PowerLab Sensors Quickstart

PowerLab Sensors work with Lt Sampling. You can apply settings while editing Sampling Panels or import sensor content from the Lt Library. If a Stimulator is used, you can configure its settings in the Stimulus channel.

Get started by connecting Sensors directly via USB or through the PowerLab T1.

Lt Sampling app v1.3.0 | Lt: Mac + Windows | Lt Labstation: Windows

Lt

PowerLab Sensors are compatible with Lt on both Windows and Mac.

Lt Sampling must be enabled at the course level.

Lt Labstation

PowerLab Sensors are compatible with Lt Labstation on Windows.

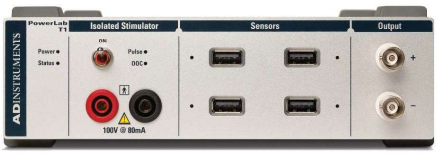
Lt Labstaton latest version must be installed to use PowerLab Sensors.

Lt Sampling

For use in Lt, PowerLab Sensors require Lt Sampling for data aquisition on both Windows and Mac.

Lt Sampling v1.3.0 or later required.

PowerLab T1



Isolated Stimulator:
Electrically isolated and certified safe for human connection. 0.1-80 mA, 100 V.

USB Sockets:
PowerLab Sensor connection.

Analog output:
For stimulation of animal tissue or control of external devices. ±10 V, 20 mA.

PowerLab Sensors can connect directly to a computer, through a PowerLab T1, or via a USB hub.

PowerLab Sensors

- Biopotential Sensor
- Blood Pressure Senor
- Cardio Mic Sensor
- ECG 12 Lead Switch Box
- Finger Pulse Sensor
- Force Sensors
- Spirometer Sensor
- Goniometer Sensor
- Grip Force Senor
- GSR Sensor
- Push Button Switch
- Respiratory Belt Sensor
- Skin Temperature Sensor
- Tendon Hammer Sensor

When using multiple Sensors for high-frequency sampling, we recommend using the T1 or USB hub to ensure optimal synchronization.

Lt Library Device Identifiers

PowerLab T1


PL Sensors

Hover over icons to reveal the required equipment for labs.

Data Card

Data cards with individual sensor specifications.

adi.to/data-cards

LED Status Indicators

The LED appears on the lead-end of the Biopotential Sensor and GSR Sensor, or on the USB-end of all other sensors.

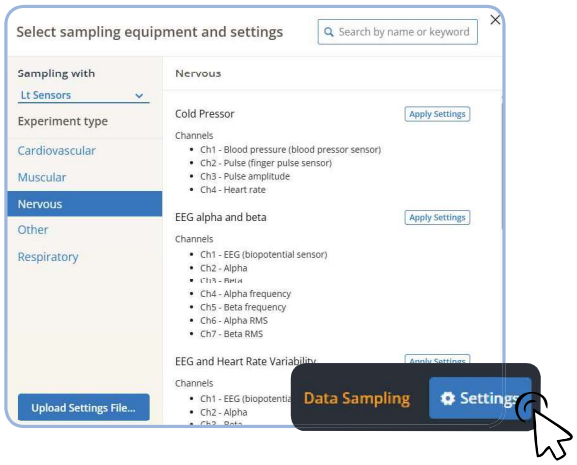
Status indicator	Meaning
No light	There may be a problem with the power source or power cable. Check connections and cables.
Green	The sensor is idle, initialized, and waiting for a command from the computer.
Blue	The sensor has been detected by Lt.
Light blue	The sensor is sampling.
Orange flashing	Sensor firmware is being updated. Do not unplug the sensor until the status light turns green or blue.

Settings

PowerLab Sensors work with all Sensor Collection content or Sensor Settings applied from the settings library.

Access the settings library when editing Data and Scope Sampling panels.

Start from a settings file that matches the sensor hardware and lesson workflow.



1 Edit Sampling Panel
Select a Sampling Panel and click Edit.

2 Select Settings
Open Settings to view and select a Sensor settings that matches your lesson requirements.

3 Apply Settings
Click Apply settings to update the sampling panel with your selection.

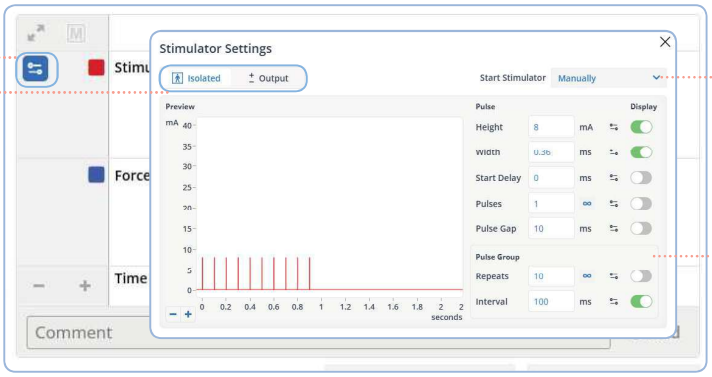
PowerLab T1 Stimulator Authoring

In Lt and Lt LabStation, authors can create and edit settings for the Isolated Stimulator and analog outputs on the PowerLabT1.

1 Stimulator Settings
Open the Stimulator settings by clicking on the settings button.

2 Select Mode
Isolated: Safe, Electrically isolated stimulus for human experiments.

Output: Direct voltage to control external equipment or stimulate animal tissue where electrical isolation is not required.

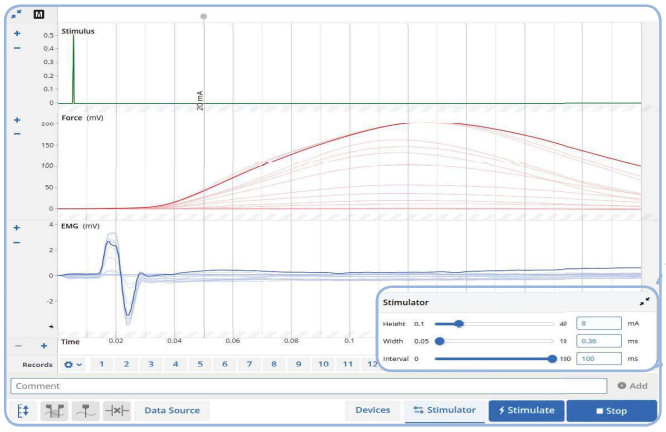


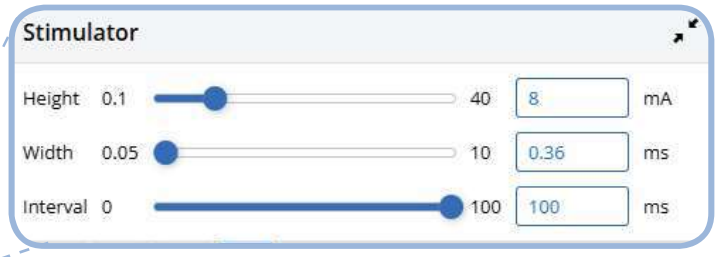
3 Select Stimulation Type
Choose whether to stimulate manually or automatically.

4 Edit and Apply Parameters
Choose which parameters students can view and control.

Fullscreen Stimulator Controls

Stimulation controls are available in fullscreen mode through a dedicated stimulator window.





Modify and Share Settings Files

You can modify stimulator settings from within Sampling Panels by selecting the settings button in the stimulus channel.To restore the original configuration you can reapply the original settings from the Settings library.

To share or reuse customized settings, export the Sampling Panel settings as an **.ltset file.** Sampling panels can also be copied and pasted between lessons while retaining their settings.

Using Sensors with 26T PowerLabs

PowerLab Sensors can be used in the same lesson as 26-series PowerLabs when they are placed in separate DataPanels.

1. Install both KCDA and Lt Sampling.
2. Enable Lt Sampling at the course level.
3. Use settings files that match each panel's hardware.

Authoring Checklist

Install
Lt Sampling v1.3.0 or later is installed.

Enable
Lt Sampling is enabled at course level in Lt.

Match
Lesson settings match the connected sensor hardware.

Connect
Sensors, and/or PowerLabT1 is connected to the computer.

Stimulator
Make stimulator settings changes from an existing settings file.

Preview andTest
Status light confirms sensor is detected? Click Start!