# Getting Started

Thank you for using Makeblock Neuron! Neuron is a set of durable electronic building blocks. It is easy to get started and flexible to use, making it excellent for learning and creating.

Neuron blocks have two modes: Online mode and Offline mode. When a chain of Neuron blocks is not connects to an iPad or a PC, it stays in the Offline Mode. In this mode, Neuron Blocks will behave according to the data it received from the previous block. For example, if a LED light follows a button, it will light up when someone presses the button.
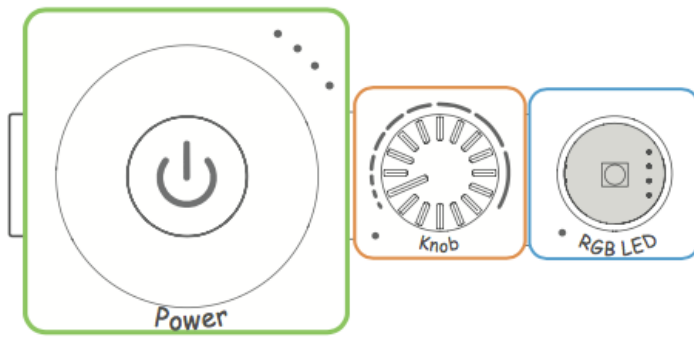
An example of Neuron Blocks running under offline mode

When a chain of Neuron block connects to an iPad or PC, either with Bluetooth or Wifi, it will act in the Online Mode. Now you can design how Neuron blocks interact with each other with the Neuron App in the iPad or PC. You may also introduce logic and math operations to explore more possibilities.
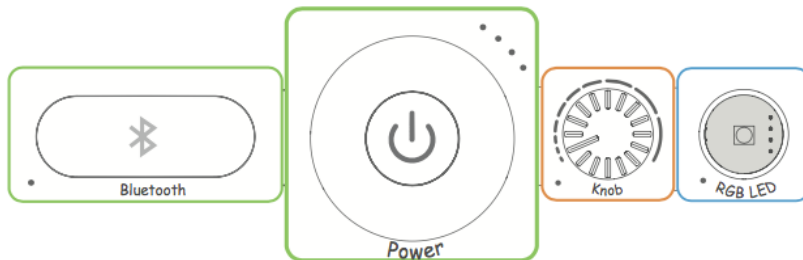

An example of Neuron Blocks running under online mode

This document will introduce Makeblock Neuron App on iPad. And how it helps making creative work with Neuron Blocks.
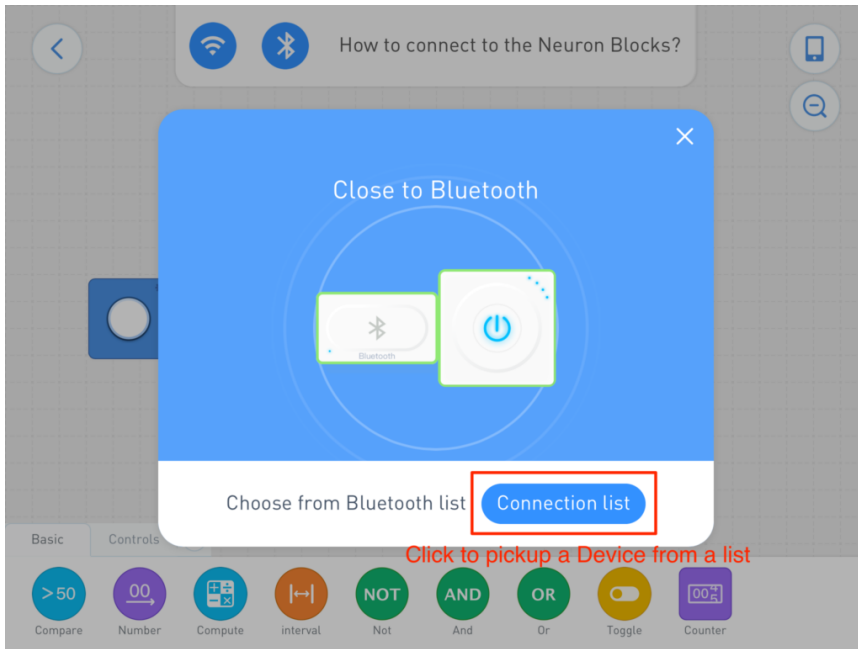
Connect with Bluetooth

The first thing to do is to connect Neuron Blocks to the iPad.

To connect with Bluetooth, you need a Bluetooth Block connected to the Power Block or an USB cable. After this, open the App and click the Bluetooth icon. Now you may hold your iPad and close up to the Bluetooth Block. If this does not work, tap "Pick from a List" button and tap the device name from the list. The name should start with "Neuron_" and followed by a unique number.
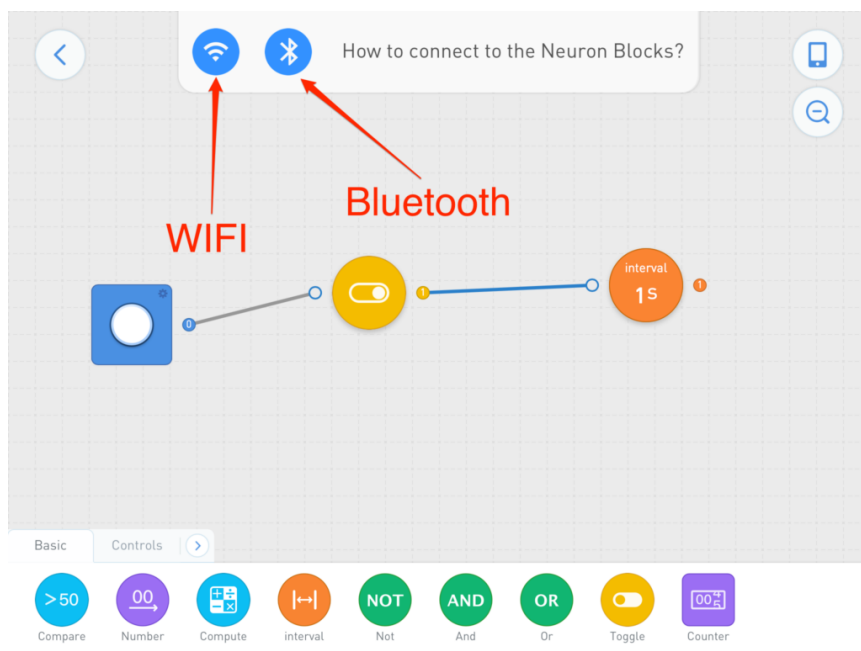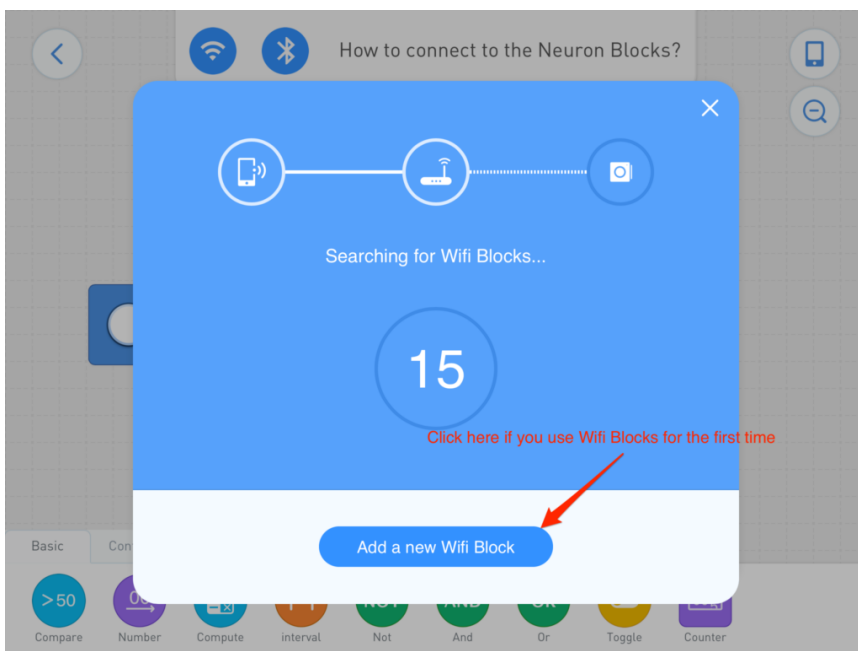

Start connecting with Wifi or Bluetooth
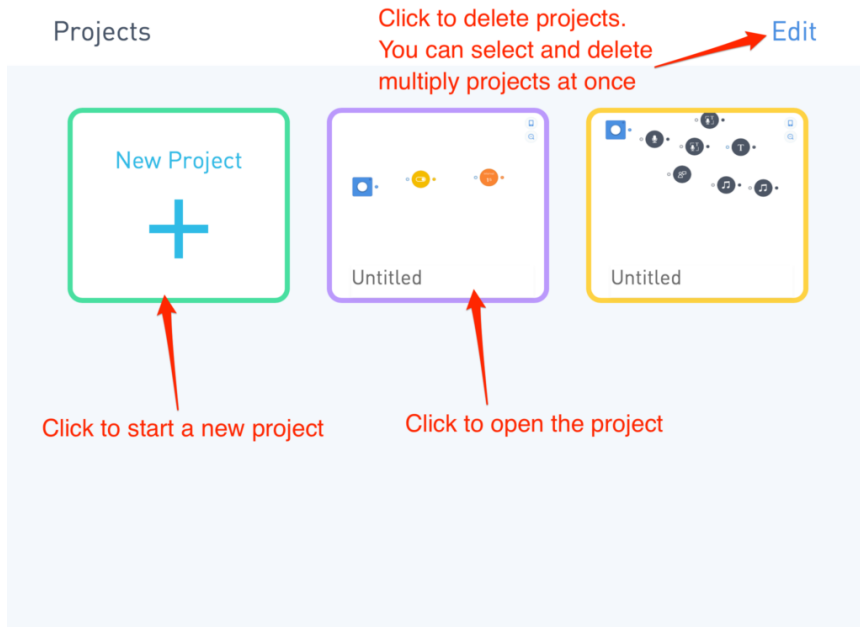
Connect via Bluetooth

Connect with Wifi

To connect with Wifi, you need a Wifi Block connected to the Power Block or USB Cable. Then click the Wifi icon and follow the prompt on the screen.
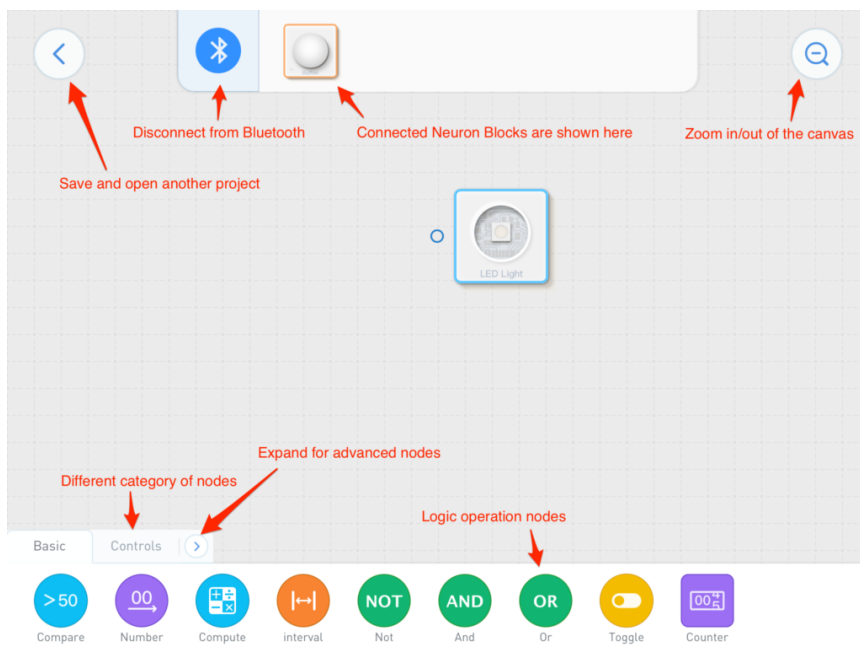

Connect with Wifi Blocks

A tour of the Interface

Projects

Click to delete projects.
You can select and delete
multiply projects at once

Edit

New Project

Untitled

Untitled

Click to start a new project

Click to open the project

Interface of the Project Screen

Disconnect from Bluetooth

Connected Neuron Blocks are shown here

Zoom in/out of the canvas

Save and open another project

LED Light

Expand for advanced nodes

Different category of nodes

Logic operation nodes

Basic   Controls   >

>50   00   Compute   interval   NOT   AND   OR   Toggle   Counter
Compare   Number   Not   And   Or   Counter

A tour of user interface

Using Neuron Electronic Blocks

When a Neuron Electronic Block adds to the chain, the block will pop up on the top of the screen. Then you may drag it down to the canvas.
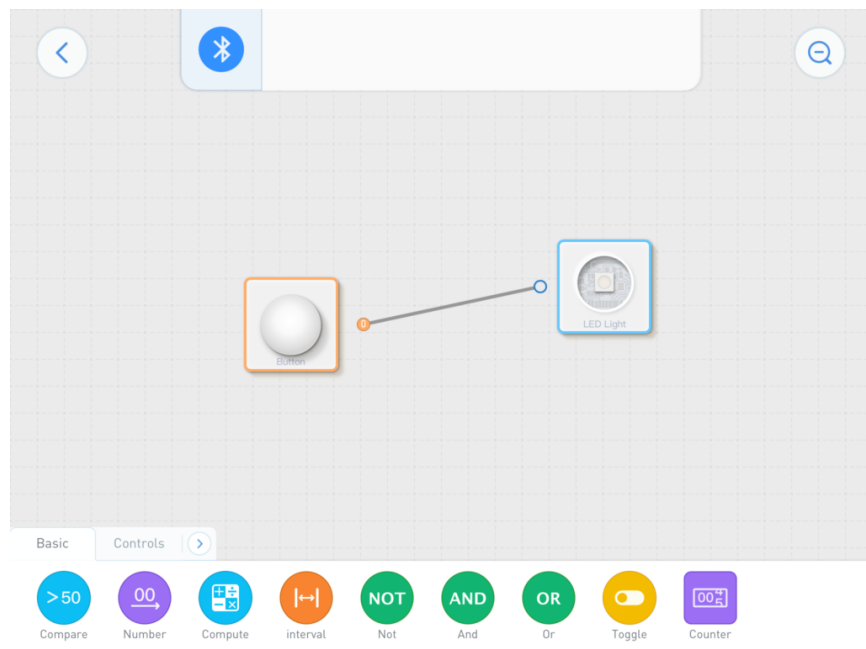
The node often comes with outputs or inputs. You can draw a line between the output of a node and the input of another node to create connections. For example, if a button links to a LED light, it means the button "controls "the LED light. Pressing the button will turn on the light.
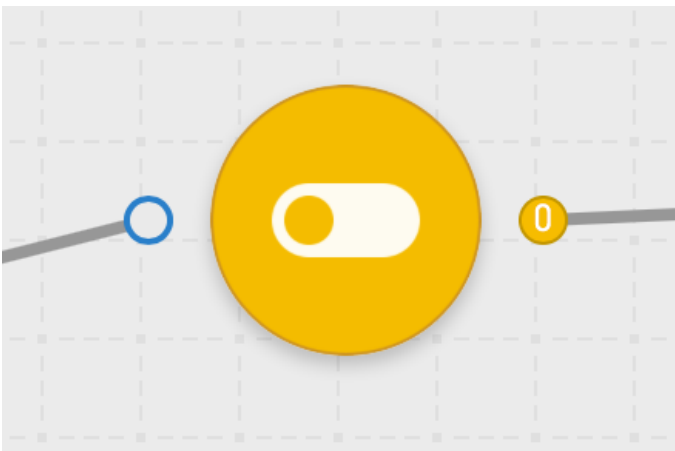
The picture of a Neuron Node
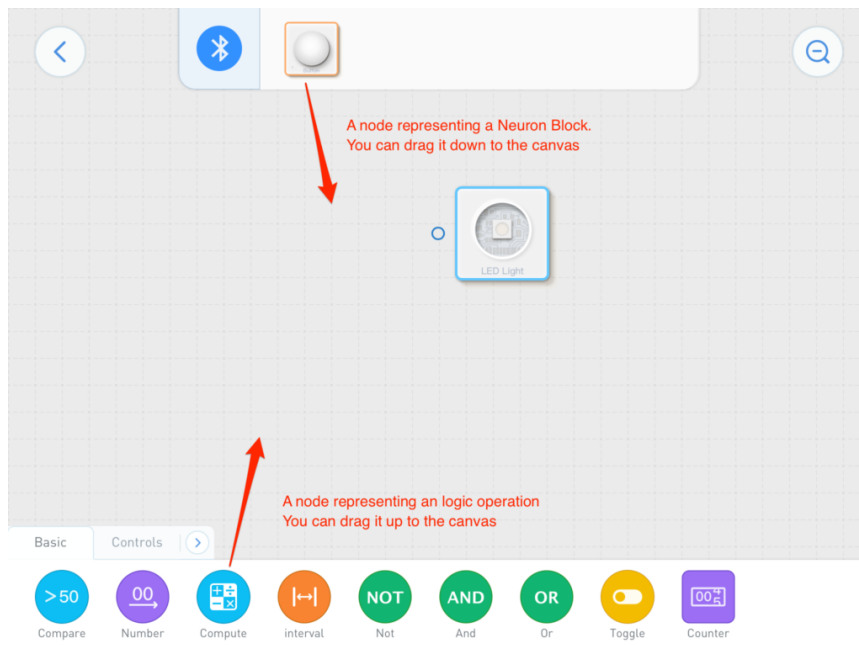
Adding Nodes to the Canvas

An example of a Button Node controlling an LED Node

Behind the scene, Neuron App uses a "flow-based programming" model. This means the status of the button will be send to the LED Light each time it updates. The status of a node could be yes-or-no, numbers, or complex concepts like colors.

When you tap on some of the Neuron Block nodes, a Config Panel will popup. this will allow you change some properties like the color of the light, or the pattern of the light strip.