

## NEULOG WIFI COMMUNICATION MODULE GUIDE



### NeuLog WiFi communication module WIFI-201

The WiFi module is without a doubt one of the most advanced and innovative elements that the NeuLog line has to offer. Data collection and analysis with NeuLog sensors can be performed through any device which has wireless capabilities such as iPads, Android tablets, smartphones, Windows, Mac, and Linux based computers. The WiFi module can seamlessly transform group projects by connecting up to 5 devices onto the wireless network at a single time – promoting interaction and allowing each member to have their own dataset.

There is no downloaded application or software installation as they are built directly into the WiFi module which transmits its own closed wireless network. This means that you do not need your own wireless network – though if you have one a simple setting can be changed on the WiFi module to allow surfing of the web at the same time!

All current popular browsing programs can be used with the WiFi module to allow you to use whichever browser you and your students feel most comfortable with.

### Using the NeuLog WiFi module:

The NeuLog WiFi module is a very advanced piece of equipment; having capability to transmit its own wireless network as well record data from up to 5 NeuLog sensors at a time.

You'll notice that on the front of the WIFI-201 module there are four LED lights labeled A, C, T, and U.

**A:** (blue LED) When the blue LED is the only light on, the WIFI module is in Access Point mode (described below) and is transmitting a closed wireless network which you can connect devices to.

**C:** (green LED) When the green LED is the only light on, the WIFI module is in Client Mode (described below) and allows your wireless devices to control sensors through the website [www.Wifi201.com](http://www.Wifi201.com) as well as browse the internet.

**T:** (red LED) The red LED will blink when there is active communication between any connected sensors and the NeuLog software.

**U:** (yellow LED) The yellow LED will remain lit when the WiFi module is working in USB mode (detailed below). USB mode can be turned on and off by pressing the button on the front of the WiFi module three times.

### Materials needed:

- NeuLog USB module or battery module
- Any NeuLog sensor
- NeuLog WiFi module
- Any device with wireless capabilities.

### Access point mode:

Access point mode is the default operating mode for the the NeuLog WiFi module – it transmits it's own closed wireless network which allows up to 5 devices to connect to it at a time. No prior wireless networks are required, making this option both very portable and unique. Because the network is closed; you will not be able to browse the internet, if you wish to browse the internet while using the WiFi module please locate the "Client mode" procedural guide in this manual beginning on page 5.

1. Connect up to 5 NeuLog sensors directly to the left side of the WIFI-201 module (no wires required).
2. Connect either a BAT-200 or a USB-200 module to the right side of the WIFI-201 module.  
**Note:** Although not required, we recommend plugging the BAT-200 to an outlet using a USB to micro USB charger (such as a typical cell phone charger). The WIFI-201 module will run for 15-75 minutes (depending on the sensor) without being plugged in.
3. For further WIFI-201 instructions or the WIFI-201 quick start guide please visit [www.NeuLog.com/download](http://www.NeuLog.com/download).
4. The WIFI-201 indicator lights will flash; take no action until the LED to the far left turns blue.
5. Take your tablet or smart phone and go to the Wi-Fi settings and select the NeuLog network which matches the WIFI module ID found on the back of the WIFI-201 device. (NeuLog1334 for example)
6. Give your device 1-2 minutes to connect to the WIFI-201 network.
7. Once the device is connected go to your browser and type in the website [wifi201.com](http://wifi201.com) into the URL bar, then wait for 30-60 seconds.

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8. You will see a “Control mode” icon in the browser, click on this icon.  
**Note:** Only one device can be in control mode at a time, the remaining devices must be in “View mode” but switching between them is both possible and very easy. Control mode allows the user to change experimental parameters and both start and stop data collection. View mode allows the user to view the data being recorded.
9. The browser will then load a new screen and begin to auto detect the sensors, this can take a few minutes.
10. If the browser does not auto detect, select “Search for sensors”
11. Once the sensors are found you will see an icon on the left side of the screen for any detected sensors. The icon will display data in real time.
12. To set the sensors’ settings click on each sensor’s icon.
13. To change the experimental settings click the “Experiment setup” button (experiment duration for example).
14. To run an experiment and collect data click “Run experiment”.

### Client mode:

If you have a wireless network and wish to browse the internet while using the NeuLog WiFi module; you can use client mode to connect the WiFi module to your local internet. By default the WiFi module starts in “Access point mode” but can easily be changed to “Client mode”.

**Note:** Before following this procedural guide you must configure your WiFi module using the “Access point mode” guide above.

1. Configure your WiFi module as per the “Access point mode” guide beginning on page 3 of this document.
2. Using your connected device, locate and click the “Client Mode” button on the top of the NeuLog software window in your browser.
3. Input your local internet connection’s name and password in their respective text fields. **Note:** To view the password in characters, click the “Show” button.
4. Click on the “Switch to Client Mode” button. This step attempts to connect the NeuLog WiFi module directly to your local wireless network allowing you to browse the internet. **Note:** During this time the green light on the WiFi module will flash. In the event that the NeuLog site could not be accessed the blue light will turn back on and the WiFi module will return to access point mode.

5. If connection to the NeuLog site is successful; you will be disconnected from the NeuLog closed wireless network (i.e NeuLog1334) and the green light on the WiFi module will remain on.
6. At this point you must connect to your local wireless connection (the information you put into the “Client Mode” boxes).
7. Next, click the “Client Mode” button again and in its dropdown menu click the “To NeuLog Site” button.
8. You will now be in client mode with the ability to browse the internet using your smart device.

When connecting additional devices (up to 5 total) simply type the address “Wifi201.com” into your device’s internet browser bar. A prompt will ask for the wifi201 ID, this is the digit code located on the back of the WiFi module. Click “Connect” and now you will be able to access the NeuLog software broadcast from the WiFi module.

The next time the WiFi module is turned on it will again attempt to enter client mode by connecting to the same wireless connection. If the connection fails; the WiFi module will restart back in access point mode.

### Important:

To exit the software properly, enter “View Mode” before closing the software and unplugging the WiFi module. In the event that anyone used the WiFi module as the controller and forgot to disconnect from it, the WiFi module will not allow any other user to connect to the WiFi module as a controller.

In order to allow another controller to access the WiFi module, press and hold the push button located on the front panel of the WiFi module for 3 seconds until all 3 lights turn on.

### USB mode:

USB mode allows you to use your WiFi module as if it were a NeuLog USB-200. This requires a computer which has the NeuLog software (available as a free download on [www.NeuLog.com](http://www.NeuLog.com)).

By connecting the WiFi module to your sensors and computer via the included USB to micro USB cable, you are able to stream data directly from your sensors to the NeuLog software.

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To enter USB Mode:

1. Download and install the NeuLog software ([www.NeuLog.com/SoftwareandApplication.php](http://www.NeuLog.com/SoftwareandApplication.php)) onto the computer which you plan on using.
2. Connect the WiFi module to the computer with the NeuLog software using the included USB to micro USB cable, you'll see the LED lights blink for a moment while the module powers on.
3. Connect your NeuLog sensors to the side of the WiFi module, the red LED on each sensor should blink to acknowledge they are working properly.
4. Press the button located on the front panel of the WiFi module three times, the yellow LED labeled 'U' should turn on.
5. Open the NeuLog software. **Note:** The software will run through your default browser but requires no internet connection.
6. Your connected sensors will automatically be detected.
7. Once your sensors are detected, you can begin experimenting in USB mode!

**Note:** To switch back to Access Point mode from USB mode, press the button on the WiFi module faceplate three times again.

### Included in package:

- NeuLog WiFi-201 module
- NeuLog WiFi-201 module instruction manual (this document).

### Maintenance and storage:

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

### Warranty:

We promise to deliver our sensor 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 sensor will be repaired or replaced.

Thank you for using NeuLog!



Flexible, simple, fast, forward thinking.

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