

LR5041, LR5042, LR5043 VOLTAGE LOGGER

Operation Manual EN

Mar. 2021 Revised edition 4
LR5041B981-04 21-03H



Thank you for purchasing the HIOKI
LR5041, LR5042, LR5043 Voltage Logger.

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

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

HIOKI

Read First

1 Confirmation

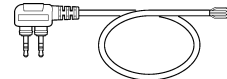
Confirm package contents, and prepare needed items.

Logger and Accessories

LR5041, LR5042, or LR5043



LR9802 Connection Cable
(Cable length: Approx. 1 m)



Instruction manual

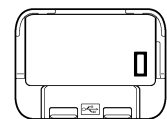
Refer to this manual for operating
procedure details, or when problems
occur.

Stand

This is the logger
stand. See the
Instruction Manual for
details.

LR6 alkaline battery
(Pre-installed in the log-
ger.)

Option



LR5091 Communication Adapter
(Includes LR5000 Utility Program CD [PC
application software] and USB Cable)

■ Importing data to a computer requires the optional LR5091
Communication Adapter or LR5092-20 Data Collector

3 Settings

Display Example: Setting the
recording interval to 10 minutes.

1 **SET** →
Display the settings, and select
the setting item.

2 **+** **-** →
Configure the setting as
needed.

3 **SET** →
Apply the new setting contents.
(The setting items are displayed as shown under Setting Display on
page 2.)



Stop

Hold the **REC STOP** button for two seconds
while recording (while **[REC]** is displayed).

Note: Continue pressing the button until the
[REC] indicator changes from a blinking to
off state.

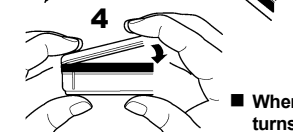
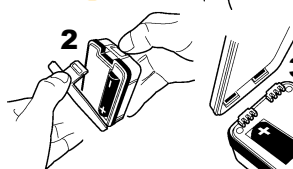
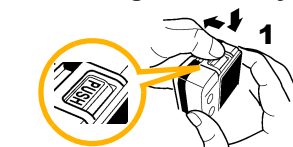


[REC] disappears when
recording stops.
If the stop method is set to
[OFF], recording stops
automatically when mem-
ory becomes full.

2 Preparations

Install the battery and connect the cable to the logger.

Installing the Battery



1 Press the PUSH tab as
shown, and pull the bat-
tery cover back.

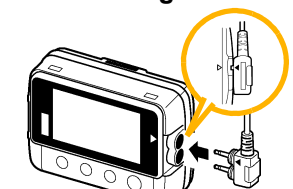
2 Install the battery as
shown.

3 Align the holes in the
battery cover with the
projections on the back
of the logger.

4 While confirming that
there are no gaps, press
with your fingers to
close the battery

■ When the battery is installed, the logger
turns on (there is no power switch).

Connecting a Connection Cable



Align the triangles on the plug
body and in front of the cable
jacks, and insert the plug
securely. (Insert the protruded
parts of the connecting cable
into the holes of the device.)

■ Correct values are not displayed unless the plug is inserted all
the way in.
■ See the instruction manual for details about connecting the
cable to an object to be measured.

4 Recording

Before recording, install the logger and
perform pre-measurement inspection.
(See the Instruction manual for details.)

Start



From the Measurement display, hold the
REC STOP button for two seconds.



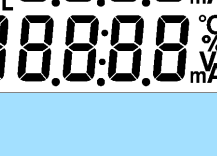
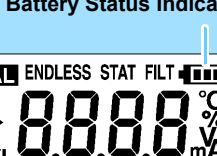
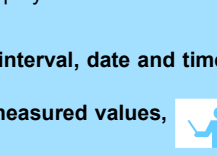
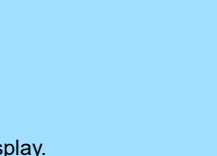
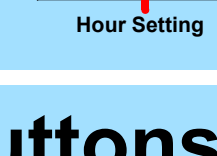
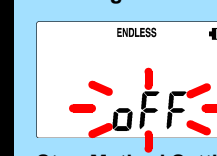
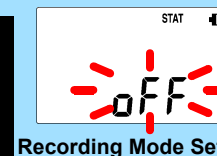
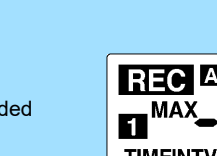
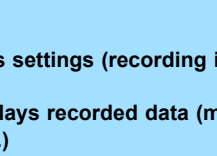
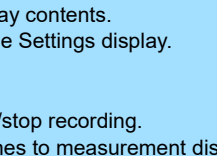
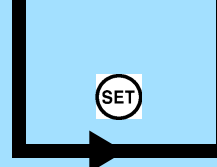
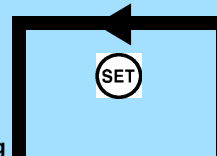
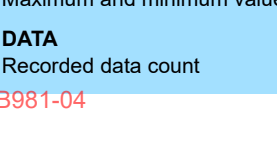
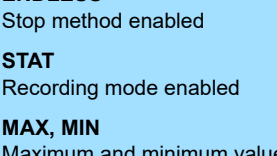
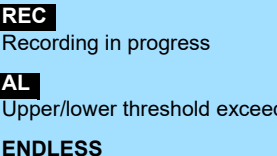
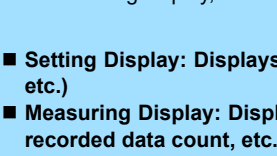
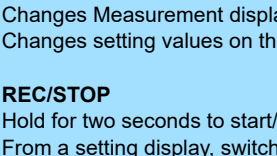
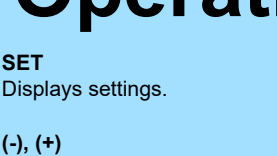
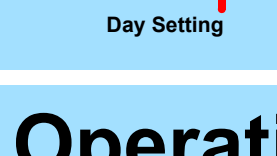
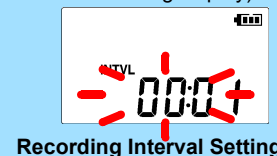
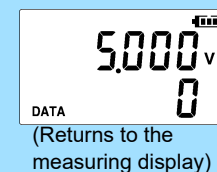
Note: Continue pressing the button until the
[REC] indicator changes from a blink-
ing to on state.

When the blinking stops and the data count is
zeroed, recording starts.

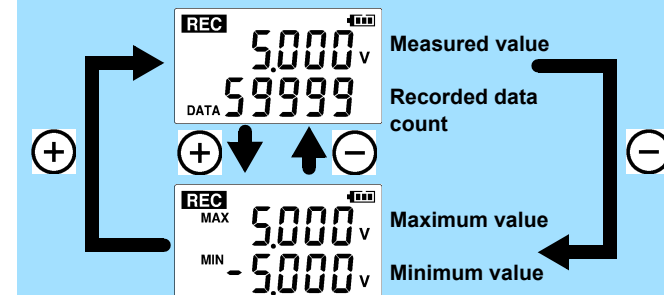
After one second, the measurement display
reappears.

■ Logger memory contains the data for two recording sessions. (Be
aware that old data is erased when starting recording after two record-
ing sessions.)
■ Data can be imported to a computer without stopping recording.

Setting Display



Measuring Display



Power Save

Battery life is extended when on (enabled).
Default is on.

Recording Mode

When on (statistical recording), instantaneous, maximum, minimum, and
average values are recorded at each interval. (Record statistical values)
Battery life is shorter.
Default is off.

Stop Method

Select what happens when memory becomes full.
When on, the oldest data is overwritten (Endless Recording), and when
off, recording stops (One-Time Recording).
Default is on.

Operating Buttons

SET

Displays settings.

(-), (+)

Changes Measurement display contents.
Changes setting values on the Settings display.

REC/STOP

Hold for two seconds to start/stop recording.
From a setting display, switches to measurement display.

■ **Setting Display:** Displays settings (recording interval, date and time,
etc.)

■ **Measuring Display:** Displays recorded data (measured values,
recorded data count, etc.)

Indicators

REC

Recording in progress

AL

Upper/lower threshold exceeded

ENDLESS

Stop method enabled

STAT

Recording mode enabled

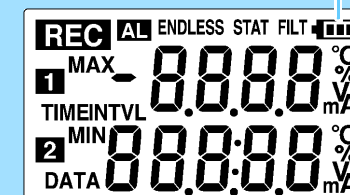
MAX, MIN

Maximum and minimum values

DATA

Recorded data count

Battery Status Indicator



No measured value is displayed.

Is the cable plug inserted all the way in?

Verify the correct plug orientation, and insert it
as far as possible.
If the values are not displayed despite these
measures, the connection cable and logger
need to be inspected and repaired.
Please contact your dealer or Hioki representative.
Note: The maximum and minimum values are not displayed when the
recorded data count is 0.

The display is blank.

Is auto power saving enabled (set to ON)?

When enabled, the display blanks after 30 seconds of operator inactivity.
Press any button or send a communication signal to turn on the display.

The [REC] indicator disappears even though recording has not been stopped.

Is the stop method disabled (set to OFF)?

With disabled, recording stops automatically when memory becomes full.
To record continuously until stopped by the REC/STOP button, enable the
stop method.
(In this case, old data is overwritten when the memory becomes full.)

Recorded data has disappeared.

Does recording restart after stopping?

Note that if recording is accidentally restarted after stopping, data recorded
prior to the last recording is automatically erased.
(The logger retains the data from both current and most recent prior
recording operations.)

To erase logger memory

Erase using the PC Utility program. See the Instruction manual for details.

The battery is depleted too quickly.

Are you using the battery originally supplied with the logger?
Are you using a zinc-manganese battery?

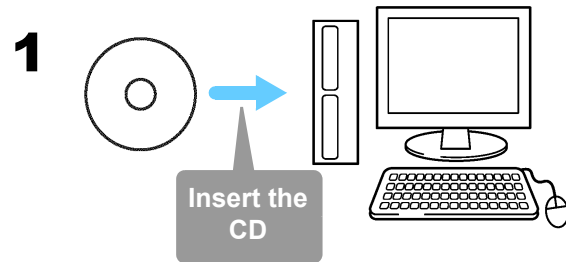
Install a new AA-size (LR6) alkaline battery.

5 Importing and Displaying Data on a Computer

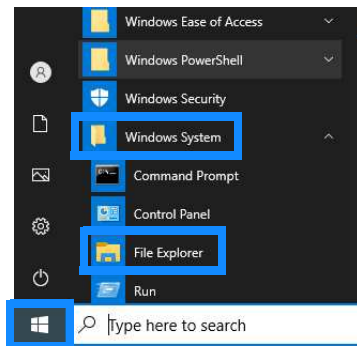
1

Installing the PC Application Program

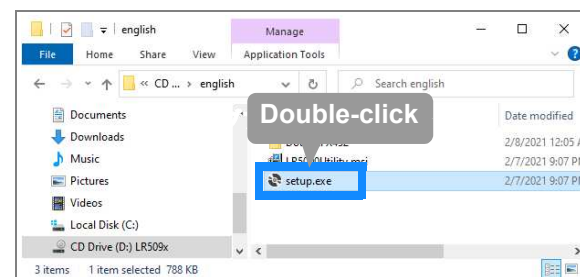
Required Items: Supplied CD



- 2 Click [Start] to display the application list. Click [Windows System]-[File Explorer] to start Explorer.



- 3 Double-click [setup.exe] (SET UP file).



■ LR5000 Utility Program Operating Requirements

- CPU 1 GHz or faster processor clock
- RAM 1 GB or more (32-bit), 2 GB or more (64-bit)
- OS Windows 7, Windows 10
- Library .NET Framework 4.5.2 or later
- Interface USB
- Monitor Resolution 1024 × 768 or higher
- Hard Disk At least 30 MB free space (Additional space is required for storing recorded data)

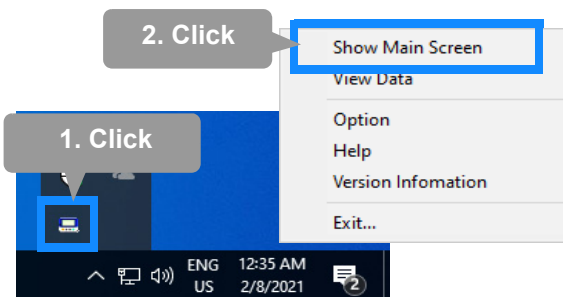
■ What if the PC Utility program cannot be installed?

- 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

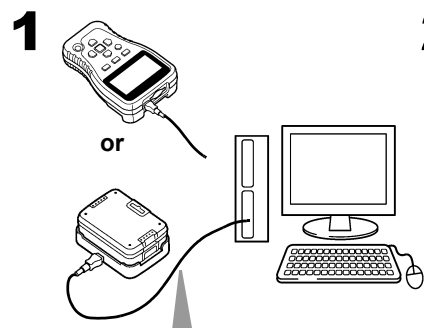
From the Windows [Start] menu, select -[HIOKI LR5000 Utility Software]-[LR5000 Utility] to start the program.

The program starts automatically from the next Windows logon, and the icon appears in the task tray (notification area).

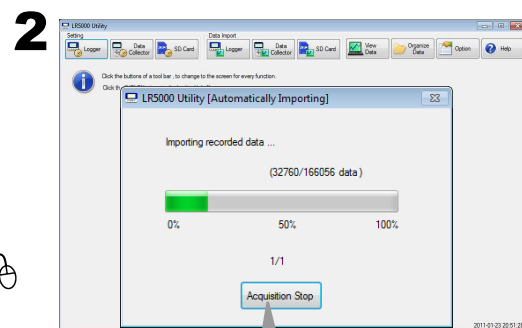


3 Importing (Saving) Recorded Data to a Computer, and Graph Display

Required Items: LR5091 or LR5092-20 and supplied USB cable

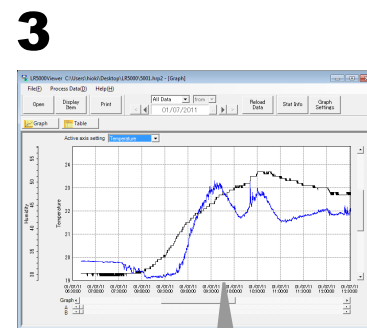


Connect to the computer via USB cable



Data importing begins automatically

Data is saved to a file.



The viewer starts up automatically with a graph displayed

PC Utility Program Features

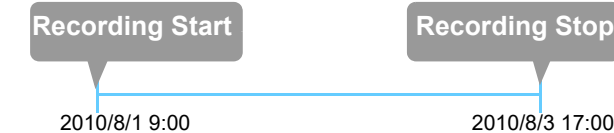


Making Detailed Settings

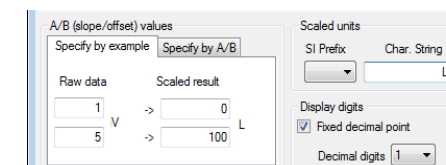
Configure settings on the LR5000 "Data Logger" series loggers, and on the LR5092-20 Data Collector. The PC utility program can access settings that cannot be accessed from the logger itself.

For example,

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



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



- 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)

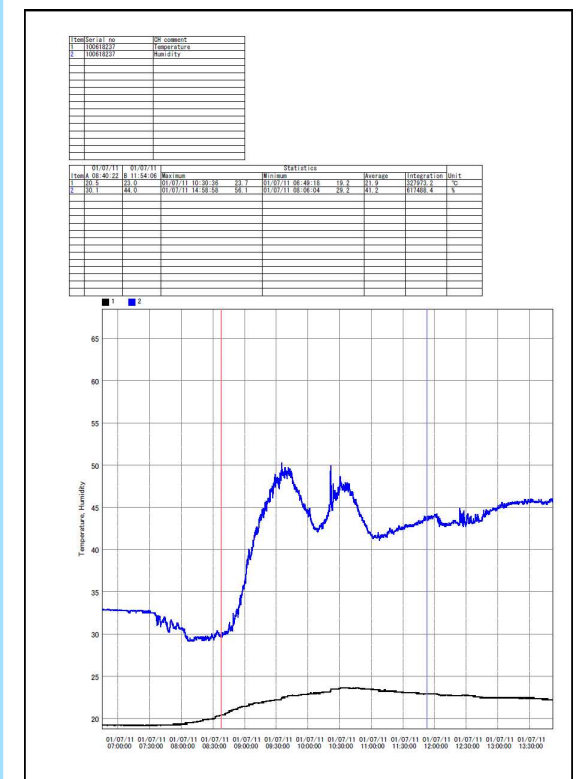


Displaying Recorded Data in a Table



Printing Recorded Data

Example Graph Printout



■ See the Instruction manual for details.

