ΗΙΟΚΙ

INSTRUCTION MANUAL

For the 3145-20 NOISE HiLOGGER

Communications

Explains the communication functions which can be used via the LAN and RS-232C interfaces.

HIOKI E.E. CORPORATION

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Introduction

The following instruction manuals are included with the 3145-20 NOISE HiLOGGER. Refer to them as they pertain to your usage of the instrument.

| Manual | Content |
|--|--|
| 1 Measurement Guide | Read first. Offers an introduction to the 3145- 20's basic measuring method for first time users. |
| 2 Instruction Manual | Contains explanation and instructions regarding the instrument's operating method and functions. |
| CD | Content |
| 3 "DATA VIEWER for 3145" Instruction Manual | Contains information about PC soft- ware which can analyze the measure- ment data recorded by the instrument. |
| "Communications" Instruction Manual (this manual) | Explains the communication functions which can be used via the LAN and RS-232C interfaces. |

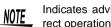
| , | |
|--------------------|---------------------------------------|
| | Explains the commands for remote |
| Commands" | control of the instrument via the LAN |
| Instruction Manual | and RS-232C interfaces. |
| | Commands" |

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Notation

Symbols The following symbols in this manual indicate the relative importance of cautions and warnings.

> Indicates that incorrect operation presents a possibility of ∕∆CAUTION injury to the user or damage to the instrument.



Indicates advisory items related to performance or correct operation of the instrument.

Indicates the location of reference information. $(\Rightarrow p.)$

> Indicates quick references for operation and remedies for troubleshooting.

- Indicates that descriptive information is provided below.
- Г 1 Menus, commands, dialogs, buttons in a dialog, and other names on the screen and the keys are indicated in brackets.

Unless otherwise specified, "Windows" represents Windows 95, 98, Me, Widows NT, Windows 2000, or Windows XP.

Dialog box represents a Windows dialog box.

| Mouse | | |
|------------|--------------|--|
| Operations | Click | Press and quickly release the left button of the mouse. |
| | Right-click | Press and quickly release the right button of the mouse. |
| | Double click | Quickly click the left button of the mouse twice. |

Overview

You can use the communication functions listed below through the RS-232C, LAN interface equipped as standard on the instrument. This manual explains how to connect the communications cable and the settings on the instrument.

In order to connect the instrument to a PC, prepare the sold separately 9612 RS-232C CABLE (for personal computer), 9721 RS-232C CABLE (for modem), and 9642 LAN CABLE.

| Interface Communications | RS-232C (⇒ p. 5) | 10BASE-T LAN $(\Rightarrow p. 7)$ | PPP (⇒ p. 23) |
|---|---------------------|-----------------------------------|-------------------------|
| Send communication commands from a PC to the instrument and take measurements (\Rightarrow p. 31) | Available | Available | Available |
| Control the instrument from a PC through an HTTP server $(\Rightarrow p. 35)$ | | Available ^{*1} | Available ^{*1} |
| Receive email on a PC when there's a warning $(\Rightarrow p. 45)$ | | Available | Available ^{*2} |
| Take measurements with the instrument through an FTP server (⇒ p. 60) | | Available | Available |

*1 During measurement using a program created in Visual Basic, for example, remote operation by a HTTP server is not possible.

*2 Email may not be sent depending on your Internet service provider. In such case, send mail via the intra-network mail server using a LAN.



RS-232C

RS-232C is a serial interface standard established by the EIA (Electronic Industries Association) which specifies the interface between DTE (data terminal equipment) and DCE (data communications equipment). The instruments can send and receive remote control signals and data to a PC (personal computer) using a subset of this standard.

LAN

Local area networks (LANs) are systems that provide communications between PCs in a limited areas at particular locations, such as offices, factories and schools.

The Ethernet 10BASE-T interface provided in the instruments is a standard LAN connection interface that uses TCP/IP communications protocols. The 10BASE-T standard is defined by IEE 802.3i as having a transfer speed of 10 Mbps. Connections are made by twisted-pair cable, and are normally arranged in a star configuration around a hub. The maximum cable length between a terminal and the hub is 100 meters. The TCP/IP protocols are commonly used for LANs, as they are the basis for the Internet as well. The protocols are defined by RFC documents published on the Internet.

PPP

Connect a modem to the RS-232C interface for performing communication based on PPP (Point-to-Point Protocol) over public telephone networks via the modem in your PC.

Specifications

LAN Interface

- Compatible with IEEE802.3 Ethernet 10BASE-T DHCP, DNS
- Screen display, remote control via HTTP server
- Acquiring data from internal memory or PC card via FTP server
- · Email notification delivered at time of alarm

RS-232C Interface

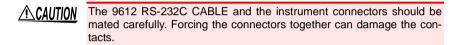
- Conforms with ETA RS-232C, mini DIN round 9-pin connector
- Communication function via PPP connection (functions similarly to LAN connection)

Interfaces

RS-232C Communications

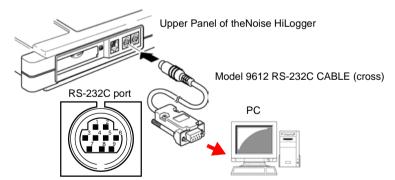
Through RS-232C communications, you can send communication commands from the PC and perform remote control and send/receive data. (\Rightarrow p. 31) For communications, set the instrument's Comm screen to the same settings as the PC to connect to.

RS-232C Connection



NOTE The RS-232C interface is not isolated from the instrument chassis.

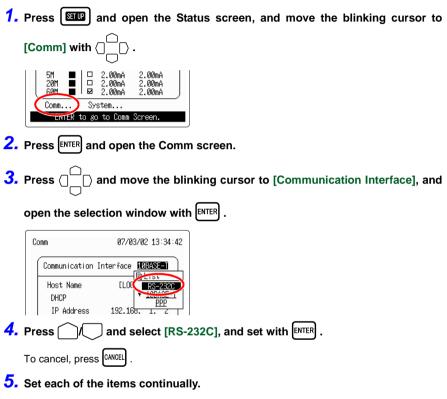
- Connect the 9612 RS-232C CABLE to the instrument's RS-232C connection terminal.
- 2. Connect the RS-232C cable's connector to the PC.



| | Pin No. | Circuit Designation | CCITT | EIA Symbol | JIS Symbol | Common |
|---|-----------------------------------|---------------------|-------|---------------|---------------|--------|
| 2 | Receive Data | Receive Data | 104 | BB | RD | RxD |
| 3 | Send Data | Send Data | 103 | BA | SD | TxD |
| 5 | Signal ground or common return | Signal Ground | 102 | AB | SG | GND |
| 7 | Request to send | Request to Send | 105 | CA | RS | RTS |
| 8 | Clear to Send | Clear to Send | 106 | СВ | CS | CTS |

RS-232 Settings

Remote control is provided by commands sent from the controlling PC. RS-232C settings are made on the instrument. These settings must match those on the PC to enable communications.



| Comm 07/03 | 3/02 13:54: |
|-------------------------|-------------|
| Communication Interface | RS-2320 |
| Baud Rate | 9600bps |
| Data Bit | 8bit |
| Parity | NONE |
| Stop Bit | 1bit |
| Delimiter | CR+LF |
| Head | OFF |
| Flow | NONE |

| Items | Settings |
|--------------|--|
| Baud Rate | 1200 bps/ 2400 bps/ 4800 bps/ 9600 bps/ 19200 bps |
| Data Bits | 7 bit/ 8 bit |
| Parity | None/ Even/ Odd |
| Stop Bits | 1 bit/ 2 bit |
| Delimiter | LF/ CR+LF |
| Header | OFF/ ON |
| Flow Control | None/ X-on/X-off/ Hardware |

- If overrun or framing errors occur, reduce the communications speed.
- Do not attempt change settings while communications are underway.

10BASE-T LAN Communications

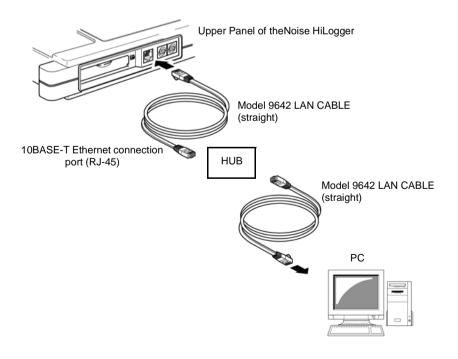
Through LAN communications, you can use the functions below.

- "Take Measurements with Communication Commands"(⇒ p. 31)
- "Remote Measurement Using HTTP Server"(⇒ p. 35)
- "Receiving Email when there is a Warning" (\Rightarrow p. 45)
- "Receiving Measurement Data from an FTP Server"(\Rightarrow p. 60)

LAN Connections

When the instrument and a PC are connected through a hub

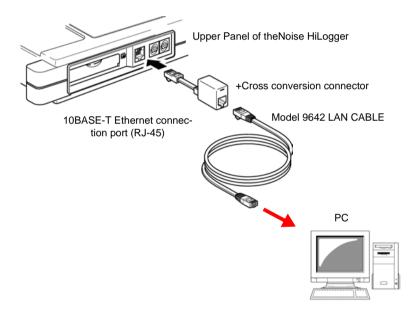
- **1.** Connect the hub to the instrument's 10BASE-T LAN connection terminal with the 9642 LAN CABLE.
- 2. Connect the PC to the hub with another LAN cable.



When the instrument and a PC are connected one-to-one

The 9642 LAN CABLE is a straight cable. When the instrument and a PC are connected one-to-one, use the supplied cross-over adapter.

- **1.** Connect the cross-over adapter to the instrument's 10BASE-T LAN connection terminal.
- 2. Connect the 9642 LAN CABLE to the cross-over adapter.
- **3.** Connect the LAN cable's connector to the PC.

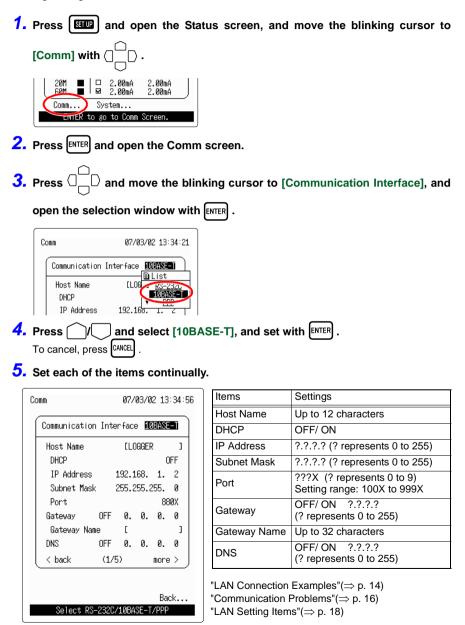


NOTE

- The instruments network settings must be correct in order to communicate with a PC via LAN.
- When connecting to an existing LAN, contact the network administrator for the appropriate settings.

LAN Settings

Following settings must match those on the PC to enable communications.



6. Press () and move the blinking cursor to [more >], and open page 2/5 with

ENTER .

Or you can press $\langle \P_{CURSOR}^{SCROLL} \rangle$ to switch the pages.

Set each of the items.

| Comm | 07/0 | 13/0 | 2 13 | :35:10 |
|-------------------|---------|------|------|--------|
| Communication Int | erface | 16 | BASE | |
| FTP/HTTP Authent | icatio | n | 0 | FF |
| User Name | [| | | 1 |
| Password | [*** | **** | **** | **] |
| Monitor Server | | | 0 | FF |
| Server Name | [| | | 1 |
| IP Address | 0. | 0. | 0. | 0 |
| Port | | | 90 | 00 |
| Delimiter CR+LF | Head | | | ON |
| < back (2/ | /5) | | more | |
| | | | | |
| | | | | :k |
| Select RS-2320 | :/10BAS | ε-T. | 7PPP | |

| Items | Settings |
|----------------------------|---|
| FTP/HTTP Authentication | OFF/ ON |
| User Name | Up to 12 characters |
| Password | Up to 12 characters Each character is shown on the screen as an asterisk (*). |
| Monitor Server | OFF/ ON |
| Server Name | Up to 32 characters |
| IP Address | ?.?.? (? represents 0 to 255) |
| Port | ???? (? represents 0 to 9) Setting range: 1000 to 9999 |
| Delimiter | LF/ CR+LF |
| Header | OFF/ ON |

"Remote Measurement Using HTTP Server"(\Rightarrow p. 35)

"Receiving Measurement Data from an FTP Server"(\Rightarrow p. 60)

7. Press \bigcirc and move the blinking cursor to [more >], and open page 3/5 with

ENTER .

Set each of the items.

| Comm 07, | /03/02 13:37:09 |
|--|-----------------------------------|
| Communication Interfac | ce 10base-t i |
| Send Mail to1:OFF [Adress 2:OFF [3:OFF [|]]] |
| Mail Server [IP Address 0. |) 0. 0. 0 |
| Sender Address [Sender Name [| 1 |
| Subject [Message [Add Instantaneous [|]] Data OFF |
| Timing □Alarm □Mem Full | □Stop □Start Bup □Card Full |
| <pre></pre> | more >) |
| | Back |
| Select RS-232C/10BA | ASE-T/PPP |

| Items | Settings |
|-----------------------------|----------------------------------|
| Send Mail To (1 to 3) | OFF/ ON |
| Address (1 to 3) | Up to 32 characters |
| Mail Server | Up to 32 characters |
| Mail Server IP Address | ?.?.? (? represents 0 to 255) |
| Sender Address | Up to 32 characters |
| Sender Name | Up to 32 characters |
| Subject | Up to 32 characters |
| Message | Up to 32 characters |
| Add Instanta- neous Data | OFF/ ON |
| Send at Stop Trigger | OFF/ ON |
| Send at Alarm | OFF/ ON |
| Send at Start Backup | OFF/ ON |
| Send at Memory Full | OFF/ ON |
| Send at Card Full | OFF/ ON |

"Receiving Email when there is a Warning"(\Rightarrow p. 45)

8. Press $\bigcap_{i=1}^{n}$ and move the blinking cursor to [more >], and open page 4/5 with

ENTER

Set each of the items.

| Comm | 07/03/02 13:37:33 |
|--|--|
| Communication Inter | face 10BASE-T |
| FTP Auto Transfer FTP Server IP Address User Name Password Append Identifier ⊠Host Name⊠If | 0N [] 0.0.0.0 [] [**************] ^ to File Name P Address ⊠Date |
| | o0 Fi0 Mi0 Ye0 o0 Fi0 Mi0 Ye0 |
| FTP Transfer Tes Mail Transfer Te | |
| k (4/5 |) more> |
| | Back |
| Select RS-232C/ | 10BASE-T/PPP |

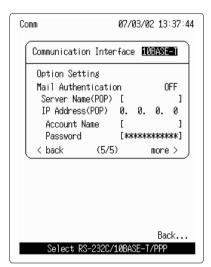
| Items | Settings |
|-----------------------------------|--|
| FTP Auto Transfer | OFF/ ON |
| FTP Server | Up to 32 characters |
| FTP Server IP Address | ?.?.?? (? represents 0 to 255) |
| User Name | Up to 12 characters |
| Password | Up to 12 characters |
| IP Address: | Attach Host Name to file name to be sent. Attach IP address to file name to be sent. Attach time of day to file name to be sent. |
| (Communication Sta- tus, FTP) | Result of FTP data transfer Total number of items, Number of items sent, Number of items failed to send, and Number of items not yet sent |
| (Communication Sta- tus, Mail) | Result of mail transfer Total number of items, Number of items sent, Number of items failed to send, and Number of items not yet sent |
| (FTP Transfer Test) | Executing this test sends test data. |
| (Mail Transfer Test) | Executing this test sends test mail. |

"Measurement Data to an FTP Server"(\Rightarrow p. 52)

9. Press () and move the blinking cursor to [more >], and open page 5/5 with

ENTER .

Set each of the items.



| Items | Settings |
|---------------------|-----------------------------------|
| Option Setting | |
| Mail Authentication | OFF/ ON |
| Server Name (POP) | Up to 32 characters |
| IP Address (POP) | ?.?.?? (? represents 0 to 255) |
| Account Name | Up to 32 characters |
| Password | Up to 32 characters |

"Receiving Email when there is a Warning" (\Rightarrow p. 45)

LAN Connection Examples

Connecting one PC and one instrument with a 9642 LAN CABLE.

Network Addresses : 192.168.1.0/24 (Private IP addresses) Subnet Mask : 255.255.255.0 PC (The settings are made manually)

IP Address : 192.168.1.1

For a network as shown above, set the PC and the instrument's Comm screen as shown next.



PC Settings

IP Address : 192.168.1.1

Subnet Mask: 255.255.255.0

The network settings on the PC are made in the [Network] dialog box. To get to this dialog box, double-click the [Network] icon in [Control Panels].

| Communicatio | on Inte | rface | e A | BASE | -1 |
|--------------|---------|-------|-------|------|----|
| Host Name | | ELC | GGER | ! |] |
| DHCP | | | | 0 | FF |
| IP Address | 3 | 192.1 | .68. | 1. | 2 |
| Subnet Mas | sk i | 255.2 | 255.2 | 55. | 0 |
| Port | | | | 88 | ØX |
| Gateway | OFF | 0. | 0. | 0. | 0 |
| Gateway Na | ame | [| | |] |
| DNS | OFF | 0. | 0. | 0. | 0 |
| < back | (1/5 | 5) | | more | > |
| < back | (1/5 | 5) | | more | > |

Instrument Settings

| Host Name DHCP IP Address Subnet Mask Port Number Gateway DNS | : LOGGER : OFF : 192.168.1.2 : 255.255.255.0 : 880X : OFF : OFF |
|---|---|
| DNS | : OFF |
| | |

When connecting one PC and one instrument by the conversion connector of the 9642 LAN CABLE, the IP address can be specified arbitrarily, but there is no problem with using a private IP address.

Set the instrument as shown below, so that every instrument has a unique host name and IP address.

Connecting one PC to multiple instrument's in a HUB.

Use a straight cable to connect the PC to the HUB and to connect the instrument to the HUB.

When building a local network with no outside connections, it is recommended that private IP addresses be used for the IP addresses.

Make the same settings on the PC as shown left. Set the IP address manually.

Set the instrument as shown below, so that every instrument has a unique host name and IP address.

| Items | Settings |
|------------|-------------|
| Host Name | LOGGER1 |
| IP Address | 192.168.1.2 |

The first instrument (The settings are made manually)

The second instrument (The settings are made manually)

| Items | Settings |
|------------|-------------|
| Host Name | LOGGER2 |
| IP Address | 192.168.1.3 |

The third instrument (The settings are made manually)

| Items | Settings |
|------------|-------------|
| Host Name | LOGGER3 |
| IP Address | 192.168.1.4 |

Common settings

| Items | Settings |
|-------------|---------------|
| DHCP | OFF |
| Subnet Mask | 255.255.255.0 |
| Gateway | OFF |
| Port Number | 880X |

Communication Problems

Have you completed the LAN setting before connection?

The LAN setting is initialized when all the settings for communications have been made. Be sure to complete this LAN setting before you connect the instrument to the network. When you edit the settings while the instrument is connected to the network, you may accidentally send illegal address information to the network. For example, you may select the same IP address as that of another instrument on the network.

Is the cable connected properly?

When you make one-to-one connection between the instrument and a PC, you must use a cross cable.

The short cable of the straight-cross converter supplied with the 9642 LAN CABLE is a cross cable. The connector is a straight male-female converter.

The cable might not be connected to the connector properly. Remove the cable and then connect it again.

Have you set the IP address of the PC correctly?

Choose [Run] from the Start menu. Type [winipcfg] (Windows95/98/Me) or [ifconfig /all] (Windows NT/2000/XP) and click [Enter]. Doing so will enable you to get the IP address of the PC's network interface, subnet mask, and gateway address.

When the IP address setting is not correct

- 1. Choose [Settings]-[Control Panels] from the Start menu.
- Double-click the [Network] icon to get the [Network Properties] dialog box.
- 3. Edit the IP address setting.

Can the instrument communicate with the PC?

If the IP addresses of the instrument and the PC are correct, check to see whether the instrument receives signals from the PC using the ping protocol.

Windows95/98/Me

Choose [Programs]-[MS-DOS Prompt] from the Start menu.

WindowsNT/2000/XP

Choose [Programs-Accessories]-[Command Prompt] from the Start menu.

When the cursor starts blinking, type [ping < IP address of the host you want to check >].

If the IP address can be obtained from DNS by providing the host name, you can type in the host name instead of the IP address.

For example, if the IP address of the instrument is 192.168.1.2, type [ping 192.168.1.2] and press Enter. If the screen display is as shown below, the instrument and the PC are communicating properly. "Time" represents how long it took for the instrument and the PC to communicate.

Pinging 192.168.1.2 with 32 bytes of data: Reply from 192.168.1.2: bytes=32 time<10ms TTL=32 Reply from 192.168.1.2: bytes=32 time<10ms TTL=32 Reply from 192.168.1.2: bytes=32 time<10ms TTL=32 Reply from 192.168.1.2: bytes=32 time=1ms TTL=32

If the screen display is as shown above, the instrument and the PC are not communicating properly. Check the cable connection again. Pinging 192.168.1.2 with 32 bytes of data: Reply from 192.168.1.2: Host is down. Reply from 192.168.1.2: Host is down. Reply from 192.168.1.2: Host is down. Reply from 192.168.1.2: Host is down.

LAN Setting Items

Host name and IP address settings

To connect the instrument to a LAN network, you need to set the host name of the instrument, IP address, subnet mask, port number, and gateway.

When connecting to an existing network, the specification items must first be assigned by the network system manager (department manager). Make sure they never overlap with another machine.

You will ne-ed to obtain the following from your network administrator.

Host Name (up to 12 characters) DHCP server (yes or no) IP Addresses *1 Subnet Mask *1 Port No. (When the default, 8800-8809, cannot be used.) (Specify the first three of four decimalcolumns, and 0 to 9 in the first column is used and reserved by this machine.) X Gateway *2 (yes or no) Gateway IP addresses (There is a Gateway.) *2 DNS server *3 (ves or no) DNS server IP address (There is a DNS server.) *3 *1: Skip setting if you use DHCP.

*2: Skip setting if you can obtain gateway information with DHCP.

*3: Skip setting if you can obtain DNS information with DHCP.

Host name

This is the name of the instrument in the network. It must be distinct from the addresses of all other instruments in the network.

DHCP (Dynamic Host Configuration Protocol)

Each instrument has to have a unique IP address to connect to a network. If the number of instruments connecting to a network increases, it will become quite difficult to manually assign a unique IP address to each instrument.

To avoid this difficulty, DHCP (Dynamic Host Configuration Protocol) is now widely used. DHCP is a protocol for assigning dynamic IP addresses to instruments on a network.

With a DHCP server on the network, when the server is enabled, IP addresses, subnet masks, and other network settings will be automatically assigned to the instruments.

The [Obtain an IP address automatically] option in [TCP/IP]-[IP Address of Network] dialog box in Windows 95/98/Me/2000 uses DHCP.

IP address

The TCP/IP protocol used by this instrument for LAN communications uses IP addresses to identify each instrument. Version 4 (IPv4) standard IP addresses consist of 32-bit numerical values, normally indicated as four decimal octets (8-bit values) separated by decimals, such as 192.168.1.1.

Set an IP address distinct from the addresses of other instruments on the network, as with the host name.

When DHCP is enabled, an IP address will be automatically assigned.

Subnet mask

An IP address consists of the network address and the host address. The network address identifies the network (subnet) that the instrument is on. The host address identifies the instrument.

To specify the division between the network address and the host address, an identifier called a subnet mask is used. A subnet mask is represented by a 32-bit number. The bits for the network address are set to 1 and the bits for the host address are set to 0.

For example, if the first 24 bits show the network address and the remaining 8 bits show the host address, the network will be shown as follows.

11111111 1111111 11111111 00000000

This is represented by a hexadecimal number (0xfffff00) or, as with an IP address, by a number with decimals (255.255.255.0).

When a net mask is combined with an IP address, it is shown as 192.168.1.1/24. The number 24 after the slash shows that the net mask is made up of 24 bits, i.e., 255.255.255.0.

Set the same subnet mask for all the instruments on a subnet.

When DHCP is enabled, a subnet mask will be automatically assigned.

IP address assignment

Each instrument must have a unique IP address, as controlled by the RIR (Regional Internet Registry).

IP address assignment is controlled by the NIC (Network Information Center) of each country. You have to apply for assignment of an IP address from your country's NIC.

Besides the IP addresses and global IP addresses controlled by the NIC, the following addresses are defined as private IP addresses in the RFC1597.

10. 0.0. 0/8 10. 0.0.0 to 10.255.255.255 172. 16.0.0/12 172. 16.0.0 to 172. 31.255.255

192.168.0.0/16 192.168.0.0 to 192.168.255.255

You can use these private IP addresses freely. However, you cannot connect to the Internet directly with these addresses.

Select a private IP address when you make a one-to-one connection between the instrument and a PC using a cross cable or when you build a closed network using the HUB only. If, however, all the bits of the host address are 0, the address will be used as a network address showing the subnetwork. If all the bits of the host address are 1, the address will be used as a broadcast address showing all the hosts on the subnetwork. In these cases, the address cannot be used as the IP address of the instrument.

For example, if the network is 192.168.1.0/24, the address 192.168.1.255 shows all the instruments connected to the subnet of 192.168.1.0. On this subnet, you can use a total of 254 IP addresses between 192.168.1.1 and 192.168.1.254; the addresses 192.168.1.0 and 192.168.1.255 would be excluded.

Port number

With the TCP/IP protocol used by this instrument, connections can be made separately for every application. These connections will be distinguished by port number. The instrument is set to use 8800-8809 as the default setting.

8802 (The instrument is the server.): controlled by communications commands.

8803 to 8809: reserved

The settings above do not need editing, unless use of some port numbers is restricted for security reasons if or some port numbers cannot be used on the PC. You can edit the left three digits only. The rightmost digit (0 to 9) is used by or reserved for the instrument.

Gateway

A gateway is a instrument that connects different networks.

To communicate with a instrument on a network with a different address, you have to set the IP address of the instrument as the gateway. Set the same gateway for all instruments on the same subnet.

When you communicate only with the instruments on the same subnet (for example, if you connect the instrument to a PC only), select OFF.

When DNS is enabled and if the IP address is not 0.0.0, use that IP address. If the IP address is 0.0.0, obtain the IP address corresponding to the name of the gateway from DNS. When you set the name of the gateway, use the fully qualified domain name (FQDN), such as "dns.hioki.co.jp." If you use the host name only, like "dns," you may not get the IP address from DNS.

When DHCP is ON and you have obtained gateway information from the DHCP, this information is given priority.

DNS (Domain Name System)

With the TCP/IP protocol, each individual instrument is identified by the IP address. The addresses consist of a series of numbers and they are not easy to remember. To simplify, a text-based host name is used instead of an IP address. On a network, host names and IP addresses have to be converted from one to the other. There are two systems to perform such conversion; DNS and WINS. This instrument uses the DNS system.

When DNS is on a network, with DNS turned ON and the IP address of the DNS server specified, you can specify the instrument with which you want to communicate using its text name.

When DHCP is ON and you have obtained DNS information from DHCP, this information is given priority.

Delimiter, Header

Set the delimiter and header when you use the "Control by communications" commands.

In the default setting, character string commands are transmitted through the TCP protocol connection to port No.8802 of the instrument. For details of the commands, see the Interface Manual on the Application Disk (CD).

The delimiter sets a new line for the command response. The instrument accepts both LF and CR+LF from a PC.

"Header" sets whether a header is added to the command response.

PPP (RS-232C + Modem) Communications

Through PPP communications, you can use the functions below over a public telephone networks between the instrument and the PC.

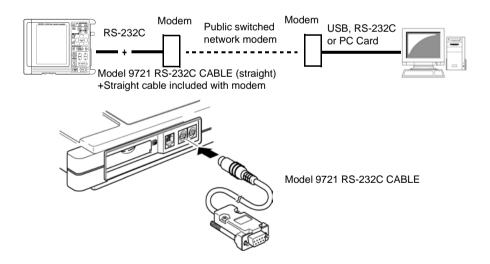
- "Take Measurements with Communication Commands"(\Rightarrow p. 31)
- "Remote Measurement Using HTTP Server"(\Rightarrow p. 35)
- "Receiving Email when there is a Warning"(\Rightarrow p. 45)
- "Receiving Measurement Data from an FTP Server"(\Rightarrow p. 60)

RS-232C Cable Connection

- Connect the 9721 RS-232C CABLE to the instrument's RS-232C connection terminal.
- 2. Connect the 9642 LAN CABLE's connector to the modem.

3. Connect the modem to the PC with the RS-232C cable.

(You can also use USB cable or a PC card)



Recommended Modems

The instrument uses public switched network.

(AT Command) Instrument side None PC side AT&D0S0=2&W0

(Telephone Number)Instrument side????????? (telephone number)PC side?????????? (telephone number)

- When using a modem connected to a private branch exchange (PBX) or TA, you may not be able to hear the dial tone (i.e., sound you hear after picking up the telephone receiver). In that case, suffix "X3" to the AT command.
- When making a call from an extension to an outside line, or to dial a number after dialing 0, enter "0," (zero and a comma) before the telephone number as in "0, ????????." This keeps the phone waiting a certain time.

PPP Settings

Following settings must match those on the PC to enable communications.

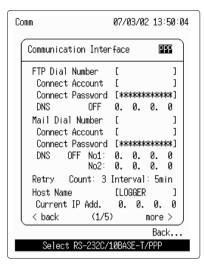
- **1.** Press **()** and open the Status screen, and move the blinking cursor to [Comm] with $\bigcirc \bigcirc \bigcirc$. 2.00mA 2.00mA 2.00mA 2.00mA 2.00mA 2.00mA 1M 5M 20M M 2 00m4 2.00mA Comm. System... to go to Comm Screen. CINTER 2. Press ENTER and open the Comm screen.
- **3.** Press \Box and move the blinking cursor to [Communication Interface], and

ENTER

| open th | e selection | window | with | ENTER | |
|---------|-------------|--------|------|-------|--|
|---------|-------------|--------|------|-------|--|

| Communicat Host Name | | ELC | -0 | List | | |
|-------------------------|----------|---------|--------|------|--------|---|
| DHCP | | | ۳ ۲ | KO- | - | |
| IP Addre | 3S | 192.1 | 168 | P | FF | / |
| Subnet M | ask | 255.2 | 255.2 | | 0 | |
| Port | | | _ | | 30X | |
| Gateway Gateway I | | Ø. [| И. | И. | U I | |
| DNS | OFF | 0. | 0. | 0. | 0 | |
| < back | (1/ | 5) | | more |) > | J |
| | | | | Ba | ck | |
| Select | RS-232C, | /10BA | ISE-T | | | |
| | | | | | | _ |

5. Set each of the items continually.



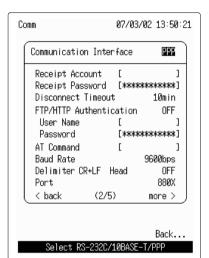
| Items | Settings |
|--------------------|--|
| FTP Dial Number | 0123456789 |
| Connect Account | Up to 32 characters |
| Connect Password | Up to 32 characters |
| DNS | OFF/ ON |
| IP Address | ?.?.?? (? represents 0 to 255) |
| Mail Dial Number | 0123456789 |
| Connect Account | Up to 32 characters |
| Connect Password | Up to 32 characters |
| DNS | OFF/ ON |
| IP Address, No. 1 | ?.?.?? (? represents 0 to 255) |
| IP Address, No. 2 | ?.?.?? (? represents 0 to 255) |
| Retry Count | ?? (? represents 0 to 9) Setting range: 0 to 10 times |
| Retry Interval | ?? (? represents 0 to 9) Setting range: 0 to 10 minutes |
| Host Name | Up to 12 characters |
| Current IP Address | ?.?.?? (? represents 0 to 255) |

"Receiving Email when there is a Warning"(\Rightarrow p. 45) "Measurement Data to an FTP Server"(\Rightarrow p. 52)

6. Press _____ and move the blinking cursor to [more >], and open page 2/5 with

Or you can press $\langle \P_{\text{CURSOR}}^{\text{SCROLL}} \rangle$ to switch the pages.

Set each of the items.



| Items | Settings |
|----------------------------|--|
| Receipt Account | Up to 12 characters |
| Receipt Password | Up to 12 characters |
| Disconnect Timeout | ?? (? represents 0 to 9) Setting range: 0 to 10 minutes |
| FTP/HTTP Authentication | OFF/ ON |
| User Name | Up to 12 characters |
| Password | Up to 12 characters |
| AT Command | Up to 20 characters |
| Baud Rate | 1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 bps |
| Delimiter | CR/ LF+CR |
| Header | OFF/ ON |
| Port | ???? (? represents 0 to 9) Setting range: 100X to 999X |

"Remote Measurement Using HTTP Server"(\Rightarrow p. 35)

"Receiving Measurement Data from an FTP Server"(\Rightarrow p. 60)

Set the transmission speed to 19200 bps.

7. Press \Box and move the blinking cursor to [more >], and open page 3/5 with

ENTER

Set each of the items.

| Comm | 07/ | 03/02 1 | 3:51:32 |
|--------------------------------|-----------------------------------|-----------|---------------|
| Communicati | on Interfac | e | |
| Send Mail Adres | to1:OFF [s 2:OFF [3:OFF [| |]]] |
| Mail Serv | er | Teleph | one |
| Sender Ad Sender Na | | |]] |
| Subject Message Add Inst | [[antaneous D | ata |]] 0FF |
| | | | |
| < back | (3/5) | mor | e > _ |
| | | Ba | ack |
| Select R | IS-232C/10BA | ISE-T/PPI | þ |

| Items | Settings |
|-----------------------------|--|
| Send Mail To (1 to 3) | OFF/ ON |
| Address (1 to 3) | Up to 32 characters |
| Mail Server | Telephone, IP address, and server name |
| Mail Server Name | Up to 12 characters |
| Mail Server IP Address | ?.?.?? (? represents 0 to 255) |
| Sender Address | Up to 32 characters |
| Sender Name | Up to 32 characters |
| Subject | Up to 32 characters |
| Message | Up to 32 characters |
| Add Instanta- neous Data | OFF/ ON |
| Send at Stop Trigger | OFF/ ON |
| Send at Alarm | OFF/ ON |
| Send at Start Backup | OFF/ ON |
| Send at Memory Full | OFF/ ON |
| Send at Card Full | OFF/ ON |

"Receiving Email when there is a Warning"(\Rightarrow p. 45)

8. Press \bigcirc and move the blinking cursor to [more >], and open page 4/5 with

ENTER

Set each of the items.

| Communicati | ion Interfa | ce [| ppp |
|-------------|--------------------------|-----------|-------|
| FTP Auto I | [ransfer | | ON |
| FTP Serve | er | Telepho | one |
| User Name | e [| |] |
| Password | [* | **** | k***] |
| | lentifier t Name⊡IP A | | |
| Comm Statu | IS | | |
| FTP : | | Fi0 Mi0 Y | |
| Mail: | ToØ | Fi0 Mi0 \ | /eØ |
| FTP Trar | nsfer Test | Exect | ute |
| Mail Tra | ansfer Test | Exect | ute |
| < back | (4/5) | more | e > |
| | | Ba | ck. |

| Items | Settings |
|---|---|
| | Settings |
| FTP Auto Transfer | OFF/ ON |
| FTP Server | Telephone, IP address, and server name |
| FTP Server Name | Up to 12 characters |
| FTP Server IP Address | ?.?.?? (? represents 0 to 255) |
| User Name | Up to 12 characters |
| Password | Up to 12 characters |
| Append Identifier to File Name Host Name: IP Address: Time: | to be sent. Attach IP address to file name to be sent. |
| (Communication Status, FTP) | Result of FTP data transfer Total number of items, Number of items sent, Number of items failed to send, and Number of items not yet sent |
| (Communication Status, Mail) | Result of mail transfer Total number of items, Number of items sent, Number of items failed to send, and Number of items not yet sent |
| (FTP Transfer Test) | Executing this test sends test data. |
| (Mail Transfer Test) | Executing this test sends test mail. |

"Measurement Data to an FTP Server"(\Rightarrow p. 52)

9. Press \bigcirc and move the blinking cursor to [more >], and open page 5/5 with

ENTER

Set each of the items.

| 07/03/02 13:53:00 |
|---|
| erface 🎫 |
| ion OFF |
| [] [*********************************** |
| 5) more> |
| |
| |
| Back DBASE-T/PPP |
| |

| Items | Settings |
|----------------------------|----------------------------------|
| Option Setting | |
| Mail Authentication | OFF/ ON |
| Server Name (POP) | Up to 32 characters |
| Server IP Address (POP) | ?.?.? (? represents 0 to 255) |
| Account Name | Up to 32 characters |
| Password | Up to 32 characters |

"Receiving Email when there is a Warning"(\Rightarrow p. 45)

Communication Functions

Take Measurements with Communication Commands

You can send commands to the instrument from a PC with a program created in Visual Basic and take measurements. For details about the communication commands, see the supplied application disk (CD). The explanation of the communication commands is saved in the HTML format.

Communication Preparation

Make preparations before starting communications.

When using RS-232C

1. Connect the PC and the instrument with the 9612 RS-232C CABLE. (\Rightarrow p. 5)

2. Set the instrument's Comm screen. (\Rightarrow p. 9)



Model 9612 RS-232C CABLE (cross)



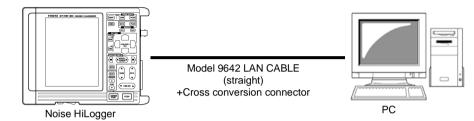
Noise HiLogger

Example of Comm screen settings Comm screen

| Comm | 07/03/02 13:54 | :23 |
|---------------|--------------------------|-----|
| Communication | Interface RS-232D | |
| Baud Rate | 9600bps | |
| Data Bit | 8bit | |
| Parity | NONE | |
| Stop Bit | 1bit | |
| Delimiter | CR+LF | |
| Head | OFF | |
| Flow | NONE | J |
| | | _ |
| | Back. | |
| Select RS-3 | 232C/10BASE-T/PPP | |

When using 10BASE-T LAN

- 1. Connect the PC and the instrument with the 9642 LAN CABLE. (\Rightarrow p. 7)
- **2.** Set the instrument's Comm screen. (\Rightarrow p. 9)



Example of Comm screen settings

Comm screen (10BASE-T 1/5)

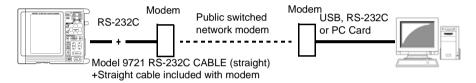
| Comm | | 07/ | 03/0 | 2 13 | :34:5 | 6 |
|-------------------|-------|---------|-------|----------|----------|---|
| Communicatio | n Int | erface | e A | IBASE | 8 | |
| Host Name DHCP | | [LC | IGGEF | • |] IFF | |
| IP Address | | 192.1 | .68. | 1. | 2 | |
| Subnet Mas | k | 255.2 | 55.2 | | - | |
| Port Gateway | OFF | 0. | ø | 88 0. | ЮХ 0 | |
| Gateway Na | | о. [| 0. | 0. | Ĵ | |
| DNS | OFF | 0. | 0. | 0. | 0 | |
| < back | (1/ | (5) | | more | o J | |
| | | | | | | |
| | | | | Ba | ck | |
| Select RS | -2320 | :/10BA | SE-T | /PPP | | |

When using PPP

- **1.** Connect the modem and the instrument with the 9721 RS-232C CABLE. $(\Rightarrow p. 23)$
- **2.** Connect the modem to the PC with the RS-232C cable.

(You can also use USB cable or a PC card)

- **3.** Set the instrument's Comm screen. (\Rightarrow p. 25)
- **4.** Set communications on the PC. (\Rightarrow p. 77)



Example of Comm screen settings

Comm screen (10BASE-T 2/5)

| Comm | 07/03/02 13:54:1 |
|---|------------------------|
| Communication Int | erface 🎟 |
| Receipt Account Receipt Password Disconnect Timeo | [[*************** |
| FTP/HTTP Authent User Name Password | |
| AT Command Baud Rate | [] 960008 |
| Delimiter CR+LF Port < back (2/ | 880X |
| | |
| Select RS-2320 | Back C/10BASE-T/PPP |

Sending Communication Commands

Create a program with Visual Basic and send commands to the instrument.

- **1.** Insert the supplied CD into the CD-ROM drive.
- 2. The main screen will open automatically. Click [English] for the display language.

If the main screen does not open automatically, open [index.htm] with a web browser.

- 3. Click [Communication Commands Manual] .
- **4.** The communication commands manual will open.



5. Create a program and execute it.

Remote Measurement Using HTTP Server

The HTTP server function allows you to set up this instrument, acquire data, and monitor the screen by using a general WWW browser like Internal Explorer without having to install dedicated application software in your PC.

You can control the instrument from a PC through this HTTP server. Using the HTTP server function, you can start and stop measurements, display the current measurement value, retrieve the internal memory data, retrieve data via FTP, set comments, and perform remote control.

Communication Preparation

Make preparations before starting communications.

When using 10BASE-T LAN

1. Connect the PC and the instrument with the 9642 LAN CABLE. (\Rightarrow p. 7)

Model 9642 LAN CABLE

2. Set the instrument's Comm screen. (\Rightarrow p. 9)



Noise HiLogger (e.g. 192.168.1.2)

Example of Comm screen settings

Comm screen (10BASE-T 1/5, 2/5)

| Host Name | | [LC | OGGEF | 2 |] | FTP/HTTP Authentication O |
|-----------|-----|-------|-------|------|-----|---------------------------------|
| DHCP | | | | (| DFF | User Name [|
| IP Addres | s | 192.1 | 168. | 1. | 2 | Password [********* |
| Subnet Ma | ısk | 255.2 | 255.2 | 255. | 0 | Monitor Server 0 |
| Port | | | | 88 | 30X | Server Name [|
| Gateway | OFF | 0. | 0. | 0. | 0 | IP Address 0.0.0. |
| Gateway N | ame | Γ | | |] | Port 90 |
| DNS | OFF | 0. | 0. | 0. | 0 | Delimiter CR+LF Head |
| < back | (1/ | 5) | | more | • > | <body>< back(2/5)more</body> |



PC (Internet Explorer) (e.g., 192.168.1.1)

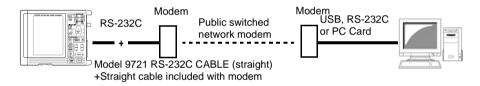
When using PPP

- **1.** Connect the modem and the instrument with the 9721 RS-232C CABLE. (\Rightarrow p. 23)
- 2. Connect the modem to the PC with the RS-232C cable. (You can also use USB cable or a PC card)
- **3.** Set the instrument's Comm screen. (\Rightarrow p. 25)

4. Set the modem on the PC.

Consult the instruction manual supplied with each modem.

5. Set the dial-up settings on the PC. (\Rightarrow p. 77)



Example of Comm screen settings

Comm screen (PPP 2/5)

| Receipt Account | : Set the user name (e.g., logger) to be entered at PC dial-up connection. Refer to "Answer Calls on the Instrument from the PC"(\Rightarrow p. 77). |
|-----------------------|---|
| Receipt Password | : Set the password (e.g., logger) to be entered at PC dial-up connection. Refer to "Answer Calls on the Instrument from the PC"(\Rightarrow p. 77). |
| Disconnect Timeout | : When no communication is performed, the instrument waits the time set here before disconnecting. |
| AT Command | : If necessary, the AT command can be specified for the modem as an option. Refer to "PPP (RS-232C + Modem) Communications"(\Rightarrow p. 23). |
| Commands | : Consult the instruction manual supplied with each modem. |
| Port, Delimiter, Head | er: Specify the port number used by this instrument. Refer to "LAN Settings"(\Rightarrow p. 9). |

Baud Rate : (Slow down if you cannot communicate.)

| Comm | 07/03/02 13:53:42 |
|--|--|
| Communication Inte | rface 🎟 |
| Receipt Account Receipt Password Disconnect Timeou FTP/HTTP Authentin User Name Password AT Command Baud Rate | [************************************* |
| Delimiter CR+LF Port < back (2/5 | 880X |
| Select RS-232C/ | Back |

Control with the Web Browser

You can display the main page on the PC's web browser and control the instrument.

Displaying the Main Page

- 1. Launch Internet Explorer.
- 2. Enter the instrument's address in the address bar and the 3145 Main Page will be displayed.

(Enter http://192.168.1.2 here)

| MAIN Page - Microsoft Int | | | |
|-------------------------------|--|------------|-------------------|
| Ele Edt Yew Favorte | n Itols Help 2) (2)Search (2)Favorites (2)Factory (2)-(2) | | The second |
| Address (2) http://192.168.1. | | - 26 10 | rês ³⁰ |
| | HIOKI 3145 Main Page Date 07/03/05 13:40:32 | | 1 |
| | SETTING PAGE | | |
| | | | |
| Ð | | 🔮 Internet | - |

3. Click [SETTING PAGE].

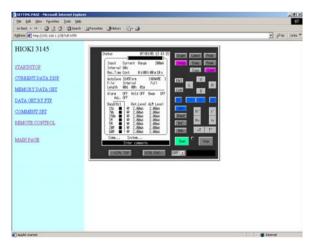
(When connected via a modem using PPP communications, the address is like http:// 192.168.55.2)

4. If [FTP/HTTP Authentication] is [ON] on the instrument's Comm screen, you

are asked for your user name and password.

Enter your user name and password, and click [Set].

5. The instrument's screen will be displayed in the web browser as-is.



- Keys can be pressed in the same panel layout as in this instrument.
- You can select the screen refresh rate.
- When the screen is refreshed, the rate at which the start LED goes on and off is also updated.
- Click inside the screen to move the blinking cursor without using the up/down and left/right arrow keys.



If the HTTP screen does not appear

Choose [Tools] - [Internet Options] on the Internet Explorer tool bar and click on the [Advanced] tab. Check the box for [Use HTTP1.1] and remove the check from the box for [Use HTTP1.1 through proxy connections]. if it is checked. Also, choose the [Connections] tab of [Internet Options], click on the [LAN Settings] button, and remove the check from the box for [Use a proxy server] if it is checked.

If the HTTP screen appears but the remote control screen does not

Choose [Tools] - [Internet Options] on the Internet Explorer tool bar and click on the [Security] tab. Choose [Internet] and click on the [Customize Level] button. Scroll down to [Java permissions] and choose a permission level to enable Java. If Java is not installed, reinstall Internet Explorer with Java included.

NOTE

- To ensure that HTTP will not be inadvertently accessed by any third party, we recommend limiting connections by user name and password on the instrument Comm screen.
 - Internet Explorer version 4 or later is supported. Netscape Navigator can also be used, but in such case, part of the browser screen may be unable to operate normally.
 - Using a program created in Visual Basic, for example, remote operation by a HTTP server is not possible.

Starting and stopping measurement

1. Click [START/STOP] on the settings screen. The screen below will be displayed.

| SETTING PAGE - Microsoft Internet Deplor Ble Edit Yew Favorites Tools Help ↓= Back + → (2) (2) (3) Search | 19 (B) |
|---|--|
| Address C http://192.168.1.2/SETUP.HTM | |
| HIOKI 3145 | START/STOP |
| STARDSTOP | CURRENT STATUS Waiting in progress. |
| CURRENT DATA DISP MEMORY DATA GET | START |
| DATA GET BY FTP | STOP |
| COMMENT SET | |
| REMOTE CONTROL | CURRENT MEMORY STATUS Waiting in progress. |
| MAIN PAGE | TIME VALUE MEMORY DATA TOP MEMORY DATA END |
| | DATE 07/03/05 13:34:47 07/03/05 13:34:47 |
| | TIME 0d 0h 0m 0s0 0d 0h 0m 0s0 |
| | NUM 0 0 |
| | |
| e) Done | 🔮 Internet |

2. Click [START]. The instrument's logging measurement will start.

You can check the current measurement status on the browser.

| SETTING PAGE - Microsoft Internet Explo | rer | | | | | | _ # > |
|---|--------------------|------------|-------------------|------------------------|--------|-----|-------|
| Ele Edit View Fgvorites Iools Help | | | | | | | - |
| 4+Back • → · ② ③ ④ ∰ @Search | Pevorites Shistory | B- 🥔 | | | | | |
| Address 🕘 http://192.168.1.2/SETUP.HTM | | | | | • | ନିତ | Links |
| HIOKI 3145 | START/STOP | | | | | | _ |
| HIONI 5145 | STREESTOP | | | | | | - |
| | | | | | | | |
| START/STOP | | CUE | RENT STATUS Re | cording in progress. | | | |
| CURRENT DATA DISP | | | | | | | |
| MEMORY DATA GET | | | START | | | | |
| | | | STOP | | | | |
| DATA GET BY FTP | | | 3104 | | | | |
| COMMENT SET | | | | | | | |
| REMOTE CONTROL | | 0.000 | IT MEMORY STATUS | | | | |
| REMOTE CONTROL | | CUHHEN | IT MEMORY STATUS | Recording in progress. | | | |
| MAIN PAGE | | TIME VALUE | MEMORY DATA TOP | MEMORY DATA END | | | |
| MAINTAGE | | DATE | 07/03/05 13:44:40 | 07/03/05 13:44:40 | | | |
| | | TIME | 0d 0h 0m 0s0 | 0d 0h 0m 0s0 | | | |
| | | NUM | 0 | 0 | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Done | | | | | intern | et | _ |

3. Click [STOP] to stop the measurements.

1. Click [CURRENT DATA DISP] on the settings screen. The screen below will be displayed.

| SETTING PAGE - Microsoft Internet Explores Ele Edit Yew Favorites Tools Help | | | | | | | - 5 > |
|---|-------------------------------|-------------|----------|-------------------|---------|--------|-------|
| ↔ Back • → • ③ ⑤ ∰ @Search [| 🖥 Favorites 🎯 History 🛛 🖓 🕶 🎯 | | | | | | |
| Agdress 🛃 http://192.168.1.2/SETUP.HTM | | | | | | • 🖗 60 | Links |
| HIOKI 3145 | CURRENT DATA DISP | | | | | | |
| | 07/ | 03/05 13:45 | 40 | | | | |
| START/STOP | BA | ND REAL | PEAK | TIME | | | |
| CURRENT DATA DISP | 154 | : U.F. | U.F. | 07/03/05 13:45:14 | | | |
| MEMORY DATA GET | 701 | : U.F. | U.F. | 07/03/05 13:45:14 | | | |
| | 250 |)k U.F. | U.F. | 07/03/05 13:45:14 | | | |
| DATA GET BY FTP | 1M | U.F. | U.F. | 07/03/05 13:45:14 | | | |
| COMMENT SET | 51M | 10.0m/ | 12.0mA | 07/03/05 13:45:35 | | | |
| REMOTE CONTROL | 201 | M 2.0mA | 2.0mA | 07/03/05 13:45:25 | | | |
| REMOTE CONTROL | 601 | M.U.F. | U.F. | 07/03/05 13:45:14 | | | |
| MAIN PAGE | | DATA REP | EWAL T | IME OFF | | | |
| | | | RESET PE | EAK | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| Done | | | | | in 😵 In | | |

2. To change the screen's renewal rate, set with [DATA RENEWAL TIME].

Acquiring data from memory

1. Click [MEMORY DATA GET] on the settings screen. The screen below will be displayed.

| SETTING PAGE - Microsoft Internet Explor File Edit View Favorites Tools Help | A | X |
|---|---|---------------|
| 4=Back • ⇒ • ② ② △ ③ Search | | |
| Address 🛃 http://192.168.1.2/SETUP.HTM | <u> </u> | i?Go ∐Links * |
| HIOKI 3145 | MEMORY DATA GET | |
| START/STOP | GET TOP POSL GET END POSL PART SET BIN DATA | |
| CURRENT DATA DISP | 7 3 5 7 3 5 GET PART 13 :46 :46 .68 .0 DATE SET SET | |
| MEMORY DATA GET | 0 d 0 h0 m0 s0 0 h0 m12 s0 TIME SET 3145FORM DATA | |
| DATA GET BY FTP COMMENT SET | 0 point 12 point NUM SET | |
| REMOTE CONTROL | DATE) (DATE) (DATE) GET ALL 07/03/05 13.46.46 07/03/05 13.46.58 IN MEMORY | |
| MAIN PAGE | (TIME) (TIME) 3145FORM DATA 0d 0h 0m 0s0 0d 0h 0m 12s0 3145FORM DATA | |
| | (NUM) (NUM) 0 12 | |
| | | |
| | | |
| | | |
| | | |
| Done | Diternet | |

2. Specify and retrieve a range of data saved in the internal memory during the instrument measurement.

You can also retrieve all of the data. Click [3145 FORM DATA] to retrieve binary data; click [Get Text] to retrieve text data.

NOTE If you cannot save data by clicking on [3145 FORM DATA], right click [3145 FORM DATA] and from the menu execute [Save Target As]. If you cannot save the text data, perform in the same way.

Data acquisition using FTP

1. Click [DATA GET BY FTP] on the settings screen. The screen below will be displayed.

| 4+Back + → - ③ ② △ ③Search @Fevorites ③History □ → ④ | SETTING PAGE - Microsoft Internet E Ele Edit Yen Fgyorites Iools | |
|--|---|---------------------------------|
| HIOKI 3145 DATA GET BY FTP STARTISTOP CURRENT DATA DEF Data GET FROM CARD & MEMORY CURRENT DATA DEF Data of MEMORY is able to acquire à only at the time of measurement stopped DATA GET FFT SCOMMENT SET REMOTE CONTROL | ⇔Back • ⇒ • ③ 🗿 🖄 ③Se | rch @Favorites @History 12-3 |
| STARTISTOP STARTISTOP STRATUSTOP STRATUSTOP STRATUSTOP STRATUSTOP Data GET PROM CARD & MEMORY CURRENT DATA GET Data GET RY FIP COMMENT SET REMOTE CONTROL STRATUST S | Agdress 🛃 http://192.168.1.2/SETUP.HTP | 💌 p² Go 🛛 Linis ' |
| CURRENT DATA DISP Data of MEMORY is able to acquire # ONORY DATA GET Only at De time of instancement stopped DATA GET BY TIP COM (DBIT SET ERMOTE CONTROL | HIOKI 3145 | DATA GET BY FTP |
| Data of MEMORY DATA GET Data of MEMORY is able to acquire à only at the time of measurement stopped DATA GET EY TIP COMMENT SET REMOTE CONTROL | START/STOP | FTP DATA GET FROM CARD & MEMORY |
| MEMORY DATA GET only at the time of measurement stopped DATA GET BY FIP COMMENT SET ERMOTE CONTROL | CURRENT DATA DISP | |
| COMMENT SET REMOTE CONTROL | MEMORY DATA GET | |
| REMOTE CONTEQL | DATA GET BY FTP | |
| | COMMENT SET | |
| MAIN PAGE | REMOTE CONTROL | |
| | MAIN PAGE | |
| | | |
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| | | |

- Click [FTP DATA GET FROM CARD & MEMORY]. You can retrieve the instrument's PC card files and the data containing measurements in internal memory from the web using FTP.
- **3.** If [FTP/HTTP Authentication] is [ON] on the instrument's Comm screen, you are asked for your user name and password. Enter your user name and password and click [Set].

See also "Receiving Measurement Data from an FTP Server" (\Rightarrow p. 60).

| 😰 ftp://192.168.1.2/ - Microsoft Ir | ternet Explorer | | | | _ 🗆 🗙 |
|---|---------------------------|------|-----------------|------------------|---------|
| Eile Edit View Favorites Too | ols <u>H</u> elp | | | | 1 |
| $] \leftarrow Back + \Rightarrow + E @Search$ | 🕒 Folders 🛛 🖓 History 🛛 🖓 | °×ກ | :::: : • | | |
| Address 2 ftp://192.168.1.2/ | | | | ▼ ∂⊙ | Links » |
| | Name 🛆 | Size | Туре | Modified | |
| | CARD CARD | | File Folder | 3/5/2006 5:37 AM | |
| | MEMORY | | File Folder | 3/5/2006 5:37 AM | |
| 192.168.1.2 | | | | | |



- During measurements, you cannot retrieve measurement data in internal memory. You can retrieve them after stopping measurement.
- We recommend that you set the user name and password on the instrument's Comm screen to restrict connections to the instrument so that a third party does not accidentally delete your files. When multiple PCs frequently access the instrument, set [FTP/HTTP Authentication] to OFF.

Comment settings

1. Click [COMMENT SET] on the settings screen. The screen below will be displayed.

| SETTING PAGE - Microsoft Internet Explore Ble Edit View Favorites Tools Help | и | _ 8 |
|---|---|---------------------------|
| ⇔Back • ⇒ - 🎯 🖄 🛱 QiSearch | | |
| Address Dhttp://192.168.1.2/SETUP.HTM | × | (∂ [°] Go ∐Links |
| HIOKI 3145 | COMMENT SET | |
| START/STOP | TITLE COMMENT | |
| CURRENT DATA DISP | SET | |
| MEMORY DATA GET | | |
| DATA GET BY FTP | Attention.Please input the comment after the whole space comment input frame is selected, | |
| COMMENT SET | or delete all comment, because the space comment already may be input, even in the case that | |
| REMOTE CONTROL | the input frame of the comment is a blank. Comment is effective to 20 characters. | |
| MAIN PAGE | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| 5] | Disterra | ÷ |

2. Set the instrument's comments.

Receiving Email when there is a Warning

You can receive an email on a remote/networked PC or on your mobile phone through an SMTP mail server when the measurement value exceeds the reference warning value and the instrument is in the warning state. You can also receive an email in other situations such as when measurements stop, when recovering from a power outage, when internal memory is full, and when the PC card is full. You can register up to 3 addresses to receive email.



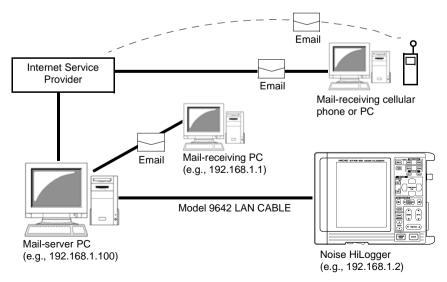
- If warnings are frequently generated you may receive not a few emails. In order to avoid this, set warning retention to **[ON]** on the settings screen so that you can receive only the first warning for each warning channel.
 - Email can be sent during logging measurements only. During monitor measurements, email will not be sent even in the warning output state.

Communication Preparation

Make preparations before starting communications.

When using 10BASE-T LAN

- **1.** Connect the PC and the instrument with the 9642 LAN CABLE. (\Rightarrow p. 7)
- **2.** Set the instrument's Comm screen. (\Rightarrow p. 9)



Example of Comm screen settings

For sending email from this instrument ("logger@xyz.xx.xx" to "abc@xyz.xx.xx") via SMTP mail server 192.168.1.100 at start trigger occurrence

IP address: 192.168.1.2

Comm screen (10BASE-T 1/5)

Comm screen (10BASE-T 3/5)

| Comm | 07/03/02 13:42:41 |
|--|---|
| Communication Inter | face 10BASE-T |
| Send Mail to 1:0N Adress 2:0FF 3:0FF | [] |
| Mail Server IP Address 15 | [] 92.168. 1.100 |
| Sender Address Sender Name | [logger@xyz.~] [logger] |
| Subject Message Add Instantaneou | [logger_mail] [from logger] s Data ON |
| Timing ⊠Alarm ⊡Mem Ful | □Stop □Start Bup 1 □Card Full |
| <pre></pre> |) more> |
| | Back |
| Select RS-232C/1 | LØBASE-T/PPP |

Send Mail To 1 abc@xyz.xx.xx Send Mail To 2 Send Mail To 3 Mail Server IP Address Sender Address Sender Name Subject Message Timing Stop Trigger Alarm Start Backup Memory Full Card Full

ON Address 1

OFF Address 2 OFF Address 3

192.168.1.100 (Set the SMTP mail server.) logger@xyz.xx.xx logger logger_mail Mail from logger ON OFF OFF OFF OFF OFF

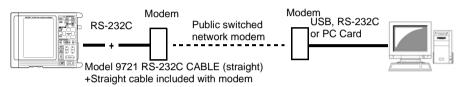
When Using PPP

1. Connect the modem and the instrument with the 9721 RS-232C CABLE. $(\Rightarrow p. 23)$

2. Connect the modem to the PC with the RS-232C cable.

(You can also use USB cable or a PC card)

3. Set the instrument's Comm screen. (\Rightarrow p. 25)



Example of Comm screen settings

Comm screen (PPP 1/5)

Set the mail server name and mail server IP address as shown below. Other settings are the same as when communicating via a LAN.

When sending to the Internet service provider, you normally need to specify the server name.

| "Telephone" | Specify the PC at the Telephone. | | |
|-------------------|---|--|--|
| "IP Address" | Specify the server by IP. | | |
| "Server Name" | Specify the server by host name. (DNS is required.) | | |
| Mail Dial Number | : Set the telephone number of the Internet service provider to which mail is connected or the telephone number on the PC side. | | |
| Connect Account | : Set the user name of the Internet service provider or user name (e.g., logger) to be entered in the PC's remote access server (i.e., Incoming Connections, dial-up server.) Refer to " Answer Calls on the Instrument from the PC" (\Rightarrow p. 77). | | |
| Connect Password | : Set the password of the Internet service provider or password (e.g., logger) to be entered in the PC's remote access server (i.e., Incoming Connections, dial-up server.) Refer to " Calling from the Instrument to PC" (\Rightarrow p. 97). | | |
| DNS | : To use the DNS at the connected destination, select ON for this item. | | |
| IP Address of DNS | : To use the DNS at the connected destination, set the IP address of the DNS. (For one DNS, set its IP address at No. 1; for two DNSs, set their IP addresses at No. 1 and No. 2.) | | |

Retry Count, Retry Interval:

If the call cannot be connected, the number is redialed (after waiting the specified retry interval) as many times as specified by the retry count.

AT Command : If necessary, the AT command can be specified for the modem as an option. Refer to " PPP Settings" (\Rightarrow p. 25). See the Instruction Manual of your modem.

- Baud Rate
- : (Slow down if you cannot communicate.)

| Comm | 07/03/02 13:44:43 |
|---|--|
| Communication Inter | face 🎟 |
| Mail Dial Number Connect Account Connect Password DNS ON No1:1 | [*************] 0. 0. 0. 0 [0123456789] [logger] [************** |
| Retry Count: 3 Host Name Current IP Add. < back (1/5 | Interval: 5min [] 0. 0. 0. 0) more > Back |
| Select RS-232C/ | 10BASE-T/PPP |

Comm screen (PPP 3/5)

| Comm | 07/03/02 13:46:20 |
|--|--|
| Communication Inter | face 🎟 |
| Send Mail to 1:0N Adress 2:0FF 3:0FF | [] |
| Mail Server Server Name | |
| Sender Address Sender Name | [logger@xyz.~] [logger] |
| Subject Message Add Instantaneou | [logger_mail] [from logger] µs Data ON |
| Timing ⊠Alarm ⊡Mem Ful | |
| back (3/5 |) more> |
| | Back |
| Select RS-232C/: | 10BASE-T/PPP |

When the DNS is enabled, use the specified IP address other than 0.0.0.0. If the specified IP address is 0.0.0.0, use the IP address obtained by referring to the DNS by its server name. At that time, specify the server name in full domain as "server.xyz.xx.xx." A server name like "server" cannot be used to refer to the DNS.

Receiving Warning Email

Start the instrument's measurements. In the warning state you will receive an email via the mail server.

Example of received email

| From: logger@mailserv To: pc Subject: logger_mail | | |
|---|--|--|
| MESSAGE = logger_mail | | |
| comment = time = 07/03/02 13:10:15 | | |
| content = alarm happen | | |
| alarm source = BAND1 data = 12.7mA | | |
| instant data BAND1 = 12.7mA BAND2 = 34.0mA BAND3 = 81.8mA BAND4 = 128.9mA BAND5 = 140.0mA BAND6 = 100.0mA BAND7 = O.F. | | |
| ~ | | |

Mail communication status

(Comm screen 4/5)

The status of mail transfer (including the total number of items, number of items sent, number of items failed to send, and number of items not yet sent) is displayed.

Communication status

Mail To 10 Fi 7 Mi 1 Ye 2

(Among the ten items of mail, seven have already been sent, one could not be sent, and two have yet to be sent because transfer is currently underway. "Mi 2" indicated instead of "Ye 2" means that two items have not been sent because transfer was interrupted by the stop button. "Wa 2" indicated instead of "Ye 2" means that there are two items remaining to be sent, and awaiting retry. At the "Mail" item, press the ()() buttons to send the interrupted and remaining-to-be-sent mail.)

Mail transfer test

(Comm screen 4/5)

Executing the mail transfer test sends test mail.

If the test mail cannot be sent, check whether the settings you made are correct.

The mail transfer time required when sending mail via PPP at 9600 bps is about 100 bytes * 8 bits/9600 bps = just under one second.

(Moreover, additional time is required before and after sending mail; about 30 seconds to make a call and about 30 seconds to disconnect.)

The mail transfer time required when sending mail via LAN is about 100 bytes * 8 bits/10 Mbps = just under one second.

NOTE If more than 100 items of mail yet to be sent have accumulated (such as when PPP calls cannot be connected), the oldest mail yet to be sent is assumed to have failed and will not be sent. At startup, all mail yet to be sent is cleared.

Email transmission requiring email authentication

(Comm screen 5/5)

To send an email, you must access an SMTP server. However, SMTP servers do not carry out authentication. To prevent abuse, some Internet service providers use a security measure called "POP before SMTP" for which you must undergo mail authentication at the mail-receiving server (POP server) prior to sending an mail from the SMTP server. When POP before SMTP is used, set up mail authentication (POP) as shown below.

1. Choose ON in mail authentication (POP).

2. Specify the server name (POP) or IP address (POP) as below.

| Server name | : Specify the receiving server (POP server) using the host name. (DNS is necessary.) |
|--------------|--|
| (IP address | : Specify the receiving server (POP server) using the IP.) |
| Account name | : Mail account name of the receiving server (POP server) |
| Password | : Mail password of the receiving server (POP server) |

Comm screen (10BASE-T 5/5, PPP 5/5)

| Communicatio | n Intonfaco | 10BASE_T | | on Intonfaco | PPF |
|-----------------------|--|---|--|--|--|
| Account M Password | ntication ne(POP) [s(POP) 192.18 Wame [log | 0N] 8. 1.100 [ser_acou] #*********] more > | Option Set Mail Auther Server Nar Account M Password < back | ntication ne(POP) [pop.; Name [logge [***** | ON <yz.xx.~] er_acou] k******** more ></yz.xx.~] |
| Select R | S-232C/10BAS | Back E-T/PPP | Select R | S-232C/10BASE- | Back |

Measurement Data to an FTP Server

FTP (File Transfer Protocol) is a protocol for transferring files in a network. While the instrument is taking measurements, it can automatically transfer binary files automatically saved to the PC card to a PC with an FTP server. The data transfer is possible when both the PC is on the network and in a remote location.

In this situation, set automatic saving to [3145 Form] on the instrument's Status screen. To regularly save/send data, set the save mode to [Interval] or [Ref. Time]. If you want to continue saving/sending data even when the PC card becomes full, set the save mode to [Delete]. For details refer to the instruction manual.

FTP Server

You can use Windows' FTP server. For the FTP server, set the user name and password for the instrument and register it. For details see the Windows' FTP server help. You can use other FTP servers as well, such as the free TinyFTPDaemon. To perform automatic data sending by FTP client, the IP address of the PC on which the FTP server is running must be specified.

Communication Preparation

Make preparations before starting communications.

When using 10BASE-T LAN

- **1.** Connect the PC and the instrument with the 9642 LAN CABLE. (\Rightarrow p. 7)
- **2.** Set the FTP server on the PC. (\Rightarrow p. 64)
- **3.** Set the instrument's Comm screen. (\Rightarrow p. 9)

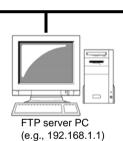
4. Set automatic saving on the instrument.

Check if a PC card has been inserted. For details refer to the instruction manual.

Model 9642 LAN CABLE



Noise HiLogger (e.g., 192.168.1.2)



Example of Comm screen settings (When sending data to FTP server 192.168.1.1) Comm screen (10BASE-T 1/5)

| Comm | | 07/ | 03/0 | 2 13 | :34:56 |
|--------------|---------|--------|-------|-------|--------|
| Communicatio | on Inte | erface | e Ø | IBASE | |
| Host Name | | [LO | IGGER | 2 |] |
| DHCP | | | | 0 | IFF |
| IP Address | s | 192.1 | 68. | 1. | 2 |
| Subnet Mag | sk | 255.2 | 55.2 | 255. | 0 |
| Port | | | | 88 | 10X |
| Gateway | OFF | 0. | 0. | 0. | 0 |
| Gateway Na | ame | Γ | | | 1 |
| DNS | OFF | 0. | 0. | 0. | 0 |
| < back | (1/ | 5) | | more | ı> ∫ |
| | | | | | |
| | | | | | ck |
| Select R | S-232C. | /10BA | SE-T | /PPP | |

| Host Name | : LOGGER |
|------------|---------------|
| IP Address | : 192.168.1.2 |

Comm screen (10BASE-T 4/5)

| Comm 07/03/02 13:30:40 | FTP Auto Tra FTP Server | ansfer : ON |
|---|-------------------------------------|--|
| Communication Interface IDEASE FTP Auto Transfer ON FTP Server [] IP Address 192,168. User Name [] Password [************************************ | IP Address User Name Password | : 192.168.1.1 (Set the PC on which the FTP server operates.) : logger (User name of this instru- ment registered in FTP server on PC side.) : logger (Password of this instru- |
| GHost Name GIP Address GDate Comm Status FTP: To0 Fi0 Mi0 Ye0 Mail: To0 Fi0 Mi0 Ye0 FTP Transfer Test Execute Mail Transfer Test Execute ≤ back (4/5) more > | •• | ment registered in FTP server on PC side.) tifier to File Name : Attach host name to file name to be sent. (Set on Comm screen 1/5) |
| Back Select RS-232C/10BASE-T/PPP | IP Address | : Attach IP address to file name to be sent. (Set on Comm screen 1/5) |
| | Date | : Attach send start time to file name to be sent. |

For example, when using host name = LOGGER, IP address = 192.168.1.2, time = '02-03-04 05:06:07, and automatically saved file name = AUTO0001.MEM, the host name, IP address, and time are all selected, then the file name is LOGGER_192-168-1-2_020304-050607_AUTO0001.MEM. When using multiple instruments, this helps to identify a specific instrument.

When using PPP

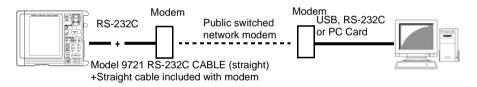
- **1.** Connect the modem and the instrument with the 9721 RS-232C CABLE. $(\Rightarrow p. 23)$
- 2. Connect the modem to the PC with the RS-232C cable. (You can also use USB cable or a PC card)
- **3.** Set the modem on the PC.

Consult the instruction manual supplied with each modem.

- **4.** Set the FTP server on the PC. (\Rightarrow p. 64)
- **5.** Set the remote access server on the PC. (\Rightarrow p. 97)
- **6.** Set the instrument's Comm screen. (\Rightarrow p. 25)

7. Set automatic saving on the instrument.

Check if a PC card has been inserted. For details refer to the instruction manual.



Example of Comm screen settings

Comm screen (PPP 1/5, 4/5, 2/5)

Comm screen (PPP 4/5)

| Comm | 07/03/02 13:32:33 |
|-------------------------------------|---|
| Communication Inter | rface 🎫 |
| FTP Auto Transfer FTP Server | ON Telephone |
| Password Append Identifie | [logger] [*************] r to File Name P Address ⊡Date |
| | o0 Fi0 Mi0 Ye0 o0 Fi0 Mi0 Ye0 |
| FTP Transfer Te Mail Transfer Te | |
| <pre>< < back (4/5</pre> |) more> |
| | Back |
| Select RS-232C/ | 10BASE-T/PPP |

Set the FTP server name and FTP server IP address as shown below. Other settings are the same as when communicating via a LAN.

Specify the PC on which the FTP server operates.

To send to the PC, normally set "Telephone." "Telephone" Specify the PC at the Telephone. "IP Address" Specify the server by IP.

"Server Name" Specify the server by host name. (DNS is required.) Comm screen (PPP 1/5)

| FTP Dial Number | : Set the telephone number on the PC side at the connected destina- tion. |
|----------------------|--|
| Connect Account | : Set the user name (e.g., logger) to be entered in the PC's remote access server (i.e., remote access server, dial-up server.) |
| Connect Password | See "Calling from the Instrument to PC"(⇒ p. 97) Set the password (e.g., logger) to be entered in the PC's remote access server (i.e., remote access server, dial-up server.) See "Calling from the Instrument to PC"(⇒ p. 97) |
| DNS | : To use the DNS at the connected destination, select ON for this item. |
| IP address of DNS | : To use the DNS at the connected destination, set the IP address of the DNS. |
| Retry Count, Retry I | nterval: |
| | If the call cannot be connected, the number is redialed (after waiting the specified retry interval) as many times as specified by the retry count. |
| AT Command | : If necessary, the AT command can be specified for the modem as an option. See "PPP Settings"(\Rightarrow p. 25). |
| Command Baud Rate | : See the Instruction Manual of your modem. : (Slow down if you cannot communicate.) |

| Comm Ø | 7/03/02 13:32:07 |
|--|------------------------------|
| Communication Interf | ace 🍱 |
| FTP Dial Number [Connect Account [Connect Password] | logger] [**************] |
| Mail Dial Number [Connect Account [Connect Password [DNS ON No1: 0 |] ***************** |
| Retry Count: 3 Ir Host Name [Current IP Add. < back (1/5) | LOGGER] |
| Select RS-232C/10 | Back BASE-T/PPP |

When the DNS is enabled, use the specified IP address other than 0.0.0.0. If the specified IP address is 0.0.0.0, use the IP address obtained by referring to the DNS by its server name. At that time, specify the server name in full domain as "server.xyz.xx.xx." A server name like "server" cannot be used to refer to the DNS.

Automatic Data Transfer

- **1.** Start measurements.
- **2.** The automatically saved files on the PC card will be automatically sent to the FTP server on the PC.

FTP communication status

(Comm screen 4/5)

The status of FTP communication (including the total number of items, number of items sent, number of items failed to send, and number of items not yet sent) is displayed.

Communication status

FTP To 10 Fi7 Mi1 Ye 2

(Among the ten items of FTP data, seven have already been sent, one could not be sent, and two have yet to be sent because transfer is currently underway. "St 2" indicated instead of "Ye 2" means that two items have not been sent because transfer was interrupted by the strop button. "Wa 2" indicated instead of "Ye 2" means that there are two items remaining to be sent, and awaiting retry. At the "FTP" item, press the ()/() buttons to send the interrupted and remaining-to-be-sent data.)

FTP data transfer test

(Comm screen 4/5)

Executing the FTP data transfer test sends a file named FTP_TEST.TXT.

If the test file cannot be sent, check whether the settings you made are correct.

NOTE If more than 100 items of FTP data yet to be sent have accumulated (such as when PPP calls cannot be connected), the oldest FTP data yet to be sent is assumed to have failed and will not be sent. At startup, all FTP data yet to be sent is cleared.

Data transfer time

When data are measured for one hour at one-second intervals, for example, the file size is

(3600 data * 2 bytes * 11 channels + header 13000) = 90K bytes. Therefore, the transfer time via PPP at 19200 bps is 90K bytes * 8 bits/19200 bps = app. 38 seconds. When taking the time needed to create data on the main instrument side into account, however, the actual transfer time is a little 2 minutes. (Moreover, additional time is required before and after data transfer; about 30 seconds to make a call and about 30 seconds to disconnect.)

The transfer time via LAN is 90K bytes * 8 bits/10 Mbps = 0.1 second. When taking the time needed to create data on the main instrument side into account, however, the actual transfer time is a little under three seconds. "FTP Server Settings"(\Rightarrow p. 64)

Receiving Measurement Data from an FTP Server

FTP (File Transfer Protocol) is a protocol used for transferring files on a network. This instrument has an FTP server. You can download memory waveforms of this instrument and PC card files into the PC using the FTP client running on the PC.

Communication Preparation

When using 10BASE-T LAN

- **1.** Connect the PC and the instrument with the 9642 LAN CABLE. (\Rightarrow p. 7)
- **2.** Set the instrument's Comm screen. (\Rightarrow p. 9)



Noise HiLogger (e.g., 192.168.1.2)



Comm screen (10BASE-T 2/5, 1/5)

| Comm | | 07/ | 03/0 | 02 13 | :32:50 | Comm | 07/03/1 | 02 13:33 |
|-------------|----------|--------|-------|-------|--------|------------------|------------|---------------|
| Communicati | on Inte | erface | e 11 | ØBASE | | Communication Ir | iterface 🛙 | .0BASE-T |
| Host Name | | נרנ | OGGEI | R |] | FTP/HTTP Auther | ntication | OFF |
| DHCP | | | | 0 | DFF | User Name | [|] |
| IP Addres | s | 192.1 | L68. | 1. | 2 | Password | [**** | ****** |
| Subnet Ma | sk | 255.2 | 255.3 | 255. | 0 | Monitor Server | | OFF |
| Port | | | | 88 | 30X | Server Name | [|] |
| Gateway | OFF | 0. | 0. | 0. | 0 | IP Address | 0. 0. | 0. 0 |
| Gateway N | ame | [| | | 1 | Port | | 9000 |
| DNS | OFF | 0. | 0. | 0. | 0 | Delimiter CR+LF | Head | ON |
| < back | (1/ | 5) | | more | ∍≻∫ | K kack (2 | 2/5) | more > |
| Select R | RS-232C. | /10BA | ISE-1 | | ck | Select RS-23 | 2C/10BASE- | Back T/PPP |

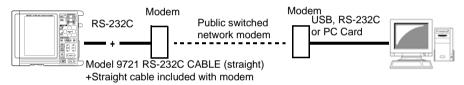
When using PPP

- **1.** Connect the modem and the instrument with the 9721 RS-232C CABLE. $(\Rightarrow p. 23)$
- 2. Connect the modem to the PC with the RS-232C cable. (You can also use USB cable or a PC card)
- **3.** Set the modem on the PC.

Consult the instruction manual supplied with each modem.

4. Set the dial-up settings on the PC. (\Rightarrow p. 77)

5. Set the instrument's Comm screen. (\Rightarrow p. 25)



Example of Comm screen settings

Comm screen (PPP 2/5)

| Comm | 07/03/02 13:33:51 |
|--|--|
| Communication Inte | rface 🎫 |
| AT Command Baud Rate Delimiter CR+LF | [************************************* |
| Port < back (2/5 | Back |
| Select RS-232C/ | 10BASE-T/PPP |

Data Download

There are many different FTP clients for Windows, and in the standard OS install, there is the ftp command which is run at the DOS prompt.

1. Launch Internet Explorer.

2. Input the instrument's address in the address bar.

(Enter ftp://192.168.1.2 here. Enter ftp://192.168.55.2 during PPP communication) The screen below will be displayed.

| 😰 ftp://192.168.1.2/ - Microsoft I | nternet Explorer | | | | _ 🗆 × |
|--|-----------------------------|------|-----------------|------------------|-------------|
| Ele Edit View Favorites In | ols <u>H</u> elp | | | | |
| $] \leftarrow Back + \rightarrow + \bigcirc \bigcirc Search$ | n 🔁 Folders 🎯 History 🛛 🔮 🎙 | X n | . | | |
| Address Rtp://192.168.1.2/ | | | | ▼ ∂G | o 🗍 Links 🎾 |
| | Name A | Size | Туре | Modified | |
| | CARD CARD | | File Folder | 3/5/2006 5:37 AM | |
| The second secon | MEMORY | | File Folder | 3/5/2006 5:37 AM | |
| 192.168.1.2 | | | | | |
| Server: 192.168.1.2 User Name: Anonymous | | | | | |
| Click here to learn about browsing FTP sites. | | | | | |
| | | | User: Anonymous | 🌏 Internet | //. |

3. Copy the measurement data in the [MEMORY] folder.

If there is SETUP.SET and measurement data, there are MEMORY.MEM and MEM-ORY.TXT files, and they can be downloaded to the PC.

4. Copy the data in the [CARD] folder.

By downloading the files in the MEMORY directory, you can retrieve the instrument's measurement data and setting data in file format.

In the CARD directory, the files on the PC card can be retrieved as-is.

FTP Authentication

FTP authentication of this instrument is set to "Anonymous." Any instrument on the network is allowed to access the FTP server.

If you want to restrict access to the FTP server, set FTP/HTTP authentication to ON and enter the username and password.

We recommend that connection be restricted through the use of a username and password, to prevent an unauthorized person from accidentally accessing and deleting the files.



- The FTP server of the instrument allows only one connection at a time. More than one PC cannot access the server simultaneously.
 - If no command is sent from a PC for more than one minute after connecting to the FTP server, the FTP may disconnect the PC. Reconnect the FTP.
 - If connection cannot be reestablished, wait about one minute, then try again.
 - The FTP client can only read files during real-time save, automatic save, manual save, file delete, directory create/delete, name edit, or format operations.
 - If data is being written to the PC card using the FTP at the start of automatic saving or calculation-data saving, FTP operation will be interrupted to save data.
 - If the instrument ends measurement during data transmission using the FTP, transmission may be interrupted to save data.
 - Be sure to disconnect the PC from the FTP before replacing the PC card.
 - Although the PC card on this instrument can be accessed from outside using FTP, do not access the card from FTP or the main instrument, or simultaneously manipulate files from telnet, etc. Such operation may lead to unexpected results.
 - With Internet Explorer, the refresh date of files may not match those of the main instrument.
 - With Internet Explorer, temporary internet files may retain data from their previous access, so the previous data may be obtained instead of the newest data. If the instrument data has been updated, reload Internet Explorer and then access it via FTP.

FTP Server Settings

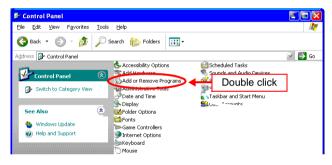
When interacting with the instrument and data through an FTP server, setup an FTP server on the PC.

WindowsXP Professional

Windows XP Home Edition does not include an FTP server; use the free software "War FTP Daemon" or other third party software instead.

FTP Service Setup

 On [Control Panel] on the Windows start menu, double click [Add/Remove Programs].



2. Choose [Add/Remove Windows Components].



3. Choose [Internet Information Services (IIS)] then [Details].

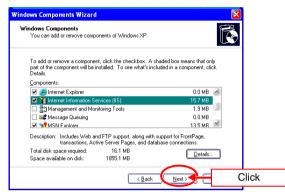
| dows Components Wizard | | |
|--|--------------|-----------|
| #indows Components | | |
| You can add or remove components of Windows XP. | | |
| To add or remove a component, click the checkbox. A shippart of the component will be installed. | | |
| Details. (1) Chec | k | |
| Components: | | |
| internet Explorer | 0.0 MB 🛃 | |
| Internet Information Services (IIS) | 15.7 MB | |
| Anagement and Monitoring Tool | 1.9 MB | |
| 🗌 🚅 Message Queung | 0.0 MB | |
| MSN Explorer | 13.5 MB 🕍 | |
| Description: Includes Web and FTP support, along with su transactions, Active Server Pages, and datab | | |
| Total disk space required: 15.9 MB | Details | (2) Click |
| Space available on disk: 1854.3 MB | | |
| | | |
| < Back | Next> Cancel | |

4. Select the [File Transfer Protocol (FTP) Service] check box and click [OK].

| Internet Information Services (IIS) | |
|---|----------------------|
| To add or remove a component, click the check box. A shaded box me of the component will be installed. To see what's included in a compone Subcomponents of Internet Information Server (1) Check | |
| | 1.0 MB 🛃 3.5 MB 📗 |
| File Transfer Protocol (FTP) Service | 0.1 MB |
| ✓ Coverane Zillit Server Events ✓ The Internet Information Services Snap-In | 4.1 MB 1.3 MB |
| ✓ Image SMTP Service ✓ Amage World Wide Web Service | 3.6 MB 2.2 MB |
| Description: Provides support to create FTP sites used to upload and | |
| Total disk space required: 16.1 MB | Details |
| Space available on disk: 1854.2 MB | |
| | (2) Click |

5. Click [Next].

(You will be asked for the Windows XP CD.)



6. Click [Finish].

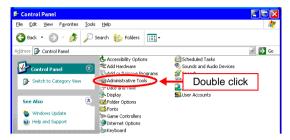
| Windows Components Wiz | ard 🛛 | |
|------------------------|--|-------|
| | Completing the Windows Components Wizard You have successfully completed the Windows Components Wizard. | |
| | | Click |

7. A directory named [InetPub] is created when installation is completed.

| 📼 Local Disk (C:) | | | |
|---|----------|---------------|-------|
| <u>File Edit View Favorites Tools H</u> elp | | | |
| ← Back • → • 🔂 ② Search Par Folders ③ History | 2 93 X 4 |) <u></u> . | |
| Address Disk (C:) | | | • @Go |
| Local Disk (C:) | | | |
| Select an item to view its description. | | | |
| Capacity: 2.01 GB | | | |
| Used: 770 MB | | | |
| Free: 1.26 GB | | | |
| | | | |
| 4 object(s) (plus 2 hidden) | 0 bytes | 🖳 My Computer | 11. |

FTP Site Settings





2. Choose [Internet Information Services].

| Eile Edit View Favorites Iools Help | <i>1</i> 1 |
|--|-------------------|
| 🚱 Back 🝷 🌍 👻 🏂 Search 🎼 Fo | iders 📰 - |
| Address 🖓 Administrative Tools | 🚽 📑 Go |
| File and Folder Tasks | lanagement |
| Anternet In | ormation Services |
| Other Places Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored Panel Image: Colored | |

3. Choose [Default FTP Site] and right-click to select [Property].

| 🕷 Internet Information Servic | es | | | |
|--|-------|----------------------------------|-------------------|--------|
| Elle Action View Help | | | | |
| 🗢 🔶 🗈 💽 🖆 🖳 | 2 🔍 🕨 | • • • | | |
| Internet Information Services - B CHASER2 (local computer) + O Web Sites | Name | Path There are no items to sh | low in this view. | Status |
| + Default FTP Ste | | Right-click |] | |
| | | | _ | |
| | | | | |
| | | | | |
| | | | | |
| | 3 | | _ | э |
| · · · · · · · · · · · · · · · · · · · | , | | | |

4. Select [(All Unassigned)] for IP Address.

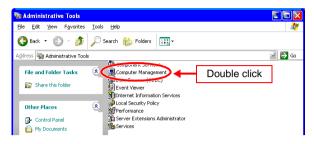
| Default FTP Site Properties | ? 🛛 |
|---|------|
| FTP Site Security Accounts Messages Home Directory | |
| ⊂ Identification | |
| Description: Default FTP Site | 1 |
| IP Address: (All Unassigned) - Select | |
| ICP Port: 21 | |
| Connection | =1 |
| ◯ <u>U</u> nlimited | |
| Limited To: 10 connections | |
| Connection Timeout: 900 seconds | |
| Enable Logging | =1 |
| Active log format: | |
| W3C Extended Log File Format Properties | |
| | _ |
| Current Sessio | ns |
| OK Cancel Apply H | lelp |

5. Select the [Read], [Write], and [Log visits] check boxes for Home Directory, then click [OK].

| Default FTP Site Properties |
|---|
| FTP Site Security Accounts Messages Home Directory |
| When connecting to this resource, the content should come from: |
| Directory Listing Style |
| OUN⊠ ⊗ ⊙ M§-DOS ⊗ |
| |
| OK Cancel (2) Click |

User Registration

1. Choose [Computer Management] in [Administrative Tools].



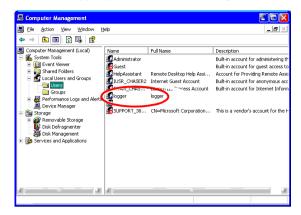
2. Choose [Users] in [Local User and Group] and right-click to select [New User].

| 🗏 Computer Management | |
|---|--|
| 📕 File Action View Window Help | X |
| | |
| Concuter Management (Loca (1) Right-click me Secure 1 (Loca (1) Right-click me Right-click me Secure 1 (Loca (1) Right-click me Right-click me Secure 1 (Loca (1) Right-click me Secure 1 (Loca (| Description Built-in account for administering the Built-in account for guest access to Account for Providing Remote Assis Control for Internet. Inform This is a vendor's account for the i- |
| Creates a new Local User account. | |

3. Enter User name, Full name, Password, and Password reentry for confirmation (e.g., logger), and then choose [Create].

| New User | |
|---|-----------|
| User name: logger | |
| Eull name: logger | |
| Descriptio : I (1) Ir | nput |
| Password: | |
| Confirm passwort | |
| User must change password at next logon User cannot change password | |
| Password never expires | |
| Account is disabled | |
| | |
| | (2) Click |

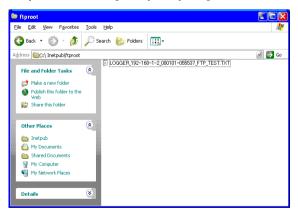
4. The user [logger] you created is then registered.



FTP server setup on Windows is complete with the above steps.

5. Execute the FTP data transfer test from this instrument (192.168.1.2) to the PC (192.168.1.1) using the "logger" user name and "logger" password.

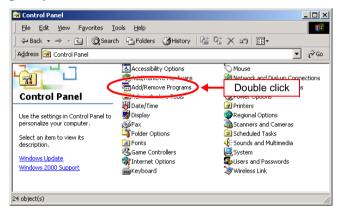
6. The test file (e.g., LOGGER_192-168-1-2_000101-055537_FTP_TEST. TXT) is then sent to [C:\Intpub\ftproot].



Windows2000

FTP Service Setup

1. On [Control Panel] on the Windows start menu, double click [Add/Remove Programs].



2. Choose [Add/Remove Windows Components].

| 🙀 Add/Remov | e Programs | | - U × |
|--|--|---------------|-------|
| R | Currently installed programs: | Sort by: Name | • |
| Change or Remove Programs Add New Programs Add/Remove Windows onponents | There are no programs installed on this computer Click | | 8 |
| | | | llose |

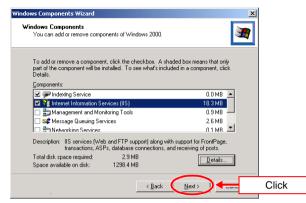
3. Choose [Internet Information Services (IIS)] then [Details].

| Vindows Components Wizard | × | |
|---|----------------|-----------|
| Windows Components You can add or remove components of Windows 2000. | 3 | |
| To add or remove a component, click the checkbox. A shaded be part of the component will be installed. To a (1) Check Details. Components: | iponent, click | |
| Pladexing Service Service Services | 0.0 MB | |
| Managemerik and Meriheling Tech | U.3 MB | |
| Message Queuing Services | 2.6 MB | |
| Pa Networking Services | 0.1 MB 🗾 | |
| Description: IIS services (Web and FTP support) along with supp transactions, ASPs, database connections, and rece | | |
| Total disk space required: 0.1 MB | Details | (2) Click |
| Space available on disk: 1298.4 MB | | (_/ •• |
| < Back N | Next > Cancel | |

4. Select the [File Transfer Protocol (FTP) Server] check box and click [OK].

| Internet Information Servic | es (IIS) | | × |
|---|--|--|---------|
| To add or remove a component of the component will be installe | | | |
| Sub <u>c</u> omponents of Internet Info | (1) Check | | |
| 🗹 🔷 Common Files 🚽 | | 1.0 MB | |
| 🗌 🙆 Documentation | | 3.5 MB | |
| 🔽 📮 File Transfer Protocol (F | TP) Server | 0.1 MB | |
| CrewPage 2000 Server | Futonciano | 4.1 MB | |
| 🗹 🐔 Internet Information Ser | vices Snap-In | 1.3 MB | |
| 🗌 🗌 💱 Personal Web Manager | r | 1.4 MB | |
| 🗆 🛄 SMTP Service | | 5.0 MB | - |
| | ile Transfer Protocol (FTF ng and downloading of file | P), allowing you to set up FTI es). | > |
| Total disk space required: | 2.9 MB | Details. | |
| Space available on disk: | 1298.4 MB | Eorain. | |
| | | ок (| 2) Clio |
| | | \smile – | |

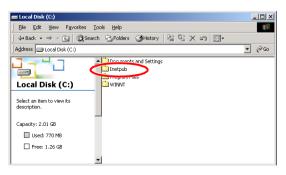
5. Click [Next].



6. Click [Finish].

| Windows Components Wizar | d 🗵 | |
|--------------------------|---|-------|
| | Completing the Windows Components Wizard You have successfully completed the Windows Components Wizard | |
| Windows 2000 | To close this wizard, click Finish. | |
| | < Back Finish | Click |
| | | |

7. A directory named [InetPub] is created when installation is completed.

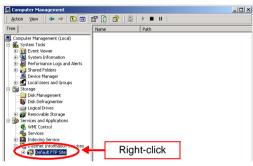


FTP Site Settings

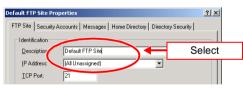
1. Choose [My Computer] and right-click to select [manage].



2. Choose [Default FTP Site] for [Service and Applications]-[Internet Information Services], then right-click to select [Property].



3. Select [(All Unassigned)] for IP Address.

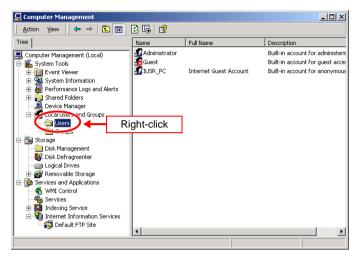


4. Select the [Read], [Write], and [Log visits] check boxes for Home Directory, then click [OK].

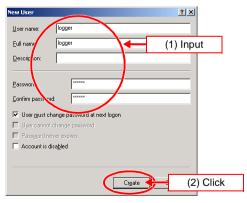
| efault FTP Site Properties | <u>? ×</u> |
|---|----------------|
| FTP Site Security Accounts Messages Home Directory Direct | ctory Security |
| When connecting to this resource, the content should come from a girectory located on this computer a share located on another computer | |
| FTP Site Directory | |
| Local Path: c:\inetpub\ftproot | Browse |
| Read | |
| Vite | (1) Check |
| ✓ Log visits | |
| Directory Listing Style | |
| CUN⊠● | |
| | |
| | |
| | |
| | |
| | |
| | |
| OK Cancel | (2) Click |

User Registration

1. Choose [Users] in [Local User and Group] and right-click to select [New User].



2. Enter User name, Full name, Password, and Password reentry for confirmation (e.g., logger), and then choose [Create].



3. The user [logger] you created is then registered.

| Action Yiew Yee Image: Computer Management (Local) Computer Management (Local) Administrator Bult-in account for administrator System Tools Sult-in account for guest acce Bult-in account for guest acce System Information Sult-in account for anonymous System Information Soger loager System Information Soger loager Stard Folders Soger loager Storage Storage Storage Storage Services Services Storage Services Services Storage Services Services Storage Internet Information Services Internet Information Services | Computer Management | | | _ 🗆 × |
|---|--|-----------------|-----------|---------------------------------|
| Computer Management (Local) Administrator System Tools System Tools Geuest | Action View ↓ 🗢 ⇒ 🗈 📧 | 1 🗟 1 | | |
| System Tools Guest Bult-in account for guest acce Bult-in account for guest Bult-in accoun | Tree | Name | Full Name | Description |
| Default FTP Site | System Tools System Tools System Tools Performance Logs and Alerts Shared Folders Local Users and Groups Course Manager Course Manager Course Manager Course Storage Disk Management Disk Defragmenter Logical Drives Services and Applications MMI Control Services MMI Control MMI Control | Guest Dugger | | Built-in account for guest acce |

FTP server setup on Windows is complete with the above steps.

4. Execute the FTP data transfer test from this instrument (192.168.1.2) to the PC (192.168.1.1) using the "logger" user name and "logger" password.

5. The test file (e.g., LOGGER_192-168-1-2_000101-055537_FTP_TEST.

TXT) is then sent to [C:\Intpub\ftproot].

| 🔁 ftproot | |
|--|------|
| Eile Edit View Favorites Tools Help | 1 |
| ⇔Back • → • 🖻 @ Search ParFolders ③History Par 😤 🗙 🖄 III• | |
| Address 🔁 C:\Inetpub\ftproot | • @@ |
| ELOGGER_192-168-1-2_000101-102030_FTP_TEST.TXT ftproot There are no items to show in this folder. See also: My Documents My Network Places My Computer | |
| 0 object(s) 0 bytes 🖳 My Computer | |

PC Settings during PPP Communication

Answer Calls on the Instrument from the PC

The connecting IP address when a telephone message is being received is 192.168.55.2 for this instrument, and 192.168.55.1 for the PC.

"Current IP Address" indicates the IP address actually assigned to this instrument.

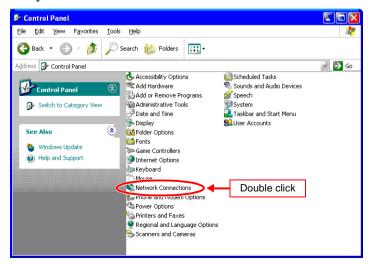
Before dialing a number from the PC to this instrument, make sure that dial-up connections have been set up on the PC side. Dial-Up Networking is included with Windows, so refer to Windows HELP.

For details on how to add a modem to Windows, refer to the user's manual supplied with your modem.

WindowsXP

Create a New Network

1. On [Control Panel] on the Windows start menu, double click [Network Connections].



2. Choose [File] - [New Connection].

| Setwork Connections | |
|--|----------|
| File Edit View Favorites Iools Advanced Help | * |
| Connect Status Search 😥 Folders | |
| Repair 15 | i 🚽 🔁 Go |
| New Connection | |
| Create Copy | |
| Create Shortcut Delete | |
| Rename | |
| Properties | |
| Close | |
| Vetwork Troubleshooter | |
| | |
| Other Places | |
| Control Panel | |
| Search Strategy My Network Places | |
| My Documents | |
| 🦉 My Computer | |

3. Click [Next].

| New Connection Wizard | |
|-----------------------|---|
| Ś | Welcome to the New Connection Wizard |
| | This wizard helps you: |
| | Connect to the Internet. |
| | Connect to a private network, such as your workplace network. |
| | Set up a home or small office network. |
| | To continue, click Next. |
| | |

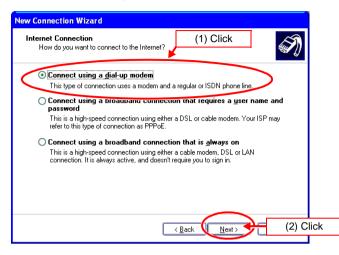
4. Select [Connect to the Internet] and click [Next].

| New Connection Wizard | |
|---|---|
| Network Connection Type What do you want to do? | (1) Click |
| Connect to the Internet Connect to the Internet so you | can browse the Web and read email |
| Connect to the network at Connect to a business network a field office, or another location | < (using dial-up or VPN) so you can work from home, |
| O <u>S</u> et up a home or small off Connect to an existing home o | fice network r small office network or set up a new one. |
| | nection mputer using your serial, parallel, or infrared port, or her computers can connect to it. |
| | (2) Click |
| | |

5. Select [Set up my connection manually] and click [Next].

| New Connection Wizard | |
|---|-----------|
| Getting Ready The wizard is preparing to set up your Internet connection. | Ì |
| How do you want to connect to the Internet? | (1) Click |
| Choose from a list of Internet service providers (ISPs) | |
| Set up my connection manually | |
| For a dial-up connection, you will need your account name, password phone number for your ISP. For a broadband account, you won't nee sumber. | |
| ○ Use the <u>C</u> D I got from an ISP | |
| | |
| | |
| | |
| | |
| \frown | |
| < <u>B</u> ack Next> | (2) Click |
| | |

6. Select [Connect using a dial-up modem] and click [Next].



7. Set the ISP Name (e.g., LOGGER) and click [Next].

| New Connection Wizard | |
|---|---------|
| Connection Name What is the name of the service that provides your Internet connection? | |
| Type the name of your ISP in the following box. ISP Maree (1) Input LOGGER The name you type here will be the name of the connection you are creating. | |
| |) Click |

8. Set the telephone (Phone number) and and click [Next].

| New Connection Wizard | le l | |
|--|--|-------|
| Phone Number to Dial What is your ISP's phone number? | Ś | |
| Type the phone number (1) Inpu | ıt | |
| Phone number: 0123456789 | | |
| You might need to include a ''1'' or the a you need the extra numbers, dial the ph hear a modem sound, the number dialec | one number on your telephone. If you | |
| | | |
| | | |
| | | |
| | <back next=""> to (2)</back> | Click |

9. Set the telephone (Phone number) and and click [Next].

10.Set the user name (e.g., logger) and password (e.g., logger), then click [Next].

(Same as receiving user name (Receipt Account) and password (Receipt Password) on this instrument side when using HTTP or FTP servers.)

| New Connection Wizard | |
|--|-----|
| Internet Account Information You will need an account name and password to sign in to your Internet account. | |
| Type an ISP account name and password, then write down this information and store it in a safe place. [If you have forgotten an existing (1) Input | |
| User name: logger | |
| Password: | |
| | |
| ✓ Use this account name and password when anyone connects to the Internet from this computer | |
| ✓ <u>M</u> ake this the default Internet connection | |
| ☑ ⊥urn on Internet Connection Firewall for this connection | |
| | ick |

11.Click [Finish].

| New Connection Wizard | |
|-----------------------|--|
| Ś | Completing the New Connection Wizard |
| | You have successfully completed the steps needed to create the following connection: |
| | LOGGER • Make this the default connection • This connection is firewalled • Share with all users of this computer • Use the same user name & password for everyone |
| | The connection will be saved in the Network Connections folder. Madd a shortcut to this connection to mv desktop |
| | To create the connection and close this wizard, click Finish. |
| | |
| | |

Network Settings

1. Select the connection you've just created from [Network Connections] and right-click to select [Property].

| S Network Connections | |
|--|----------|
| Elle Edit View Favorites Iools Advanced Help | 1 |
| 🚱 Back 🝷 🛞 🖌 🏂 🔎 Search 🎼 Folders 🔛 - | |
| Address 🚳 Network Connections | i 🚽 🔁 Go |
| Network Tasks (Register of the series of the | |
| - office network | |
| See Also | |
| Vetwork Troubleshooter | |
| Other Places | |
| General Control Panel | |
| My Network Places | |
| Hy Documents | |
| Wy Computer | |

2. Click the [Networking] tab, choose [PPP: Windows 95, 98, NT4/2000, Internet], and click on [Settings].

| LOGGER Properties | ? 🛛 | |
|--|---------------|-----------|
| General Options Security Networking | (1) ëlëš | |
| Type of dial-up server Lam calling: | | |
| PPP: Windows 95/98/NT4/2000, Internet | | |
| | Settings | (2) Click |
| This connection uses the following items: | | |
| Internet Protocol (TCP/IP) | | |
| ☑ 🛃 QoS Packet Scheduler □ 🚚 File and Printer Sharing for Microsoft I | Networks | |
| Client for Microsoft Networks | Networks | |
| | | |
| <u>In</u> stall | Properties | |
| | | |
| Transmission Control Protocol/Internet Pro wide area network protocol that provides o | | |
| across diverse interconnected networks. | communication | |
| | | |
| |)K Cancel | |

3. Deselect all check boxes for [PPP Settings] and click [OK].



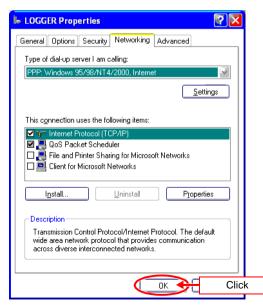
4. Select [Internet Protocol (TCP/IP)] then [Properties].

| 🖩 LOGGER Properties 💽 🔀 | |
|---|-----------|
| General Options Security Networking Advanced | |
| Type of dial-up server I am calling: | |
| PPP: Windows 95/98/NT4/2000, Internet | |
| (1) Check | |
| This connection uses the following items: | |
| Internet Protocol (TCP/IP) OoS Packet Scheduler File and Printer Sharing for Microsoft Networks | |
| Client for Microsoft Networks | |
| Install | (2) Click |
| Description | |
| Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. | |
| OK Cancel | |

5. Select [Obtain an IP address automatically] and [Obtain DNS server address automatically], then click [OK].

| Internet Protocol (TCP/IP) Properties | |
|---|-------|
| General | |
| You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. | |
| (1) Click (1) Click | |
| Use the following if address: | |
| Ubtain DNS server address automatically (2) Click Use the following DNS server addresses: | |
| Preferred DNS server: | |
| Alternate DNS server: | |
| Advanced | |
| | |
| | |
| | Click |

6. Click [OK].



Dial-up Connection (Dialing)

1. Go to [Control Panel]-[Network Connections] and double click the connection you have just created.

| Setwork Connections | |
|--|--------|
| <u>E</u> ile <u>E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools Adva <u>n</u> ced <u>H</u> elp | 1 |
| 🚱 Back 👻 🌍 🕤 🏂 🔎 Search 🎼 Folders 🔛 - | |
| Address 🔇 Network Connections | 🚽 🛃 Go |
| Network Tasks | |
| Connection | |
| Set up a home or small office network | |
| See Also | |
| Vetwork Troubleshooter | |
| Other Places | |
| Control Panel | |
| See My Network Places | |
| A My Documents | |
| 9 My Computer | |

2. Enter User name and Password (e.g., logger) and then enter the telephone number in the [Dial] field.

Click on the [Dial], and the dial-up process will begin.

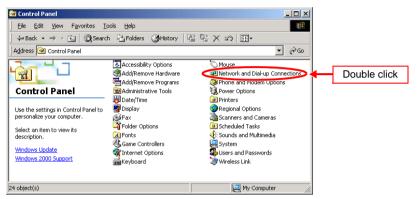
(Use the same user name (Receipt Account) and password (Receipt Password) as on the HTTP server, FTP server.)

| Connect LOGGER |
|---|
| |
| User name: (1) Input |
| Password: [To change the save password, click here] |
| ✓ Save this user name and password for the following users: |
| O Me o <u>n</u> ly |
| |
| Dial: 0123456789 (2) Input |
| Dial (3) Click Help |

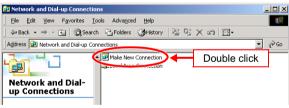
Windows2000

Create a New Network

1. Go to [Control Panel]-[Network and Dial-up Connections] and double click the connection you have just created.



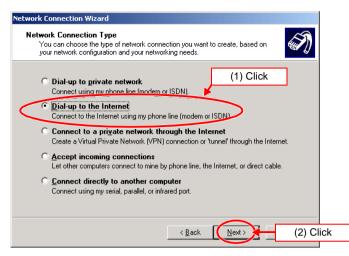
2. Choose [Make New Connection].



3. Click [Next].



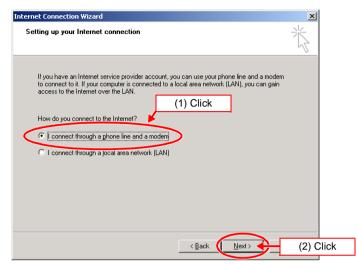
4. Select [Dial-up to the Internet] and click [Next].



5. Select [I want to set up my Internet connection manually, or I want to connect through a local area network(LAN)] and click [Next].

| Internet Connection Wizard | X |
|----------------------------|---|
| | Welcome to the Internet Connection Wizard The Internet Connection wizard helps you connect your computer to the Internet. You can use this wizard to set up a new or existing Internet account. I want to sign up for a new Internet account. (My telephone line is connected to my modem.) |
| | I want to transfer my gxisting Internet account to this compute (1) Click (My telephone line is connected to my modem.) want to set up my Internet connection manually, or I want to connect through a local area network (LAN). To leave your Internet settings unchanged, click Cancel. |
| | To learn more about the Internet, click Tutorial. |

6. Select [I connect through a phone line and a modem] and click [Next].



7. Set the telephone number and click [Next].

| Internet Connection Wizard | × |
|---|-----------|
| Step 1 of 3: Internet account connection information | × |
| Type the phone number you dial to con (1) Input | |
| 012 - 3456789 Country/region name and code: United States of America (1) ✓ Use area code and dialing rules | |
| To configure connection properties, click Advanced. (Most ISPs do not require advanced settings.) | |
| | |
| < <u>Back</u> <u>N</u> ext> | (2) Click |

8. Set the user name (e.g., logger) and password (e.g., logger), then click [Next].

(Same as receiving user name (Receipt Account) and password (Receipt Password) on this instrument side when using HTTP or FTP servers.)

| Internet Connection Wizard | × |
|---|-----------|
| Step 2 of 3: Internet account logon information | ×× |
| Type the user name and password you use to be neterate to a you Member ID to Us (1) In control you for the second of the second | put |
| < <u>B</u> ack | (2) Click |

9. Set the connection name (e.g., LOGGER) and click [Next].

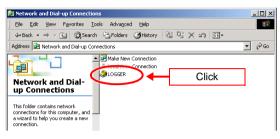
| Internet Connection Wizard Step 3 of 3: Configuring your computer | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX | | |
|---|--|-----------|--|
| Information about your internet account is grouped together as a dailup connection and labeled with a name war and the second of the second se | | | |
| < Back Next > | | (2) Click | |

10.Click [Finish].

| Internet Connection Wizard | | × |
|----------------------------|--|---|
| - 174 | Completing the Internet Connection Wizard | |
| | You have successfully completed the Internet Connection wizard. Your computer is now configured to connect to your Internet account. | |
| | After you close this wizard, you can connect to the Internet at any time by double-clicking the Internet Explorer icon on your desktop. | |
| 4 | \Box [Io connect to the Internet immediately, select this box and then click Finish. | |
| | To close the wizard, click Finish | |
| | | |
| [] | | |
| | < Back Finish Lancer | |

Network Settings

1. Select the connection you've just created from [Network and Dial-up Connection] and right-click to select [Property].



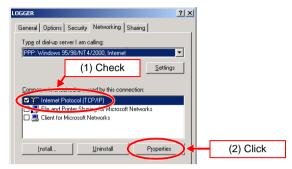
2. Select [PPP:Windows95,98,NT4/2000,Internet] in [Networking], then [Settings].

| LOGGER | <u>?</u> × |
|---|--------------------|
| General Options Security Networking | (1) ëlëš |
| Type of dial-uniserver Lamicalling; | |
| PPP: Windows 95/98/NT4/2000, Internet | |
| | Settings (2) Click |
| Components checked are used by this connectio | n: |
| Internet Protocol (TCP/IP) | |
| File and Printer Sharing for Microsoft Networks | vorks |
| | |
| | |
| Install Uninstall | Properties |
| Description | |
| Description | |
| Transmission Control Protocol/Internet Protoco wide area network protocol that provides comm across diverse interconnected networks | |
| across diverse interconnected networks. | |
| | |
| OK | Cancel |

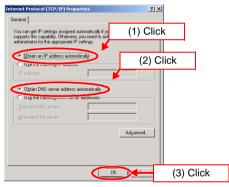
3. Deselect all check boxes for [PPP Settings] and click [OK].



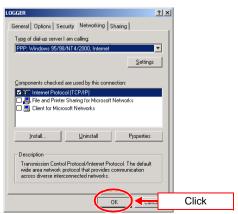
4. Select [Internet Protocol (TCP/IP)] then [Properties].



5. Select [Obtain an IP address automatically] and [Obtain DNS server address automatically], then click [OK].



6. Click [OK].



Dial-up Connection (Dialing)

1. Go to [Control Panel]-[Network Connections] and double click the connection you have just created.

| 🔁 Network and Dial-up Connections | _ 🗆 × |
|--|--------------|
| Eile Edit View Favorites Tools Advanced Help | 1 |
|] ← Back • → • 🖻 @ Search 🖓 Folders ③History 😤 🧏 🗙 🕫 🏢• | |
| Address 🔁 Network and Dial-up Connections | ▼ ∂60 |
| Wake New Connection Network and Dial- up Connections This folder contains network connections for this computer, and a wizard to help you create a new connection. To create a new connection, click Make New Connection. To open a connection, click its icon. | |
| 3 object(s) | li. |

2. Enter the user name (e.g., logger), password (e.g., logger), and telephone number. Then select the connection to make a dial-up connection.

(Same as receiving user name (Receipt Account) and password (Receipt Password) on this instrument side when using HTTP or FTP servers.)

| Connect LOGGER | | ? | × |
|-------------------|-------------|-------------------|---|
| | | (1) Input | |
| User name: logger | | (T) Input | |
| Password: | ***** | | |
| | ve Password | | _ |
| Dia | (2) Click | ties <u>H</u> elp | |

Windows98, WindowsMe

Create a New Network

1. Choose [My Computer]-[Dial-Up Networking], then [Make New Connection].



2. Set the telephone number and click [Next].



3. Set the name and click [Finish].

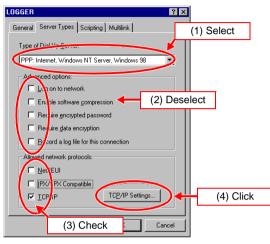


4. From [Dial-Up Networking], select the connection you've just created and right-click to select [Property].

| 🔯 Dial-Up Networking | | | | _ 🗆 × |
|-------------------------|-------------------|--------------------|--------|----------|
| Eile Edit View Go | Favorites Connect | tions <u>H</u> elp | | 1 |
| Back Forward | t 🔊 Up Create | Dial K | Copy | Paste * |
| Address 🔯 Dial-Up Netwo | rking | | | • |
| Entry name | Phone # or Host | Device name | Status | |
| LOGGER | Right-o | click 🖷 | | |

5. Click the [Server Types] tab and set the [Type of Dial Up Server] to [PPP: Internet, Windows NT Server, Windows 98].

Remove the checkmarks from all [Advanced options] boxes. In the [Allowed network protocols] boxes, only check the box for [TCP/IP], then click the [TCP/IP Settings].



6. Select the [Server assigned IP address] and [Server assigned name server address] check boxes, then select the [Use default gateway on remote network] check box and click [OK].

| TCP/IP Sett (1) | Click | ? × |
|---|-------|-----------|
| € Crasik on ID adde | | |
| C Specify an I <u>P</u> addre IP a (2) Cli ogrver assigned na Specify name serve | ick | . 0 |
| Primary <u>D</u> NS: | 0.0.0 | . 0 |
| Secondary D <u>N</u> S: | 0.0.0 | . 0 |
| Primary <u>W</u> INS: | 0.0.0 | . 0 |
| Secondary WINS: | 0.0.0 | . 0 |
| □ Use IP header com ☑ Use default gatewa | | |
| | | (4) Click |
| (3) Ch | еск | |

Dial-up Connection (Dialing)

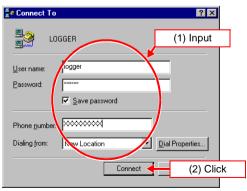
1. Choose [My Computer] - [Dial-Up Networking], then the connection you've just created.

| 😰 Dial-Up Networking | | | | _ 🗆 🗙 |
|---------------------------|---|--------------------|---------|----------|
| <u> </u> | F <u>a</u> vorites <u>C</u> onnec | tions <u>H</u> elp | | 1 |
| Back Forward | t 🔊 Up Create | Dial Cut | Copy Pa | |
| 🛛 Address 😰 Dial-Up Netwo | rking | | | • |
| Entry name | Phone # or Host | Device name | Status | |
| LOGGER | 1->>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> | Standard Modem | Double | click |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| 2 object(s) | | | | |

2. Enter the user name (e.g., logger), password (e.g., logger), and telephone num-

ber. Then select [Connect] to make a dial-up connection.

(Same as receiving user name (Receipt Account) and password (Receipt Password) on this instrument side when using HTTP or FTP servers.)



Calling from the Instrument to PC

The IP address normally assigned when originating a call is 192.168.55.2 for this instrument, and 192.168.55.1 for the PC, although the address may vary depending on settings made on the PC side.

"Current IP Address" indicates the IP address actually assigned to this instrument.

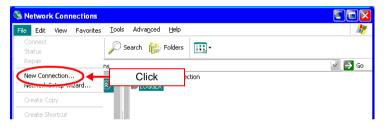
When dialing a number from this instrument to the PC, the remote access server (dial-up server) must be up and running before the call can be terminated on the PC side. The remote access server is included with Windows, so refer to Windows HELP.

For PPP in this instrument, unsigned PAP is used for authentication.

WindowsXP

Incoming Connection Settings (Remote Access Server)

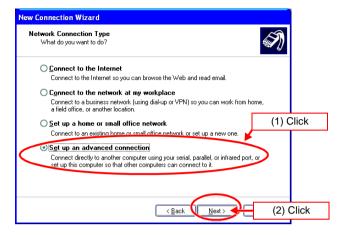
1. Go to [Control Panel] - [Network Connections] and choose [New Connection].



2. Click [Next].



3. Select [Set up an advanced connection] and click [Next].



4. Select [Accept incoming connections] and click [Next].

| Advanced Connection Options Which type of connection do you want to set up? (1) Click Select the connection type you want: Advoor of the computer is to compete to this computer through the Internet, a phone the or a direct cable connection. Connect directly to another computer Connect to another computer using your serial, parallel, or infrared port. | New Connection Wizard | | |
|---|--|---------------------------------|-----------|
| Allow other computers to connections; Allow other computers to connect to this computer through the Internet, a phone the or a direct cable connection. Connect directly to another computer | | (1) Click | Ì |
| Caccept incoming connections Allow other computers to connect to this computer through the Internet, a phone tipe or a direct cable connection. Connect directly to another computer | Select the connection type you want: | | |
| | Allow other computers to connect to this computers | ter through the Internet, a pho | |
| | | parallel, or infrared port. | |
| | | | |
| | | | |
| | | \sim | |
| (2) Clicl | < <u>-</u> | | (2) Click |

5. Select the modem set up in your PC and click [Next].

| New Connection Wizard | | | |
|--|--------------|-------------------------------|-----------|
| Devices for Incoming Conn You can choose the device | | ccept incoming connections. | I) |
| Select the check box nex | (1) Check | use for incoming connections. | |
| _onnection devices: ☑ ➢ Standard 56000 bps | Madan | | |
| Direct Parallel (LPT) | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | Properties | - - |
| | | Topolaos | - |
| | | | |
| | < <u>B</u> a | ck Next> | (2) Click |
| | | | |

6. Select [Do not allow virtual private connections] and click [Next].

| w Connection Wizard | |
|---|-------|
| Incoming Virtual Private Network (VPN) Connection Another computer can connect to yours through a VPN connection | Ŋ |
| Virtual private connections to your computer through the Internet are possible only if your computer has a known name or IP address on the Internet. | |
| If you allow VPN connections, Windows will modify the Internet Connection Firewall to allow your computer to send and receive VPN packets. | |
| Do you want to allow virtual private connections to this computer? | |
| ○ Allow virtual private connections | |
| Do not allow virtual private connections (1) Click | |
| | - |
| | |
| | |
| | |
| | (0) 0 |
| | (2) C |

7. Select [Add].



8. Enter the user name (e.g., logger), full name (e.g., logger), and password (e.g., logger). Confirm the password by entering "logger", for example, then click [OK].

(Connect Password) on this instrument side when sending FTP data.)

| New User | (1) Input |
|---------------------------|--------------|
| | |
| <u>U</u> ser name: | logger |
| <u>F</u> ull name: | logger |
| <u>P</u> assword: | ••••• |
| <u>C</u> onfirm password: | •••••• |
| | OK (2) Click |
| | |

9. Select the [logger] added and click [Next].

| New Connection Wizard |
|--|
| User Permissions You can specify the users who can connect to this computer. |
| Select the check box next to each user who should be allowed a connection to this computer. Note that other factors, such as a disabled user account, may affect a user's ability to connect. |
| Users allowed to connect: |
| Administrator Guest Gues |
| Add <u>R</u> emove <u>Properties</u> |
| |

10.Select [Internet Protocol (RCP/IP)] and then [Properties].

| Select the check box next to each (1) Check that should be enabled for incoming connections. Menorising software: Internet Protocol (TCP/IP) Description of the construction of the con | Networking Software Networking software allows this computer to accept connections from other kinds of computers. | |
|---|---|-----------|
| QoS Packet Scheduler | for incoming connections. (1) Check | |
| QoS Packet Scheduler | | |
| Install | | |
| | Install | (2) Click |

11.Select [Allow callers to access my local area network] and click [OK].

| Incoming TCP/IP Pro | perties | ? 🛛 | |
|--------------------------------|------------------------------------|--------|-----------|
| Network Allow callers to ac | cess my local area network | (1) Ch | ieck |
| TCP/IP address assign | ment | | |
| Assign TCP/IP ad | dresses automatically using DHCP | | |
| ○ Specify TCP/IP at | ddresses | | |
| Erom: | | | |
| <u>Ι</u> α: | · · · · · | | |
| Total: | | | |
| Allow calling comp | uter to specify its own IP address | | |
| | ОК | Cancel | (2) Click |

12.Click [Finish].

| New Connection Wizard | | |
|-----------------------|---|-------|
| S | Completing the New Connection Wizard | |
| | You have successfully completed the steps needed to create the following connection: | |
| | Incoming Connections | |
| | The connection will be saved in the Network Connections folder. | |
| | To create the connection and close this wizard, click Finish. | |
| | < Back Finish Cancel | Click |

Windows2000

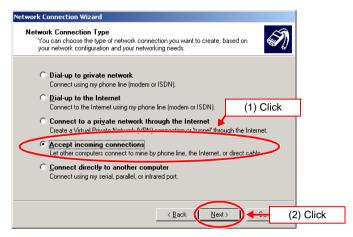
Incoming Connection Settings (Remote Access Server)

1. Go to [Control Panel]-[Network and Dial-up Connections] and choose [Make New Connection].



2. Click [Next].

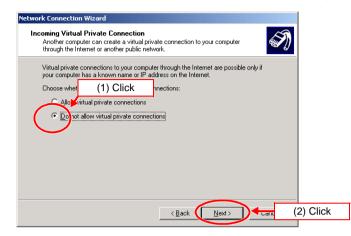
3. Select [Accept incoming connections] and click [Next].



4. Select the modem set up in your PC and click [Next].

| Devices for Incoming Connections Select the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming connections. Control of the check box next to (1) Check for incoming | You can choose the devices your computer uses to accept incoming connections. | You can choose the devices your computer uses to accept incoming connections. Select the check box next to (1) Check for incoming connections. | twork Connection Wizard | | | |
|---|---|---|--------------------------|-----------|----------------------------|---|
| (1) Check | (1) Check | (1) Creck | | | cept incoming connections. | N |
| Infrared Device (ILPT1) Direct Parallel (LPT1) | Infrared Device (ILPT1) Direct Parallel (LPT1) | Infrared Modem Port Properties Properties | | (1) Check | for incoming connections. | |
| Minfared Modem Port Soft Direct Parallel (LPT1) | Minfared Modem Port Soft Direct Parallel (LPT1) | Infrared Modem Port Direct Parallel (LPT1) Properties | | | | |
| Properties | Properties | | 🗆 🤔 Infrared Modern Port | | | |
| | | | | | Properties | |

5. Select [Do not allow virtual private connections] and click [Next].



6. Select [Add].

| Network Connection Wizard |
|---|
| Allowed Users You can specify which users can connect to this computer. |
| Select the check box next to the name of each user you want to allow to connect to this computer. Note that other factors, such as a disabled user account, may affect a user's ability to connect. |
| Users allowed to connect: |
| Add |
| < <u>₿</u> ack <u>N</u> ext > Cancel |

7. Enter the user name (e.g., logger), full name (e.g., logger), and password (e.g., logger).

Confirm the password by entering "logger," for example, then click [OK].

(Same as calling user name (Connect Account) and password (Connect Password) on this instrument side when sending FTP data.)

| New User | ? × |
|--------------------|------------------|
| <u>U</u> ser name: | logger (1) Input |
| <u>F</u> ull name: | logger |
| Password: | жжижи |
| Confirm password: | NAMANAN |
| | OK (2) Click |
| | |

8. Select the [logger] added and click [Next].

| k Connection Wizard |
|---|
| wed Users You can specify which users can connect to this computer. |
| Select the check box next to the name of each user you want to allow to connect to this computer. Note that other factors, such as a disabled user account, may affect a user's ability to connect. |
| Users allowed to connect: |
| Administrator |
| (1) Check |
| |
| < Back |

9. Select [Internet Protocol (RCP/IP)] and then [Properties].

| etwork Connection Wizard | |
|--|-----------|
| Networking Components Networking components enable this computer to accept connections from other kinds of computers. | |
| Select the check box next to the name of each networking component you want to enable for incoming connections. | |
| (1) Check | |
| Client for Microsoft Networks Install Uninstall Properties | |
| Description: | (2) Click |
| Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks. | |
| | |
| < <u>B</u> ack <u>N</u> ext> Cancel | |

10.Select the [Allow callers access my local area network] check box, then click [OK].

| Incoming TCP/IP Properties | |
|--|--|
| Network assess | |
| | |
| Assign TCP/IP addresses automatically using DHCP | |
| C Specify TCP/IP addresses | |
| Erom: | |
| <u>Ι</u> α. | |
| Total: | |
| Allow calling computer to specify its own IP address | |
| OK (2) Click | |
| | |

11.Set [Incoming Connections] for the [The connection will be named] and click [Finish].

| Network Connection Wizard | | |
|---------------------------|---|-----------|
| | Completing the Network The connection Wizar (1) Input Incoming Connections To create this connection and save it in the Network and Diakup Connections folder, click Finish. To edit this connection in the Network and Diakup Connections folder, select it, click File, and then click Properties. | |
| | | (2) Click |

Windows98, WindowsMe

Incoming Connection Settings (Remote Access Server)

1. From [Connections] in [My Computer] - [Dial-Up Networking], choose [Dial-Up Server].

(If no choices for dial-up servers are available here, first install the dial-up server as described later.)



2. Select the modem set up in your PC and select [Allow caller access] and [Change Password].

(If no choices for changing the password are available here, first limit shared level access as described later.)

| Dial-Up Server ? 🗙 | |
|-----------------------------------|-----------|
| Standard Modem DELCO IG (1) Click | |
| | |
| | |
| Allow caller access | |
| Change Password protection: | (3) Click |
| (2) Click | |
| Comment. | |
| <u>S</u> tatus; Idle | |
| Disconnect User Server Type | |
| | |
| OK Cancel Apply | |

3. Enter a password in the New password and Confirm new password areas (e.g.,

logger). Click [OK].

Leave [Old password] blank.

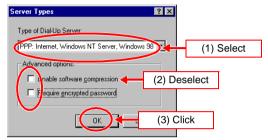
(Use the same username (Connect Account) and password (Connect Password) as the connect account and password of the instrument used when sending FTP data.)

| Dial-Up Networking Password | ? × | |
|-----------------------------|--------------|-----------|
| Qid password: | OK Cancel | (2) Click |
| Confirm new pas word: | (1) Inp | put |

4. Choose [Dial-up Server] and click the [Server Types] tab.

5. Set the [Type of Dial Up Server] to [PPP: Internet, Windows NT Server, Windows 98].

Remove the checkmarks from all [Advanced options] boxes, then click [OK].



6. Click the [Apply]; [Status] will change to "Monitoring."

| Dial-Up Server ? 🗙 | |
|--------------------------------------|-------|
| Standard Modem MELCO IGM-B56KS MODEM | |
| No caller access | |
| Allow caller access | |
| Password protection: Change Password | |
| | |
| Comment | |
| Statu: Monitoring | |
| Statu: Monitoring | |
| Disconnect User Server Type | |
| | |
| | Click |

7. When a call is received, [Status] will change to "Connected."

| Dial-Up Server ? | × |
|---|---|
| Standard Modem MELCO IGM-B56KS MODEM | |
| Ng caller access Allow caller access Password protection: Change Password | |
| Comment: | |
| Status: Hislin connected since 2:00 PM on 22/5/2002 | |
| Dis <u>c</u> onnect User Server <u>Type</u> | |

Install the Dial-up Server

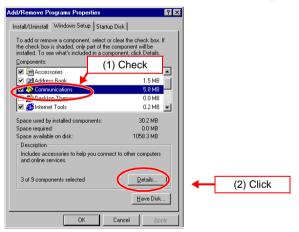
1. Prepare the Windows 98/Me CD and insert it in the CD drive. Leave it inserted.

2. [My Computer]-[Control Panel], select [Add/Remove Programs].



3. Click the [Windows Setup] tab.

Check the box for [Communications] and click the [Detail].



4. Select [Dial-Up Server] and click [OK].

| To add a component, select the don't want the component. A sha the component will be installed. I component, click Details. | aded box means that only p | art of |
|--|----------------------------|--------|
| Components: | Check | |
| Dial-Up ATM Support | 1.0 | |
| 🗹 😥 Dial-Up Server | 0.1 1 | |
| Bitect Cable Samection We HyperTerminal | 10.0 | |

PC Settings during PPP Communication

Limiting Shared Level Access

1. Right-click the [Network Neighborhood] icon and choose [Properties].



2. Click the [Configuration] tab, then the [File and Print Sharing].

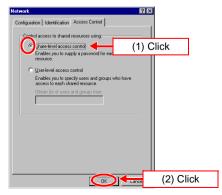


3. Check the boxes for [I want to be able to give others access to my files] and [I want to be able to give others access to my printer], then click [OK].



4. Click the [Access Control] tab.

Check the radio button for [Share-level access control] and click [OK].



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