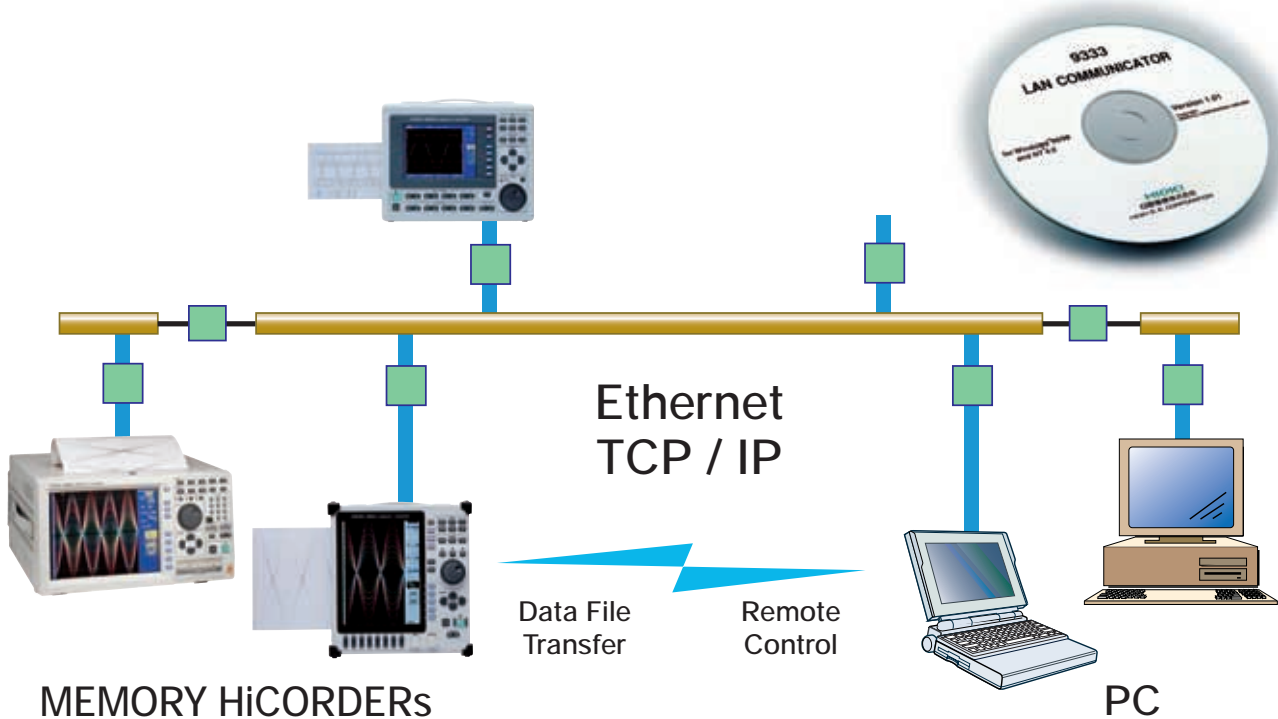


## 9333 LAN COMMUNICATOR

Recorders



### MEMORY HiCORDERs and PC Communications

## Remote Control via LAN

Application program collects data over Ethernet and analyzes the data in a Windows environment

The HIOKI 9333 LAN COMMUNICATOR is a PC program that allows measurement data to be quickly transferred through remote control commands issued over a LAN between MEMORY HiCORDERs and PCs. The screen of the MEMORY HiCORDER can be displayed in near real time on the PC, for convenient monitoring during measurement. Remote measurement and monitoring has never been easier! Using the MEMORY HiCORDER as the data collection tool, waveform data can also be transferred to the PC via the high-speed LAN connection.



ISO 9001  
JMI-0216



ISO 14001  
JQA-E-90091

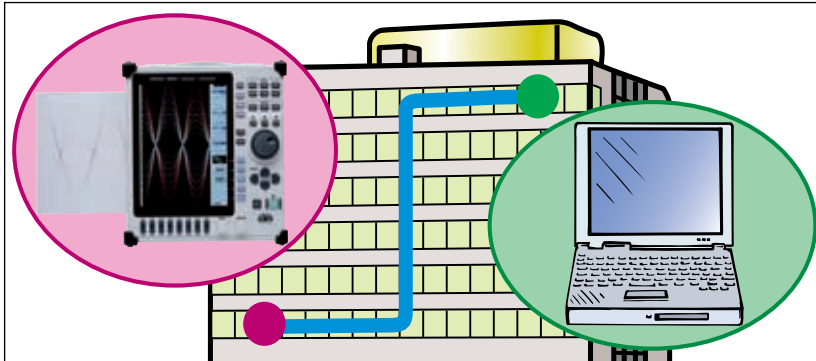


<http://www.hioki.co.jp/>

HIOKI company overview, new products, environmental considerations and other information are available on our website.

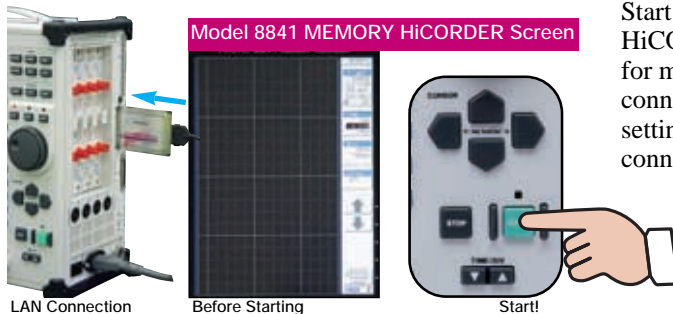
# MEMORY HiCORDERs with LAN Connections

## 1 View the screen of the MEMORY HiCORDER in near real time on the PC monitor



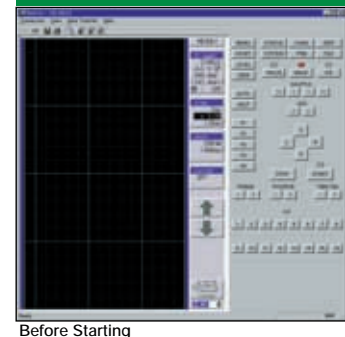
Actual screen data from LAN-connected MEMORY HiCORDERs can be verified by the HIOKI 9333 LAN COMMUNICATOR program on a PC in near real time. The MEMORY HiCORDER can also be remotely controlled from the PC screen.

### 1 Starting at the worksite



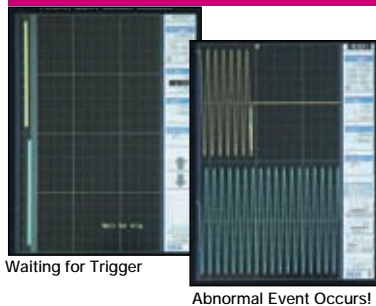
Start the MEMORY HiCORDER after preparing for measurement by connecting the LAN and setting up the LAN connection.

#### LAN COMMUNICATOR Window on the PC Screen

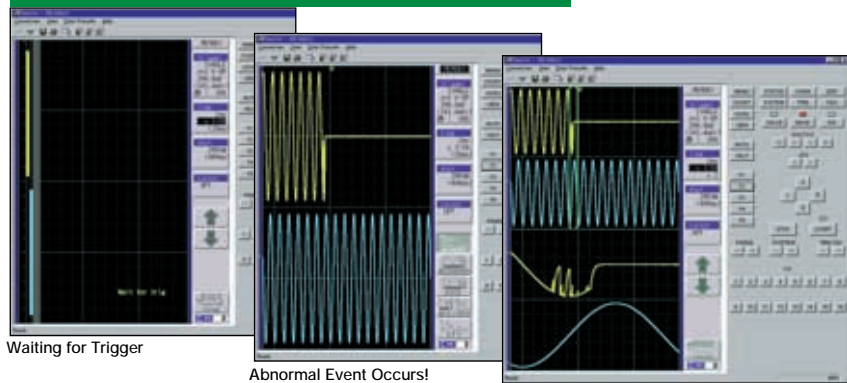


### 2 Confirming on the PC Screen

#### Model 8841 MEMORY HiCORDER Screen



#### LAN COMMUNICATOR Window on the PC Screen



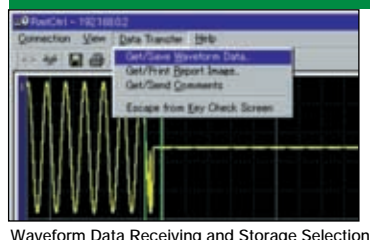
The screen of the connected MEMORY HiCORDER appears in the LAN COMMUNICATOR window on the PC in near real time.\* Current measurement states can be confirmed by watching the LAN COMMUNICATOR window.

\* The LAN COMMUNICATOR window may lag the MEMORY HiCORDER display by about one second (or more, depending on network traffic load and MEMORY HiCORDER settings).

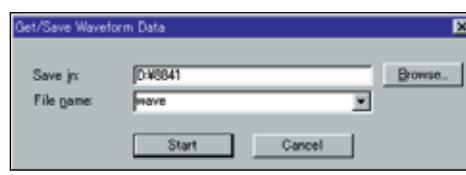
### 3 Acquire waveform data from the PC screen

Waveforms measured by the MEMORY HiCORDER are acquired by the PC from the LAN COMMUNICATOR window.

#### LAN COMMUNICATOR Window on the PC Screen



Waveform Data Receiving and Storage Selection



Sample of Waveform Data Receiving and Storage Dialog Box

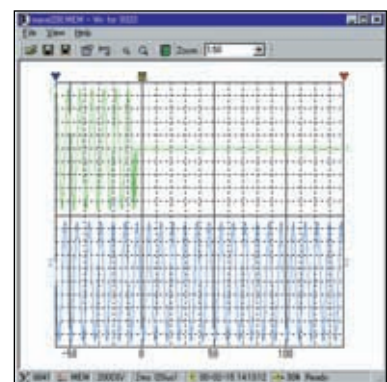
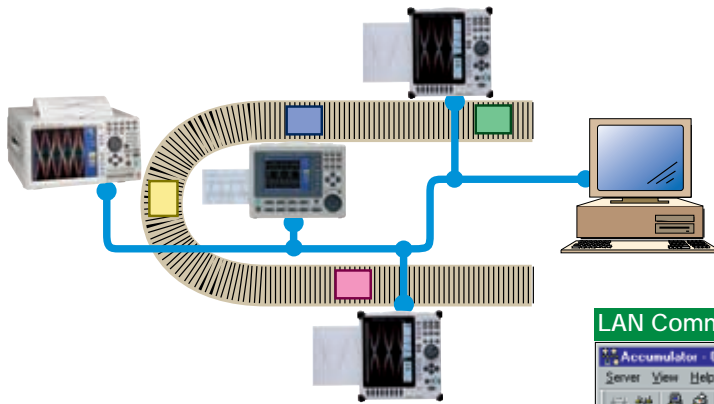


Image displayed in the Waveform Viewer window

## 2) Accumulate Data on a Single PC



Using the HIOKI 9333 LAN COMMUNICATOR, multiple MEMORY HiCORDERs can be connected to a single PC via LAN. Measurements can be observed from one location, and results stored together on the PC hard disk. In addition, measurement results can be printed in the report print format via the LAN connection.

### Applications

- Store waveforms recorded during shipping inspection
- Perform simultaneous measurements at different points on a production line
- Record the waveforms of multiple processes
- Analyze causes of abnormalities in production lines
- Store test data from production lines

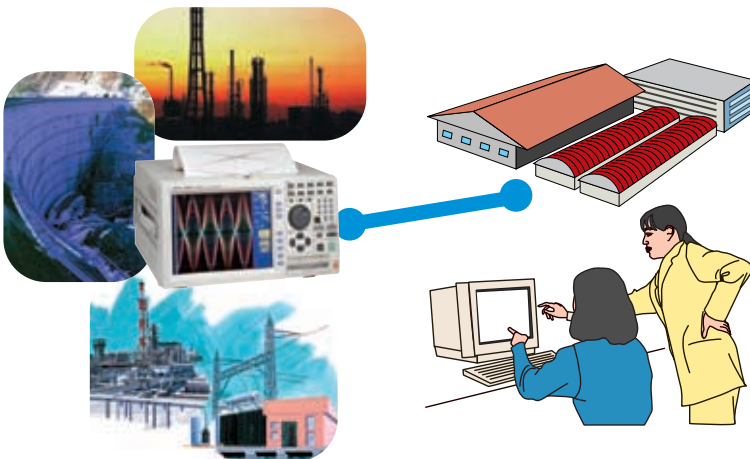
LAN Communicator Data Collection Window

File name	Host name	Model type	Size	Date	Status
WAVE.202139.MEM	H8841a	8841	42Kb	00/03/07 20:21:39	Receiving completed
WAVE.202309.MEM	H8841a	8841	42Kb	00/03/07 20:23:09	Receiving completed
WAVE.202393.MEM	H8826a	8841	42Kb	00/03/07 20:23:53	Receiving completed
WAVE.202428.MEM	H8826b	8841	42Kb	00/03/07 20:24:28	Receiving completed
WAVE.202501.MEM	H8826a	8841	42Kb	00/03/07 20:25:01	Receiving...
WAVE.202540.MEM	H8841a	8841	42Kb	00/03/07 20:25:40	Receiving completed
WAVE.202541.MEM	H8826b	8841	42Kb	00/03/07 20:25:41	Receiving...
WAVE.202541.MEM	H8826a	8841	42Kb	00/03/07 20:25:41	Receiving...

Shows the list of files obtained from multiple MEMORY HiCORDERs.

The current status of the 9333 LAN COMMUNICATOR program is displayed.

## 3) Measure from a Distance via LAN/WAN



From any place with a LAN/WAN connection, measurement results from remote MEMORY HiCORDERs can be displayed with the 9333 LAN COMMUNICATOR on a local PC. (Depending on network speed and traffic when sending data, some functions may be limited or unavailable.)

### Applications

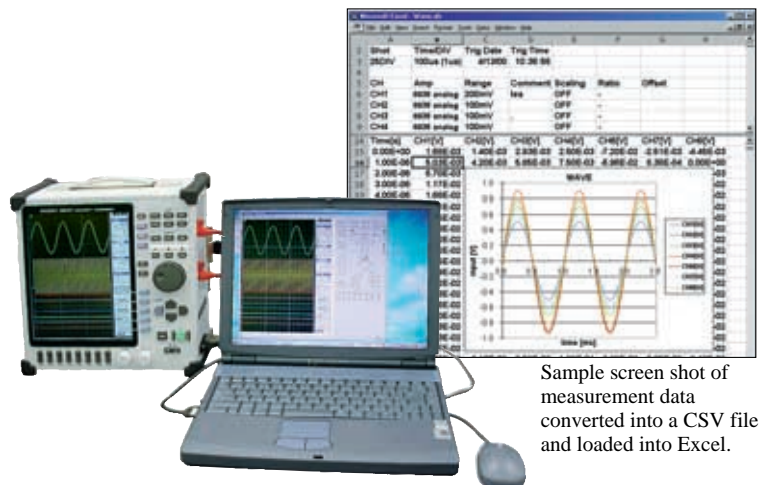
- Monitor measurements when measuring and monitoring at different locations
- Measurement locations: clean rooms, machinery rooms, laboratories, etc.
- Monitoring locations: offices, control rooms, monitoring rooms, etc.

## 4) New Standard for Data Transfer and Remote Control

Use the MEMORY HiCORDER as a high-speed transmitter of measurement data for processing on the PC. The data can be conveniently edited and analyzed using popular PC spreadsheet programs. Data can be saved to hard disk in CSV format using the waveform viewer of the 9333 LAN COMMUNICATOR.

### Applications

- Analyze waveform input on a PC
- Transfer data to create reports using PC spreadsheet programs
- Capture screen images (.BMP file format) to include in reports and documents



Sample screen shot of measurement data converted into a CSV file and loaded into Excel.



## LAN Connection Features

The following additional features are available when using the MEMORY HiCORDER with a LAN connection, compared with the earlier GP-IB and RS-232C connections.

### Advantages

- Faster transfer speed (even faster than the writing speed of the MO drive in the HiCORDER)
- Longer cable lengths possible (up to 100m with 10Base-T cable)
- Existing corporate LAN infrastructure can be used
- PC program (9333 LAN COMMUNICATOR) is available
- Less susceptible to errors than RS-232C: data disrupted by noise is automatically resent
- PC expenses can be lower than for GP-IB

### Disadvantages

- Transfer time depends on network traffic when the network is shared by other devices. In addition, HiCORDER data transfers affect other network traffic
- In some cases, depending on network management, existing LANs may not be usable for the HiCORDER
- PC networking settings are more complex than for RS-232C, and more settings are required because the OS is affected. (However, once set, there is no need to reset later)

### ● High-speed communication with LAN connections

The 9333 is a software application that runs on a PC. You can swiftly transfer measured data between MEMORY HiCORDERs and PCs connected to a LAN to remotely control the MEMORY HiCORDER from the PC. The 9578 10BASE-T LAN CARD (sold separately) must be installed in the MEMORY HiCORDER to provide the necessary LAN connectivity. (The 8855 MEMORY HiCORDER comes equipped with LAN connectivity, so the 9578 is not required.) Customers who are already using MEMORY HiCORDERs will require a software version upgrade, which is packed with the 9333 software. The version upgrade is designed to be performed by the customer using their PC. For customers currently using the 8835-01 MEMORY HiCORDER with the 9540-01 FUNCTION UP DISK, it will be necessary to re-install 9540-01 using a new upgrade disk written with the appropriate program specific for this purpose. Please contact your HIOKI supplier for further details.



9333



9578

### ● Gather and manage waveform data on PCs with the waveform data collection function

When automatically saving and printing with a MEMORY HiCORDER, you can use a LAN hard disk drive and printer connected to a LAN by means of the 9333 LAN COMMUNICATOR. When automatically saving, you can save waveform data files using the 9333 to a specified LAN hard disk drive. For printing, images can be output using the 9333 with a specified printer. In both cases, you must start up the 9333 LAN COMMUNICATOR on your PC first.

### ● Remote and PC operations

You can display the MEMORY HiCORDER operation panel on your PC screen and perform MEMORY HiCORDER remote operations from here. Because the PC display screen simulates the MEMORY HiCORDER screen, this allows you to confirm measured waveforms on the PC in realtime. You can also save waveform data on a PC hard drive using operations on the PC screen, and directly input comments and other data from the PC keyboard.

### 9333 LAN COMMUNICATOR

(Windows 95/98, NT4.0 English version)

### 9578 10BASE-T LAN Card

(Compliance with the PCMCIA standard, with LAN cable (1.5m) and connector)

### 9333 LAN COMMUNICATOR Specifications

Compatible Recorders	8826 MEMORY HiCORDER (Vers. 2.30 or later) 8835-01 MEMORY HiCORDER* (Ver 1.10 or higher, or Ver. 5.10 or higher for high-level functions) 8841, 8842 MEMORY HiCORDERs (Vers. 2.30 or later) 8855 MEMORY HiCORDER (Standard feature) 8720 VISUAL HiCORDER (Vers. 2.00 or later) (*1) 8835 not compatible with the 9333.
Recorder Operating Environment	Compatible PC Card: 9578 10BASE-T LAN CARD Connector: 10BASE-T (connector is provided on the 8855)
Supplied Media	CD-ROM or CD-R (1 pc.)
PC Operating Environment	IBM PC/AT Compatible (1024 x 768 or higher screen resolution is recommended when using the remote control functions) Windows 95/98/Me or Windows NT4.0 (network functions installed, with a TCP/IP environment)
Communication System	Ethernet, TCP/IP
Functions	<input type="checkbox"/> Remote Control Applications <ul style="list-style-type: none"> <li>• Remote Control of MEMORY HiCORDER (control by sending key codes and receiving screen images)</li> <li>• Report printing</li> <li>• Screen image printing</li> <li>• Receives waveform data in same format as waveform files from MEMORY HiCORDER (binary only)</li> </ul> <input type="checkbox"/> Waveform Data Acquisition Applications <ul style="list-style-type: none"> <li>• Accepts auto saving from MEMORY HiCORDER: same format as auto save files of MEMORY HiCORDER (binary only)</li> <li>• Automatic printing by MEMORY HiCORDER at PC side</li> <li>• MEMORY HiCORDER Print key prints at PC side</li> </ul> <input type="checkbox"/> Waveform Viewer <ul style="list-style-type: none"> <li>• Simple display of waveform files</li> <li>• Converts to CSV format: a selection can be specified, and thinning can be enabled</li> <li>• Display format setting: Scroll function, Enlarge/Reduce display, display CH settings</li> </ul> <input type="checkbox"/> GP-IB Command Functions (MEMORY HiCORDER main unit) <ul style="list-style-type: none"> <li>• MEMORY HiCORDERs can be controlled by the same commands as GP-IB using TCP/IP Port 1 (GP-IB command functions are not required with the 9333)</li> </ul>

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