

## NEULOG USB MODULE GUIDE



### NeuLog USB module USB-200

The NeuLog USB module is the easiest way to connect the whole NeuLog sensor line and RF module, to any computer with a USB port.

The USB module acts as a bridge between the sensors and your computer's hardware by both translating incoming data from the sensors and by providing power to the sensors.

Connection to computers is done through a standard USB to mini USB cable included in the package. The only requirement is for the computer to have a USB port.

### Using the NeuLog USB module:

As with all NeuLog devices, using the USB module is very quick and easy.

#### Materials needed:

- USB module (USB-200)
- Any NeuLog sensor
- Free NeuLog browser based application

The browser based application can be downloaded for free at [www.NeuLog.com](http://www.NeuLog.com) as well as a full application user guide. Choose "Downloads" on the main menu and then choose "Software and Application".

#### USB usage with sensors:

Using the USB module with any NeuLog sensor (up to 20) plugged directly into it is the easiest and most straightforward way to collect data.

1. Download the completely free NeuLog application from [www.NeuLog.com](http://www.NeuLog.com) as described in the "materials needed" section above.
2. Connect the micro USB end of the included cable into the USB module.
3. Connect the regular USB end of the included cable into any open USB port on the smart device.
4. Connect any NeuLog sensor (up to 20) for the experiment directly into the left side of the USB module. No cables are required to plug modules and sensors together. They plug directly into each other.

5. Open the NeuLog application (i.e the NeuLog icon on your desktop). The application will run through your default internet browser (Chrome, Mozilla, Safari, etc.) though **you don't need to have an active internet connection**.
6. The application will automatically detect all connected sensors. If you wish to connect more sensors you can simply click the "Search for Sensors" button after doing so.
7. You can begin collecting data!

#### USB with RF modules:

Using NeuLog RF modules with a USB module and sensors provides a much more flexible system in which students can collect data around their lab bench while wirelessly streaming data in realtime to the NeuLog application at their workstation.

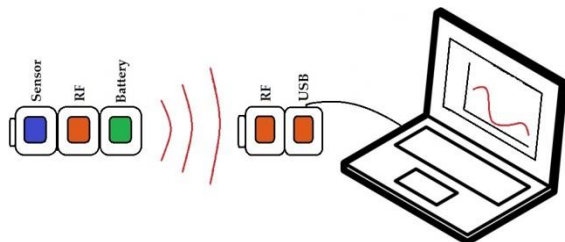
Once you have paired two RF communication modules to the same RF ID number (1 through 9) you can begin connecting NeuLog modules and sensors together. It may be easiest to imagine the RF communication modules as a long cable between the sensor and the USB module.

8. Connect the USB module into a computer using the included USB to mini USB cable.
9. Connect one of the paired RF modules to the left side of the USB module.
10. Separately, connect the second RF module into the left side of a charged battery module. Note: press and hold the button on the front of the battery module: if a light comes on, then the battery has sufficient power. If no light comes on, then you must charge the battery some more.
11. Connect whichever sensors you wish to use into the left side of the second RF module (which is connected into the battery). Note: You can conduct experiments with up to 5 NeuLog sensors using the RF modules.
12. Open the NeuLog application (i.e the NeuLog logo on your desktop) and automatically begin searching for sensors.
13. Once your sensors are detected you are ready to begin collecting data wirelessly!

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For reference, the image below demonstrates roughly how your setup should appear.



For more information see the RF module user guide.

### USB at off-line mode:

Using the USB module with several NeuLog sensors plugged directly into it can also be used with off-line mode.

The USB module and the NeuLog application are used to determine the off-line experiment parameters.

After running the sensors off-line with the battery module, the USB module and the NeuLog application are used to upload the experiments data from the sensors to the computer for examination and saving.

The experiments' data is saved in the sensors internal flash memory up to 5 experiments.

The USB module can be used as the power source for the sensors (instead of the battery module) and enables to start the off-line experiment at once for all of the connected sensors. This is for some complex experiments where more than one sensor has a trigger level and you want that the sensors' data will be synchronized.

### Included in package:

- USB-200 module
- USB to micro USB cable.

### Maintenance and storage:

- Never submerge the NeuLog plastic body in any liquid.
- After use, gently wipe away any foreign material from the USB module
- Store in a box at room temperature out of direct sunlight.

### Warranty:

We promise to deliver our module free of defects in materials and workmanship for a period of 3 years from the date of purchase. Our warranty does not cover damage of the product caused by improper use, abuse, or incorrect storage. Sensors with a shelf life such as ion selective probes have a warranty of 1 year. Should you need to act upon the warranty please contact your distributor. Your module will be repaired or replaced.

**Thank you for using NeuLog!**



Flexible, simple, fast, forward thinking.

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