

   Subnet mask is the network mask address for the network to which the instrument is connected.   The subnet mask value depends on your network configuration.

(6) **DNS (Domain Name System)**

   To specified a certain remote host, you must know its IP address, however, numeric IP address is hard to memory.   DNS allows users to address a host using a name instead of IP address.   To realize DNS a HOSTS file or/and one or more DNS sever(s) is required.   A HOSTS file contains a mapping table of IP address, host names, and aliases, and it is allocated on local hard disk.   A DNS server is a host (usually a work station) specialized for DNS on the network.   It manages mapping table (same function as HOSTS file) as a whole network.

2.2.2 Setting Procedures

1. Turn on the instrument.

2. The instrument control application starts.   To quit the application, select the *Exit* from its
   File menu.

3. Open the *PathWay Runtime* group in the Program Manager.

Fig. 2-2   "PathWay Runtime" group

4. To start the network setting utility program, double-click on the *Config* icon.
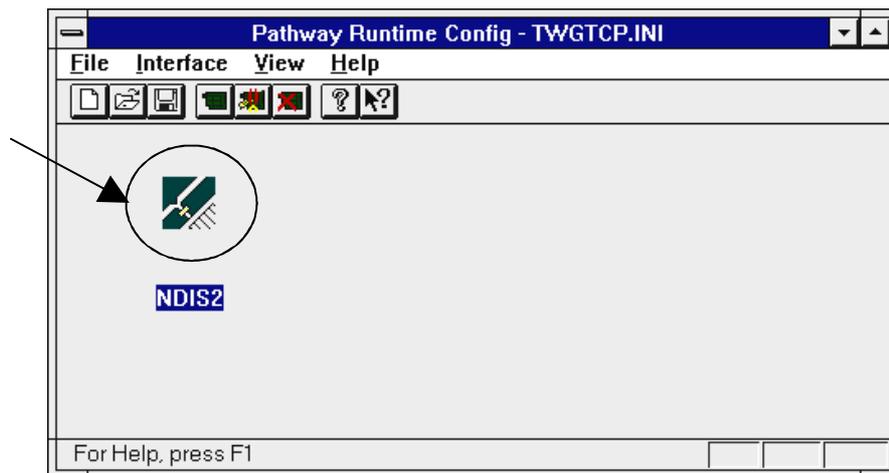
Fig. 2-3   Starting screen of the setting utility program (Config)

5. Double-click on an icon indicated by an arrow in Fig.2-3.   A configuration dialog will open.

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6. Clicking on an icon indicated by an arrow in Fig.2-4 enables you to set Internet parameters.
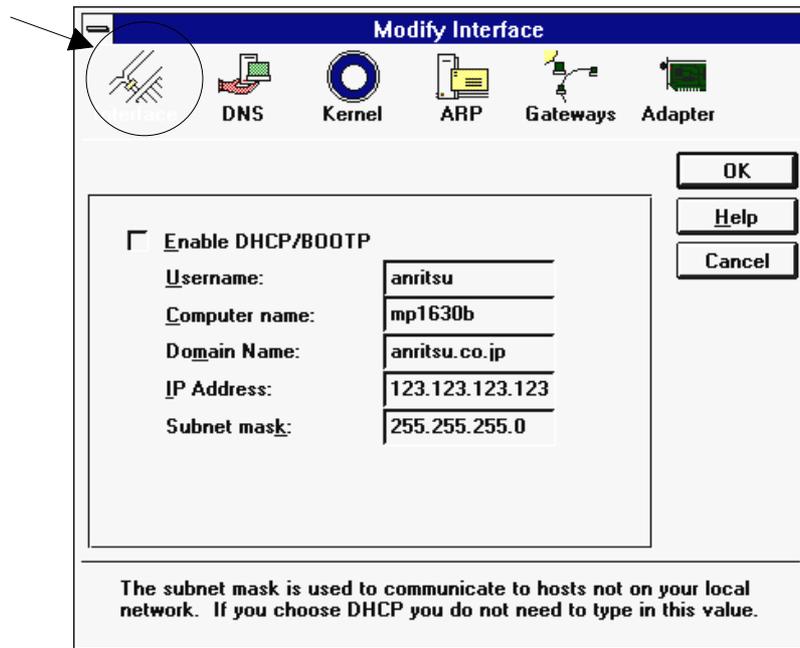
Fig. 2-4   Modify Interface Dialog Box (Interface)

Fill in suitable parameters on each setting fields described in Table 2-1.

Table 2-1   Interface Setting Items

Setting field	Description
Enable DHCP/BOOTP check box	Remain it OFF (unchecked).
Username: text box	Input your user name. A user name is alphanumeric, up to 256 characters in length, with no spaces.
Computer name: text box	Input the instrument's official host name. A computer name can be up to 256 characters in length, with no spaces.
Domain Name: text box	Input domain name of network on which the instrument is connected. A domain name can be up to 29 characters in length.
IP Address: text box	Input the instrument's IP address. An IP address comprises 32 bits, separated into four octets by decimals. For example, the IP address 200.30.5.3 has for octets (with eight bits per octet).
Subnet mask: text box	Input the subnet mask of the sub-network on which the instrument is connected. Its format as same as IP address.

7. Clicking an icon indicated by an arrow in Fig.2-5 enables you to set DNS parameters.
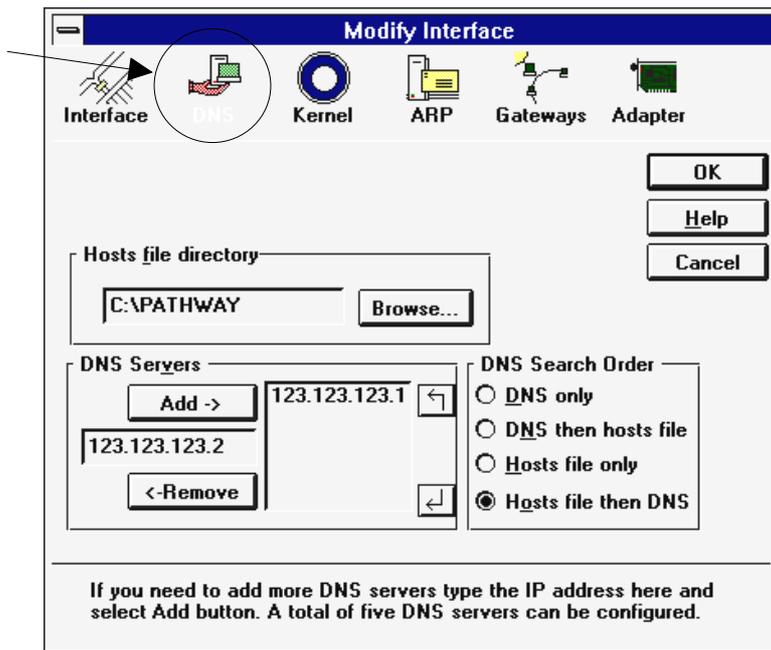
Fig. 2-5   Modify Interface Dialog Box (DNS)

Domain Name Servers resolve the names of on your network to their IP addresses.   This allows users to address a host using a name instead of its IP address.   The DNS dialog box (Fig.2-5) will allow you to change the location of the HOSTS file directory, add or remove IP address of DNS servers, and specify the order in which host names are resolved.

DNS	Resolves host names using Domain Name Severs only.
DNS then HOSTS file	Resolves host names using the DNS first, then the local HOSTS file.
HOST file	Resolves host names using the local HOSTS file only.
HOSTS file then DNS	Resolves host names using local HOSTS file first, then the DNS.

8. When you have set the fields to your satisfaction, click the *OK* button.   If you do not want to use the new setting, select *Cancel*.

9. To quit the network setting utility program, select *Exit* from the *File* menu.   Massage box labeled "Save Changes to C:\PATHWAY\TWGTCP.INI?" will appears immediately. Click on *OK*.   And then another message which prompt restarting Windows, click *Restart Windows* button.

10. After Windows restarts, the instrument's control application will start.   The new network settings is enable at this time.

2.3.1 Introduction

This section describes about PING; echo request program that can be used to help determine the operating status of the instrument and other hosts on TCP/IP networks. PING sends an Echo Request datagram to the selected host and listens for an Echo Reply datagram in response.

2.3.2 Starting PING

1. Turn ON the instrument.

2. The instrument control application starts. To quit the application, select the *Exit* from its *File* menu.

3. Open the *PathWay Runtime* group in the Program Manager.

Fig. 2-6 "PathWay Runtime" group

4. To start PING, double-click on the *Ping* icon.

Fig. 2-7 PING Starting screen

5. First, send data to itself. Fill in the instrument's IP address on the list box upper of the window, and click on the *Start* button. You should see yellow and green arrows moving on the lines joining the two terminals at the bottom of the window, indicating requests being sent and replies being received.

6. To see the result, click on the *Result* button. The *Ping Result* dialog box will be displayed.
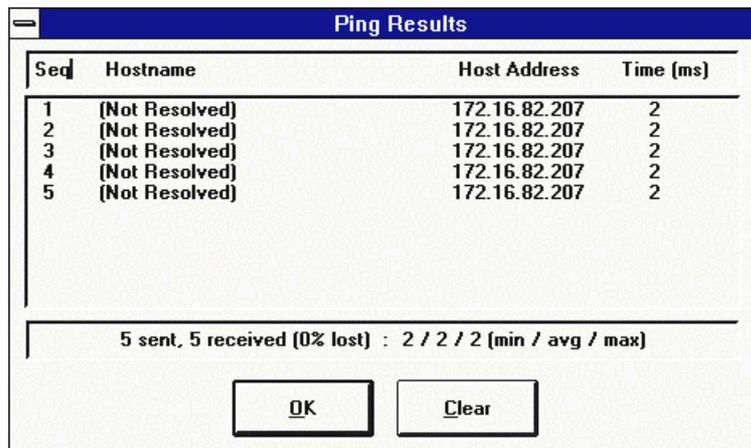
Fig. 2-8   PING Result Dialog box

The result screen reports result of host name resolving, too.   If you specified remote host with IP address or you set DNS disable, *Hostname* column always reports *[Not Resolved].*

When the message above the *OK* button say "0% lost", the test is successful.   If some of datagram is lost, interval time between datagrams may be too short.   To set more interval, select *Delay Between each Ping* from the *Option* menu.

7.   Next, perform same test to any other host on your network similarly.

8.   If you want to test whether DNS functions normally, check *Resolve IP Addresses* from the *option* menu.   Then specify any remote host on your network with its host name instead of IP address, and start PING.
If "[Not Resolved]" is reported as result, DNS setting or Domain name may be wrong.

Fail of ping shows that there are some problems about network settings.   Confirm the settings again with your network administrator's help.
If ping to itself is failed, there is possibility that the ethernet adapter is out of order.   In that case, perform diagnostic following the procedures described in "2.4 Diagnostics of the LAN adapter".

2.4.1 Introduction

When PING to the instrument itself is failed, there is possibility that the ethernet adapter is out of order.   In that case, perform diagnostics function described in this section to confirm whether the adapter is normal.

2.4.2 Diagnostics procedures

1.   Connect both terminal of the ethernet cable following procedures described in "2.1 Connecting Cable".

2.   Turn ON the instrument.

3.   The instrument control application starts.   To quit the application, select the *Exit* from its *File* menu.

4.   To quit Windows® select *Exit Windows* from the *File* menu of Program Manager.   The menu screen is displayed.

```
                    MP 1632C
                    ─────── M E N U ───────

                    1 ... MP1632C Startup

                    2 ... Defrag

                    3 ... Scandisk

                    4 ... Windows Setup

                    5 ... MP1632C Startup with Default Settings

                    6 ... Etherborad Diagnostics


            Select command number.  Otherwise, turn off MP1632C.
```
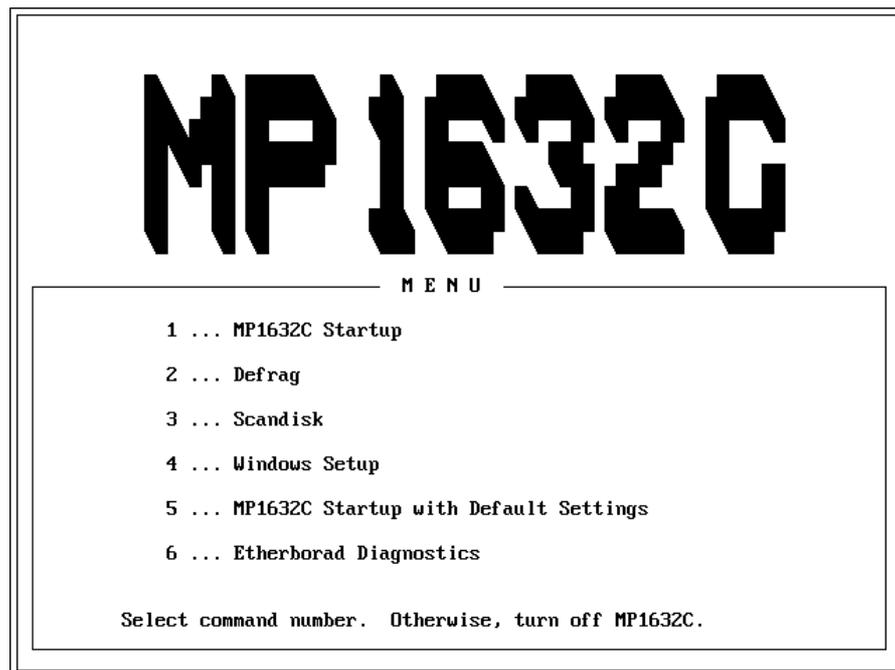
Fig. 2-9   Menu Screen

5.   To start diagnostic program, select 6.

6. Checking the back of the ether card.   If "3 com CE" is not described on it, proceed to step A.   If it is described, proceed to step B.
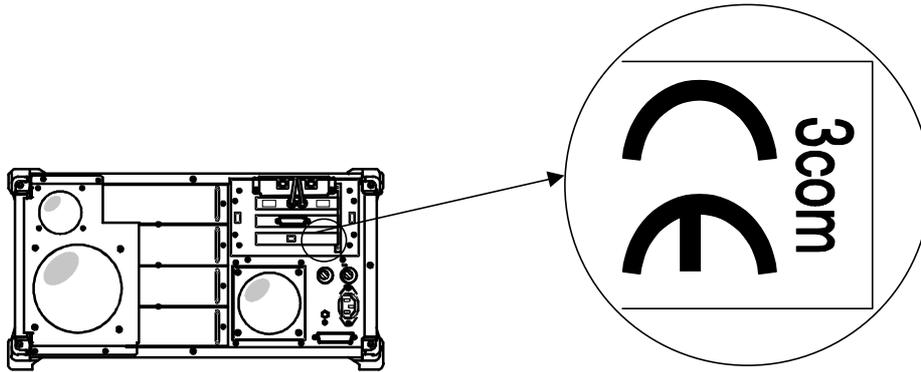
Fig. 2-10   Ether card

A. If "3 com CE" is not described

```
+-------------------------------------------------------------------+
|D-Link DE-220 Family Ethernet Card Setup/Diagnostic Program   Ver2.61(970516) |
+-------------------------------------------------------------------+
 _+------- Your Current Configuration --------+ +-------- Main Menu ---------+__
 _| Node ID -------------- 00 80 C8 1E FC 5D  |_|  SetUp Configuration     |__
 _| Bus Mode ------------- 16-bit             |_|  Adapter Basic Diagnostics |__
 _| Card Type ------------ CT                 |_|  Network Diagnostics     |__
 _| I/O Base Address ----- 300                |_+--------------------------+__
 _| Interrupt Number ----- 10                 |
 _|                                           |_____
 _|+--------- Setup Configuration ----------+ |_____
 _|| Connector Type ------> UTP (RJ-45)      | |_____
 _|| I/O Base Address ----> 300              | |_____
 _|| Interrupt Number ----> 10               | |_____
 _|| Plug and Play -------> Disabled         | |_____
 _|| Remote Boot ---------> Disabled         | |_____
 _||                                         | |_____
 _||                                         | |_____
 _||                                         | |_____
 _|+-----------------------------------------+ |_____
 _+-------------------------------------------+ |_____
                                                _____
 ■■ Move     Enter Select     F1 Help     Esc Exit
```

Fig. 2-11   Self-diagnosis main menu screen

1. Highlight *Adapter Basic Diagnostics* in the menu on the upper-right corner, and to start diagnostic, press Enter key.

```
+------------------------------------------------------------------------+
|D-Link DE-220 Family Ethernet Card Setup/Diagnostic Program   Ver2.61(970516) |
+------------------------------------------------------------------------+

              +---------------- Adapter Diagnostic ----------------+
_____     | Node ID         : 00 80 C8 1E FC 5D               |_____
_____     | I/O Base Address : 300                            |_____
_____     | Connector Type  : UTP (RJ-45)                     |_____
_____     | Interrupt Number : 10                            |_____
_____     |                      Cycle    0                   |_____
_____     | Current I/O Base Address .................... PASS |_____
_____     | DC-DC Convert, Oscillator, Crystal T7213 ... PASS |_____
_____     | EEPROM ...................................... Testing |_____
_____     | LAN Setup Registers ........................ Unknown |_____
_____     | Memory ..................................... Unknown |_____
_____     | LAN Control Functions ...................... Unknown |_____
_____     | Cable Connection ........................... Unknown |_____
_____     | Loopback Mode Testing ...................... Unknown |_____
              +----------------------------------------------------+
 _____
 _____
 _____
 _____
 _____
 Esc Exit
```

Fig. 2-12   Diagnostics Progress Screen

Note

・There is risk that the ethernet adapter becomes not to work if you select except *Adapter Basic Diagnostics* and change some settings.   Do not select item except *Adapter Basic Diagnostics* from the menu.

・The *Loopback Mode Testing* may take much time (from 30 seconds to 1 minutes).

2.   The "Remote" key on the front panel of the instrument is assigned to the "ESC" key on a keyboard.   Similarly, the "M/k" key is to the "F1" key.   To quit the diagnostic program, press the "Remote" key.

If an abnormality is detected, contact the nearest Anritsu branch, sales office or Anritsu agent described at the end of this operation manual.

B. If "3 com CE" is described
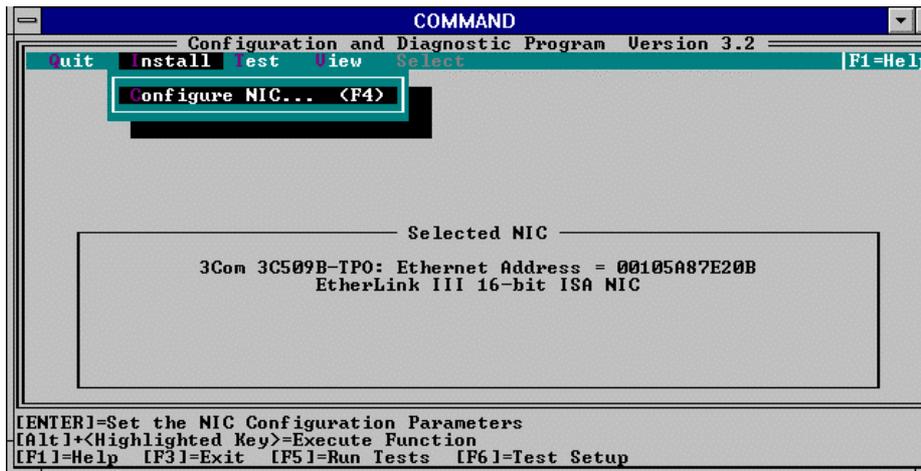
Fig. 2-13   Self-diagnosis main menu screen

1. Select "Test" from the menu on the screen and press the Enter key.   Then, select "Run test" and press the Enter key.   The screen is transferred to the self-diagnosis screen.
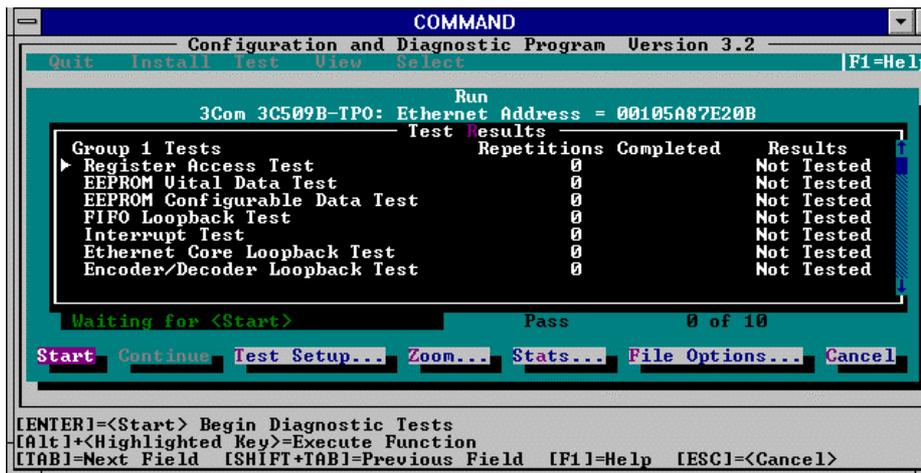

Fig. 2-14   Self-diagnosis screen

2. Select "start" from the menu at the bottom of the screen and press Enter to start the self-diagnosis.

3. When the self-diagnosis is completed, select cancel from the menu at the bottom of the screen.   The screen returns to the main menu. To end the self-diagnosis, select "Quit" and press the Enter key

If an abnormality is detected, contact the nearest Anritsu branch, sales office or Anritsu agent described at the end of this operation manual.

SECTION 3   HOW TO USE FTP

3.1 FTP Overview

The File Transfer Protocol (FTP) enables transfer of files between computers on a network.   With this ETHERNET option, the instrument can behave like a computer, and it provides you with two FTP applications: FTP Client, and FTP Server.
FTP Client lets you to transfer files between your instrument and a remote host, and FTP Server lets you give other users on the network the ability to transfer files to and from your instrument. This section describes the use of FTP Client and FTP Server.

Note

Before start the FTP Client or FTP Server, you must quit the instrument control application. There is risk that the system gets wrong, when the FTP application and the instrument control application are running at the same time.

3.2.1 Preparations

Make the following preparations before starting FTP client session:

● Find out if your instrument has been configured to use a DNS server, so that you can specify an alias (name other than its numerical IP address) to access a remote host.   If your instrument is not set up to use a DNS server, you must use IP address or create HOSTS file.

● Through your network administrator who manages remote host which you want to exchange files, obtain
  1. A valid user account on each remote host
  2. The IP addresses, official hostnames, or aliases of the remote hosts with which you want to exchange files.
  3. Verification that each remote host has an FTP server (also referred to as "FTP deamon" or FTPD) process running.   Most remote hosts such as OpenVMS or UNIX systems are always running an FTP server.
  4. Appropriate level of authority on each remote host, so that you will be able to use those file transfer and file manipulation functions that you need.

● Become familiar with the file system structure, case-sensitivity, and file-naming conventions on the hosts you want to use (such as those used with the UNIX or OpenVMX operating systems).

3.2.2 Using FTP client

1. Open the *PathWay Access* group in the Program Manager.
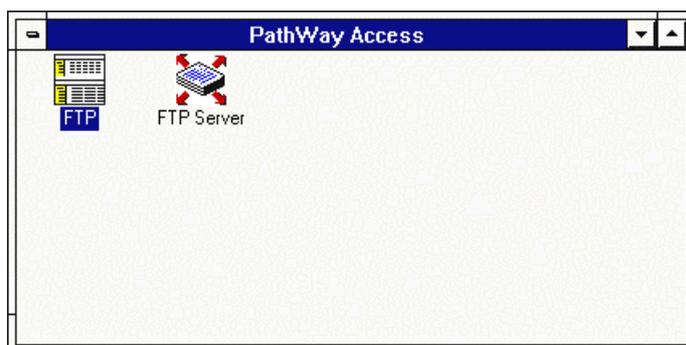
Fig. 3-1   PathWay Access group

2.	Double-click on the *FTP* icon to open the *FTP* window.
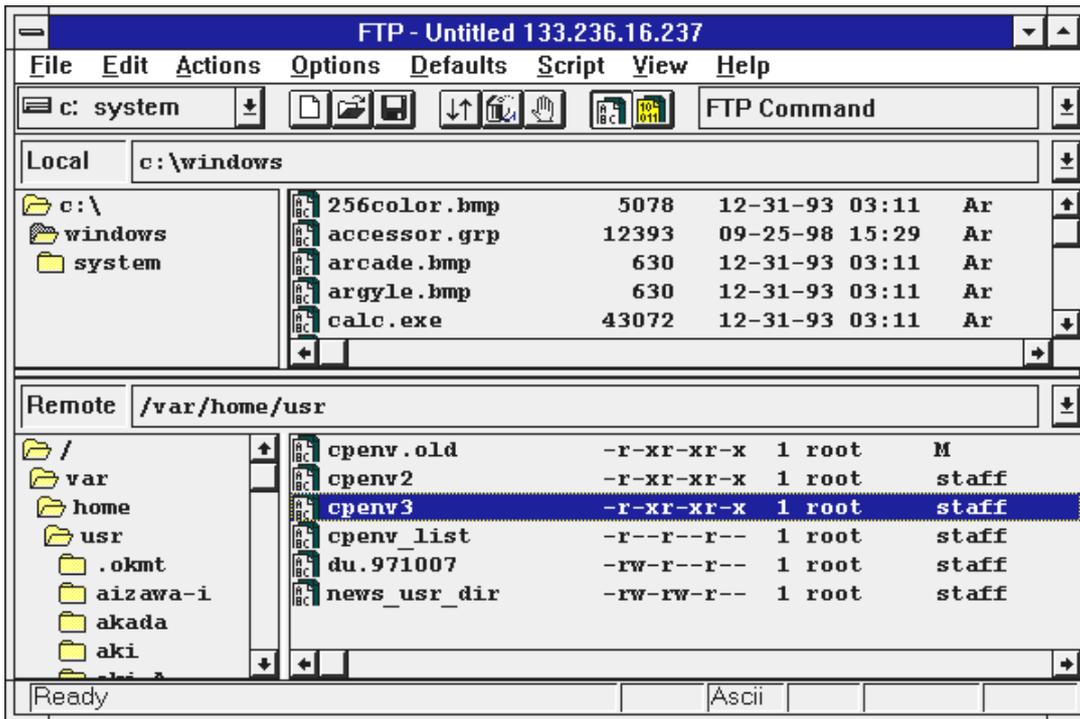

Fig. 3-2   FTP Window

Notice that the *FTP* window displays the files on your local instrument in the upper portion of the window, and the files on remote system in the lower portion.

The directory and file display functions the same as in Windows®.   You can use standard Windows® techniques to browse directories and select files.   Before you start a file transfer, however, you should have some knowledge of the file system structure on the remote host, and know filename and where the file(s) reside.

The elements of the *FTP* window are described in Table 3-1

Table 3-1   FTP Window

Button/Field	Description
FTP Menu bar	Displays names of the available command menu. Click on any name to open the menu. This manual doesn't describe all menu functions. For detail of individual functions, refer to on-line help from the *Help* menu.
Tool bar	Displays two windows (local drive windows in the left, FTP Commands window on the right) and a row of buttons to give you quick access to most-used commands. The *Toolbar* display is on by default. To remove it, toggle the *Toolbar* option from the *View* menu. For more information refer to "3.2.3 The FTP toolbar".
Local : field	Displays the drive and directory path currently selected on your instrument. Click on the scroll (arrow) button to display a history of directory changes made during and FTP session.

Table 3-1   FTP Window (continued)

Button/Field	Description
Local list box	Displays your instrument's directory tree and file list for the selected directory. To select a file on which to perform a file transfer operation, highlight the file(s) in the list box
Remote: field	Displays the remote host's directory path currently selected on the remote host. Click on the scroll (arrow) button to display a history of directory changes made.
Remote list box	Displays the remote host's directory tree and the file list for the selected directory. To move up or down a level in the directory list, double-click on the applicable folder icon. To select a file on which to perform a file transfer operation, such as a transfer, deletion, or rename, highlight the file(s) in the list box.
Status: field	Displays the status of the current FTP operation at the button of the window. For example:

	Ready	No operation is in process.
	ASCII	FTP is ready to transfer ASCII mode
	Binary	FTP is ready to transfer Binary mode
	Filter	Only files having attributes you specify are displayed this option is on.
	Doc type	The *Doc type* option is on.
	Ext. Trn	File extension will be translated when this option is on.

To remove the status display, toggle the *Status Bar* option in the window menu.

3.2.3 The FTP toolbar

The following items comprise the FTP Toolbar:

<p align="center">Table 3-2   FTP toolbar</p>

Button or Window	Description
Local drive window	A scrollable window that permits you to change the local file display to show the contents of a different drive on your instrument. Functions like *Change local drive* option in *Actions* menu. **Note** : Because drive D is dedicated to virtual memory, you should not change to drive D.
Transfer	Transfers a copy of the file or files selected. Note that this button is not acti-vated (appears gray) until the file(s) to be transferred are selected. Functions like *Transfer* command in *Actions* menu
ASCII	Specifies ASCII (text) file transfer format, translating end-of-line characters to suit the operating system of the machine that is receiving them. Press-ing this button caused all files to be treated as ASCII files, except those specified otherwise using *Doc type by extension* (from *Defaults* menu). Functions like *ASCII* command in *Defaults* menu
Binary	Specifies binary (data) file transfer format. No characters are translated; the data maintains its original format. Pressing this button causes all files to be treated as binary files, except those specified otherwise using *Doc type by extension* (from *Defaults* menu). Functions like *Binary* command in *Defaults* menu
New Session	Starts a new FTP session by displaying an FTP Login window and a new FTP session window. You can start a new session while another is in prog-ress. The new, unconnected session window is displayed over the current, connected session window. Functions like *New* command in *File* menu.
File ... Save(As)	Saves the session settings (*Save*) or saves changed session settings (*Save As*) in a new file. Functions like *Save* and *Save As...* command in *File* menu.
File ... Open	Opens a saved session file. Functions like *Open* command in *File* menu.
Stop	Aborts the action in progress; for example, stops a file transfer or file dele-tion. Functions like *Stop* command in *Actions* menu.
Delete	Deletes the currently selected file(s). Functions like *Delete* command in *Actions* menu.
FTP commands window	A scrollable window that displays file transfer commands you can use to manage files and directories on the local and remote systems. For detail of FTP commands, see "FTP Command Reference" on on-line help's contents.

3.2.4 Establishing a new session

To start a new session:

1. Select *New* from the *File* menu.   The *FTP Login* dialog box appears.
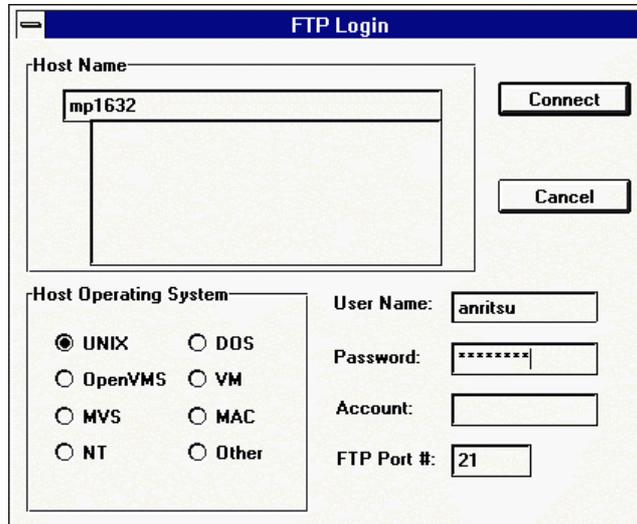
Fig. 3-3   FTP Login dialog box

2. Specify the following setting:

Table 3-3   FTP Login dialog box

Field	Description
Host Name: field	Type the IP address, official hostname, or alias of the remote host to which you want to connect (or select an official hostname or alias from the list box).
List box	Select a remote host from the list of official hostname or aliases.
User name: field	Type a valid username or ID for the remote host to which you are connecting.
Password: field	Type the password for your username.
Account: field	Type the account name, if applicable. This is dependent upon the remote host, therefore may not be required. Check with the network administrator.
Host Operating System check box	Select the type of operating system: *UNIX, OpenMVS, DOS, VM, Mac*, or *Other* is the default.
Cancel button	Select *Cancel* to close the dialog box without starting a session.
Connect button	Select *Connect* to start the connection. When you have connected to the remote host, the *FTP* window refreshes.

When you have set the options to your satisfaction, click the *Connect* button.   If you do not wan to use the new set of options, select *Cancel*.

After establishing connection, no operation for a while causes compulsory closing by the FTP server (this period is specified by the FTP server you are connecting). If you access FTP server (including file browsing) under such a condition, because the FTP client tries to access repeatedly without establishing again, you can't operate about for 3 minutes, and after that a warning message will appear.

If such a situation is occurred, close the session by selecting *Disconnect Session* from *File* menu, and establish a new session again.

3.2.5 Manipulating files

During a file transfer session you may perform various tasks using the *Actions* menu items as described Table 3-4 below.

Table 3-4   Actions menu items

Button/Field	Description
Transfer	Transfer a copy of the selected file(s).
Delete	Deletes the currently selected file(s).
Rename	Renames the currently selected file(s).
Refresh	Updates the file lists to reflect changes caused by file transfers, renames, and deletions.
Stop	Cancels the current activity. If you cancel a file transfer, a partial file may be left on the destination host.
FTP command	Provides an alternative input field for FTP commands. For detail of FTP commands, see "FTP Command Reference" on on-line help's
Change local drive	Provides an alternative method of changing the local drive.

Transferring files without making changes:

1. Select the format for the transferred file (*ASCII* or *Binary*) from the *Defaults* menu:
    where

    ASCII   is a word processor file, a spreadsheet print file, or program source code.
    The file Transfer program automatically converts ASCII, or "text," files to the correct format for the host to which files are being copied.

    Binary   is an executable file, if it is a graphic, or if you do not want line feeds or carriage returns between each line of text. The File Transfer application does not convert binary files in any way; they are transferred bit-by-bit.

2. Select the destination directory to receive the transferred file, and then select the source directory. To change either the destination or source directory, select it from the list boxes in the *FTP* window. You can also change drives by selecting it from the list box in the upper-left corner of window, for example, click on A: or C:.

3. Select the file(s) you want to transfer. You can select a file to transfer from any directory. To select multiple files, use any of the following methods:

   ● Hold down the Control key while you select the files with the mouse or touch screen. (this methods needs a keyboard)
   ● Hold down the Shift key to select entire groups of files.

4. Click the *Transfer* option from the *Actions* menu. (This transfers files as they are currently named.)

Transferring files with making filename changes:

1. Double-click on the selected file(s). A *Local/Remote Quick Act* dialog box appears.
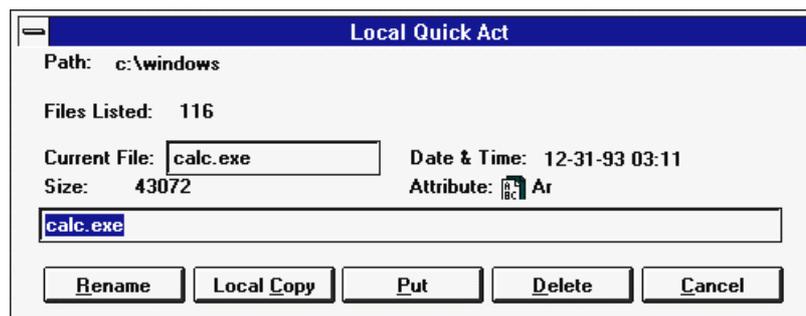
Fig. 3-4   Local Quick Act dialog box

For *Local Quick Act*, you may perform a *Put, Rename, Delete, Cancel,* or *Local copy* action. For *Remote Quick Act*, you may perform a *Get, Rename, Delete* or *Cancel* action.

2. Fill in the new name(s) on the dialog box.

3. Click *Put* or *Get* to change the name of the transferred file(s).

If the Warning option (ON by default) is on, you will be prompted when you attempt to transfer a file with the same name as existing file. You will be asked whether you want to replace the existing file with the file being transferred.

A status field in the lower-left corner of the *FTP* window displays the number of kilobytes transferred so far.

Renaming files

1. Select the file to be renamed.

2. Click on the *Rename* option from the *Actions* menu. The *Rename Local File / Rename Local File* dialog box appears.
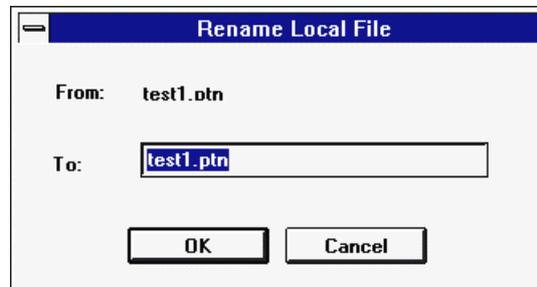

Fig. 3-5   Rename Local File dialog box

3. To Change the name of file, type the new name, the click *OK*.

Deleting files from the instrument or the remote host

1. Select the file(s) from the local or remote file lists.

2. Click on the *Delete* option from the *Actions* menu.

   If the Prompt option is on, the *Confirm Delete* dialog box appears. Select *Yes* or press Enter to delete the file(s).

   If the *Prompt* option on *Option* menu is off, you will not be prompted to confirm the deletion of the file(s).

Canceling a file transfer

1. Click on the *Stop* option from the *Actions* menu.

    The file transfer could have been invoked by selecting the *Transfer* option, clicking the transfer (arrows) button on the Toolbar, or by using the **get**, **put**, **recv**, **send**, **aget**, **aput**, **bget**, **bput**, **mget** or **mput** command from *FTP Command* menu.

    Note

    If you cancel a *Transfer* command before the file transfer is complete, an incomplete file may be left on the host.

2. When transferring multiple files, if you do not want to transfer a particular file, select *No* in the *Confirm File Transfer* command dialog box.

    Note

    The *Prompt* option must be selected from the *Options* menu if you want to be prompted to cancel the transfer of specific files during a multiple file transfer operation. If the *Prompt* option is off, all files specified will be transferred.

Changing the destination directory

To specify a different destination directory, use either the directory list or the *FTP Command* menu.

-   For the directory list, click on the list until the directory in which you want to place the file displays.

-   For the *FTP Command* menu, type the **cd [rdir]** or **lcd [ldir]** command to change the directory on the remote host or your instrument or pull down the menu and highlight the **cd [rdir]** or **lcd [ldir]** command.

    Note

    If the *Auto refresh* option on *Option* menu is off, you may need to select the *Refresh* button to update the file listing.

3.2.6 Running scripts

A FTP Script file is text file that you may create with any text editor. The file may contain any FTP command that is listed in *FTP Command* menu (or *FTP Command Reference* which is one of the on-line help content). Each command must be on a separate line.

To specify a script, use the *Script* menu. The *Script* options are as follows:

Table 3-5

Option	Description
Run	Execute script currently selected.
Select	Specify a script to execute. Choose *Select* from the *Script* menu. The *Select Script File* dialog box appears. Select a script file from the list box or enter the name of the file, and click *OK*.
Edit	Edit a script file.
Auto run on init	Automatically execute selected script in the *.ft* file upon logging in to FTP. You may toggle this option *ON* or *OFF* from the *Script* menu.

3.2.7 Saving a session's settings

To save the transfer settings from a session, click on the *Save* command from the *File* menu or click on the *Yes* button in the *Save Changes* dialog box (if you select *Exit* from *File* menu). In the next dialog box type a file name. Use the selection list to change directory.

The file extension *.ft* will be appended so that the file will appear in the default file list, but you can specify any three character extension.

3.2.8 Opening a saved file transfer session

To open a saved file transfer session:

1. Select *File* on the menu bar and then select *Open*.

   or

   Click the *File... Open* button on the tool bar.

   A list appears of transfer sessions saved in the default directory (or any other directory) with the *.ft* extension.

2. Select the file name (session) you want to use.

3. Click the *Connect* button.

4. When the connection is made, the *File Transfer* dialog box appears.

You may also open a file by selecting the *.ft* file from the File menu.

3.2.9 Opening multiple file transfer sessions

The total number of sessions you can open is limited by the amount of available memory.

To open additional sessions while the current session is still open, select one of the following from the *File* menu:

- *New*
- *Open*

When the FTP Login dialog box displays, use the procedure described in "Establishing a new session" on page 23.

To switch between sessions, click on the window you want to make active to activate a particular file session window.

3.2.10 Editing a saved file transfer session

The *Edit* menu allows you to select an *.ft* file so that you may make changes.   Use the *FT document* function on *Edit* menu when your saved username or password has been changed, or you want to modify other characteristics in your *.ft* file.

1. Highlight the file and clock *OK* on the *Edit an FT Document* dialog box.

    If your *.ft* document is not stored under the default directory(*C:\PATHWAY*), you may change drives or directories and highlight the file in the list box or type it in the *File name:* entry field.   Click *OK*.   The *FTP Login* window is displayed.

2. Change the desired characteristics.

3. Click *Save* or *Save As* to save the new settings.

The *Auto save on exit*   on Edit menu option allows you to save your FTP session automatically when you close the session.

3.2.11 Closing a file transfer session

To close a file transfer session, you can select *Exit* or *Disconnect* from the *File* menu at any time during a session.   This will forcibly close all connections, you will be disconnected from the remote host, and the *FTP* window will close.   It is possible that some files on the remote host might not be closed properly.

To close a file transfer session, you may do any one of the following:

- Select Close from the Control-menu box in the upper-left corner of the *FTP* window.

- Select *File* on the menu bar, and then select *Exit.*

- Select *File* on the menu bar, and then select *Disconnect.*

If *the* session was started with the *New* option, or if options were changed during the session, you will be prompted to save the session's options.

The FTP Server application enables you to give FTP access–the ability to copy files to and from your instrument–to other users in the network.   Once you have set up user access parameters, you can either let the FTP Server run unattended, (displayed minimized, as an icon), or, if you proper, open the full window.   With the window open you can observe FTP logins and logouts as they occur.

Because you issue user Ids associated with specified privileges, you retain complete control of all FTP access to your instrument.   You can

- Limit any user's access to only certain directories that you specified.

- Specify each user's read/write privileges.

- Require that users enter passwords, and/or set up username for general access (for example, "anonymous") that need no password.

FTP Server also lets you monitor the FTP activity of any user.   Whenever a user logs in to your system, an icon appears in the FTP Server window.   Operating the icon reveals a log of session operatings, as they occur.   You can monitor session logs while FTP sessions are in progress, or you can have any user's activity logs remain in the server window so you can review them later.

You can turn on or turn off the file transfer service as you wish, without disrupting any server activity that may be in progress.

3.3.1 Starting to use the FTP Server

Use the following procedure to set up and start using the FTP Server:

1. Open the *PathWay Access* group in the Program Manager.
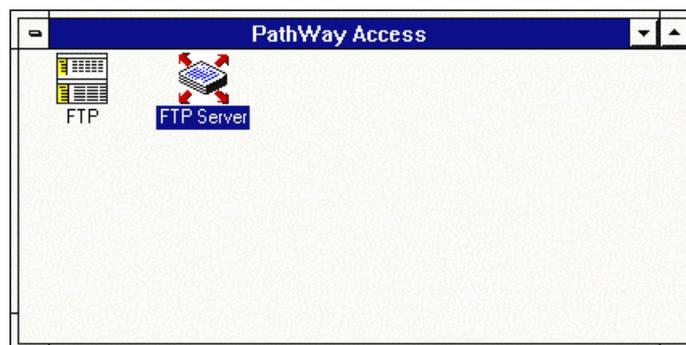
Fig. 3-6   PathWay Access group

2. To Start the server, double-click on the FTP Server icon.   The server icon appear on the Windows desktop.

   Note

   By default, FTP Server runs minimized (displayed as an icon)

3. To open the server window, double-click the icon on the desktop.
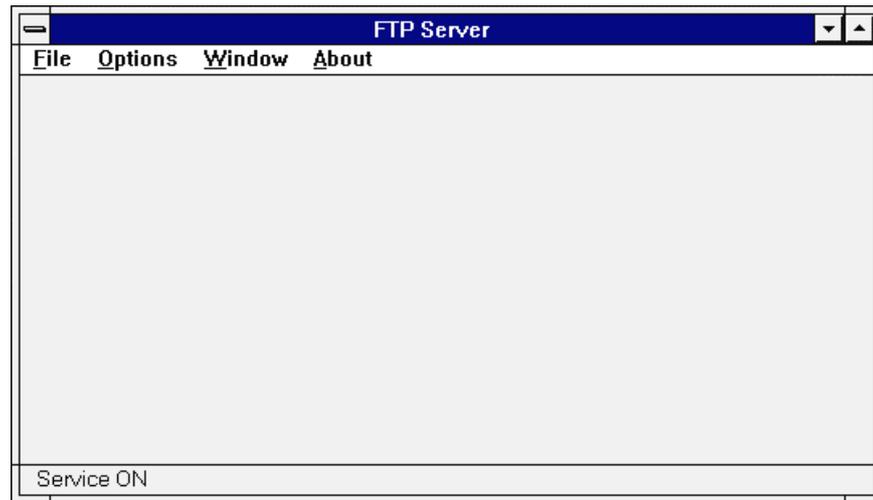
Fig. 3-7   FTP Server Window

4. In the server window, select User Setup... from the File menu, and set up usernames for those users you will let use the service.   (For recommendations and procedures, see next section)

5. When you have finished building your initial user list, click the Exit button to close User Setup dialog box.

6. Read the status bar (at the bottom of the FTP Server window) to verify that FTP service is on. If service is off, select Service On from the Options menu.

7. Minimize the FTP Server window if you need not be actively involved in server use, or leave the window open, if you want to observe file transfer service activity.

3.3.2 FTP Server window elements

When you open it, you can see that the server window is very simple, containing only a menu bar, an activity area in which user login icons are displayed, and a server status bar at the bottom on the window.

You initiate all server management functions using commands available from the server menus. All menu commands are described in Table 3-6, which follows.

Table 3-6   FTP Server menu commands

Menu name	Command	Description
File	*User Setup...*	Opens the User Setup dialog box, from which you authorize all FTP access to your instrument.
	Exit	Closes the FTP Server application, immediately stopping FTP service availability. Using this command aborts any FTP session in progress. To stop FTP service without disrupting a current FTP session, turn service off from the *Options* menu.
Options	*Service On*	When selected (checked) turns on the FTP Server, making file transfer service available to FTP users you have authorized. The legend "Service ON" appears in the status bar at the bottom of the FTP window. When deselected (not checked) file transfer service is prohibited to new logins. The legend "Service OFF" appears in the window's status bar. Turning service off *does not interrupt* any FTP session in progress.
Window	*Minimize on open*	When selected (checked), opens and runs FTP Server minimized as an icon. This command is selected by default. If you prefer to open FTP Server as a window, deselect (unchecked) the command.

3.3.3 Managing user access

Because running FTP Server permits others entrance into your instrument system, it is important that you plan and control the access to directories, and the ability to manipulate files that you allow users. Some possible users access setups are:

● Anonymous or guest access.   To permit users only to copy files from your instrument, but nothing else, set up and FTP transfer directory, to which you direct and limit the users, and in which they have only *read* privileges.   Read privileges let a user view file and subdirectory listings, and copy files from your system to their own.   You may or may not want to require that users enter a password to permit access.

● User home directory access.   For this, set up a *home* directory for each user, to which you direct and limit the user.   In the user's own home directory, you can allow both read *write* access; that is, in addition to viewing and copying files, permit the user to transfer files to, delete files from, and create subdirectories in the directory.   Require a password for access to a home directory.

● A combination of anonymous and home directory access.

● Unlimited or "superuser" access for certain specified users, for example, a system administrator.   *Always* require a password for this type of access.

User Setup dialog box

The *User Setup* dialog box, available from the *File* menu, is where you add new FTP users, delete existing users, or change any aspects of an existing username setup.
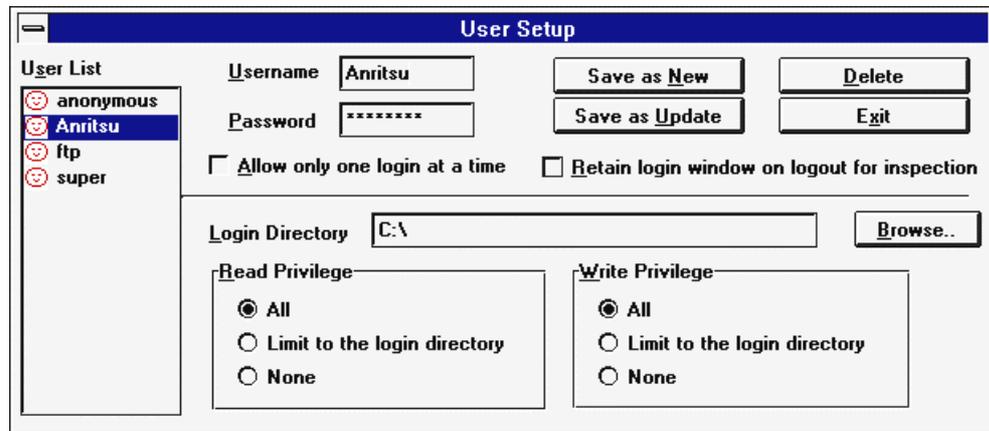

Fig. 3-8   User Setup dialog box

When you first open this dialog box, notice three sample usernames, "anonymous," "ftp," and "super," have been set up for you.   Click on each name to view that name's assigned access privileges.

You can delete these username, modify their access privileges, or use them just as they are set up (if you create the directories that "anonymous" and "ftp" have been assigned to).   However, if you keep the "super" username setup, which has been given unlimited access, make sure that you assign it a new password.

The controls and fields in the User Setup dialog box are described in Table 3-7, which follows,

Table 3-7   Controls and fields in the User Setup dialog box

Control/field	Description
User List	A list of all FTP usernames currently assigned. Selecting any name inserts that name in the Username field, and displays the user's existing access privilege settings.
Username field	A field in which you type a new username, or in which any username you select from the User List is displayed.
Password field	A field in which to assign or change a user password. A password entry is never displayed in this field, but appears only as a row of asterisks, You can leave this field blank for a username account for which you do not require a password (for example, "anonymous", or "guest").
User login check boxes	*Allow only one login at a time*, when checked, permits only one user at a time to log in under the selected username. This feature is useful in case where more than one person has been given "super" user privileges.

Retain login without on logout for inspection, when checked, prevents the user's session log window from begin deleted from the server window at the session's end.   Use this feature when you want to keep the record of the user's FTP activities for late review. |

Table 3-7   Controls and fields in the User Setup dialog box (Continued)

Control/field	Description
Login Directory field	A field in which to assign or change a user's current (active) directory at login. If you choose, you can limit a user's read and/or write access to only the files in the login directory. To do so, click *Limit to the login directory* in the *Read* and/or *Write Privilege* boxes.
Browse... button	Opens the *Browse* dialog box, from which you can select a directory path and automatically insert it in the *Login Directory* field.
Read / Write Privilege selection areas	Areas in which a user's file access privilege levels are assigned and displayed. Click on the button for a privilege level to select it. — *Read* privileges let a user view file and directory listings and transfer copies of files from your instrument. — *Write* privilege let a user create directories on your instrument, transfer files to your instrument, and delete files and directories from your instrument. — *All* permit unlimited access. — *Limit to the login directory* restricts access to only the directory (and all its subdirectories) named in the *Login Directory* field. — None denies access.
Save as New button	Saves a new user setup and displays the new username in the *User List*. This button is activated (undimmed) as soon as you start type in the *Username* field.
Save as Update button	Saves any changes made to an existing setup. This button is activated (undimmed) as soon as you make any change to any access setting for a selected username, or to the username itself.
Delete button	Deletes the account for the username shown in the *Username* field. When you click *Delete*, a prompt box appears asking you to confirm the deletion. Click *Yes* to delete the user, or *No* to cancel the deletion.
Exit button	Closes the *User Setup* dialog box. If you made any changes but did not save them, a prompt box appears, asking you to confirm the exit. Click *Yes* to close the dialog box, or *No* to cancel the exit.

Authorizing a new user

To authorize a user to transfer files to and from your instrument, you assign that user an FTP username that is associated with file access privilege that you specify.

Set up a new username as follows:

1. From the *File* menu, Select *User Setup...* to open the *User Setup* dialog box.

2. In the *Username* entry field, type the username you are assigning.

3. If you require the user to enter a password, type it in the *Password*; If no password is necessary, leave the field blank.

   Note that any password you type is not displayed; it appears in the field as a row of asterisks.

4. In the *Login Directory* field, type the path to the directory that will be the user's initial current directory (or click *Browse...*, to open the *Browse* dialog box, and select the directory from there)

5. Select the *Read Privileges* and *Write Privileges* that you will allow the user.

6. Click *Save as New*. The new username appears in the *User List*.

7. To add another user, repeat steps 2 through 6; to close the dialog box, click *exit*.

Deleting a user

1. From the *File* menu, select *User Setup...* to open the *User Setup* dialog box.

2. In the *User List* displayed, select the username to be deleted. The selected name appears in the *Username* field.

3. Click *Delete*. A prompt box appears asking you to confirm the deletion.

4. Click *Yes* to delete the user, or *No* to cancel the deletion.

5. To delete another user, repeat steps 2 through 4. To close the dialog box, click *Exit*.

3.3.4 Managing the FTP service

In addition to controlling user access, you have control over FTP service availability, and you can monitor service use.

Controlling service availability

To permit users to log in to your instrument and transfer files, the FTP Server must be running on your instrument, and FTP service must be turned ON.   You control service availability from FTP Server window.

- To tun service on

  Select *Service On* from the *Options* menu.   Notice that the legend, "Service ON," appears in the status bar at the bottom of the window.

- To tun service off

  Deselect (unchecked) the Service On command.   This closed the server to any further logins, but does not interrupt any sessions in progress.   The status bar displays the legend: "Service OFF."

Monitoring service use

You can monitor a user's FTP activity while a session is in progress, and you can retain session logs for later review.

To monitor a session in progress

1. Open the FTP Server window, and size it so that it is large enough for you to view all user icons that can be displayed.
   When a user logs in to your instrument, an icon appears in the FTP Server window.
   The icon is labeled with

   - The username

   - The IP address of the client computer

2. To observe user session activity, double click on the username icon to display the FTP session log, a continuing list of all FTP operations taking place.

3. The icon is displayed until the user logs out, or is timed-out. (After 30 minutes of inactivity [a fixed duration], the FTP Server times-out the login automatically, and removes the icon.)

To be able to review closed sessions, set up the username to permit this when you authorize the user's FTP access.   Check *Retain login window on logout for inspection* as part of the username's profile.   Then, when that user ends an FTP session, the user icon remains displayed in the FTP Server window.   Open the icon to display the session log.

SECTION 4 HOW TO RECOVER SOFTAWARE

In addition to software that is installed in the instrument, this option is controlled by network driver and other software. The instrument and this option may fail to work correctly if any part of the software is corrupted by HDD fails or invalid file manipulations.

If this happens, you need to carry out software recovery by using the Installation DISK supplied with this option.

The Installation DISK supplied this option recovers only software concerned with ethernet functions. When functions except ethernet are wrong, you need to finish recovering the instrument's software before you perform procedure described in this section. For procedure to recover the instrument's software, refer to "Recovering Software" section in MP1632C operation manual.

Note

・Network settings which are described in "2.2.2 Setting Procedures" and transfer session file saved by FTP client would be lost if software recovery is carried out. You should keep backup copies of those files beforehand.

・Don not run the installation disk on any machine (such as a personal computer) other than the instrument. This act constitutes a violation of the software usage obligations.

Confirm that Windows® and instrument control application are working normally before you perform recovery.   If they do not work, recover the instrument's software referring its operation manual.

1.   To quit the instrument control application, select *Exit* from its *File* menu.

2.   Quit any other applications than the Program Manager.

    (1)   To open the Task List dialog box, double-click on wallpaper (An area displayed no windows).
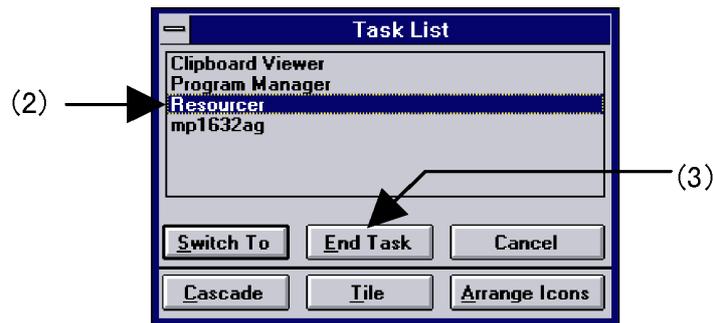

Fig. 4-1   Task List dialog box

    (2)   Highlight application title you want to quit by clicking its title.

    (3)   Press *End Task* button.

    (4)   Repeat (2) and (3), until all application without Program Manager are quitted

3.   Insert the installation disk No.1 into the FDD.

4.   Select *Run* from *File* menu.   A dialog box will open.   Type "**A:\SETUP.EXE**" into the *Command Line* text box, and then click on *OK* button.

5.   Recovery will begin.   Replace FDs according to the guidance.

6.   When recovery is finished, a message box will appears.   Click on *OK* button, and the system will reboot.

40.