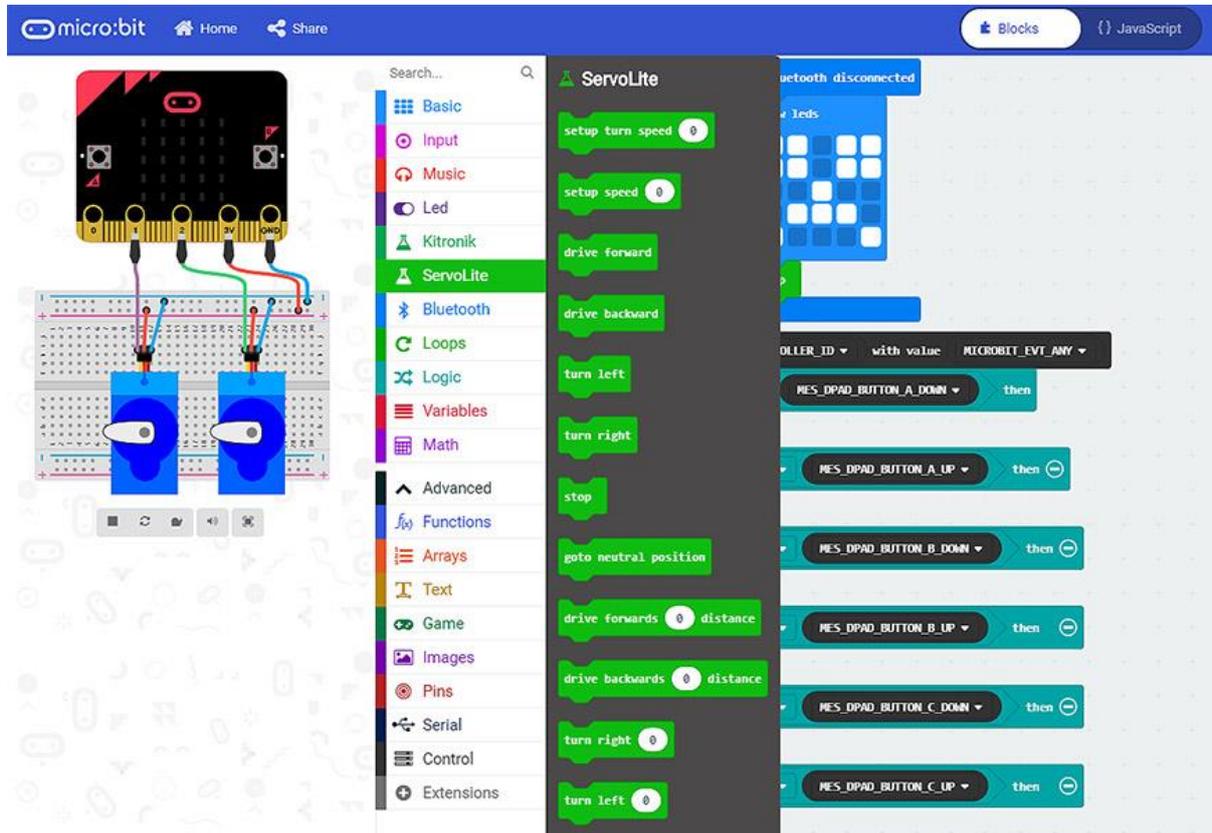


Adding Bluetooth Remote Control To :MOVE mini

The :MOVE Mini kit offers a great introduction to robotics. It can be used in a number of different ways. Most are mainly facilitated by the code that you place onto the micro:bit.

Kitronik Custom Blocks For The Microbit Javascript Block Editor:

To add our custom blocks to the editor. Click on the cog in the top right of the editor and select 'Extensions' from the menu. This will open a dialogue window with a search box. Type Kitronik into the search box and all of our custom blocks will appear as tiles. Select the tile titled 'servo-lite' and it will be added to the block's menu.



To add Bluetooth functionality to the menu, we must first add the Bluetooth package. Select Extensions from the menu and then select Bluetooth.

We are now ready to write some code.

Writing The Bluetooth Remote Control Code:

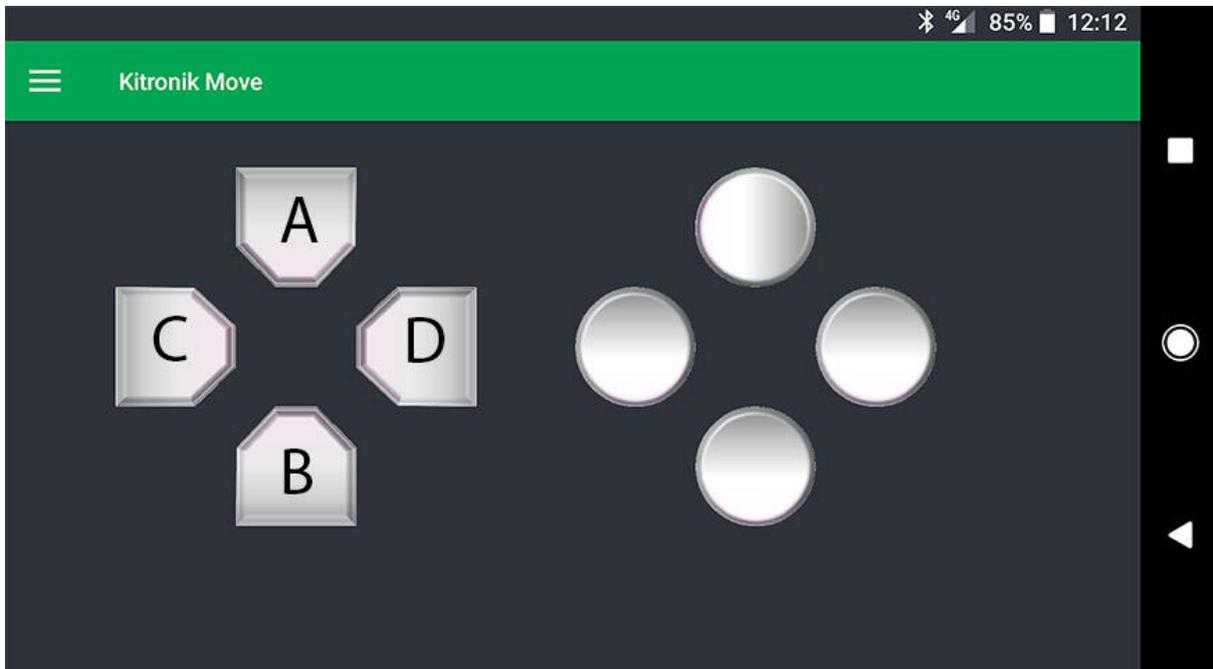
As we are going to control :MOVE mini over Bluetooth we need to code the microbit so that it responds in the right way when it receives Bluetooth commands.



Adding Bluetooth Remote Control To :MOVE mini

All of our remote-control code is going to be placed within an 'on event' loop. As shown above. You can find the 'on event' loop by expanding the Advanced menu option, you can then find the loop in the Control menu.

This will ensure that the micro:bit knows to expect commands from the DPad controller and what to do once it receives them. We are going to use the A, B, C & D buttons in the App for driving, you can see how they are orientated on the App pads in the image below.



Our controls will be:

- A – Forwards.
- B – Backwards.
- C – Left.
- D – Right.

As well as writing our code to respond to a button press, we also need to write code for what to do when the button is released. For our code, button release will always equal stop.

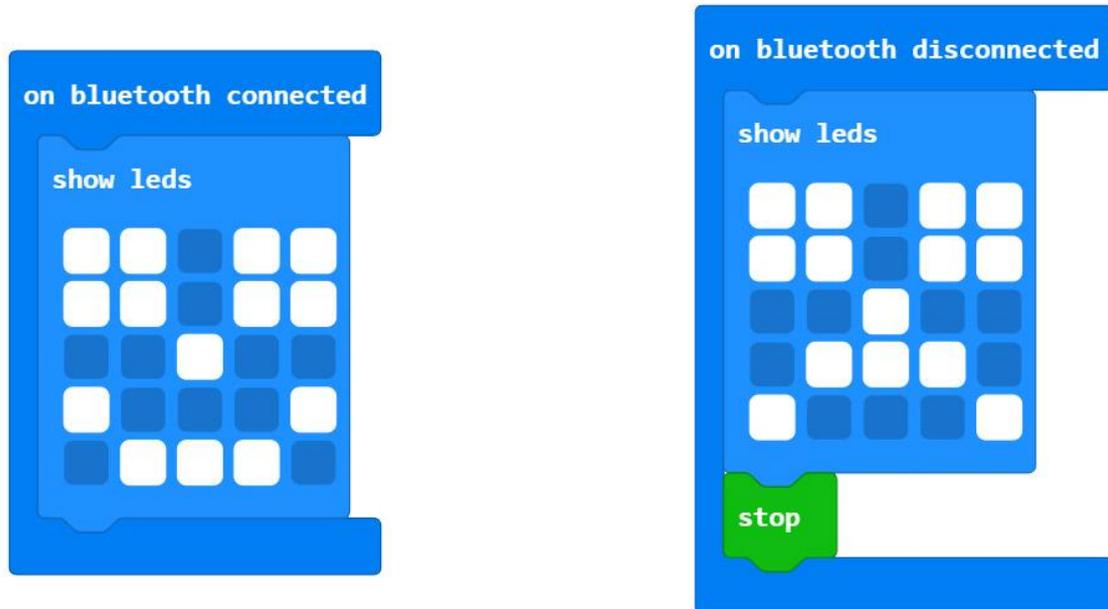


In the code above you can see how the code for the A button press works. When the A button is pressed, the buggy will drive forwards. When the A button is released, the buggy will stop.

We follow the same procedure for the other three button presses, just altering the drive command type for each.

Adding Bluetooth Remote Control To :MOVE mini

We also want to write code to give some visual feedback via the microbits LEDs as to whether Bluetooth is connected or not. If the Bluetooth connection is dropped, ideally, we would want the buggy to stop regardless of the last command. The stop command acts as a failsafe to protect the system if control fails.



The code above will display a smiley face on the micro:bit when Bluetooth is connected. If for any reason the connection is lost, then a sad face will display and the servos will stop turning.

In the embedded editor below, you can see the whole program. Once you grasp how the on-event block works and how to define an on event value the code is uncomplicated to produce.

Downloads & Information:

[Download the Code](#)

[Connecting your micro:bit and troubleshooting](#)