

# USB Humidity and Temperature Data Logger with Build-in IRT

Model: HT50

## Introduction

HT50 USB humidity and temperature data logger with build-in IRT is designed to record room temperature and humidity of places such as medium/small warehouses and computer rooms. The build-in IRT is designed to measure surface temperature of objects. The logger automatically keeps tracking temperature and humidity variations daily; and record both readings according to the rate set by users. Real time ambient temperature/humidity readings, IRT readings and recording status will be displayed on the LCD. The portable size and user friendly interface makes it easy to use and install.

## Features

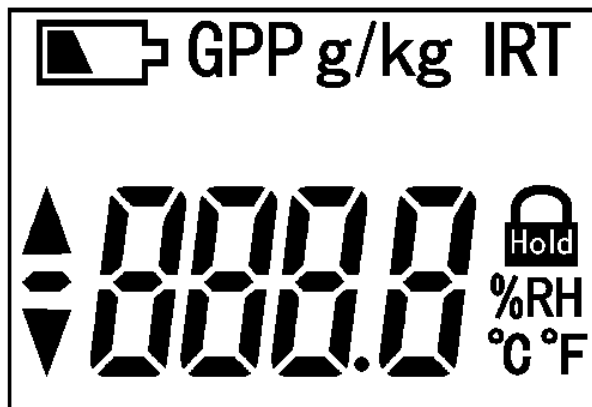
1. Real time ambient temperature/humidity and recording status will be displayed on the LCD screen; Measurement range: temperature: -20°C-70°C; Humidity: 0-100%RH
2. Measure surface temperature using the build-in infrared thermometer, Measuring range: -20°C -250°C;
3. Internal EERROM memory, tracks and records 5000 set temperature/humidity readings; battery life at most 1 year; data recorded stays in the memory until the next reset-up using the included software. Users are allowed to download data from the logger to the computer.
4. Data transmission via USB link
5. Setup high and low alarm limit, measuring units, sampling rate, start time etc from the included software.
6. Time synchronization when connected to PC.
7. The included software also supports data analysis, recorded data can be export into a .txt file for further analysis. The temperature and humidity data can also be displayed in a curve graph which can be printed and archived.

## Product Overview



- A. IRT sensor window
- B. Laser pointer
- C. Battery compartment
- D. Function buttons
- E. USB protection cap
- F. LCD
- G. Humidity and temperature sensor window

### Display Illustration



▲ : Indicates the reading is beyond the (temperature, humidity or IRT reading's) upper limit that set by the user

▼ : Indicates the reading is beyond the (temperature, humidity or IRT reading's) lower limit that set by the user

-0000.0 : reading display area

IRT: Indicates the device is in IRT mode

Hold : Indicates the IRT reading is being hold; After the IRT button is released, reading will be

hold for 10 seconds for users to check and note; auto hold will be released after 10 seconds.

**%RH:** humidity units

**°C:** temperature unit, Celsius

**°F:** temperature unit, Fahrenheit

**GPP:** [mix ratio symbol, measuring units is GPP](#)

**g/kg:** [mix ratio symbol, measuring units is g/kg](#)

## Function Buttons

### **MEAS** button:

—— Press to measure object's surface temperature using the IRT, and the device will switch to IRT mode;

—— Release to finish the IRT measuring, the last reading will be hold on LCD screen. The logger will exit from IRT mode if this button is not pressed again in 10 seconds; press again to start another IRT measurement.

### **Set** button:

Short press this button:

—— Turn on the LCD screen when it is off

—— While the LCD is on, switch between the four display mode: temperature readings, humidity readings, mix ratio and working status

Working status has 4 states below:

**Log:** Indicates the logger is in recording mode

——: Indicates the logger is in standby mode, in this mode, the device can only display current ambient temperature and humidity without recording them

**FUL:** Indicates the logger's memory is full, recording stopped automatically; current ambient temperature, humidity and IRT readings can be displayed

**CON:** logger has not been configured from software, a configuration is needed to set up relative parameters

Press and hold for 3 seconds to start/stop recording, IRT readings will not be recorded, LCD switches to working status mode; release the button, LCD switches to previous mode.

### **Sto** button:

Short press this button:

—— Turn on the LCD screen when it is off

—— While the LCD is on, in temperature display mode, press to switch temperature units

between °C and °F; in mix ratio display mode, press to switch between GPP and g/kg.

Press and hold for 3 seconds to start/stop recording, IRT readings will also be recorded, LCD switches to working status mode; release the button, LCD switches to previous mode.

## **Operation Instructions**

### **1. Battery Install**

HT50 uses DC3.6V lithium battery. Pull out the battery compartment ,place the battery at right polarity, then put back the compartment.

**NOTE: If the battery is removed before setup from software or during recording, the logger has to be reconfigured from software before reactivated, otherwise, device will stay in standby mode. In this case, press Set briefly to display working status, “CON” will be displayed. The former data were saved. The USB port powers the device while the logger is connected to a PC. In this case, the battery can be removed without interrupting the recording. But if pull out the unit from PC, the battery must be installed, then set again.**

### **2. Software Install**

Please install the included driver and software. The software manual with the detailed installation steps is inside the CD.

### **3. Activate/Deactivate the Logger**

After finish installing the software, plug the logger in the USB port of the PC, set up the logger according to the software manual. After “Setup” ,hold SET or STO buttons for 3 seconds to activate/deactivate the logger.

### **4. Collect and Record Data**

HT50 has an internal EEPROM memory. Users are allowed to set up recording rate using the included software; the logger will collect and record temperature/humidity data automatically. Press the button to check current ambient humidity, temperature and recording status. When recording status is displayed, “Log” means the logger is recording data; “FUL” means the memory is full, recording is stopped.

### **5. Export Data**

Data collected by HT50 can be download to the computer using the included software, and saved as a \*.txt file. This file will list all the data recorded in the logger memory for further analysis. For detailed steps, please refer to the software manual.

## 6. Operation Notes

1. Keep the device away from vibration source and high power EMF places. The ambient temperature should be stable.
2. To avoid damages to the instrument, do not use it near following places
  - a. EMF places (Electro-magnetic fields: such as arc welders, induction heaters)
  - b. High temperature objects
  - c. Static environment

## Operation Environment

1. Working Temperature: -20°C~70°C
2. Working Humidity: 0-100%RH
3. Air pressure: standard air pressure
4. Avoid intense magnetic field

## Technical Specifications

Product name		USB Humidity and Temperature Data Logger with Build-in IRT
Model		HT50
Structure	Dimension	125×43×24mm
	Display	LCD
	Material	ABS engineering plastic housing, safe and reliable
Temperature	Range	-20°C~70°C
	Resolution	0.1°C
	Precision	±0.3°C
Humidity	Range	0-100%RH
	Resolution	0.1%RH
	Precision	± 2%RH (10-90%RH); ± 3%RH (0-10%RH、90-100%RH)
IRT Temperature	Range	-20°C~250°C
	Resolution	0.1°C
	Precision	± 3°C
	Max laser output power	<1mW
	Laser wavelength	630-660nm
	D:S	2:1
Emissivity	0.95	

Power supply	DC3.6V lithium battery Battery dimension: 14.3×24.6 Capacity: 1200mAh
Power Consumption	<1mA (laser off); <20mA (laser on)
Data interface	USB 1.0/2.0
Software CD	Included

## **Safety Instructions**

1. Please read this manual thoroughly prior to any operation.
2. Do not remove any labels from the instrument.
3. Avoid violent shock and dropping.
4. Keep away from direct sunlight, hot/cold source and places with intense airflow.
5. Do not clean the device with chemical liquid and stiff cloth.
6. Do not operate the tool with the presence of flammable/explosive gases.
7. Keep the device away from vibration source and high power EMF places. The ambient temperature should be stable.
8. Remove the battery when storing the tool for an extended period of time to prevent the deteriorative battery from damaging the device.

## **Warranty**

The product is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase.

**Notice:** The warranty does not apply to the following conditions:

- Disassembling the laser tool will void the warranty.
- We are not responsible for any damage resulting from abrasion, water, dropping or disassembling.

**Tips:** Most parts of the product could be recycled, please refer to your local regulations for disposing of them instead of throwing into the dustbin.