USER GUIDE

LynxPro-RTD

MadgeTech

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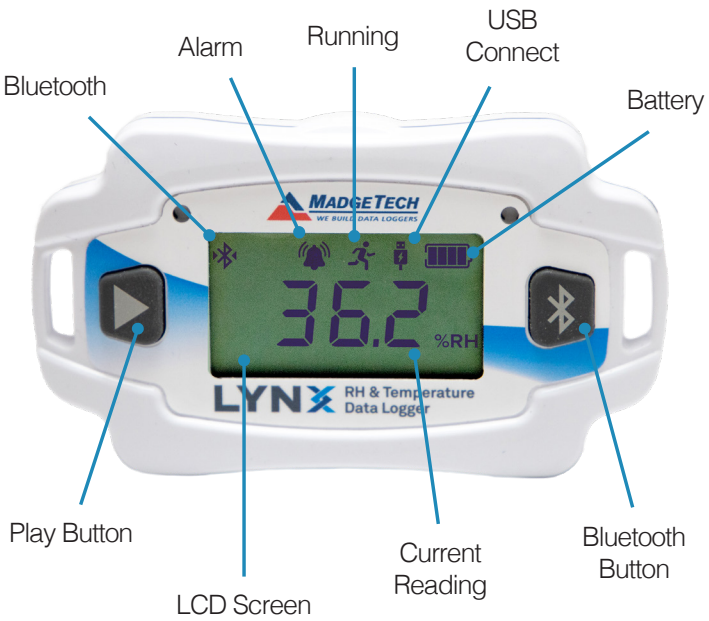
LynxPro

Bluetooth® Data Logger Series

Product User Guide

To view the full MadgeTech product line, visit our website at **madgetech.com**.

Product Overview



Play Button:
When device is in Manual Mode this button can be used to start the device or mark specific readings

Bluetooth Button:
Used to enable/disable Bluetooth broadcasting

LCD Screen:
Displays current status and readings

Battery Door:
User replaceable CR2450 battery

Alarm:
Alarm is activated

Bluetooth:
Visible when Bluetooth is turned on. Additional blinking arrows when connected to app

Running:
Will flash when actively running. Solid when waiting to start (manual mode)

USB Connect:
Connected via USB to power source

Battery:
Health monitor of the device battery

Current Reading:
The last reading the LynxPro has taken

Quick Start with the MadgeTech App

Step 1: Install and Open the App

1. Install the MadgeTech Mobile App from the Apple App Store or Google Play.
2. Open the app. The Devices screen appears by default.

GET IT ON Google Play

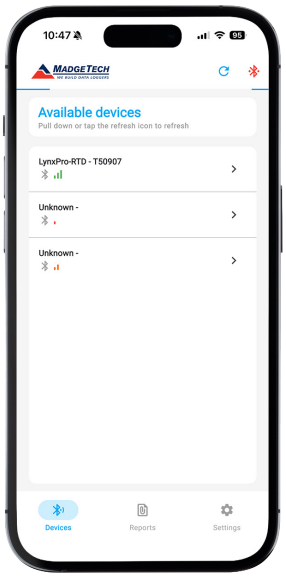
Download on the App Store

Step 2: Enable Bluetooth

1. Enable Bluetooth on your smartphone.
2. Press and hold the Bluetooth button on the LynxPro for approximately 3 seconds until the Bluetooth icon appears on the LCD.

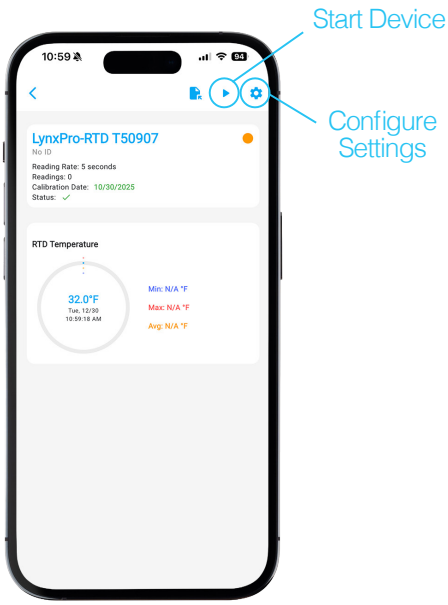
Step 3: Locate the Device

1. View the list under Available Devices.
2. Pull down or tap Refresh if the device does not appear.
3. Devices may appear as “Unknown” until claimed.



Step 4: Connect and Configure

1. Tap the desired device.
2. Configure alarms, triggers, and start/stop settings.
3. Save settings and start the device.



App Overview

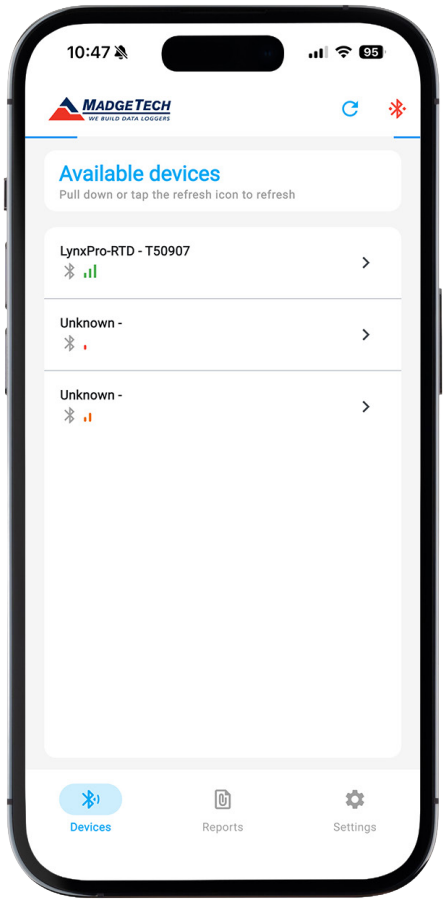
When the MadgeTech Mobile App is opened, the Devices screen is displayed by default. This screen allows users to discover nearby Bluetooth®-enabled MadgeTech data loggers and initiate a connection. Bluetooth must be enabled on the mobile device to discover available loggers.

On the bottom menu bar, the user can navigate between different pages within the app to see devices, reports, and settings.

Home/Devices Page

Available Devices:

- Displays all Bluetooth-enabled MadgeTech data loggers within range.
- Pull down on the screen or tap the Refresh icon to rescan for devices.
- Devices that have not yet been claimed or named may appear as “Unknown.”
- Tap a device to begin the connection process.
- To remove a device from your list, slide to the left.



Device Main Page

The Device Main Page provides a real-time overview of the selected LynxPro data logger, including current readings, device status, statistics, and historical data visualization.

Device Actions:

The device action buttons are located on the right hand side of the top navigation bar:

- **Report Icon:** Generate and save a report.
- **Start/Stop:** Start the device using configured settings.
- **Device Settings:** Access alarms, triggers, and start/stop configuration.

Device Summary Panel:

- **Device Title:** The model and serial number of the device. The device ID will show under the model and serial number once set by the user.
- **Reading Rate:** Displays the current sampling interval.
- **Readings:** Shows the total number of readings currently stored on the device.
- **Calibration Date:** Displays the most recent calibration date.
- **Status Indicator:** Indicates normal operation or active alarms.

Current Readings Panel:

Ambient Temperature:

- Displays the current temperature reading.
- Shows minimum, maximum, and average values with timestamps.

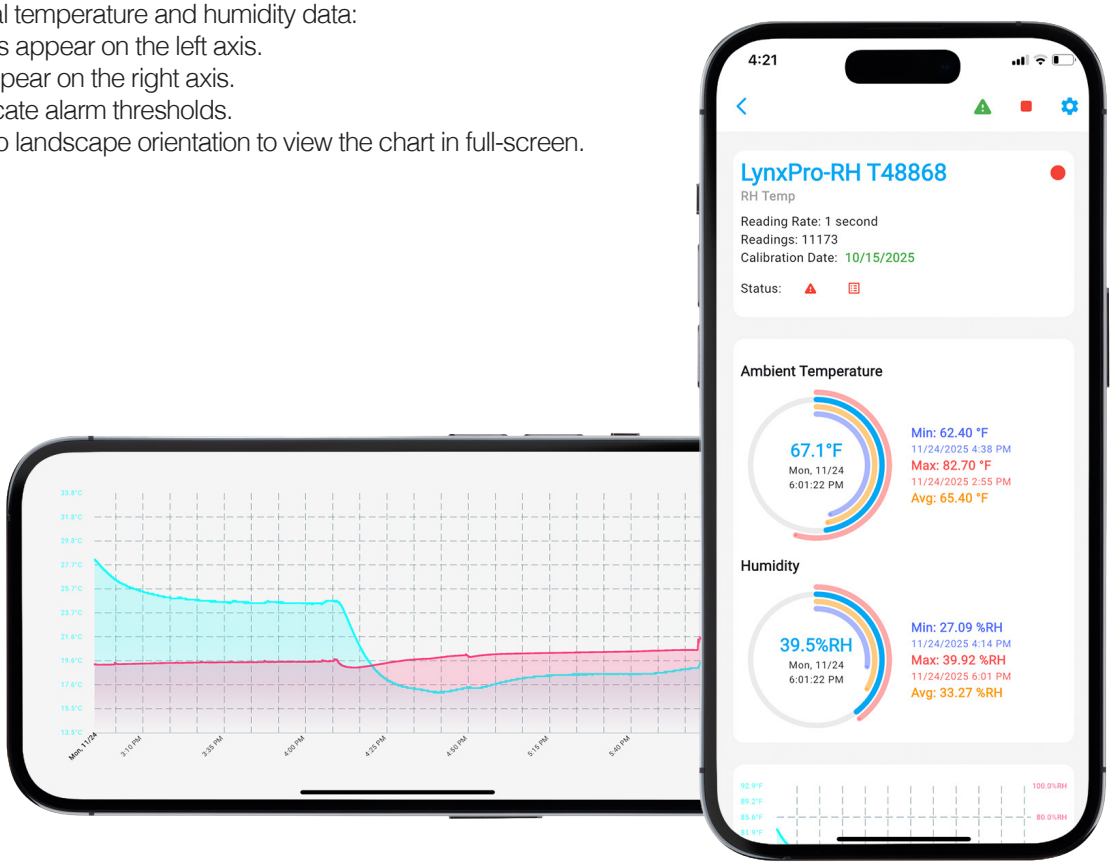
Humidity:

- Displays the current relative humidity (%RH).
- Shows minimum, maximum, and average values with timestamps.

Graph View:

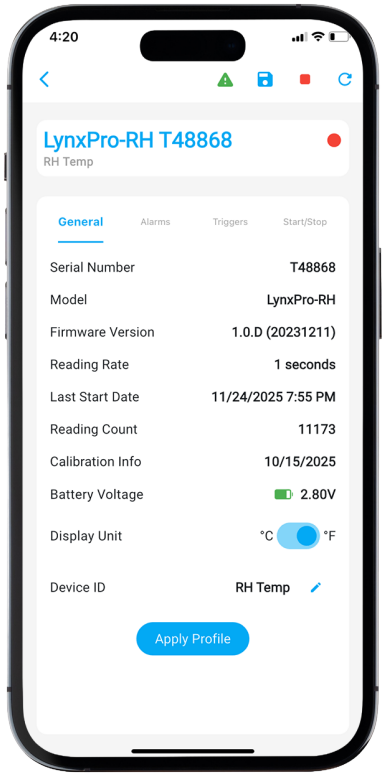
The graph displays historical temperature and humidity data:

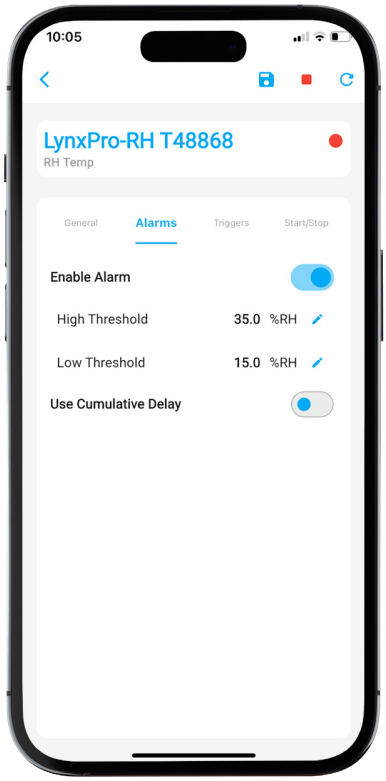
- Temperature values appear on the left axis.
- Humidity values appear on the right axis.
- Shaded areas indicate alarm thresholds.
- Rotate the device to landscape orientation to view the chart in full-screen.



Device Settings

The Device Settings page includes all device-specific preferences.





General Settings

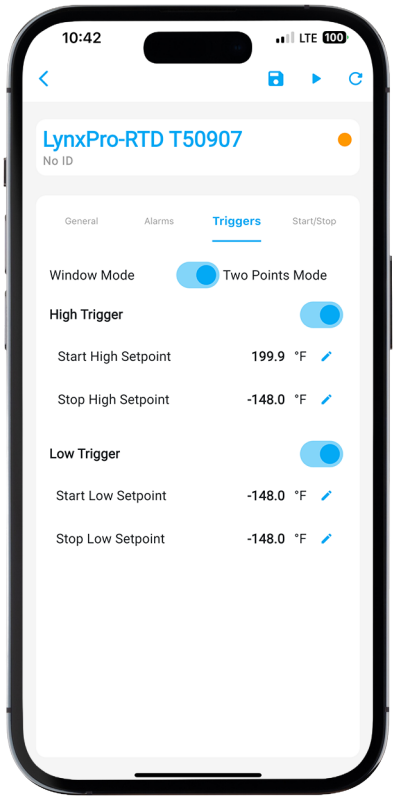
The General tab displays device-specific information and configuration options.

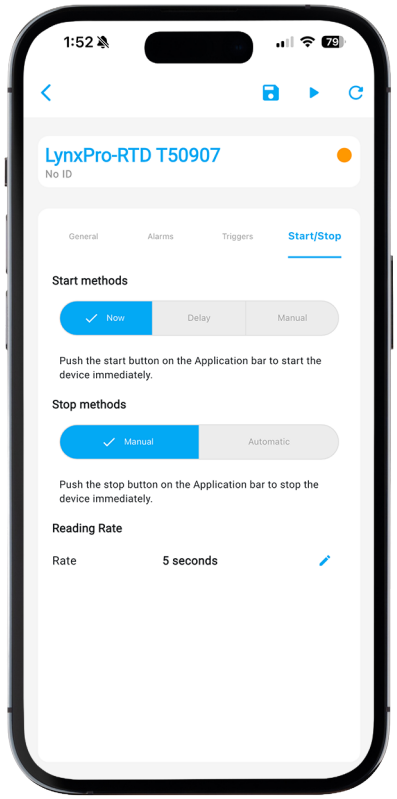
- **Serial Number:** Displays the non-editable serial number assigned to the device.
- **Model:** Displays the device model.
- **Firmware Version:** Displays the current firmware installed on the device.
- **Reading Rate:** Displays the current sampling interval.
- **Last Start Date:** Displays the most recent start time of the device.
- **Reading Count:** Displays the total number of readings currently stored.
- **Calibration Info:** Displays the most recent calibration date.
- **Battery Voltage:** Displays the current battery voltage and battery status indicator.
- **Display Unit:** Select whether the device LCD displays readings in °C or °F.
- **Device ID:** Edit the user-defined device name.
- **Apply Profile:** Apply a previously saved configuration profile to the device.

Alarms Settings

Alarm settings define acceptable measurement limits and notification behavior.

- **Enable Alarm:** Toggle alarms on or off for the device.
- **High Threshold:** Set the upper limit that will trigger an alarm.
- **Low Threshold:** Set the lower limit that will trigger an alarm.
- **Use Cumulative Delay:** When enabled, the device tracks cumulative time outside thresholds before triggering an alarm.





Trigger Settings

Trigger settings allow the device to automatically begin recording when conditions are met.

Trigger Modes:

- **Window:** Recording begins when readings exceed the defined high or low trigger limits.
- **Two-Point:** Recording begins and ends based on defined start and stop thresholds.

Additional Options:

- **High Trigger:** Enable or disable high threshold triggering.
- **Low Trigger:** Enable or disable low threshold triggering.
- **Fill Memory on First Trigger:** When enabled, the device records continuously until memory is full after the first trigger.

Start/Stop Settings

When starting a device to record data, several options and start methods are available. Start settings can be specified before deploying the device.

Start Methods:

- **Now:** Starts the device immediately using the application Start button.
- **Delay:** Starts the device at a specified future date and time.
- **Manual:** Requires pressing the Play button on the device to start recording.

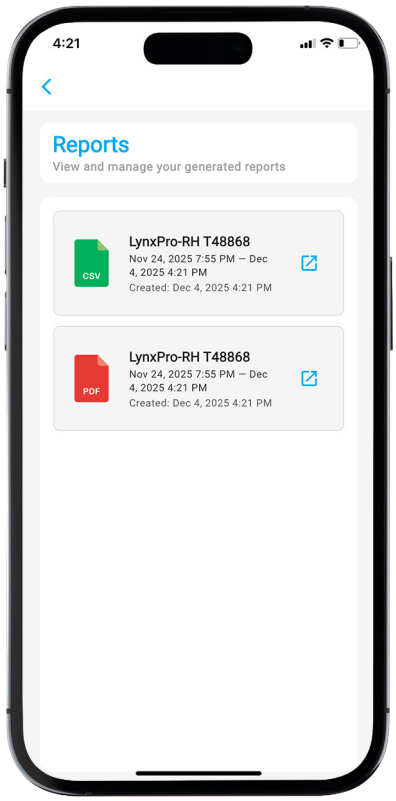
Stop Methods:

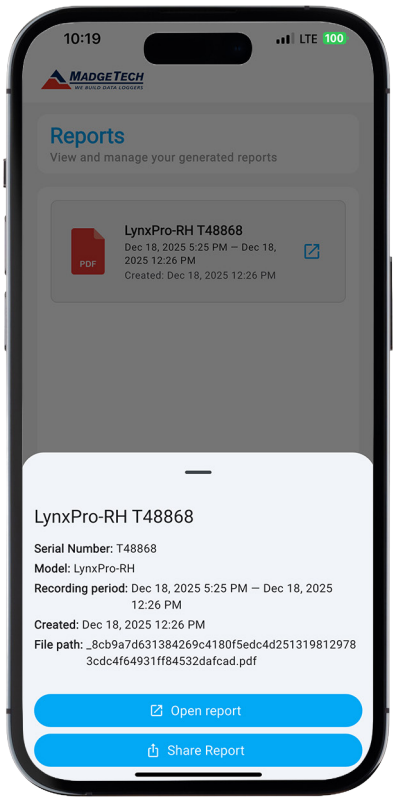
- **Manual:** Requires pressing the Stop button in the application.
- **Automatic:** Stops the device at a specified date and time.

Reading Rate:
Specify how frequently the device records data.

Reports Page

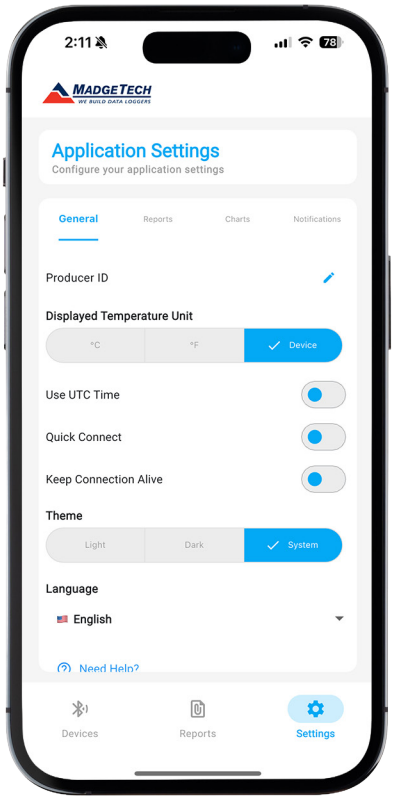
- Displays all previously created reports.
- Reports with red icons are pdf, while green icons signify .csv files.
- Click on the report icon to see a report summary and graph or share the report
- To delete a report, slide left.

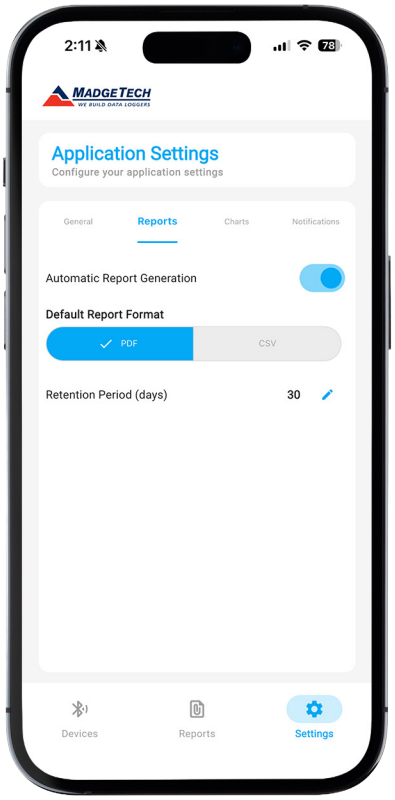




Application Settings

The Application Settings page includes all application preferences.



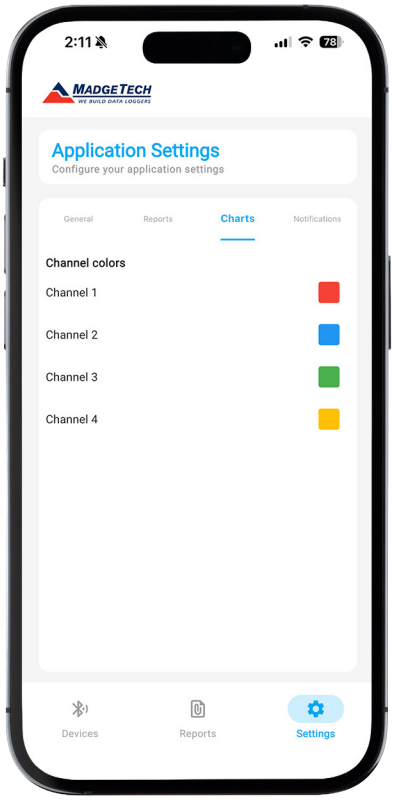


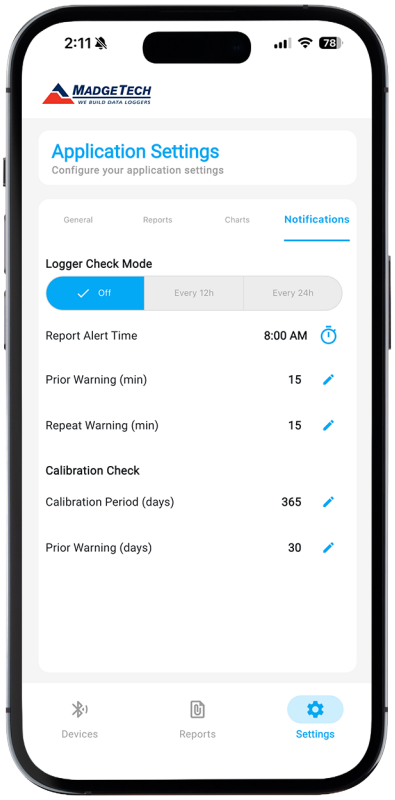
General Settings

- **Producer ID:** Set an ID for the user.
- **Units:** Select whether to display readings in Celsius or Fahrenheit.
- **Time Format:** Select Your Time Zone.
- **Quick Connect:** When Quick Connect is on and Bluetooth is enabled, the device will automatically connect and download readings when within range.
- **Keep Connection Alive:** Turn on if you plan on multi-tasking using the device connected to the MadgeTech Data Logger.
- **Theme:** Choose Your Display Style as Dark or Light.
- **Language:** Choose Your Preferred Language.

Report Settings

- **Automatic Generation:** Select whether a report is automatically created when a device is connected, either through Quick Connect or manual connection. Enabling this will automatically clear the device's readings and restart the device once the report has been generated.
- **Default Report File Format:** Select the desired format for automatically generated reports.
- **Retention Period:** Specify the number of days to retain a report before automatic deletion.





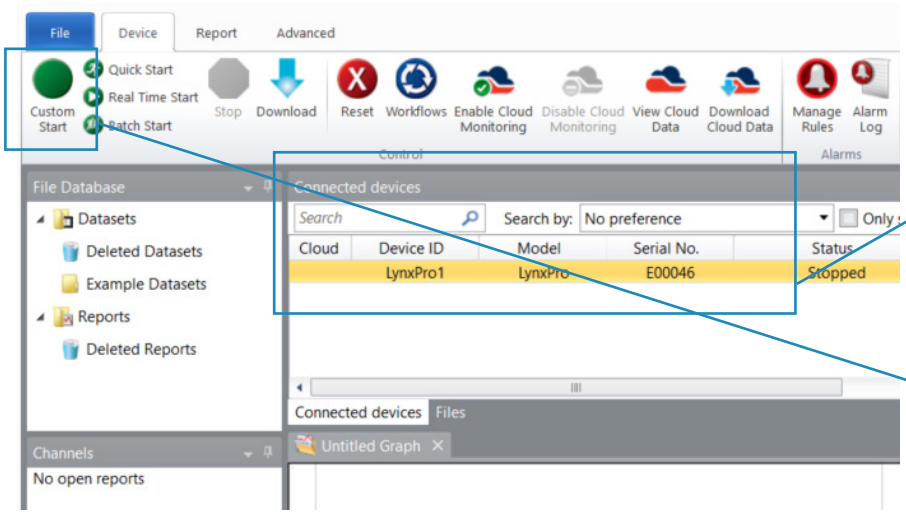
Charts Settings

- **Channel Colors:** Channel colors can be adjusted for more flexibility or visual aesthetics based on personal preference.

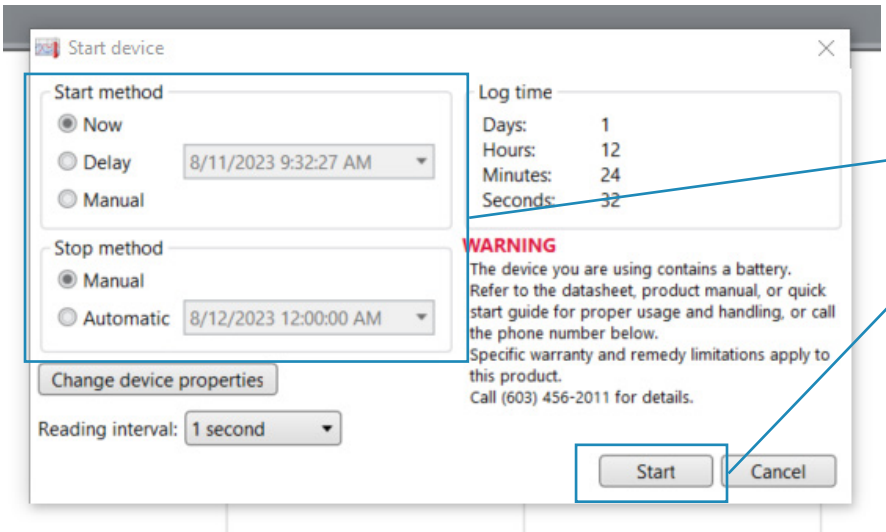
Notification Settings

- **Logger Check Mode:** Select how frequently daily checks should be performed.
- **Report Alert Time:** Select the time that checks should be completed at.
- **Prior Warning:** Specify how long before the Report Alert Time a notification should be sent.
- **Repeat Warning:** Specify how long after the initial warning all subsequent notification should be sent.
- **Calibration Check**
  - **Calibration Period:** Specify your calibration interval, as stated in your Standard Operating Procedure (SOP).
  - **Prior Warning:** Specify how many days in advance you would like to receive a calibration reminder.

Quick Start with MadgeTech4 Data Logger Software



- Download the MadgeTech 4 data Logger Software from the MadgeTech Website.
- Once installed, open the application and connect the LynxPro device with a Micro USB cable, ensuring Bluetooth is disabled. Once connected, the Lynx-Pro should be listed in the Connected Devices panel.
- Once you see the device, select it and click Custom Start to launch the Start Device window.



- Select start method, stop method and reading interval.
- Once preferences are set, click Start to start the device. If Manual Start was selected, the Play Button must be held for 3 seconds on the device to start recording.

Battery Change Procedure

The LynxPro family of data loggers run on a CR2450 coin-cell battery, which is easy to find. These batteries are initially installed at the factory, but you can replace them yourself. The battery's status is shown on the LCD display. When you see four bars, it's a new or fully charged battery. As the battery's life decreases, you'll see fewer bars, and if there are no bars, you need to change the battery immediately.

If the battery completely runs out (discharges fully), the logger will stop recording data. However, any data collected just before the battery failed will be saved. Even with an empty battery, you can still download data if you connect the logger to a PC. In this mode, the PC powers the logger, enabling communication.

It's important to note that the LynxPro's battery can't be recharged.
Once the device loses power, it will turn off.

Servicing the battery is easy with the battery access port located on the back of the LynxPro.

Either by pinching the finger impressions, or through using a coin, rotate the battery plug counter clockwise by 45 degrees. Remove the plug, and the battery becomes exposed.

Remove the old battery and discard to an appropriate recycling system. With a new, fresh, CR2450 battery, position the battery with the "+" symbol up towards you. Deposit the battery into the LynxPro. You may find some reluctance due to a tight fit. The battery should be snug but not require significant force. Once inserted/centered, apply the battery plug and rotate 45 degrees to lock the plug into place.

Tips & Troubleshooting

Unable to Find the Logger

- Check for the Bluetooth indicator on the logger. If that is not present, hold down the Bluetooth button on the device until the indicator appears (about 2 seconds).
- Make sure the logger is not connected to another app (phone).
- Move the phone closer to the device. The maximum distance between the phone and the logger should be no more than 20 feet (6 meters).

Anomalies – Alarms, Alerts and Warnings

- In the device main the Status/Alarms is nominally green indicating no reported issues. Otherwise the problems are color coded:
  - **Orange:** Warning
  - **Red:** Errors (Alarms and/or Alerts)
- Tap on the entry to show a list of what was discovered. Within the list tap on a color-coded entry for specific details and explanations.

Manual Start

If the app is connected to the logger when manually starting the logger then tap on the refresh button on the main page, after starting the logger, to see the logger's updated status.

Power Issues

A warning will be generated when a low battery is detected. It is recommended that the battery be replaced before attempting to download data.

USB/Bluetooth

- MT4 will not connect to the logger via the USB until the Bluetooth is turned off. Press and hold the Bluetooth button on the logger until the Bluetooth icon disappears (about 2 seconds).
- Refer to the MT4 user's guide for instructions on how to update the unit firmware.

Unable to Connect to the Logger

- Check the add devices list to see if the device is appearing there and tap on the device to move it to the watch list on the devices (home) page. Then tap on the device in the watch list in order to connect to the logger.
- If a device is removed from the watch list, either through sliding left on the watch list or removing the device directly on the Device main page, it will appear thereafter in the add devices list. This will reset the downloading indicator such that all of the data on the device will be downloaded by the app instead of resuming where it left off reading previously when the app reconnects.

Problem Downloading the Data

- If there is no new data available a notice is generated indicating that there is no new data to be downloaded.
- Periodically due to interference or marginal proximity to the logger, a download may not complete fully. Cancel the download and attempt to download again. The app will resume the download where it left off.

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