# HIOKI
## HIOKI E.E. CORPORATION

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The Declaration of Conformity for instruments that comply to CE mark requirements may be downloaded from the HIOKI website.

## Warranty

Warranty malfunctions occurring under conditions of normal use in conformity with the Instruction Manual and Product Precautionary Markings will be repaired free of charge. This warranty is valid for a period of one (1) year from the date of purchase. Please contact the distributor from which you purchased the product for further information on warranty provisions.

◎User Memo
Write the follows when you purchase this product.
This memo will be surely helpful to send the product to service.

| The Production Number | |
|---|---|
| The date of purchase | |
| Shop Name | |
| | TEL |

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## The Temperature Logger
（Button-typed）
## 3650
## Instruction Manual

# HIOKI
## Data Pico

Thank you for the purchase of our product.
Before using this system, read this User's Manual for the proper operation.
This manual should be retained along with the Operation Manual.
Those documents will be surely helpful for the future use.

### Contents

## HIOKI E.E. CORPORATION

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# Part Names and Functions

**Main body**



The ID number
The product-specific number
（12 digits）

The product number

**Holder**

Threaded screw hole          Magnet

Holder（Small）

Holder（Large）

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# Features

Measuring temperature: Measures the temperature of the environment where the 3650 is placed.
Measuring temperature range: The measuring temperature range is as follows.
3650 ： -40℃ to +85℃

**Recording Duration**
The following table shows the number of data that can be recorded in the memory when the temperature is continuously measured.

| Measuring Time Interval | Data Counts |
|---|---|
| 1 minute | 1.4 day |
| 3 minutes | 5.2 days |
| 5 minutes | 7 days |
| 10 minutes | 14 days |
| 30 minutes | 42 days |
| 1 hour | 85 days |

Possible recording counts: Over 500 thousand times
（4 years when measured in 5 minutes interval）

The usage in a place where the ambient temperature is over 50 may reduce the defined recording counts.

※ For example, the battery will be exhausted if the 3650 is left at more than 80℃ for approximately half a year.



Characteristics of relationship between battery life and operating temperature（example）

The data recorded in the 3650 can be retrieved with the 3920-01 Data Reader
（Refer to the 3920-01 3920-01 Instruction Manual and the Software Operation Manual in details）,
※ Recorded date cannot be read out when the battery power is close to nil.

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# Operation Instruction 1

### 1. Before use

Set the 3650 in preparation for the start of measurements （3650 Initial Settings）
The 3920-01 Data Reader （not included in this system） and a personal computer are used for the 3650 to start measuring temperature.
Refer to the 3920-01 Instruction Manual and the Software Operation Manual in details.

### 2. Initial settings 1 to start measuring temperature

● Basic Information
The ID number of the 3650 is unique throughout all the 3650s.
The number will be used when the analysis software reads the data.
Write down the number in advance before the setting.

● Items to set
・Set the Date and Time
The 3650 internal clock is displayed. Mark off the checkbox next to "Adjust to PC Time" to adjust to the clock of computer.
・Set the Date to Start Measuring
Set the date and time to start measuring temperature.
・Set the Measuring Interval
Set the time interval between the consecutive measurements of temperature.
・Set the Recording Mode
The 3650 can record two thousand and forty eight （2048） data at maximum. There are two possible modes to choose from in the recording.
Enable memory overwriting
"Yes" :Record the newest data until now （max. 2048）
"No" : Record the oldest data from start of measuring （max. 2048）
・Set the Temperature Alarm Warning
Set the warning temperature when measuring temperature.
Data outside of this range will be recorded as the alarm temperature time.

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# Operation Instruction 2

### 3. Initial settings 2 to start measuring temperature

（Example）The setting screen to start measuring temperature using the analysis software for Windows （3920-01）
・Adjust the date and time to the computer.
・ Set the starting date and time to 19 minutes later than the current time.
・ Set the Measuring Time Interval to 1 minute.
・ et the High Temperature alarm at 40.0 and the Low Temperature at -10.0 .

**Initial Setting**

| | | |
|---|---|---|
| Date/Time : | ☑ Adjust to PC Time | |
| | 3650-Time | 2001/02/05 15:34:37 |
| | PC-Time | 2001/02/05 15:36:37 |

Start Date :   2001 / 02 / 05   15 : 56
Wait Time          19 Min
Measuring Interval  1  Min   Memory Size   1.4days
Enable Overwrite ☑   Total Counts   63346
（Possible recording counts: Over 500 thousand times）
Alarm :   High-Temp   40.0  ℃
Low-Temp   -10.0  ℃
Memo   CoolBox No.22 Beef

<COM1>

[ OK ]    [ Exit ]

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## Safety Instructions

● Before using, read this 'Safety Instructions' thoroughly for the proper operation.
Safety Instructions written in this manual are intended for the proper use of our product to prevent the risk of harming or damaging people. Safety instructions are divided into two sections WARNING and CAUTION. WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury. CAUTION also indicates a hazardous situation which, if not avoided, could result in serious consequences in some cases.

| | |
|---|---|
| ⚠Warning | Indicates a potentially hazardous situation which could result in death or serious injury when the product is not handled properly. |
| ⚠Caution | Indicates a potentially hazardous situation which could result in serious consequences in some cases when the product is not handled properly. |

● The ● mark within a black circle denotes the required procedure.

■ After reading this manual, keep it in a place where anyone can have access at any time.

### Instructions for Use

## ⚠Warning

| | |
|---|---|
| 🚫 | DO NOT attempt to disassemble or service the products. Such an act may cause abnormal overheat or fire disaster. Refer for the qualified service personnel. |
| 🚫 | DO NOT expose the magnet directly to food. It may violate the Food Sanitation Law. |
| ❗ | DO NOT put the product in the mouth. Keep it away from children to avoid accidental swallowing. Contact a doctor immediately if such a case happens. |
| ❗ | DO NOT keep the product with other metals or batteries. |

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## Before Use

**Check the Packaging**
Take out the user's manual and make sure that the following items are included in your package.

| 3650 Temperature Logger | 1 |
|---|---|
| Holder（Large） | 1 |
| Holder（Small） | 1 |
| Magnet | 1 |
| Screws for fixing holders 4×12 | 2 |
| 3650 Instruction Manual（this document） | 2 |

※The product is shipped after the careful examination. If any defect is found, contact with the dealer or the user support.

● Fitting in the Holder
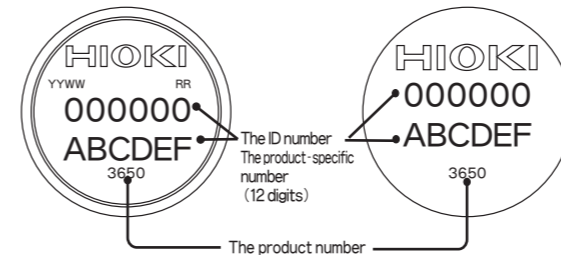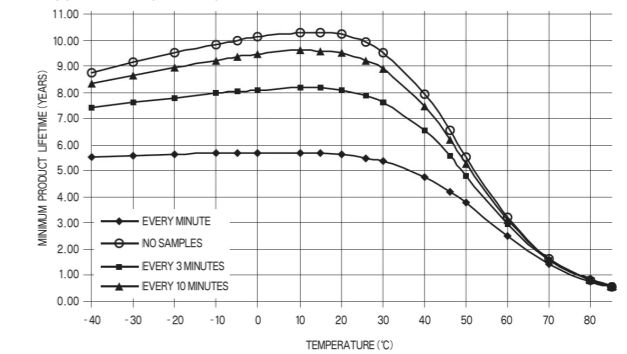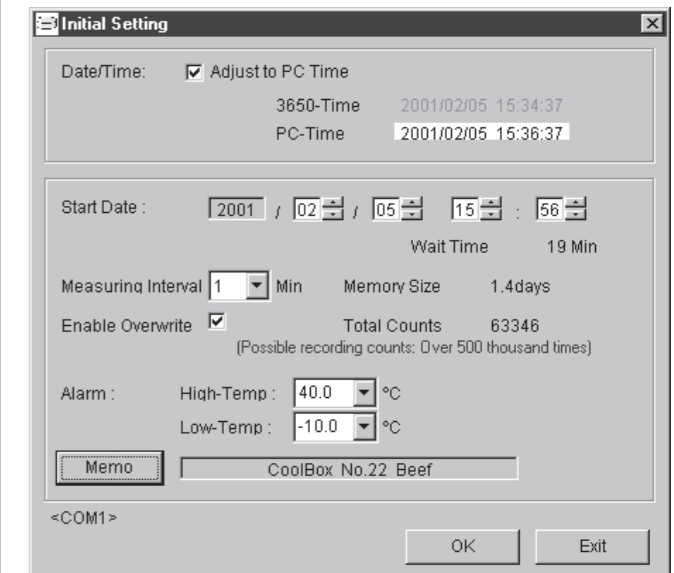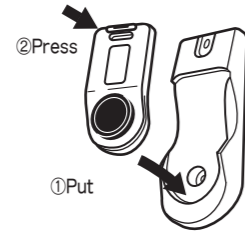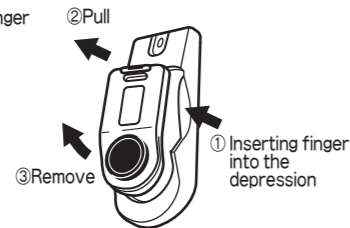① Fit the holder (Small) in the frame.
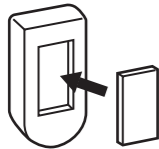② Press the protruding part of the holder (Small).

②Press

①Put

● Removing the Holder
① Take hold of the holder with your finger inserting into the depression of the either side of the holder.
② Pull the holder (Small) toward you.
③ Remove the holder (Small).

②Pull

③Remove

① Inserting finger into the depression

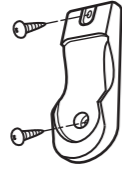The included magnet or screws are used depending on the place to fix the holder.

● Attaching the magnet
Use the scotch tape at the back of the magnet to attach to the frame at the back side of the holder (Large) firmly.

● Fixing with screws
Screw the holder (Large) as illustrated below.

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Remove the 3650 out of the holder when used without the holder.
● Removing the 3650

①Remove

Connect to the 3920-01 Data Reader
● Used with the holder
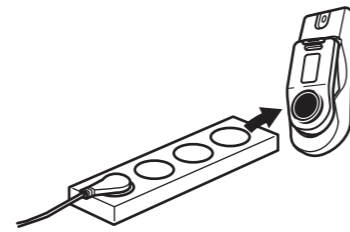Connect to the 3920-01 Data Reader with the 3650 in the holder (Small)

● Used without the holder
Remove the 3650 from the holder and connect to the 3920-01 Data Reader
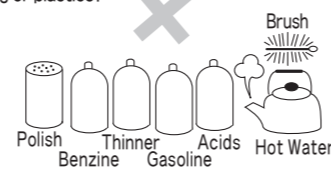
● Connect to the 3920-01 Data Reader
Connect the 3920-01 Data Reader with the 3650 fit in the holder (Large)

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| Product Name | Temperature Logger (button-typed) |
|---|---|
| Model Name | 3650 |
| Measuring Temperature Count | 1 |
| Measuring Temperature Range | -40℃ to 85℃ |
| Operating Temperature Range | -40℃ to 85℃ |
| Storage Temperature Range | -40℃ to 85℃ |
| Resolution | 0.5℃ |
| Maximum Measuring Counts | Over 500,000 (The usage in a place where the ambient temperature is over 50℃ may reduce the specified count. Battery life is approximately half a year when operating continuously or storing for a long time at more than 80℃.) |
| Accuracy of measurements | -40.0℃ to −10.5℃ ±2℃ / -10.0℃ to 30.0℃ ±1.5℃ / 30.5℃ to 85.0℃ ±2℃ |
| Accuracy of clock | 0℃～45℃ ±1 minute per month / other -8minutes per month max. |
| Resistance to water | Ordinary water resistance |
| Conformity | EN61326 |

| Dimension | 17.35 mm across and 5.89 mm thick |
|---|---|
| Weight | 3.3g |

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## Precautions for Use

### Precautions for Use

| | |
|---|---|
| Avoid using the 3650 in any place where it will be subject to vibration. Otherwise, it may cause failure. | Avoid exposing the 3650 directly to the sun or using it near fire. Otherwise, it may cause failure. |
| Avoid using the 3650 in water. Otherwise, it may cause failure. | Avoid using or storing the 3650 in any place exposed to rain. Otherwise, it may cause failure. |

※When installing the 3650 in water or in an environment where water always splashes, please use the 3650 well sealed in a plastic bag.

● Before Use
Before you use the 3650 for a long time, be sure to check the total counts.
If the count is close to five hundred thousand, the battery may wear out before the measurements are complete.
Before you use the 3650, it is also recommended that it be tested in a normal temperature for several times to confirm its proper operation.

※The usage in an environment where the ambient temperature is over 50℃ may shorten battery life.
※Recorded date cannot be read out when the battery power is close to nil.

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## Maintenance

● Regular cleaning is recommended to keep the 3650 clean all the time.
● Don't wipe with polish, powder soap, benzene, oil or hot water. Those substances may damage coating or plastics.

Brush

Polish   Thinner   Acids
Benzine   Gasoline   Hot Water

**1** Holder, the 3650

Stop the operation of the 3650 and wipe with a dry cloth.

**2** Check after the maintenance

After finishing the maintenance, check the following items for a proper operation.
● There is no fissure in the holder.
● No equipment is abnormally heated.
If anything seems to be wrong, feel free to ask to the store where you purchased this product or the service center.

## The management of the solid wastes

Instructions for disposal

### ⚠Attention

Dispose the wastes as noncombustible. However, under various state and local laws, it may be illegal to dispose of the wastes that way. Check with your local solid waste officials for details in your area for proper disposal.

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