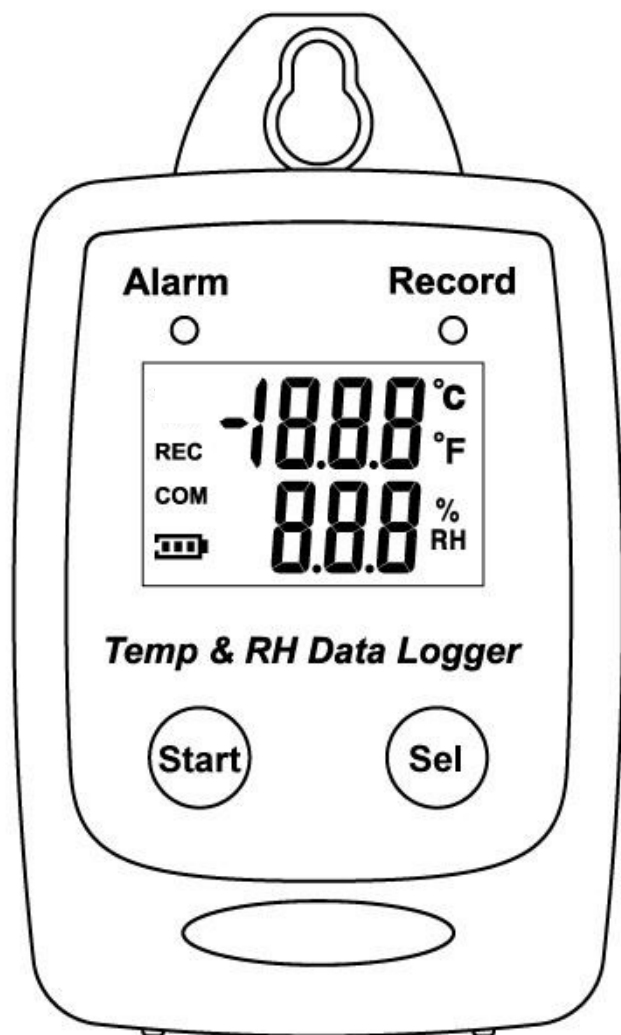


# Temperature/RH Data logger

## Users Manual



**USB Datalogger**  
**IP 54 Water Proof**

# TABLE OF CONTENTS

1. Features.....	2
2. Specifications .....	2
3. Applications .....	4
4. LCD Display .....	5
5. START UP AND GENERAL OPERATION.....	6
6. Interface switching .....	7
7. Sampling Rate and Time settings .....	8
8. Recording and Datalogging.....	9
9. Software Installation .....	11
10. USING PC SOFTWARE .....	12
11. Connecting to PC.....	12
12. Setup Screen .....	15
13. Synchronize with Computer Time.....	16
14. Download Records .....	18
15. Graphic & Chart Analysis .....	20
16. Data in Listing Format.....	22
17. Data Listing Format .....	22
18. Data Export.....	23
19. Printing report data .....	24
20. Erase Data .....	26

## 1. Features

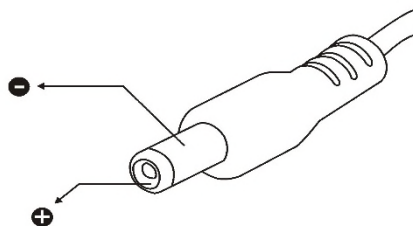
- Measure humidity and temperature-
- Datalogging- 25,000 records
- Fast USB download
- Easy- to-Use PC software for parameter settings and data analysis
- Internal Humidity Temperature alarm

## 2. Specifications

- Display : 3 1/2 and 3 digitsLCD.
- LED status : red LED of Alarm, green LED of Record.
- Sampling rate : 1 times/3second.
- Battery : One 3.6V 1/2 AA lithium battery
- Battery Life : 1 year.
- Operating temperature and humidity : -40 to 85°C (-40~185°F), 0-95%, RH, non-condensing.
- Instrument Dimensions : 83(L)x60(W)x24(H) mm.
- Weight : About 77g.
- External power supply: The device can be powered externally via an AC to DC 5V power supply or a USB connection. When using an external power supply, the waterproof function will be disabled.

Please see the specifications below for the additional AC to DC 5V power supply which is not included in our standard kit:

- Output Current:>500mA ◦
- DC plug: outside "-", inside "+"
- DC plug diameters: outer 3.5mm  $\phi$  , inner 1.1mm  $\phi$



## Relative Humidity Sensor

Type	Capacitor
Measurement Range	1%-99%
Accuracy	$\pm 3.0\% \text{RH}$ (20~80%) at 25°C $\pm 5.0\% \text{RH}$ (<20%, >80%) at 25°C
Resolution	0.1%

## Temperature Sensor

Type	Thermistor
Measurement Range	-40-185°F (-40-85°C)
Accuracy	$\pm 0.6^\circ \text{C}$ ( $\pm 1.2^\circ \text{F}$ ) from -20-50°C (-4 to 122°F) $\pm 1.0^\circ \text{C}$ ( $\pm 1.8^\circ \text{F}$ ) all other ranges.
Resolution	0.1°C





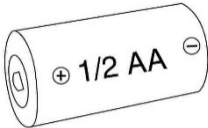
### **Below -20°C Measurement Notes:**

Please measure -20°C firstly. When the meter shows -20°C and the battery symbol should be more than 2 scales then the measurement can be continued if the temperature is below -20°C. If the battery symbol at -20°C is less than 2 scales, please replace with a new one battery immediately.

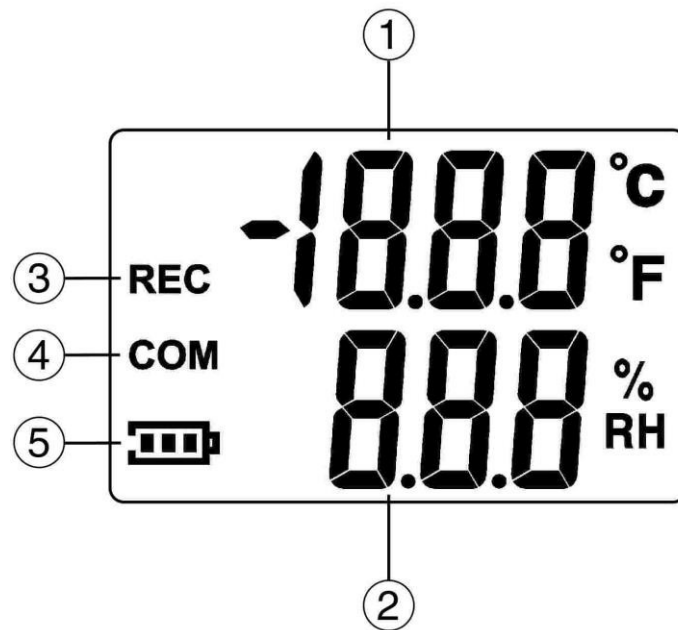
### 3. Applications

- Building HVAC monitoring
- Indoor air quality survey
- Locate the presence of combustion fumes from vehicles and appliances

### WHAT'S IN THE BOX

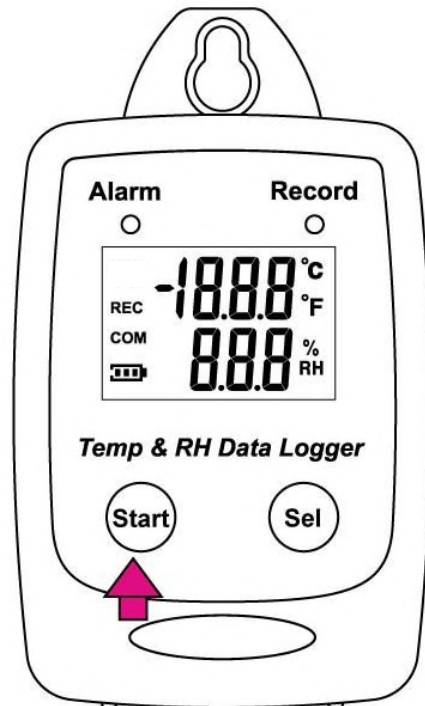
		
Main Unit	USB Cable	3.6V 1/2 AA lithium battery

#### 4. LCD Display

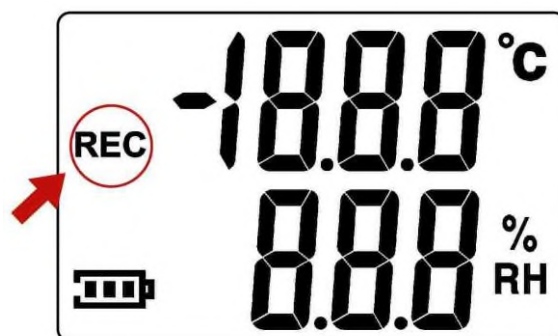


1.	Temperature Display	4.	USB Communication
2.	Humidity Display	5.	Battery Level Indicator
3.	Recording		

## 5. START UP AND GENERAL OPERATION

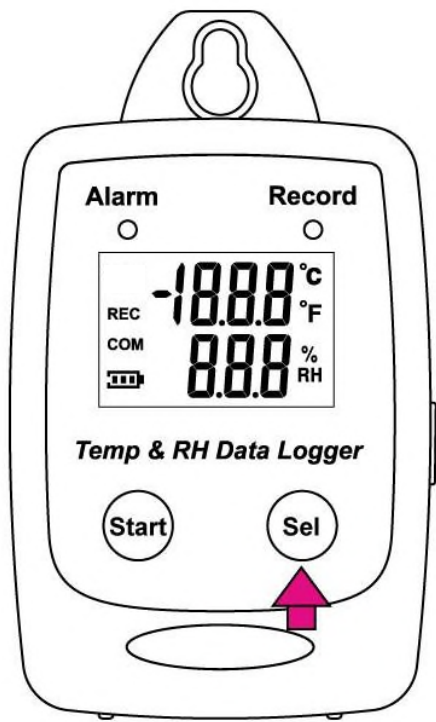


- Press the Start button for 2 seconds to turn on Temperature/Rh Datalogger
- The LCD displays REC.




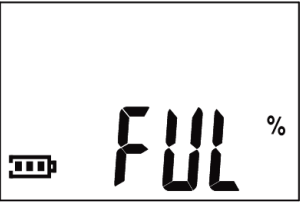


6. Interface switching

- Press Sel to jump to the next LCD display.



- Main Screens (1-4)

1	2	3.	4.
			
Main Screen Temperature(°C)	Main Screen Temperature(°F)	% of Memory Left Total 25,000 records	Display FUL – Data Memory is Full

Main Screens



## 7. Sampling Rate and Time settings

- (5sec / 10sec / 30sec / 1min / 5min / 10min / 30min / 1 hour/ 2 hour)
- Can only be set from PC setup screen.
- Click “Time synchronization” to set the time to be synchronized with the computer.

The image shows a screenshot of the "Data Logger Setup" window. The window has a blue title bar with the text "Data Logger Setup" and a close button. Below the title bar is a "Setting" tab. The main area is divided into two sections: "GENERAL" and "ALARM LIMIT".

**GENERAL**

Product# Temp & RH Data Logger - USB

Current Date&Time 01/08/2011 10:34:56PM

Start Date&Time 01/01/2011 01:06:41AM

End Date&Time 01/01/2011 03:35:54AM

Unit Description Temp & RH Data Logger

Interval 5sec

☒ Time synchronization

Temperature Unit

☒ F ☐ C

Alarm Unit

☒ On ☐ Off

**ALARM LIMIT**

High Rh Limit 90 %RH

Low Rh Limit 20 %RH

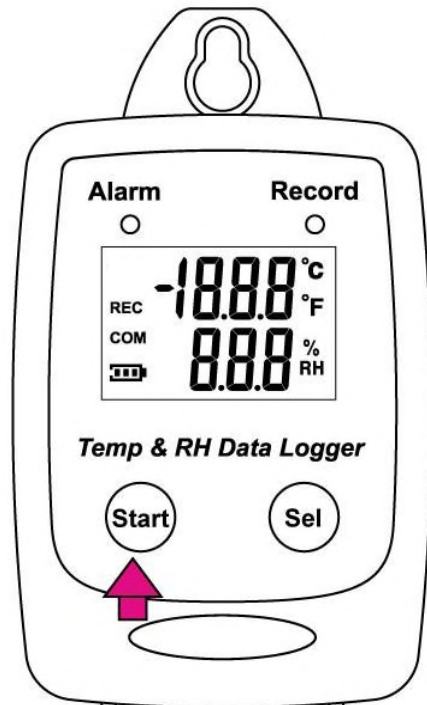
High Temp Limit 70 F

Low Temp Limit 20 F

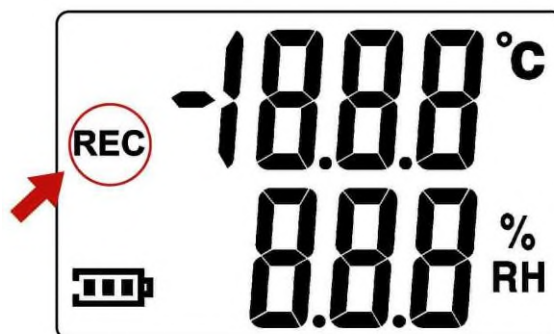
At the bottom of the window are three buttons: "Help", "Save Settings", and "Close".

## 8. Recording and Datalogging

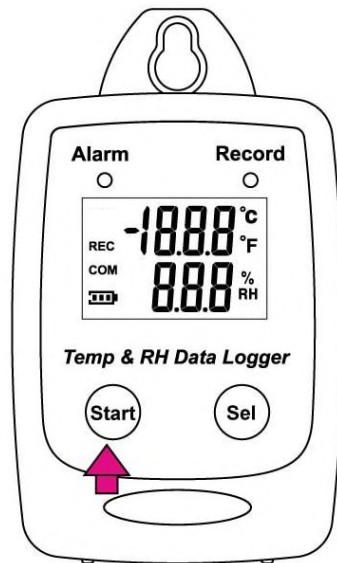
- Press the Start button to start data recording.



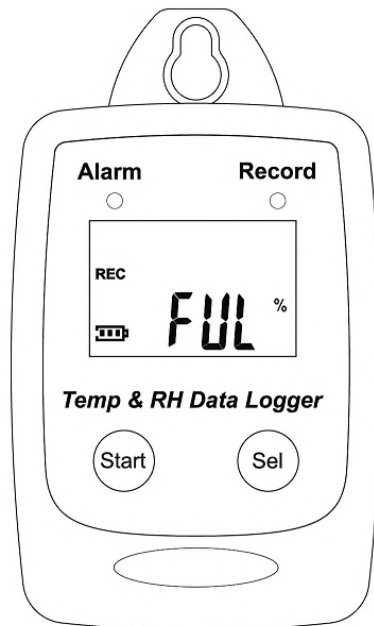
- The LCD will display REC when Temperature/Rh Datalogger is in the datalogging mode.



- Press the Start button again to stop recording.



- When the data storage is full, the LCD will display FUL and stop recording. To delete recorded data, please refer to page 26 for instructions on clearing data records.



## 9. Software Installation

1.Link website <https://www.tenmars.com/>

or scan below QR code:



2.Search TM-305U.

3.Click on the TM-305U photo.

4.Click **File Download**, then select **Software Download**.

5.Download and unzip the software.

6. For the latest software information and installation procedures, please refer to the **software installation guide**.

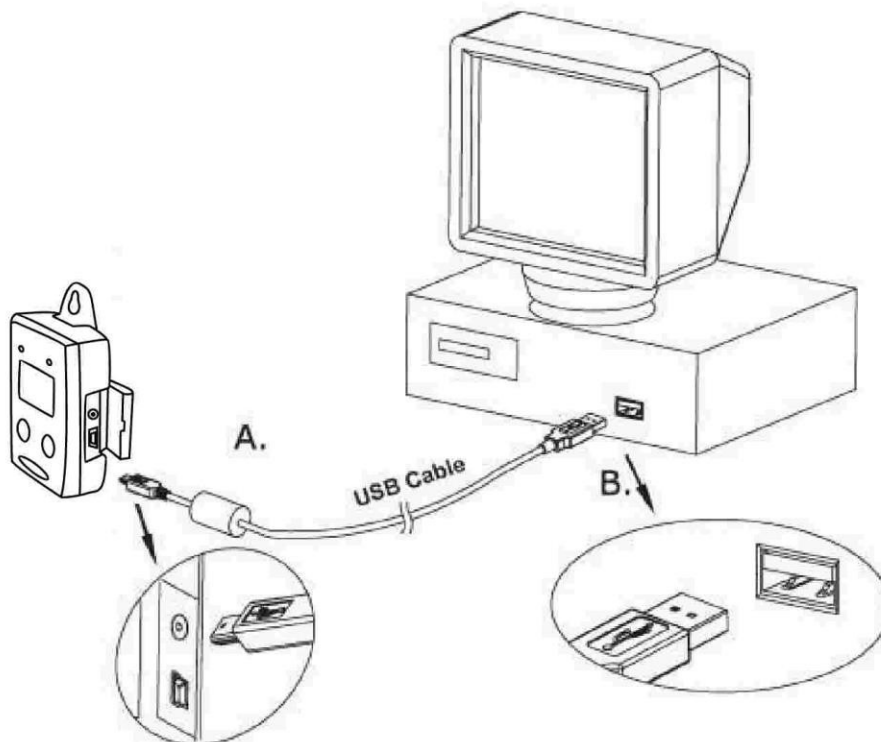
## 10. USING PC SOFTWARE

- Start Window PC software.
- Click on All programs, Click on “Temp& RH Data Logger”
- Click on “Temp& RH Data Logger” V1.7

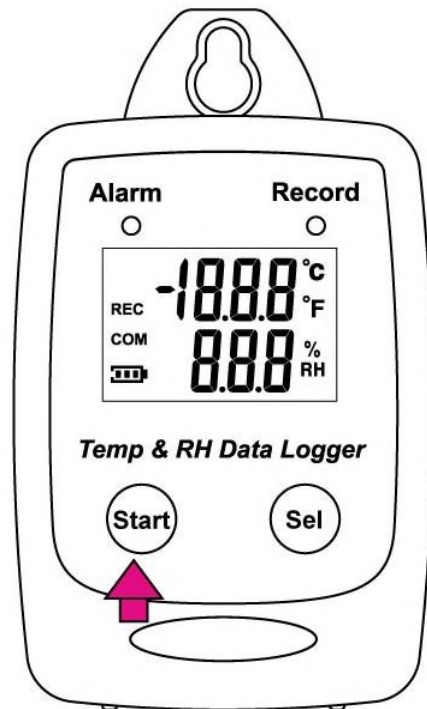


## 11. Connecting to PC

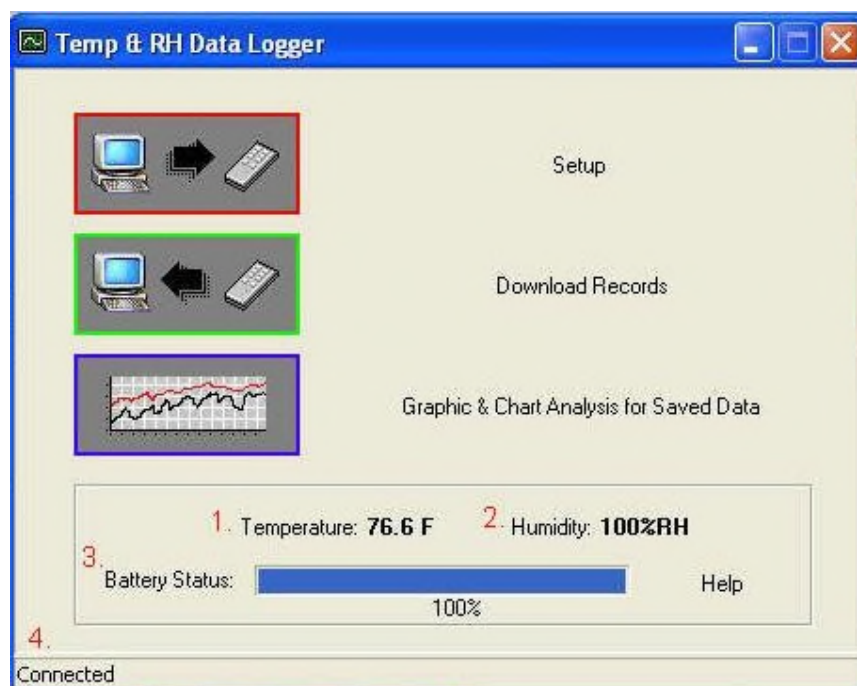
- Connect Temperature RH Datalogger to the PC with a USB cable.



- Press Start for 2 seconds to turn on Temperature/Rh Datalogger.
- Temperature/Rh Datalogger is now connected to the PC.



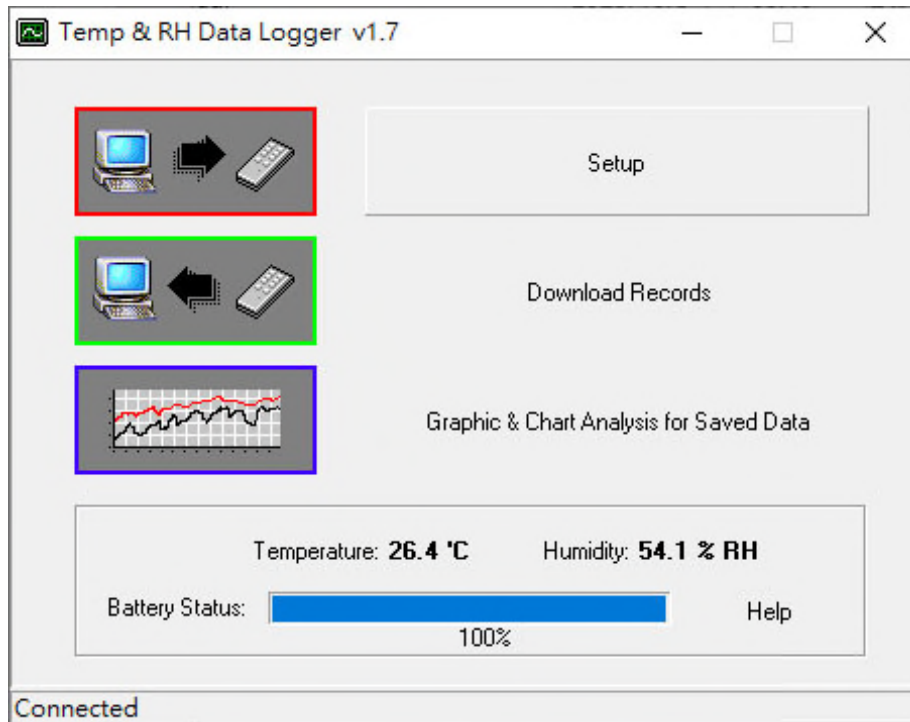
- Connected Screen



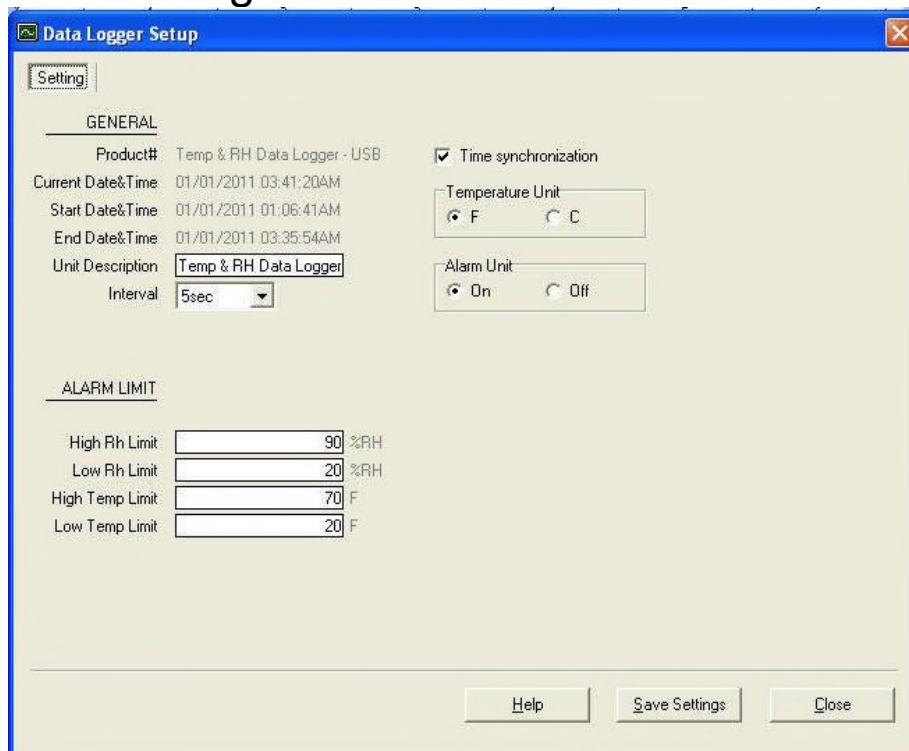
- If the datalogger is properly connected, these three values will show up.
  1. Temperature Reading
  2. Humidity Reading
  3. Battery Status
  4. Connection Status- "Connected"

## 12. Setup Screen

- Click “Setup” to enter the Setup screen.



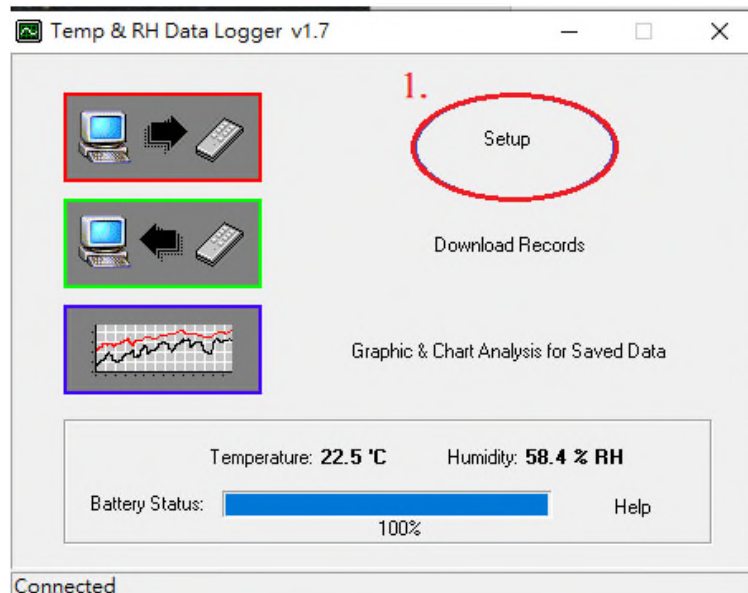
- The values in the white area can be changed by the user.
- The value in the grey area can not be changed by the user.
- Click “Save Settings” to save the values to the datalogger.



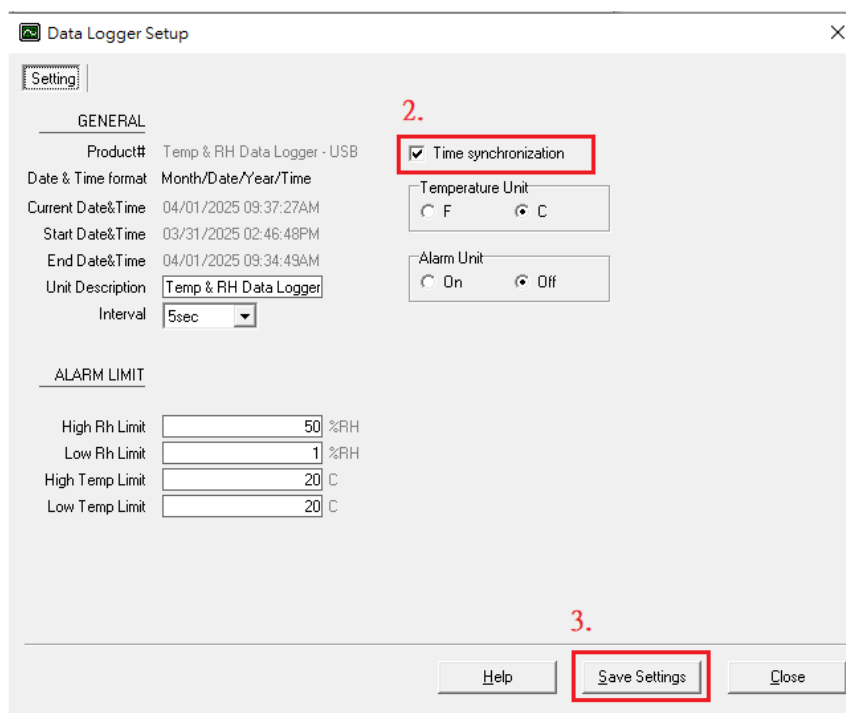


### 13. Synchronize with Computer Time

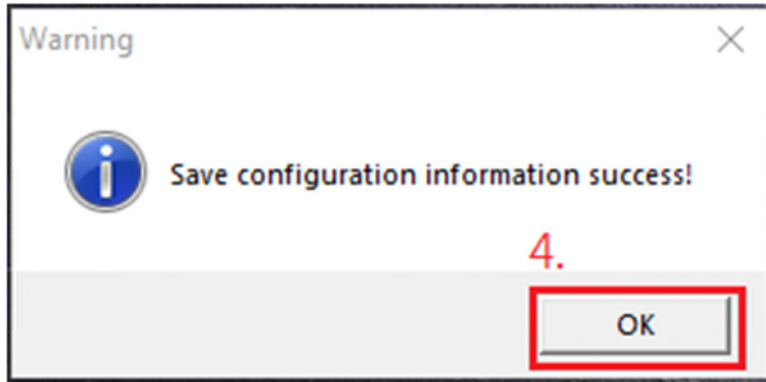
- When using the data recording function, it is recommended to synchronize with the computer time to ensure the date of the recorded data is accurate.
- Tap Setup.



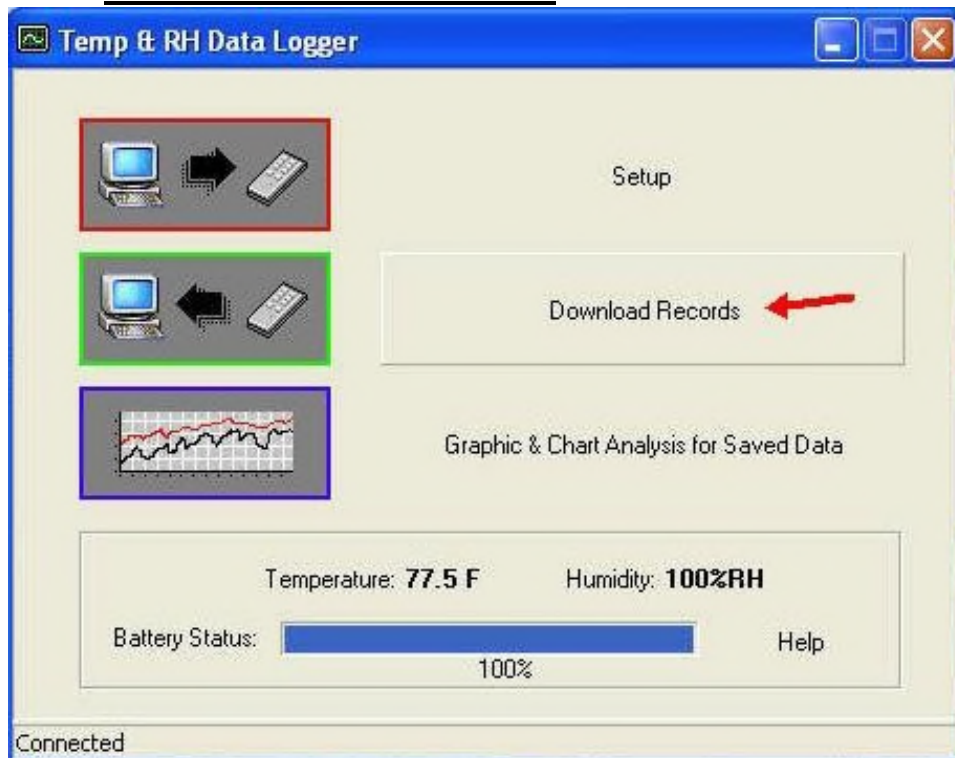
- Check Time synchronization and tap Save Settings to synchronize with the computer time.



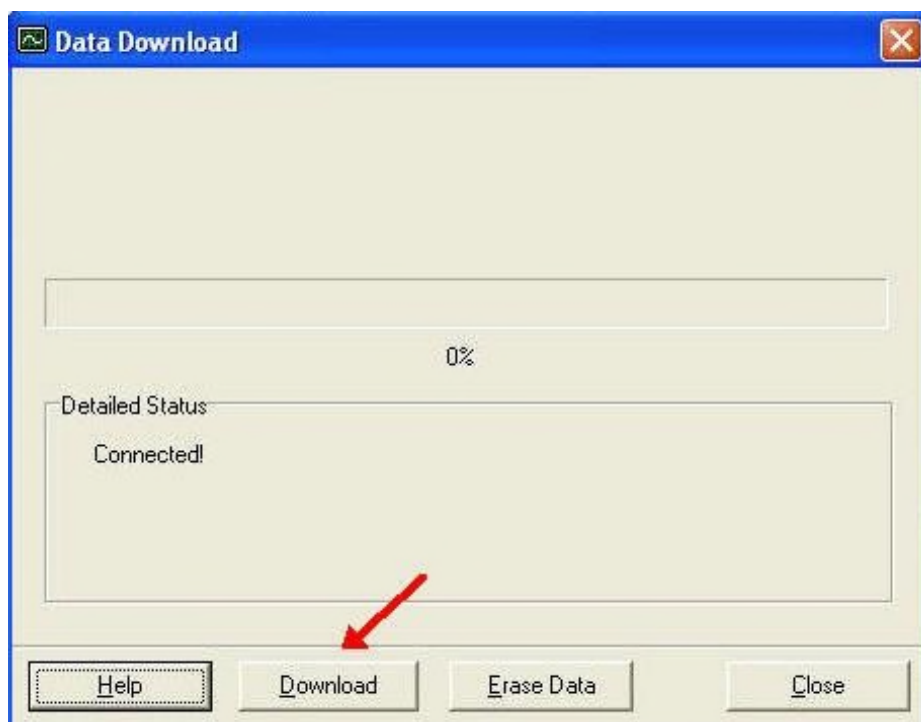
- Tap OK to confirm successful synchronization.



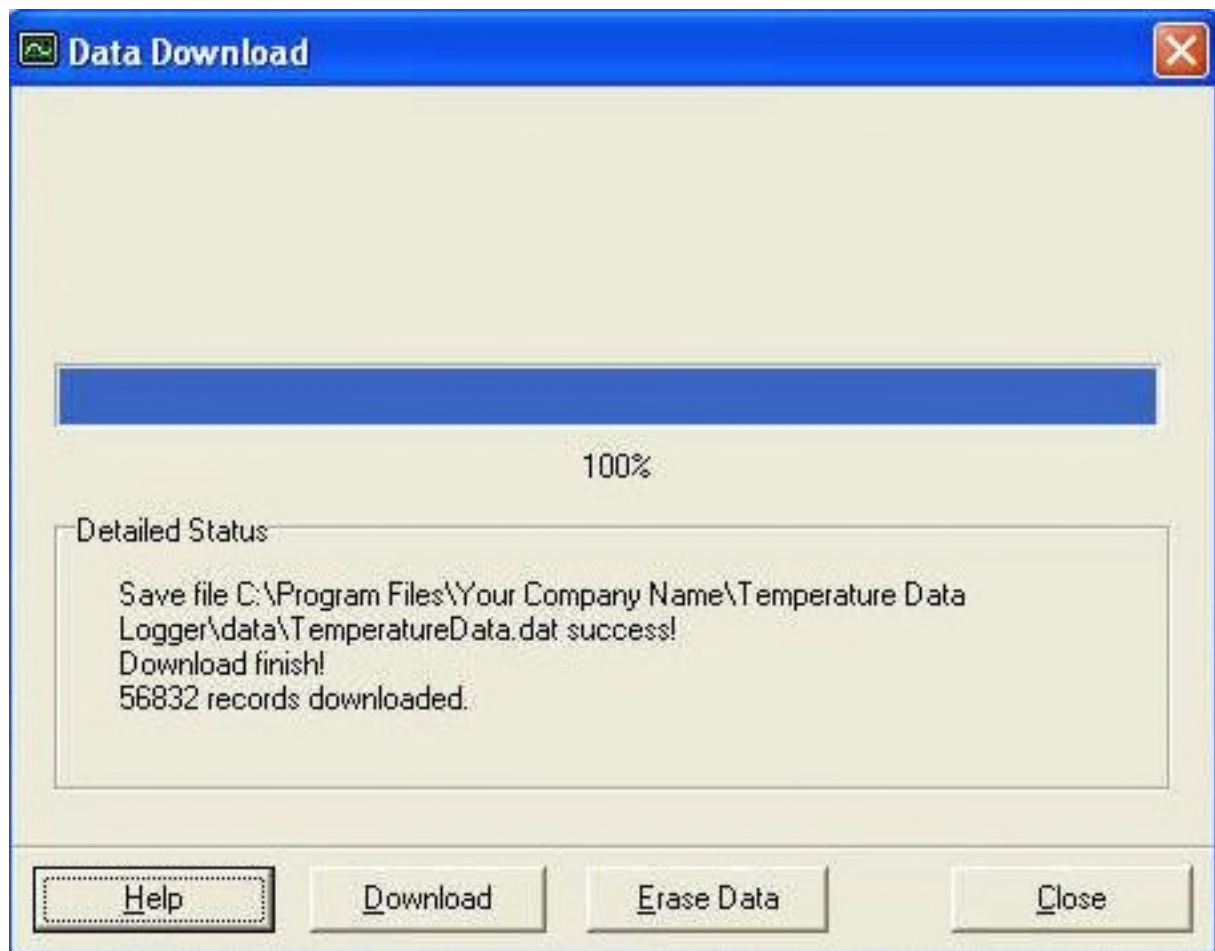
## 14. Download Records



- Click Download to download the stored data.

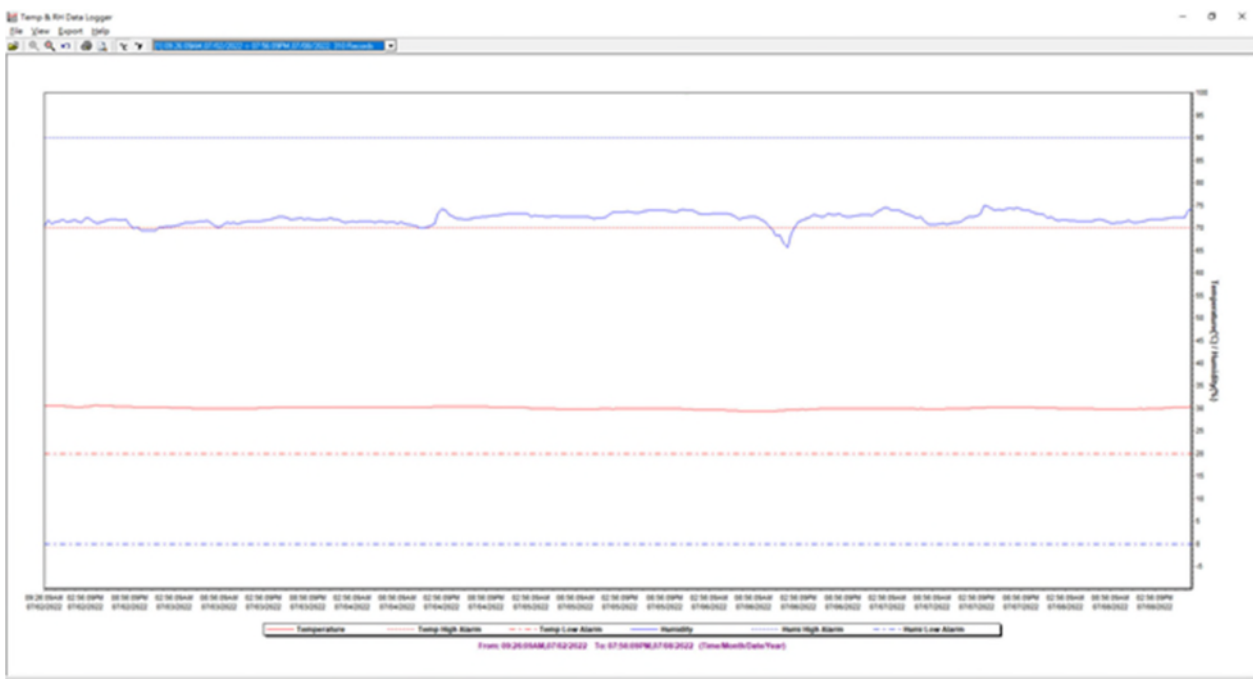


- Click “Download” to start the download.

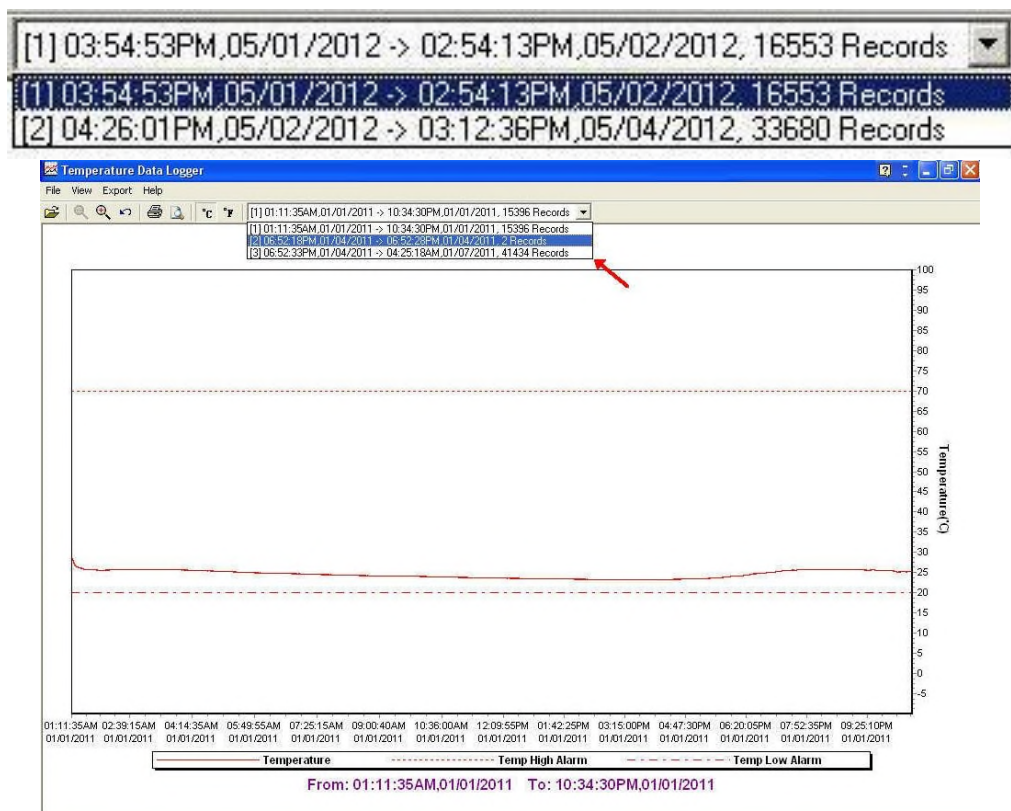


- Download Completed

## 15. Graphic & Chart Analysis

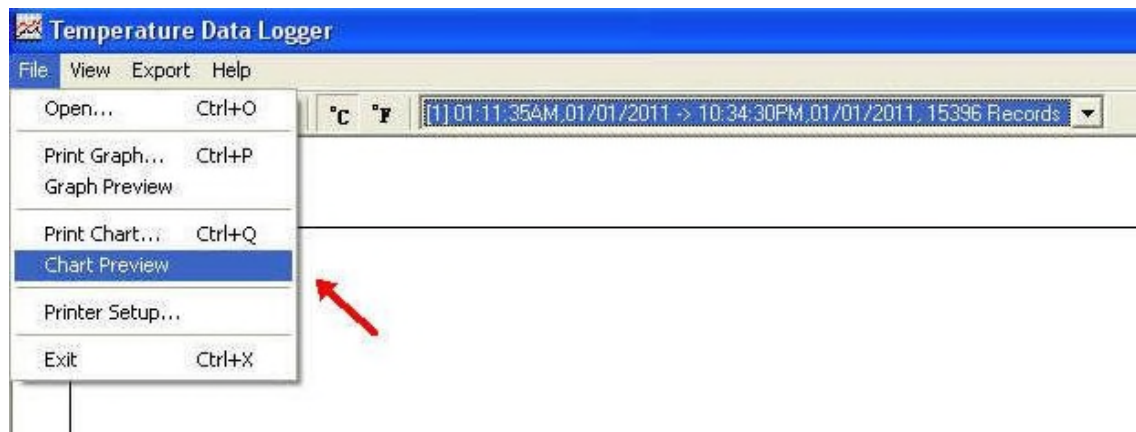


- Downloaded data will first be displayed in graph format.



- Each data groups are listed according to the date of the sampling. Lowest group number represents earliest sampling date.

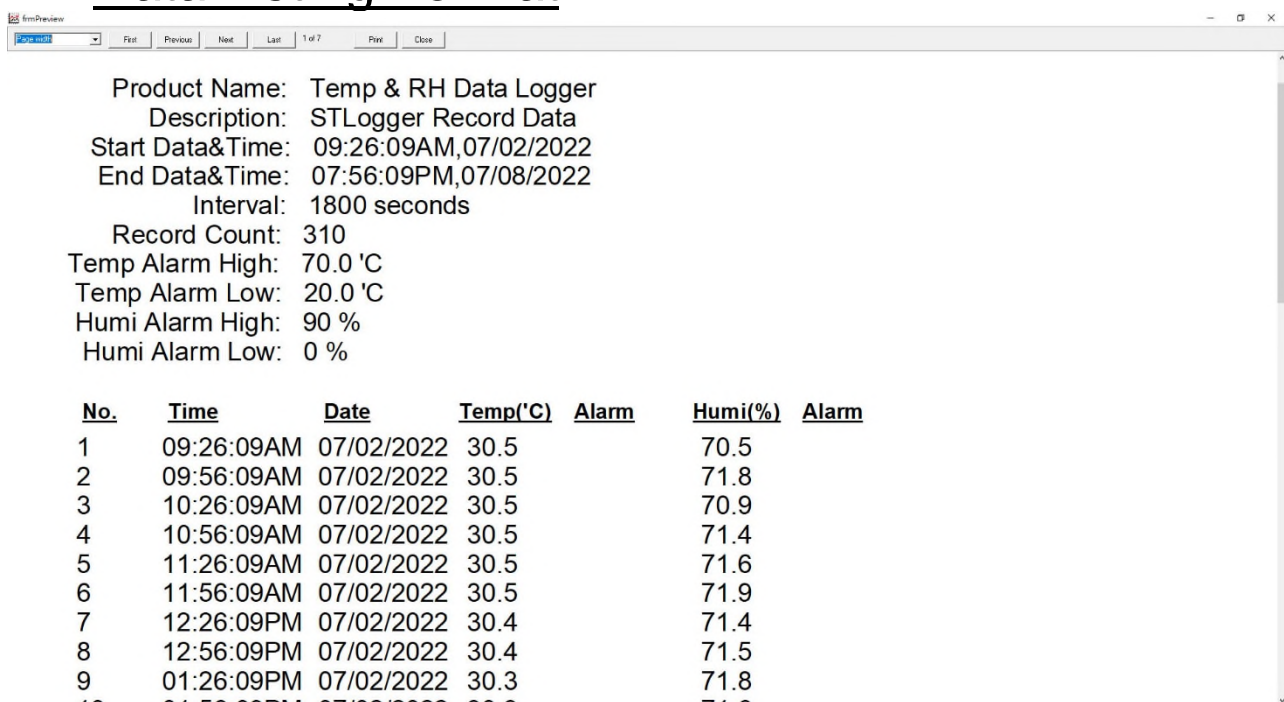
## 16. Data in Listing Format



To display data in Listing format:

- Click File
- Click Chart Preview

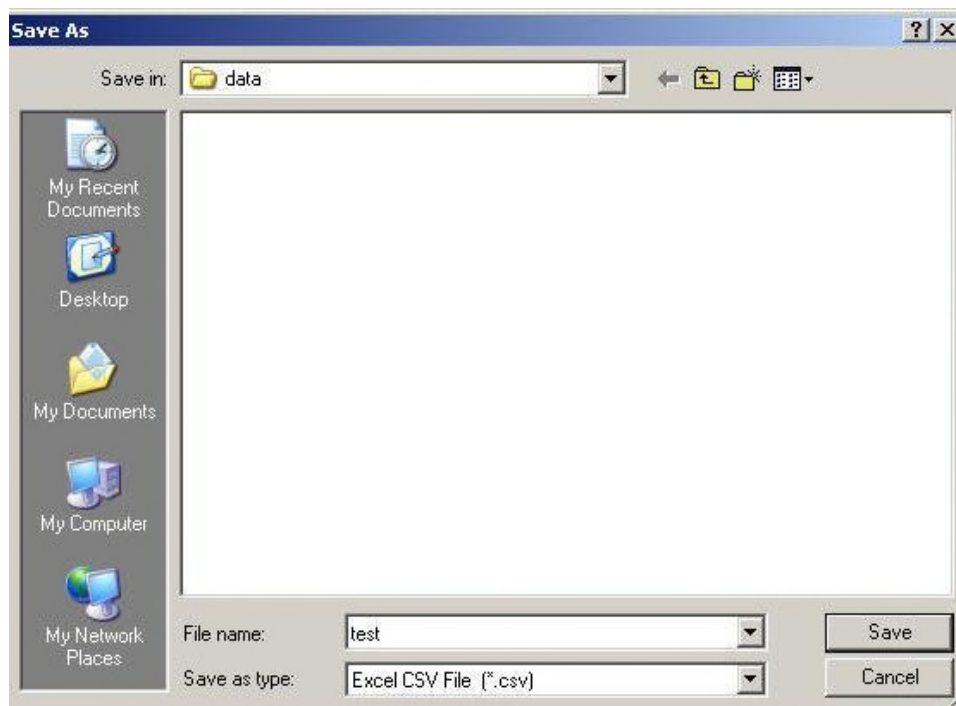
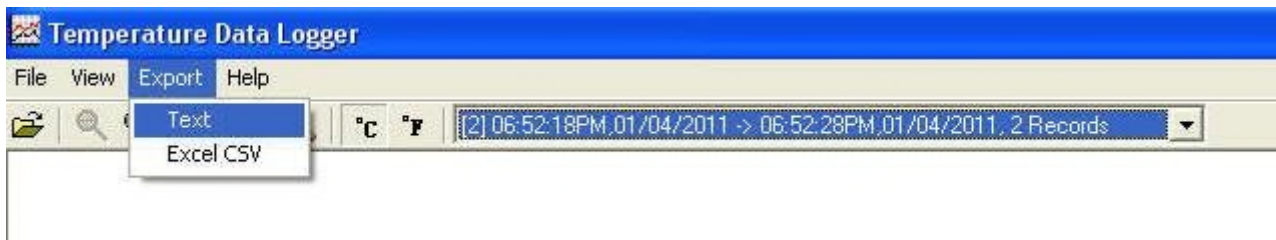
## 17. Data Listing Format



No.	Time	Date	Temp('C)	Alarm	Humi(%)	Alarm
1	09:26:09AM	07/02/2022	30.5		70.5	
2	09:56:09AM	07/02/2022	30.5		71.8	
3	10:26:09AM	07/02/2022	30.5		70.9	
4	10:56:09AM	07/02/2022	30.5		71.4	
5	11:26:09AM	07/02/2022	30.5		71.6	
6	11:56:09AM	07/02/2022	30.5		71.9	
7	12:26:09PM	07/02/2022	30.4		71.4	
8	12:56:09PM	07/02/2022	30.4		71.5	
9	01:26:09PM	07/02/2022	30.3		71.8	
10	01:56:09PM	07/02/2022	30.3		71.8	

## 18. Data Export

- Select export data type: Text or Excel CSV.



Click Save to save the file in .CSV/Txt format.

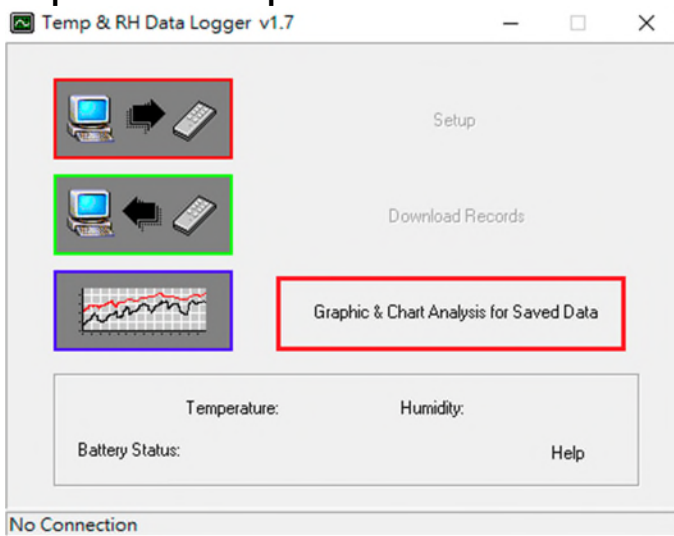


File Save

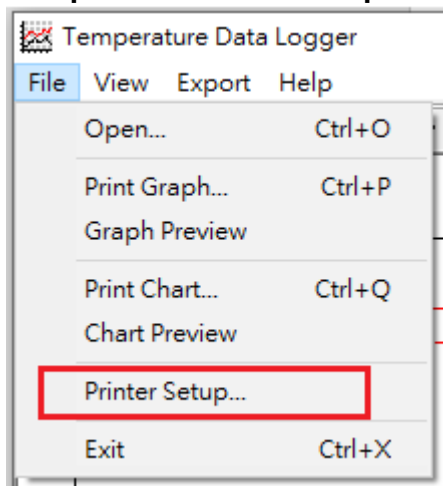


## 19. Printing report data

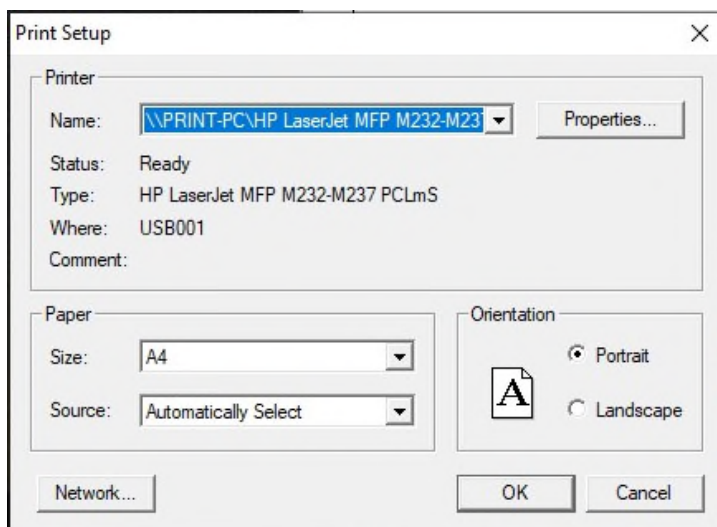
- Open the report window



- Tap Printer Setup

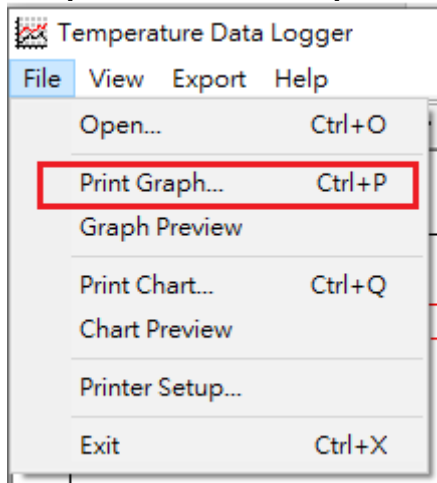


- Set the print

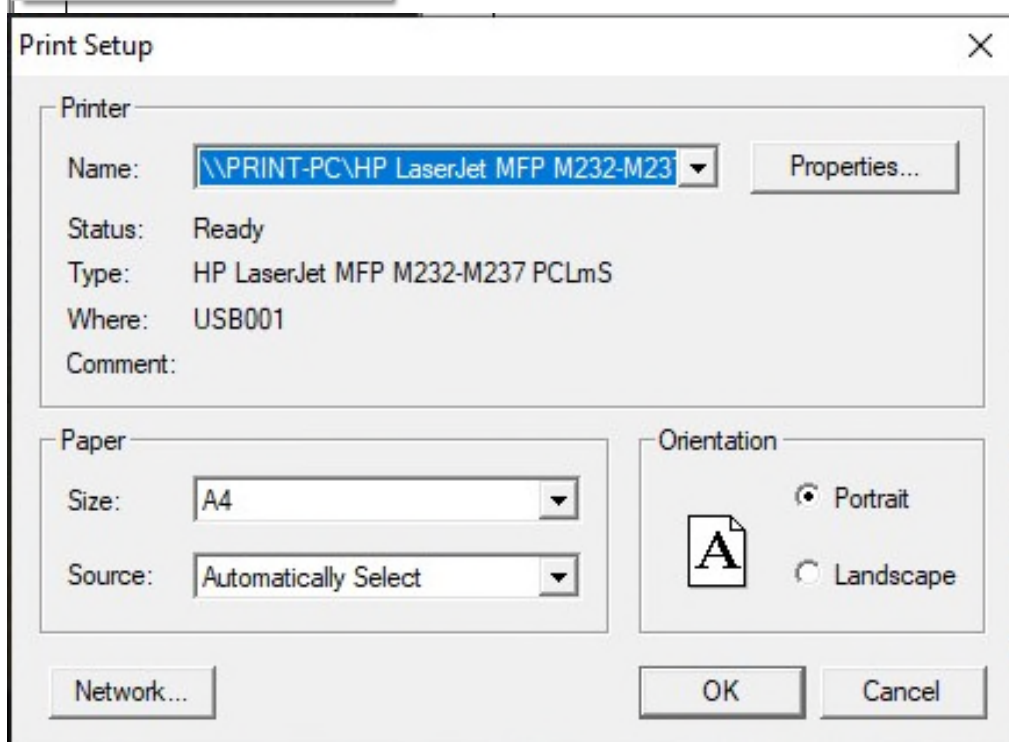
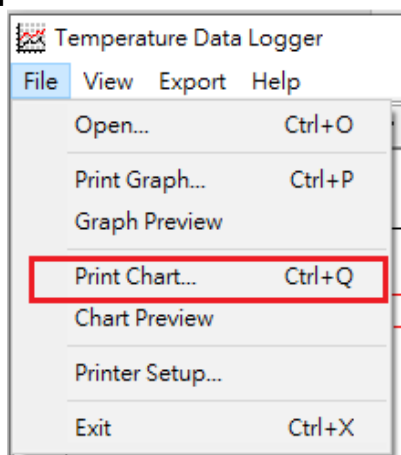




- To print the Graph: Tap Print Graph to print directly.

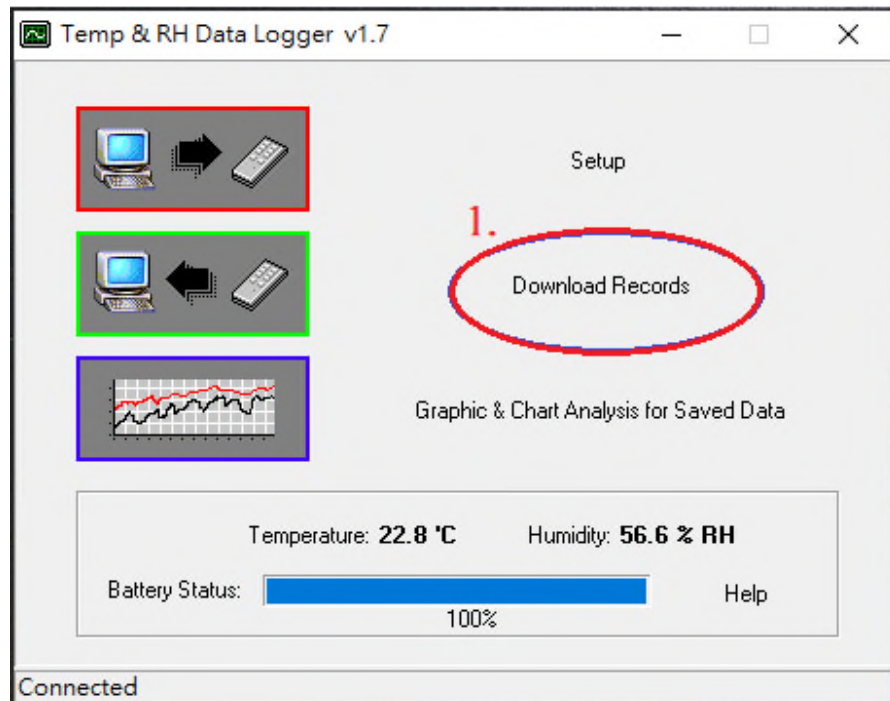


- To print the Chart: Tap Print Chart, set the print format, then print.

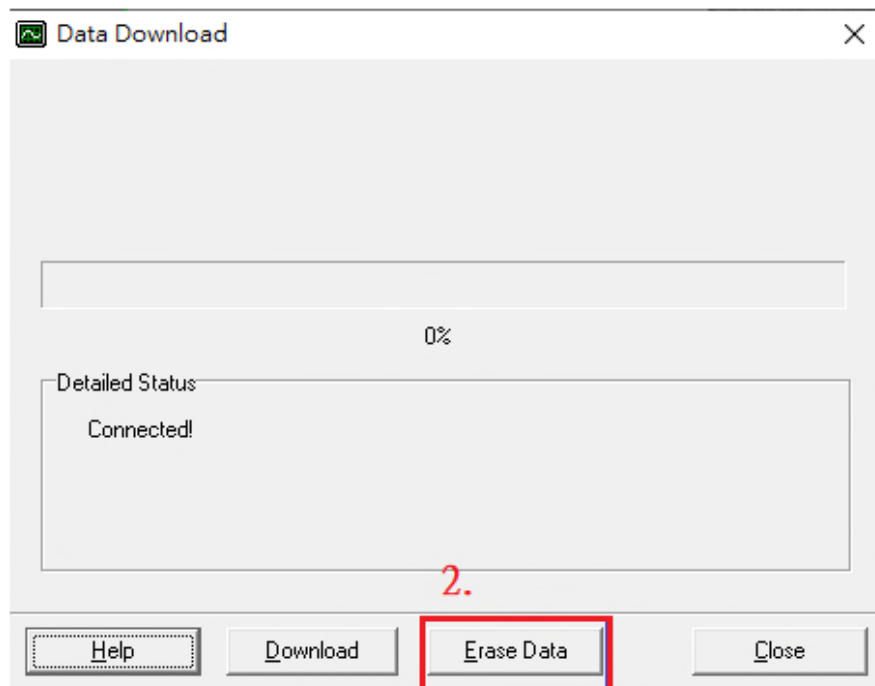


## 20. Erase Data

- Tap Download Records.



- Tap Erase Data to delete all recorded data.



- When erasing is finished, tap Close to exit the window.

