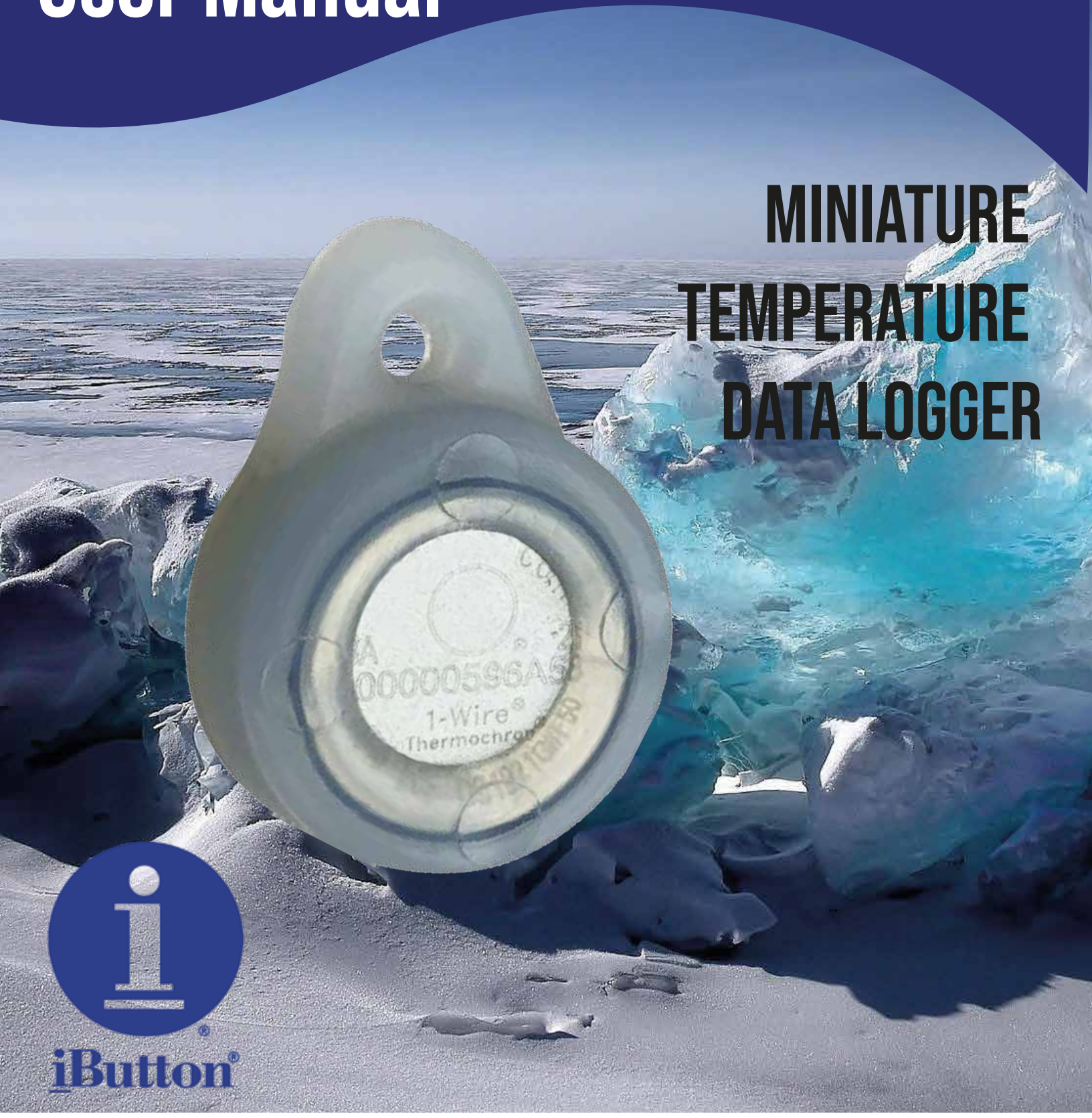
iButton® / iBee

User Manual

Version 1 Sept 2025



iButton®

Note from Alpha Mach

Thank you for choosing our iButton®Products. At Alpha Mach, we have made the iButton® completely waterproof and pressure resistant, taking the iButton® one step further, and opening a world of possibilities and discovery...

Your feedback is very important to us. Should you have any comments, questions or if you need a customized solution, please feel free to contact us.

Robert Turcotte, P. Eng.
General Manager

Introduction

The iButton® based data loggers come in all shapes and sizes. All iButton® products are supported by the WeeButton® free software application. Latest versions of the WeeButton® application can be found on our website.

https://www.alphamach.com/softwares/WeeButton_Setup_V12_R068.exe.zip

This manual takes you step-by-step through the program installation, hardware connections, and missioning process.

To use iButton® products, you must have access to a computer with Windows 7 or higher. It is not yet supported by Apple systems.

WeeTag® is a registered trademark of Alpha Mach Inc.

iButton®, Thermochron®, and are registered trademarks of Analog Devices.

WeeButton® Software

WeeButton® is a free software application we developed to interface with all Alpha Mach products. It basically allows the user to mission his loggers, retrieve the data, and export the data to an Excel spreadsheet. WeeButton® will work with iBee and iButton® products.

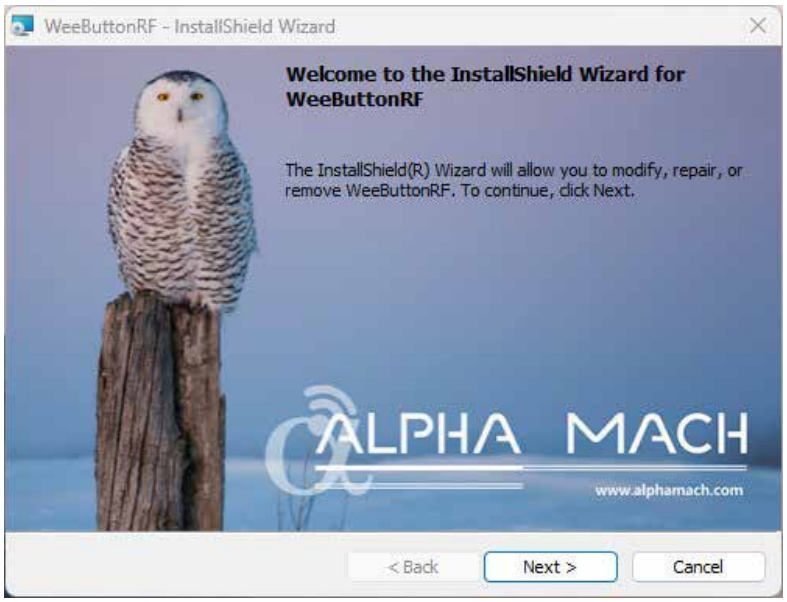
Installation

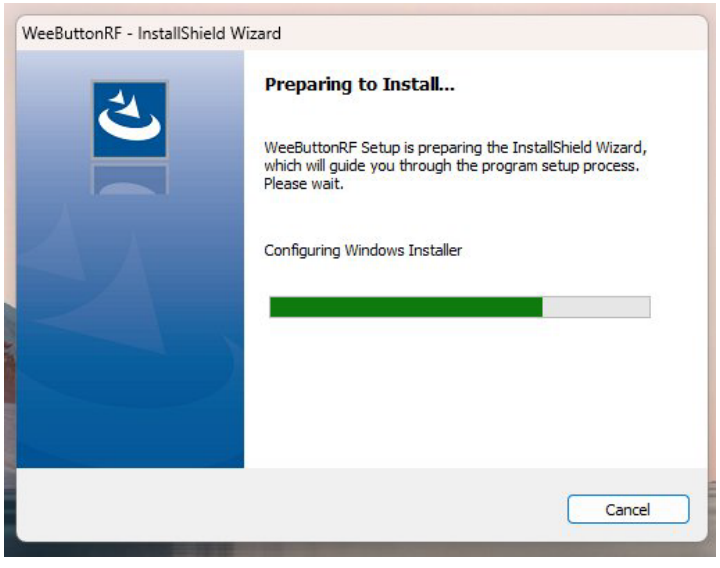
If it's the first time you're installing WeeButton®, please make sure you follow these steps:

1. Download the latest versions of the WeeButton® application from our website: https://www.alphamach.com/softwares/WeeButton_Setup_V12_R068.exe.zip

2. Unzip the file «WeeButton_Setup.exe.zip»

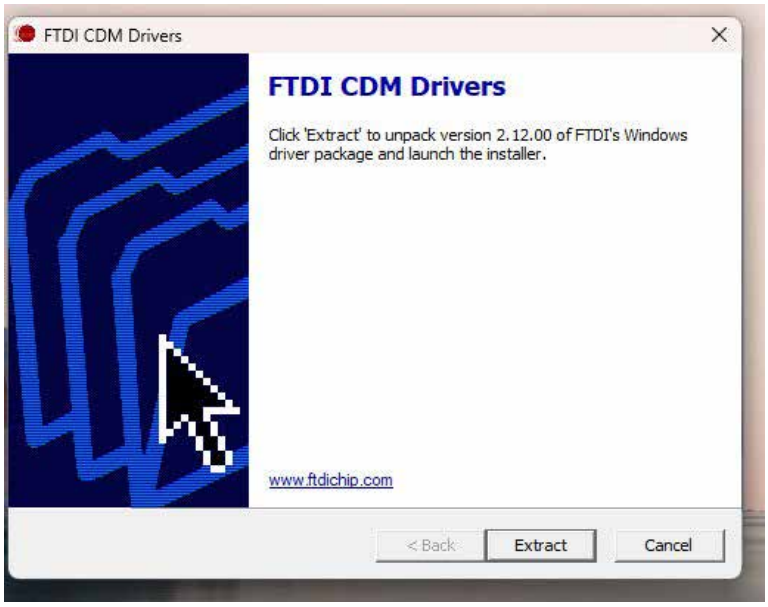
3. Launch the WeeButton RF Setup.exe. The program will install first



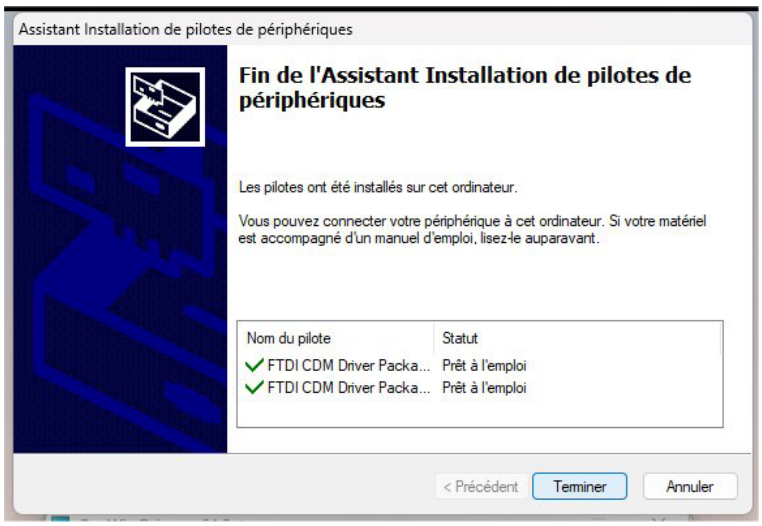


Installation

4. Make sure you install FTDI CDM Drivers correctly. Two more installations will open. If there are any problems regarding this installation, please visit FTDI's webpage: http://www.ftdichip.com/FTDrivers.htm



5. Make sure you install Microsoft Visual J# 2.0 Redistributable correctly if needed.
If there are any problems regarding this installation, please visit Microsoft's webpage: http://www.microsoft.com/en-ca/download/details.aspx?id=4712.



6. 1-Wire Driver installation will open. Make sure the drivers are installed correctly.
If there are any problems regarding this installation, please visit Maxim Integrated's ,download.

After making sure everything is installed correctly, connect the 1-Wire USB key to the computer and open WeeButton RF

7.

Connection and Missionning

To connect your iButton® data logger, you must use the appropriate iButton® serial connector for the iButton or the Connexion Clamp for the iBee.

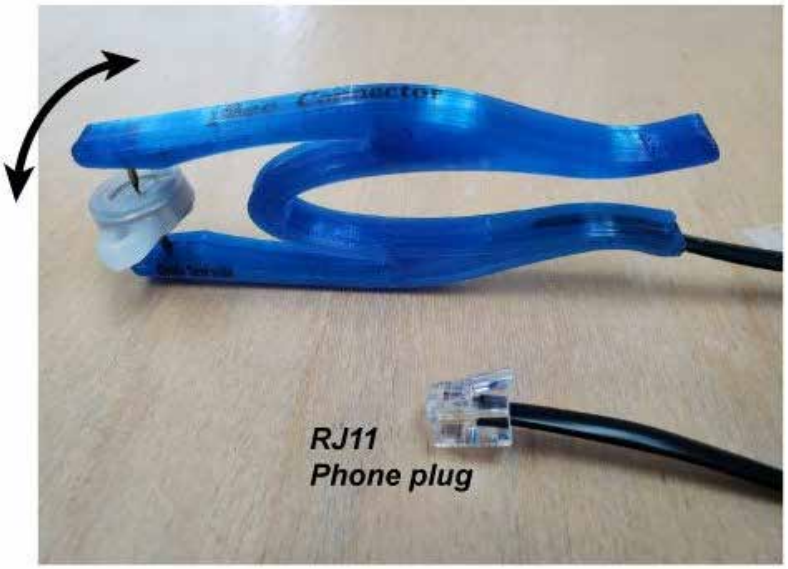
Once you have installed the software application, connect your 1-Wire USB adaptor (A) to any USB port on your computer.

To the 1-Wire adaptor, connect the iButton connector (B) if you are using the bare metal iButton (C) or the connexion clamp (D) for the iBee (E).

The software application should recognize it (this might take a few seconds). Once this is done, you can connect the tag to the connector.

Connection and Missionning

To ensure proper connexion with the iBee, rotate it back and forth to get the connexion clamp contacts to go through the thin silicone layer on both bottom and top surface.
The watertightness will not be affected because the seal is located on the sides and not on the top of bottom.



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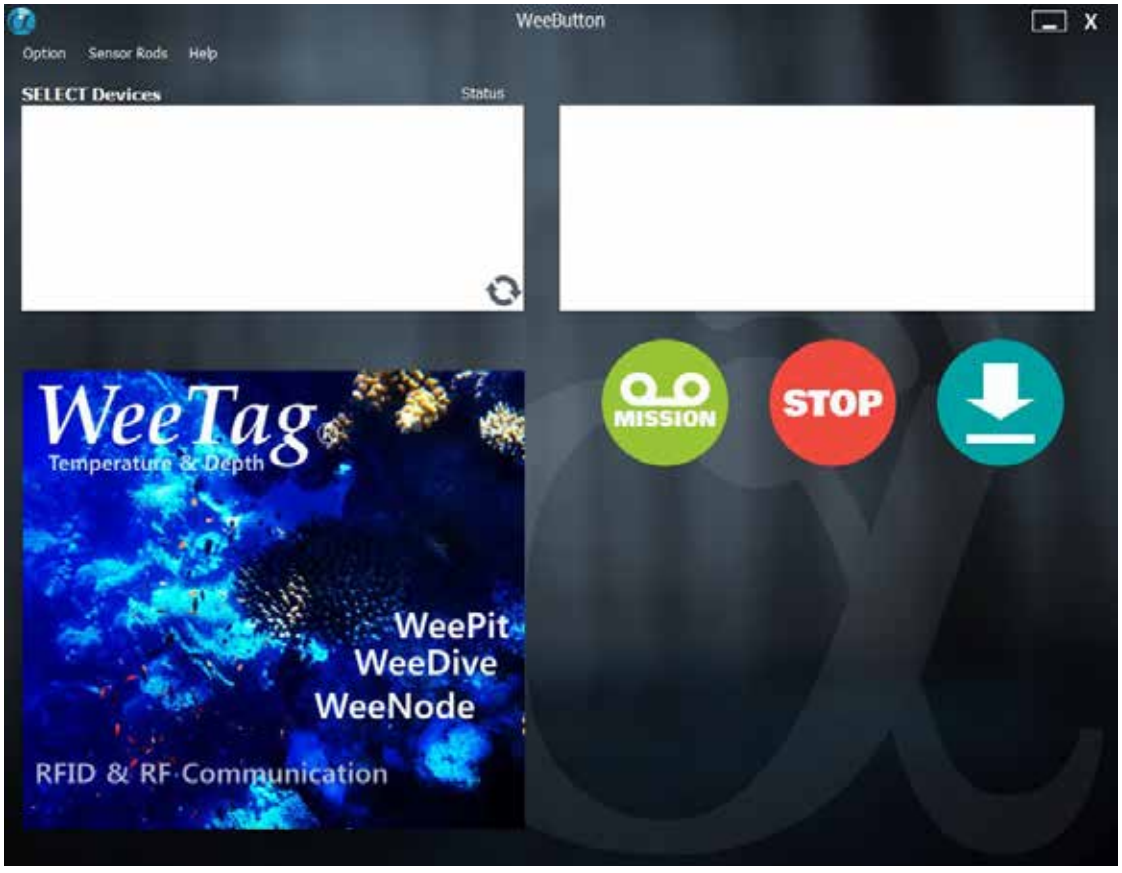
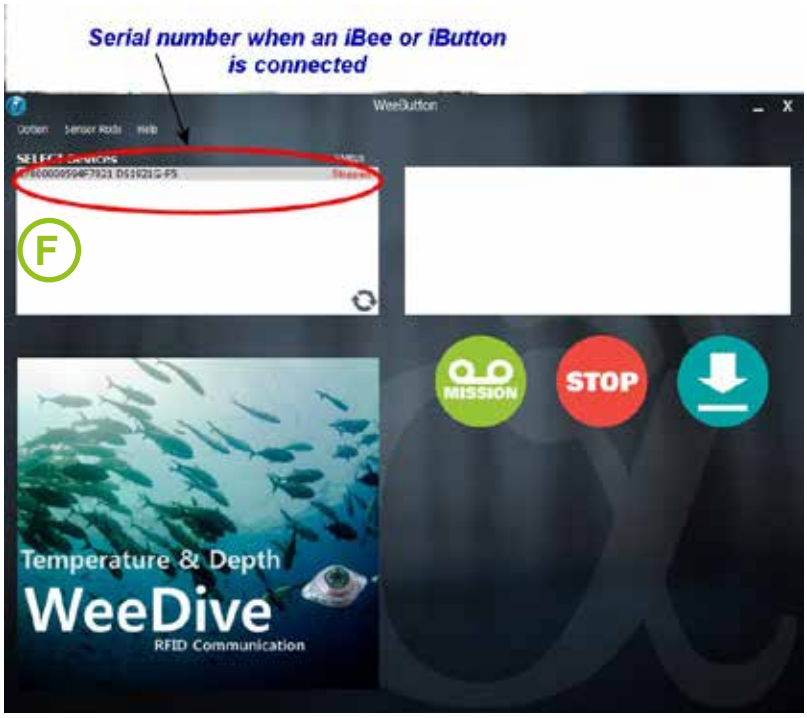
When you open the WeeButton software, you should get to this screen if the 1-Wire adaptor is properly installed.



Connection and Missionning

Connect an iButton or an iBee.

On the left box, you will see all the serial numbers (F) of the connected data
loggers. This number is important if you need a “NIST” certification. Each device has its own certification which can be downloaded from: https://www.analog.com/en/lp/001/ibutton-certifications/thermochron-nist-traceable-certificates.html



To do this, all you have to do is copy/paste the serial number in the request box on the site.

To find out some information about the connected device, double click on the desired iButton®. Its type and description will appear on the upper right corner.

Click on “Mission” button (G) to access the mission parameters for the device.
You will see a slightly different box depending on the connected iButton®.

Connection and Missionning

Missioning functions

Sampling Rate (second or minutes): This is the field where you tell the tag at what interval it will record a temperature. Depending on the type of the iButton®, it can be in seconds or minutes.

Mission starts on: Lets you programme the precise time (H/M/S) and date you want the mission to start.

This allows you to program multiple tags to start at exactly the same time.

Estimated End Date: Tells you when the RAM memory of the tag will be full. This depends on the type of iButton®, start date, start time, sample rate and resolution.

Synchronise clock: This should always be activated. This will synch the iButton® mission time and clock with your computer's time and date. If for whatever reason you need to offset the mission time, or re-mission a device through a different computer in a different time zone, then uncheck this function.

Enable Rollover: Selecting this function will allow the device to start erasing the oldest data values once the memory is full. If you do not enable this function, the tag will stop its mission when the memory is full.

Connection and Missionning

Enable Sampling: This will only be a factor when using the Hygrochron® or the iButton® 23. If not using these devices, **IT SHOULD ALWAYS BE CHECKED.**

Start Mission Upon Alarm Trigger:

Activate this function if you ONLY want to record when one of the alarms goes on:

High Alarm (C): If activated, you can set a temperature threshold that will be highlighted. This can also act as a mission start trigger (see "Start Mission Upon Alarm Trigger"). For example, when you set a High Alarm of 15C, the iButton® will start taking measures once a room temperature of 15C is reached. If the temperature goes back below 15C, the iButton® will keep on logging.

Low Alarm (C): If activated, you can set a temperature threshold that will be highlighted. This can also act as a mission start trigger (see "Start Mission Upon Alarm Trigger"). For example, when you set a Low Alarm of 15C, the iButton® will start taking measures once the room temperature decreases below 15C. If the temperature goes back above 15C, the iButton® will keep on logging.

Resolution

Low Resolution (0.5C): By activating low resolution, your device will have a 0.5C resolution on the values recorded, and will increase the total values recorded to the RAM memory to 8192. Please note that this option only applies to products of types: 22L, 22T, 22E and 23.

High Resolution (0.0625C): By activating high resolution, your device will have a 0.0625C resolution on the values recorded, and will decrease the total values recorded to the RAM memory to 4096.

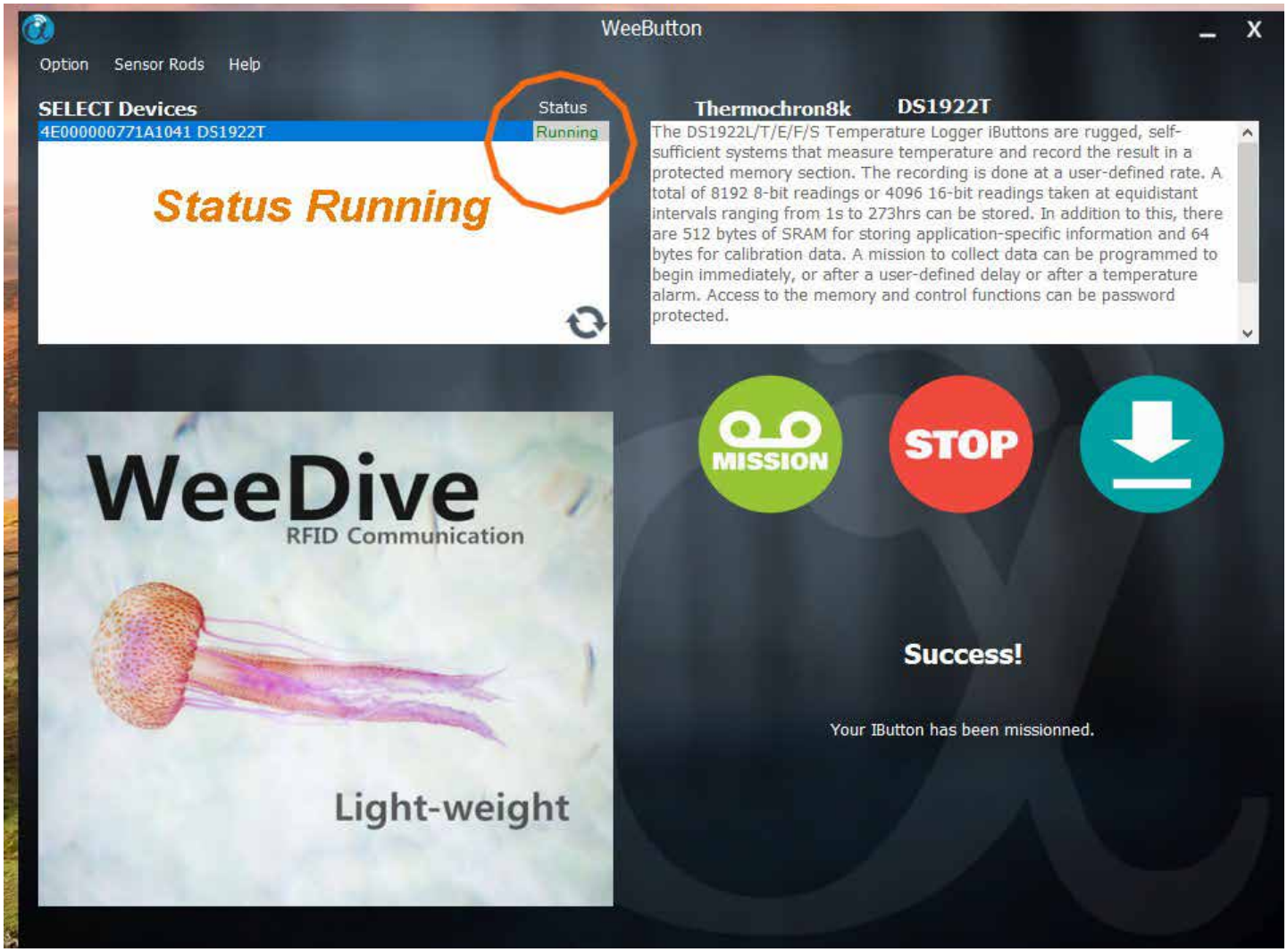
Please note that this option only applies to products of types: 22L, 22T, 22E and 23.

Connection and Missionning

Once you have selected your mission parameters, you can then click the “Mission” rocket button.

You will then see this message appear: Mission Success!! Your iButton was missioned. This confirms that the mission launch was successful.

Note that whenever a mission is programmed, all data from a previous mission is lost, and all memory is available for the new mission. You are now ready to deploy!



Stop Mission & Download

Once you retrieve your device, and are ready to download your data, reconnect the tag to the connection cable. Double-click on the serial number of the device and then, click on the “STOP” button. You will then see this message appear: Success!! Your iButton was stopped. This confirms that the iButton® was successfully stopped.

Note: The iButton® can be stopped without losing the data which can be downloaded any time after. The data from a previous mission becomes unavailable when a new mission is programmed.

Once your tag has been stopped, you will be able to download the data.
Click on the “Download” (H) button. You then have 2 options:
Text: Which will create a .txt file you can then use in any application.
Excel: Which will create a .xlsx file with the proper columns for quick graph generation.

Connection and Missionning

The file generated will provide these information:

1. **iButton S/N** : the iButton®'s serial number, which is a unique 64 bits hexadecimal number.
2. **iButton Type**: iButton® type recorded
3. WeeButton Rev: the WeeButton® version used to record the mission
4. Mission Init Date: the date and time the mission was initiated on
5. Mission Start-up: the data and time the logger started recording data
6. Download Date/Time: date and time download was initiated
7. Temp. Sample Rate: the sample rate that was set for the mission
8. Mission Running: True/False: If the mission is running (True) or if it has stopped (False)
9. Override Enable: True/False. If the “Rollover” was activated for the mission
10. Override Occurred: True/False. If a “Rollover” has occurred for the mission
11. Number Mission Records: the total amount of data logged for this mission
12. Log count: the total of data logged in the life of the iButton®. This value can give an indication of the battery left over. iButton® can last up to 500,000 measurements. Refer to detailed iButton® specs on our website at http://www.alphamach.com/faq
13. The data is presented with the date and Temperature measures in two columns.

IBUTTON DATA DOWNLOAD

Alphamach Inc.
619A rue Richelieu, St-Marc-sur-Richelieu,
Qc., J0L 2E0 CANADA
Tel: 450-584-3400
email: info@alphamach.com
www.alphamach.com

iButton Info

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iButton S/N: 5900000062362621
iButton Type: DS1921G-F5
WeeButton Rev: V12 R068

Mission Info

Mission Init Date: 01/10/2025 13:52:00
Mission Start-up: 01/10/2025 13:52:00
Download Date/Time: 01/10/2025 14:10:33
Temp. Sample Rate: 1

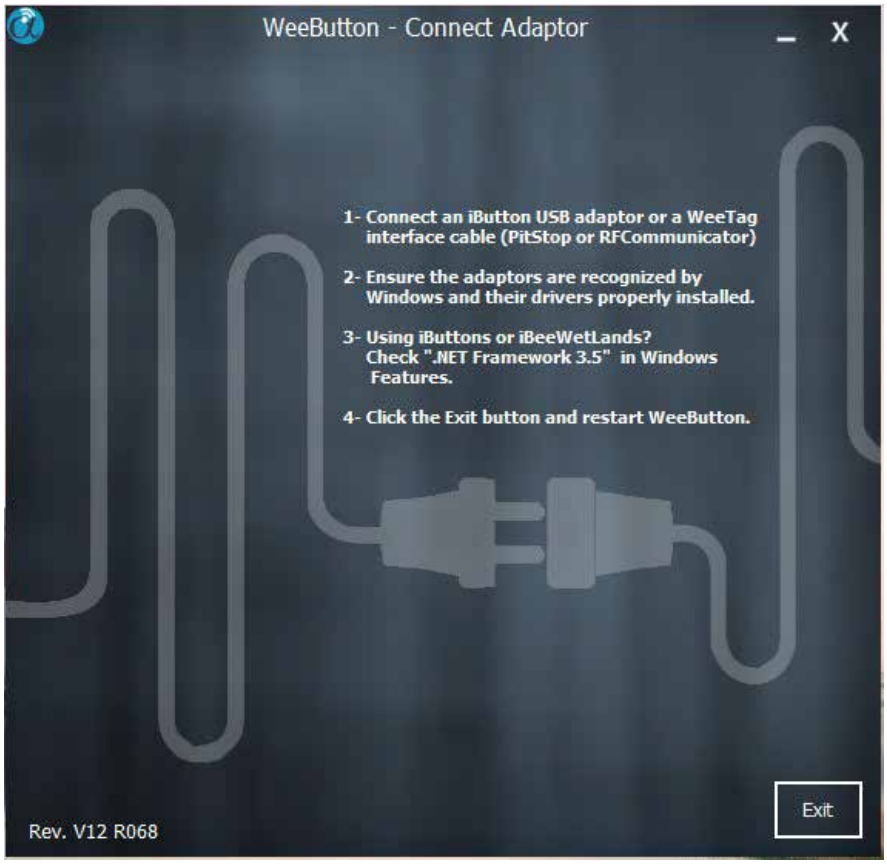
Mission Running: False
Override Enable: False
Override Occurred: False
Logs of present mission: 18
Log count: 18

---------- Data Download ----------

Date	Temp. (TEMP_CELSIUS)
01/10/2025 13:52:00	27
01/10/2025 13:53:00	27

Troubleshooting

Here's some of the most common issues that can be found:



1-Wire adaptor not properly installed
This means that the software application does not recognize the adaptor. It's can be a missing driver or a short circuit in the cable.
Close the application, reconnect the adaptor, wait until it is recognized by Windows and re-open the Weebutton® software.

Data download, the date or temperature values are not correct while using Excel:

Depending on your country, and computer settings, decimal separation is represented by a coma or a point. This problem is easily solved by either changing the settings on your computer parameters or changing points by
comas in Excel.

You have read through the "Troubleshooting" section, and nothing corresponds to your problem:

Don't worry, you can contact us at: info@alphamach.com

Tel: 450-584-3400
info@alphamach.com
We will answer promptly, and we always find a solution.

Accessories

iButton type
G / 22L / 22T / 22E

iButton Keyfobs
Yellow/Blue/Red

1-Wire USB Adaptor
DS9490R#

Wallmount
DS9093S+

iButton Connector
DS1402-RP8+

Connexion Clamp for
iBee and iButton
PAR0003

iBee, (submersible autoclaveable)
type G / 22L / 22T / 22E

Sunshield for iButton,
iBee and Nauticals

ALPHA MACH

619A rue Richelieu
St-Marc-sur-Richelieu, Québec
Canada, J0L 2E0
450-584-3400
info@alphamach.com
www.alphamach.com