LR5092-20
DATA COLLECTOR
Operation Manual

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LR5092B981-00 11-02H

600345010

Thank you for purchasing the HIOKI LR5092-20 Data Collector.

This guide introduces the Data Collector's basic measurement procedure to first-time users.

Before using the instrument, be sure to read the Instruction Manual carefully.

HIOKI

Read First

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1 Confirmation

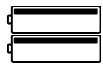**Confirm package contents, and prepare needed items.**

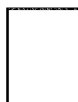## Data Collector and Accessories

LR5092-20

LR5000 Utility Program CD (PC application software)
Use this program when connecting the collector and a computer to configure the collector's settings or transfer the collector's data to the computer

Two LR6 alkaline batteries

Instruction Manual
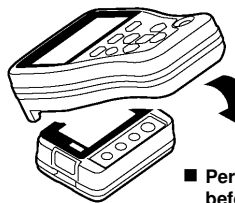Refer to this manual for operating procedure details, or when problems occur.

USB Cable
Use this cable when connecting the collector and a computer to configure the collector's settings or transfer the collector's data to the computer.
See the Instruction Manual for details.
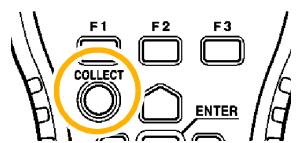
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3 Connecting
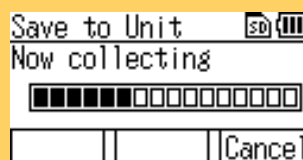
Connect the Data Logger and Data Collector.

Place the logger and collector so that their IR ports are aligned.

■ Perform the pre-measurement inspections before you use the collector.
(See the Instruction Manual for details.)

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4 Collecting Data

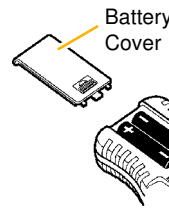**Press the COLLECT button.**

Save to Unit
Now collecting

Cancel

The display on the left is shown during data collection.
When you want cancel data collection part way through:
Press the **F3** button to return to the top display.

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2 Preparations

Install the batteries in the collector, and then turn on the power.

Installing the Battery

Battery Cover

1 Remove the battery cover from the back of the collector.

2 Install the batteries as shown.

3 Close the battery cover.

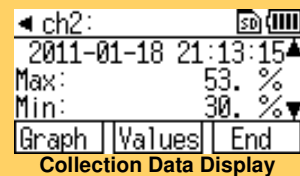■ Take care to ensure the orientation of the + and - is correct when you install the batteries.

Turning the Power On

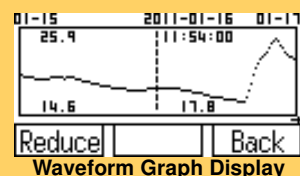Press the **POWER** button. (Long press for approximately 1 second)

■ After use, always turn OFF the power.

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5 Browsing Data

◀ ch2:   SD
2011-01-18 21:13:15 ▲
Max: 53. %
Min: 30. % ▼
Graph Values End
Collection Data Display

When collection is completed, the collected data appears on the display.

Displayed items:
Channel, comment, data count, recording interval, serial number, recording start time, recording stop time, maximum value, minimum value, and average value

When the data of a logger which recorded on two channels is collected, use ⬦ to switch channels.
Press the **F1** button to switch to waveform graph display, and **F2** button to switch the numerical value display.
(To return to the previous display, press the **F3** button.)

01-15   2011-01-16   01-17
25.9   11:54:00
14.6   11.8
Reduce   Back
Waveform Graph Display

Waveform Graph Display
Press the **F1** button to reduce the waveform, and the **F2** button to magnify the waveform.
Use ⬦ to scroll the waveform.
(To return to the previous display, press the **F3** button.)

2011-01-27 21:51:30   23.7 ℃
2011-01-27 21:51:31   23.7 ℃
2011-01-27 21:51:32   23.7 ℃
2011-01-27 21:51:33   23.7 ℃
              +   Back
Numerical Value Display

NumericaLl Value Display
Use the **F1** and **F2** buttons to decimate the data.
(To return to the previous display, press the **F3** button.)

■ Data can be collected without stopping measurement on the logger. Data is collected up until the point in time when data collection was performed.
■ By default, the collected data is saved to internal memory.

Capabilities in Addition to Collection

★ **Configure the Data Logger settings, check the recording/setting state, and control starting/stopping of recording**

You can configure the settings of the LR5000 Data Logger series and control the starting and stopping of recording. (The settings can also be received from a Data Logger.)
You can check the recording/setting state of the logger, too.

★ **Organizing Data**

You can display a list of data, delete data, and format an SD memory card.

★ **Self Checks**

You can check whether there is a problem with the firmware, LCD, keys, buzzer, and SD memory card.

■ See the Instruction Manual for details.

Operating Buttons

F1, F2, F3 button
Executes the F button menu.

COLLECT button
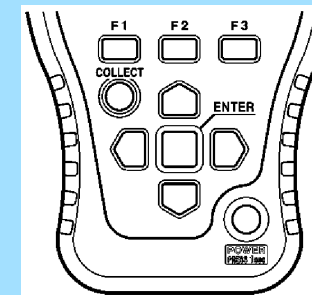Collects the recorded data from the logger.

ENTER button
Executes the selected menu.

Cursor button
Moves the cursor.

POWER button
Press and hold this button (for approximately 1 second) to turn the power on/off.
The power is turned off automatically (auto power off) when no operation is performed for approximately 1 minute.
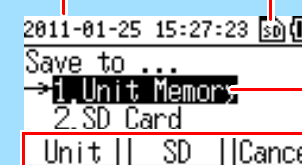

Indicators

SD Memory Card Indicator
Lit when an SD memory card is inserted.

Current Date
For the setting procedure, see the Instruction Manual.

Battery Status Indicator

2011-01-25 15:27:23 SD
Save to ...
→1.Unit Memory
  2.SD Card
Unit │ SD │Cancel

Cursor

F button menus

Basic Button Operations

2011-01-25 15:27:23 SD
Save to ...
→1.Unit Memory
  2.SD Card
Unit │ SD │Cancel

1 Move the cursor and select menus and items with the ⬦ buttons.

2 Execute items with the ⬦ (**ENTER** button) buttons.

And (Or)

Execute **F** button menus with the F buttons.

■ See the Instruction Manual for details.

Troubleshooting

■ **No indications appear on the display when the POWER button is pressed.**
Are batteries installed?
Did you press and hold the POWER button?
• Check that batteries are installed properly.
• Press and hold the POWER button for 1 second.
If the screen is not displayed after performing the above steps, the power protection element may be damaged. Contact the place of purchase or your nearest Hioki sales office because replacement and repairs cannot be performed by customers.

■ **The power does not turn off when the POWER button is pressed.**
Is the collector connected to a computer with a USB cable?
Did you press and hold the POWER button?
• The power will not turn off if the collector is connected to a computer with a USB cable. Disconnect the USB cable and then press the POWER button.
• Press and hold the POWER button for 1 second.

■ **The power turned on even though the POWER button was not pressed.**
Is the POWER button in a pressed state?
Is the collector connected to a computer with a USB cable?
• Check the POWER button.
• When the collector is connected to a computer with a USB cable, the power turns on even if the POWER button is not pressed.

■ **Button operation is not possible.**
Is one of the buttons in a pressed state?
Check the operation buttons.

■ **Cannot collect data from a logger**
Are the collector and logger placed correctly in position?
Is the communication IR port dirty or scratched?
• Place them correctly in position.
• Clean the IR port. If there is significant damage, the collector needs to be repaired. Contact the place of purchase or your nearest Hioki sales office.

■ **The batteries are depleted too quickly.**
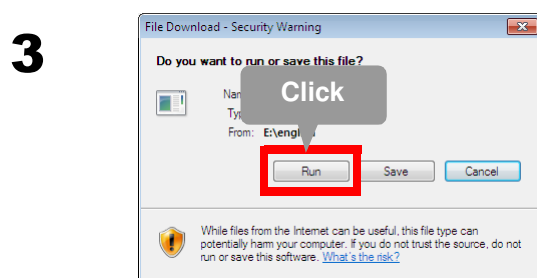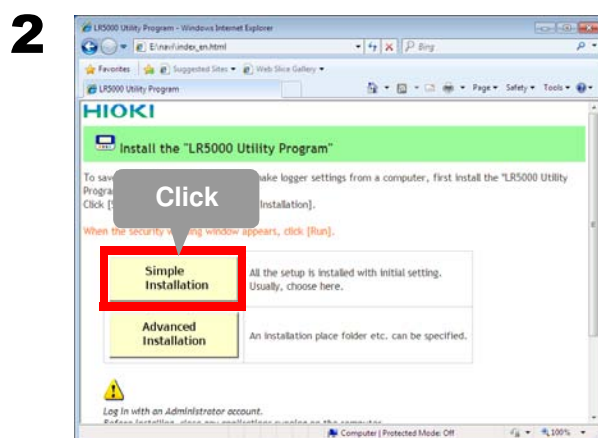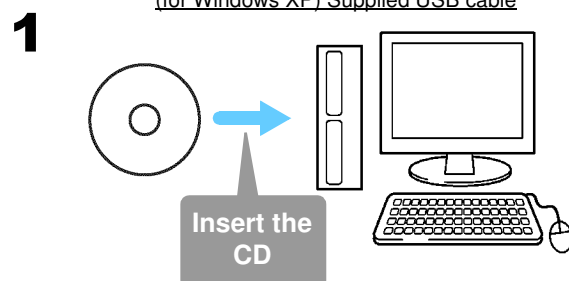Are the batteries supplied with the logger still being used?
Are manganese batteries being used?
Use new LR6 alkaline battery.

5 Importing and Displaying Data on a Computer

1 Installing the PC Application Program

Required Items: Supplied CD
(for Windows XP) Supplied USB cable

1

Insert the CD

2

Click

Install the "LR5000 Utility Program"

Simple Installation — All the setup is installed with initial setting. Usually, choose here.

Advanced Installation — An installation place folder etc. can be specified.

3

File Download - Security Warning
Do you want to run or save this file?

Click

Run   Save   Cancel

■ **LR5000 Utility Program Operating Requirements**
- CPU — 1 GHz or faster processor clock
- RAM — At least 512 MB
- OS — Windows XP SP2 or later
  Windows Vista SP1 or later
  Windows 7
- Library — .NET Framework 2.0/3.5
- Interface — USB
- Monitor Resolution — 1024 × 768 or higher
- Hard Disk — At least 30 MB free space
  (Additional space is required for storing recorded data. Another 500 MB may be required if .NET Framework 2.0 or 3.5 is not yet installed.)
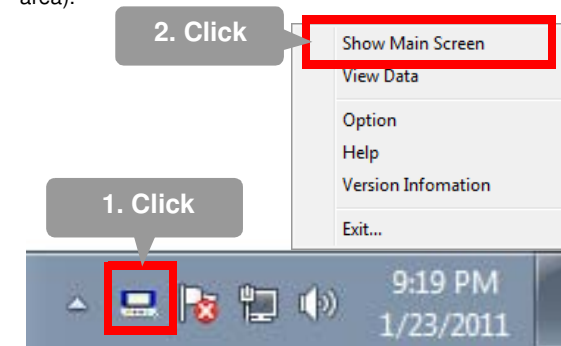
■ **What if the PC Utility program cannot be installed?**
- Be sure that the computer meets the above operating requirements.
- Carefully read "Installing the PC Application Program" in the Instruction Manual, and reinstall. Pay special attention to the following items.
  1. Be sure to log in using an Administrator account.
  2. Before installing, be sure to close any programs running on the computer.
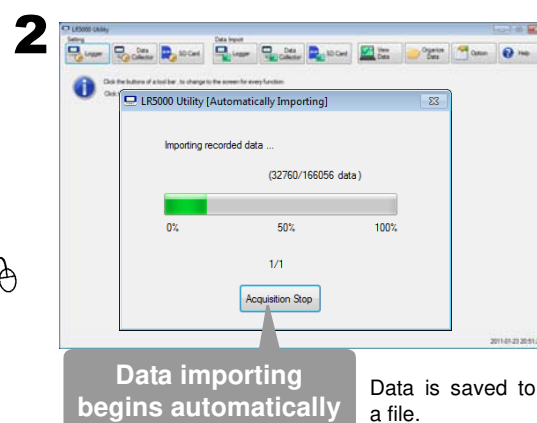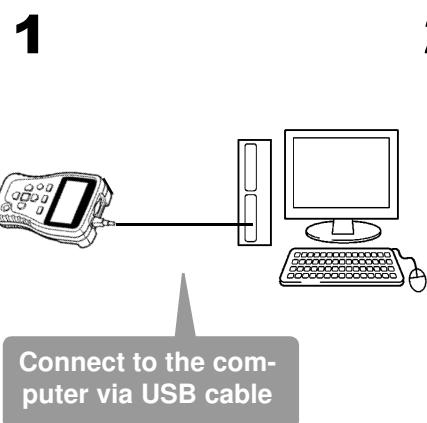
2 Starting the PC Utility Program

From the Windows [Start] menu, select [All Programs]-[HIOKI]-[LR5000 Utility Software]-[LR5000 Utility] to start the program.
The program starts automatically from the next Windows logon, and the icon appears in the task tray (notification area).
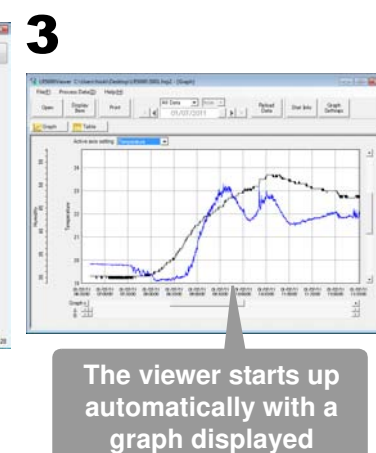
2. Click

Show Main Screen
View Data
Option
Help
Version Information
Exit...

1. Click

9:19 PM
1/23/2011

3 Importing (Saving) Recorded Data to a Computer, and Graph Display

Required Items: Supplied USB cable

1

Connect to the computer via USB cable

2

LR5000 Utility [Automatically Importing]
Importing recorded data ...
(32760/166056 data)
0%   50%   100%
1/1
Acquisition Stop

Data importing begins automatically

Data is saved to a file.

3

The viewer starts up automatically with a graph displayed
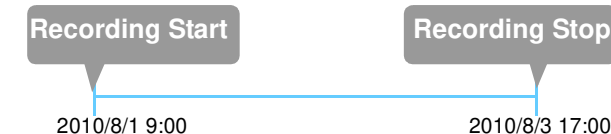

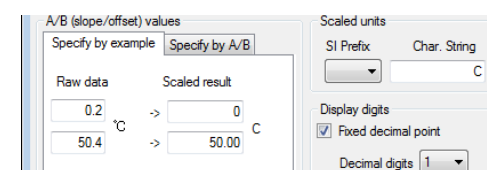# PC Utility Program Features

★ Making Detailed Settings

Configure settings on the LR5000 "Data Logger" series loggers, and on the LR5092-20 Data Collector.
The PC utility program can access settings that cannot be accessed from the logger itself.

For example,

■ **Set recording start/stop method and timing to start and stop recording automatically at scheduled times (Timer Measurements).**

Recording Start	Recording Stop
2010/8/1 9:00	2010/8/3 17:00

■ **Measurement data can be freely scaled for display (Scaling).**

A/B (slope/offset) values
Specify by example   Specify by A/B
Raw data   Scaled result
0.2   ->   0
°C
50.4   ->   50.00

Scaled units
SI Prefix   Char. String
C
Display digits
☑ Fixed decimal point
Decimal digits 1

■ **Set upper and lower thresholds so that measurements outside of the range cause [AL] (Alarm) to appear on the logger screen (Alarm Judgment).**

■ **Add comments to measurement data.**

★ Processing Recorded Data
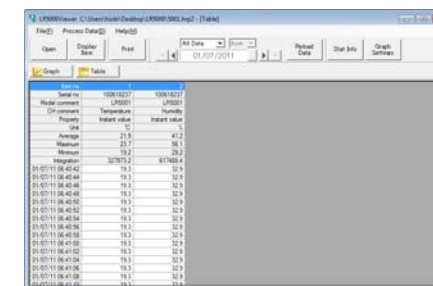
Process data imported to the computer.

■ **Freely scale for display (Scaling)**
■ **Calculate electric power easily (using clamp logger measurement values)**
■ **Calculate energy cost easily (using clamp logger measurement values)**
■ **Calculate duty cycle**
■ **Integration**
■ **Calculate dew-point temperature (using temperature/humidity logger measurement values)**

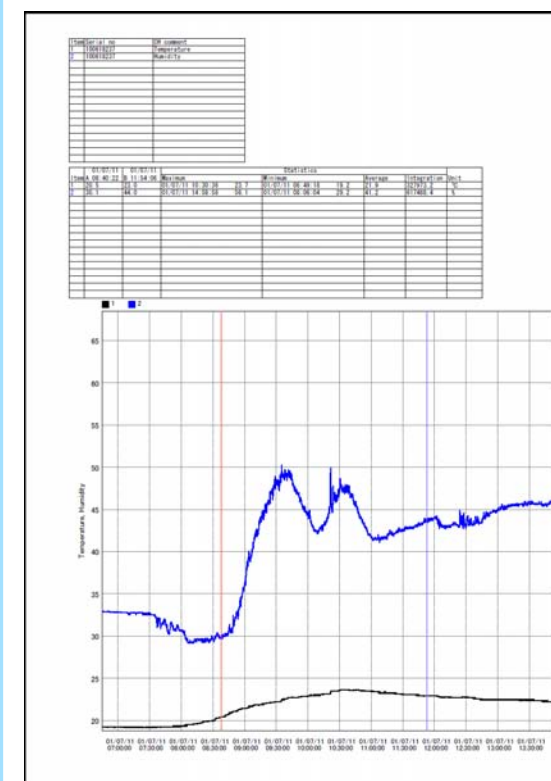## ★ Organizing Recorded Data

Sort data imported to the computer.

■ **Copy (files between folders)**
■ **Move (selected files between folders)**
■ **Delete (selected files)**
■ **Combine (multiple recording files into one, and save with new file name)**
■ **Extract (data for a specified period, and save with new file name)**

★ Displaying Recorded Data in a Table

★ Printing Recorded Data

Example Graph Printout

■ See the Instruction Manual for details.