Remote Data Logging: Quick Start

This is a general procedure for conducting a remote data logging experiment with Vernier Go Direct® sensors.

We recommend doing a short Trial Run (p2) to troubleshoot any setup issues before you carry out your own investigation.

1. Launch Graphical Analysis.

Vernier Graphical Analysis® app is used to set up remote logging and retrieve data.

- Graphical Analysis is a progressive web app (PWA). To open the app, open the **Chrome browser** and navigate to https://graphicalanalysis.app/
- You can also install the Graphical Analysis app. Visit vernier.com/downloads/graphical-analysis/

2. Connect and set up your sensor via Bluetooth.

- Make sure your battery is fully charged before starting the experiment.
- Connect your sensor via Bluetooth® wireless technology. For more info: vernier.com/start-go-direct
- If your sensor has multiple channels that you want to use, click Sensor Setup, ✎ , then click **SENSOR CHANNELS**.

3. Set up remote logging.

Selecting appropriate data-collection settings for a remote logging investigation is vital for success.

a. Click Mode to open Data Collection Settings.
b. Adjust the following for your investigation:
   - Time units
   - Rate
   - End collection duration
c. Set Remote Logging to **Enabled**.
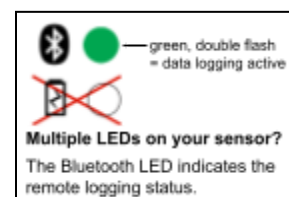d. Click Done.

> **Advanced Settings**
>
> For some experiments, such as using an accelerometer to investigate a rocket launch, you will want to zero the sensor and start data logging after a trigger.
>
> Learn more: www.vernier.com/ga-manual

4. Carry out your investigation.

When you are ready to start data logging, click **Start Logging**.

- Data logging starts immediately. Your sensor has been disconnected automatically.
- It is safe to close Graphical Analysis; you do not need to save the file.
- An LED on the sensor gives you information about the data-collection state:

  🟢🟢 Data being collected (green, double flash)

  🟢🔴 Waiting for trigger (green, red)

  🟠🟠 Data collection complete (orange, double flash)

5. Retrieve data.

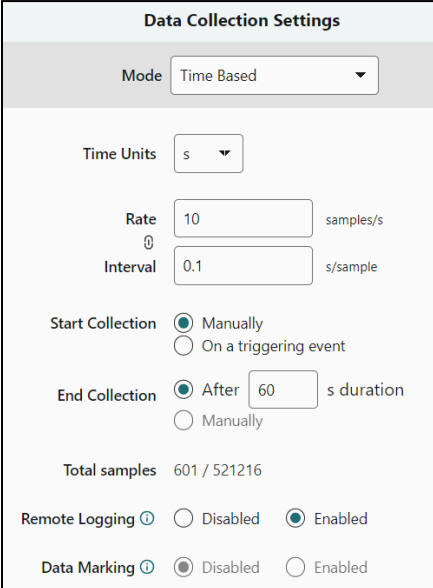**Note**: You can reconnect the sensor anytime to download the data—no need to wait for data collection to end.

a. Launch Graphical Analysis and connect the sensor via Bluetooth or USB (USB is recommended if there is a large amount of data).

b. Graphical Analysis will recognize that data have been stored on the sensor. Click **Retrieve and Clear** to download the data. Data can only be downloaded one time. To share the data with others, save and share the Graphical Analysis file.

Remote Data Logging: Trial Run

We encourage you to take 5–10 minutes to run through the following procedure. A trial run of the workflow will help you feel more confident when setting up your own investigation.

The procedure works with any Vernier Go Direct sensor that is remote-logging capable ⊕ (look on the sensor label for the symbol to know if your sensor is remote capable).

1. Launch Graphical Analysis on your computer, Chromebook, or mobile device.

2. Connect your sensor via Bluetooth.

3. Set up a trial run:
   a. Click Mode to open Data Collection Settings.
   b. Change Rate to **10** samples/s.
   c. Set End Collection to after **60** s duration.
   d. Set Remote Logging to **Enabled**.
   e. Click **Done**.

Next, you will log and retrieve data. Read through step 4 to familiarize yourself with the procedure before you start. To measure a change with your sensor, you may need a few materials (e.g., salinity: a beaker with tap water).

4. Use your sensor to log data:
   a. Click **Start Logging**.
   b. Note the LED on your sensor is flashing double green, indicating data are being collected.
   c. Close Graphical Analysis (in Chrome close the Graphical Analysis tab).
   d. Click **Don't Save**; you do not need to save the file.
   e. Do something that will register as a change with your sensor such as
      ○ Weather: Blow on the propeller.
      ○ Accelerometer: Toss the sensor into the air.
      ○ Temperature: Hold the tip of the sensor in the palm of your hand.
   f. Note when the LED begins flashing double orange, indicating data collection is complete. For the purposes of the trial run, it is okay if no change has been measured; there will be data to download.

5. Retrieve the data:
   a. Launch Graphical Analysis and connect your sensor via USB or Bluetooth.
   b. Click **Retrieve and Clear** to download the data.

For additional support, visit vernier.com/remote-logging