Bluetooth control

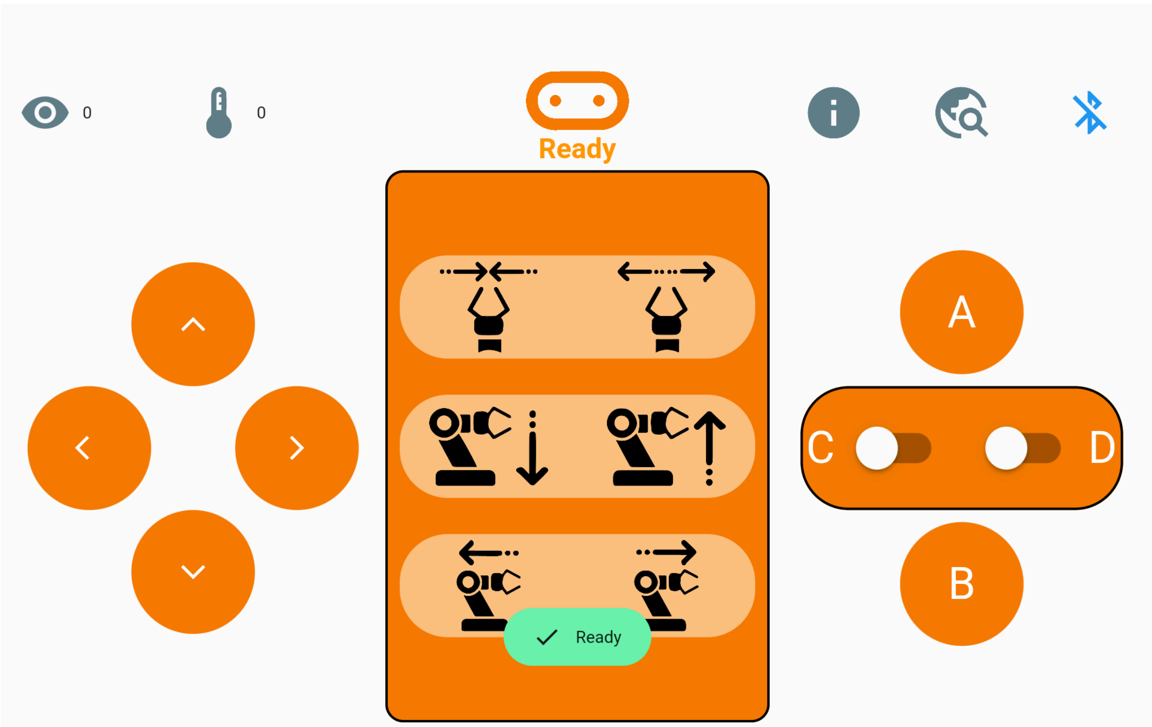
EV-micro:bit

Transmitter

The EV-micro:bit app is used for control, which is available for both iOS and Android devices. The app is able to connect to the micro:bit without pairing.

Before connecting, [this program] must be loaded into the micro:bit**.**

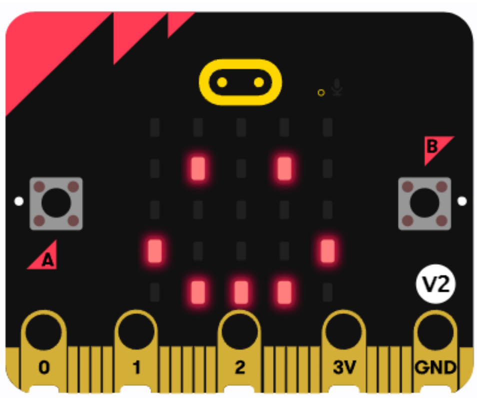
To download it, use either [App Store] for iOS, [Google Play] for Android.



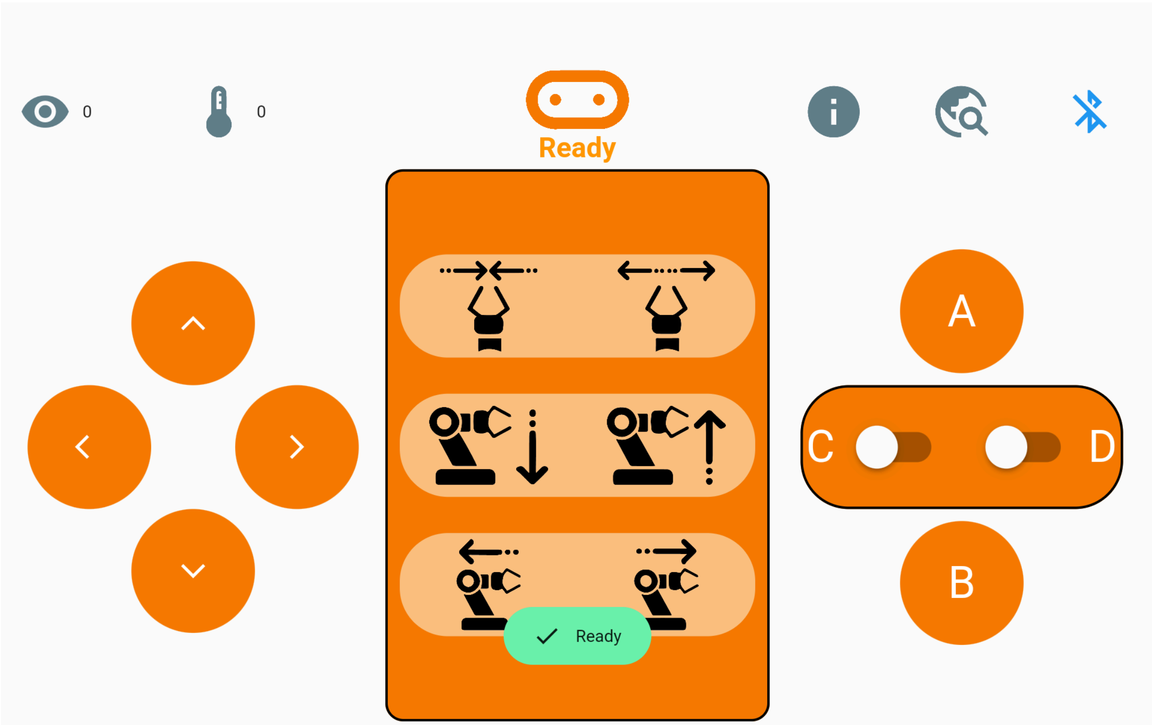
Connecting the micro:bit to a mobile

1. Open up the **EV micro:bit** app.
2. When opened, the app will automatically search for an available micro:bit device. If it does not do so, click the button on the bottom right with the magnifying glass symbol.
3. Your micro:bit device will appear in the list. Click the **Connect** button.

4. If you connect successfully, an emoticon will appear on your micro:bit (if you have downloaded our program).



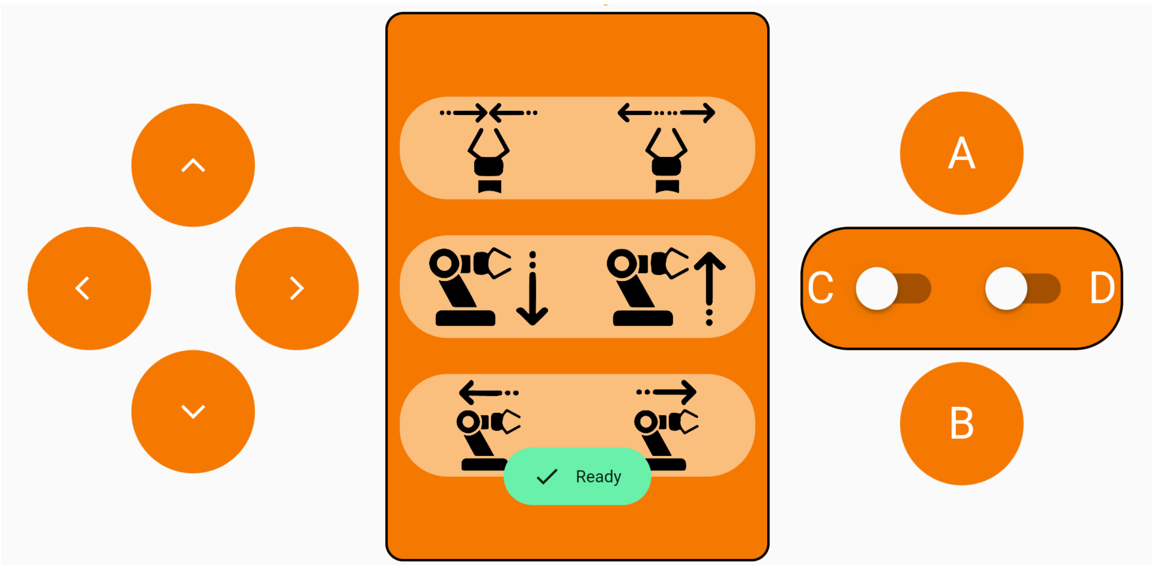
5. The application will go to the control environment. A confirmation message **Ready** will appear at the bottom of the screen..



6. To **disconnect** from the micro:bit, click on the crossed out **Bluetooth** logo at the top right of the app.

Controls

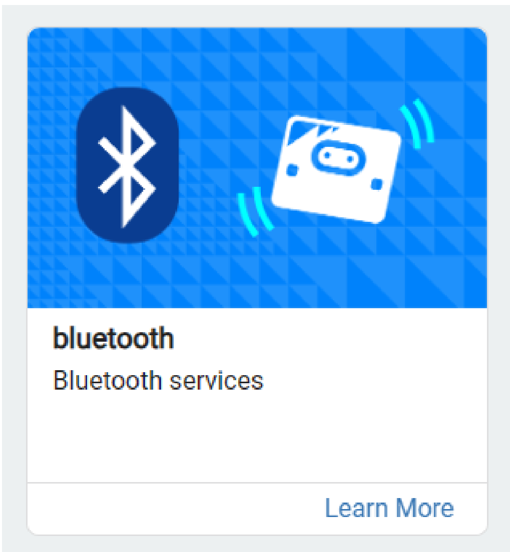
Use the arrow keys on the left side of the screen to control the ride.



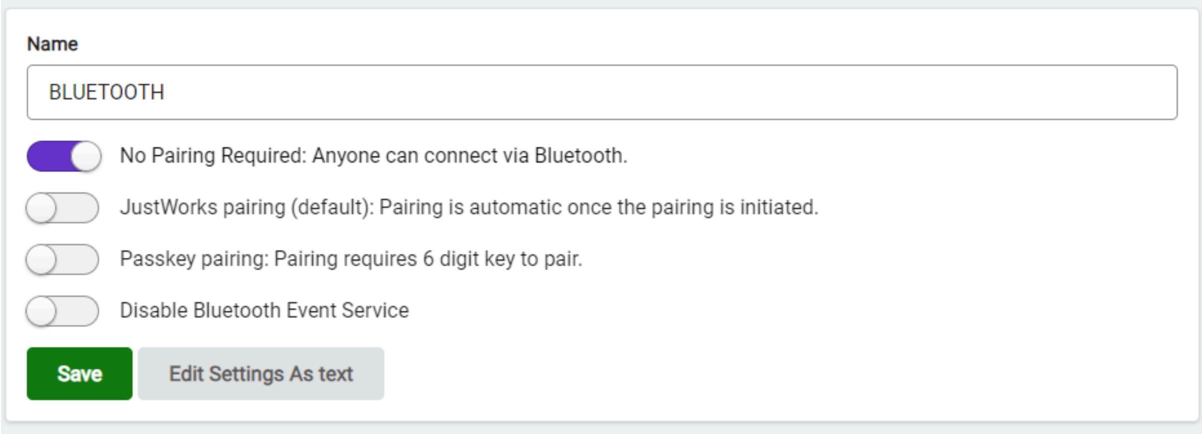
Programming

In the app itself you can find instructions for creating your own program to control the micro:bit. You can use our program as a template.

In order to use the control via bluetooth, you need to install the **Bluetooth** library. However, this will deactivate the **Radio** library for you, as it uses the same module for wireless transmission.

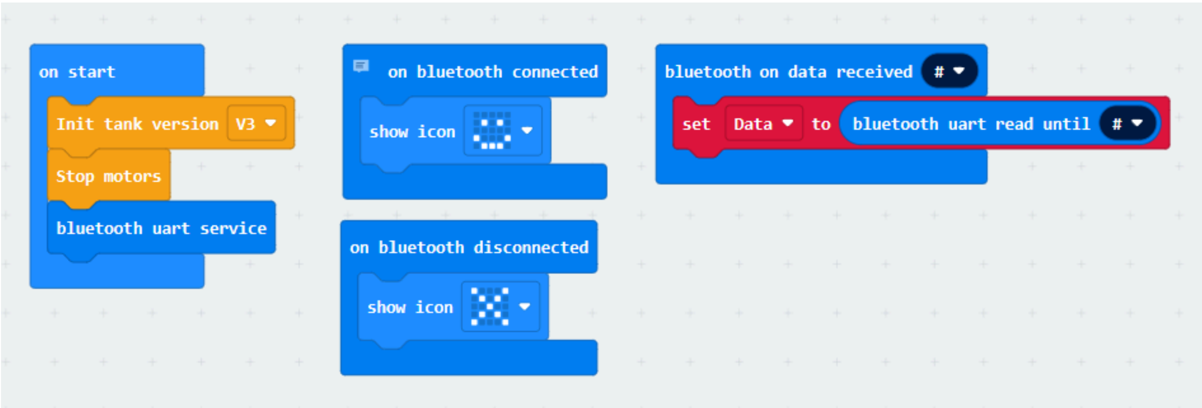


After uploading the Bluetooth library, you need to go to the project settings via the ⚙️ icon. In this menu you need to check the **No pairing box**.



Thus, we need to enable the **Bluetooth UART service** when starting the micro:bit. A good practice is to add blocks to indicate the connection and disconnection of the micro:bit and your device.

The last block tells the micro:bit to write the received data to the **Data variable**.



Finally, we just need to read what data is in the variable and trigger actions based on it.

Each button sends its own data. In the overview below you can find what data each button sends.

1. **Arrows**

Buttons with arrows send a signal when they are pressed (active)

direction	data
▲	f
▼	b
◀	l
▶	r

2. **Letters**

Buttons with letters send a signal when pressed (active), but also when released (inactive).

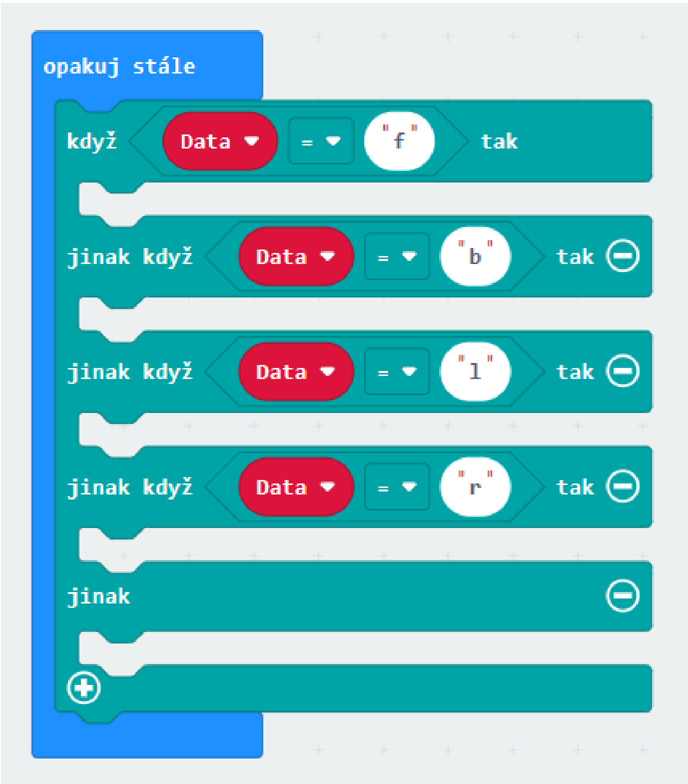
letter	data (active)	data (inactive)
A	A	Z
B	B	Z
C	C	H
D	D	W

3. Manipulator

Special buttons with manipulator symbols transmit data in the same way as the arrows, i.e. for as long as they are pressed.

line	data (left)	data (right)
1	AC-1	AC1
2	AU-1	AU1
3	AR-1	AR1

Then just use the same logic as in our program. Enter the desired action in the empty fields. Instead of the filled letters, use the ones that correspond to the desired button.



Control via Android device (older version)

DPad

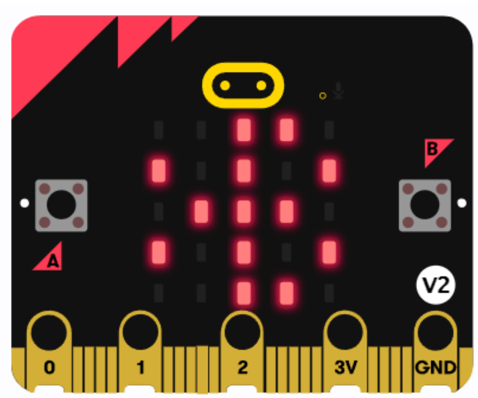
Transmitter

For older mobile phones with the Android operating system, the DPad app can be used. This app is not available for newer versions of Android.

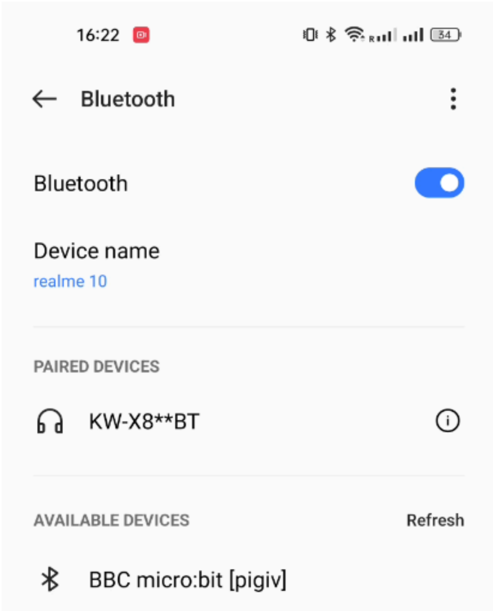
- This program must be loaded into the micro:bit **before pairing**.
- **Before connecting** the micro:bit in the DPad app, you must pair the device according to these instructions (further information on pairing devices can also be found on the micro:bit manufacturer's website)

Pairing the micro:bit with an Android

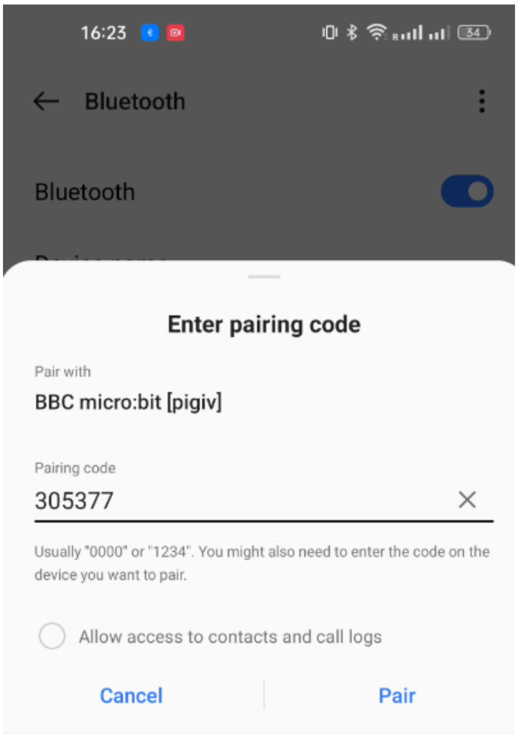
1. First, download this program to the micro:bit.
2. Press the rear **RESET** button on the micro:bit 3 times in succession. The Bluetooth logo will appear, followed by the pairing pattern



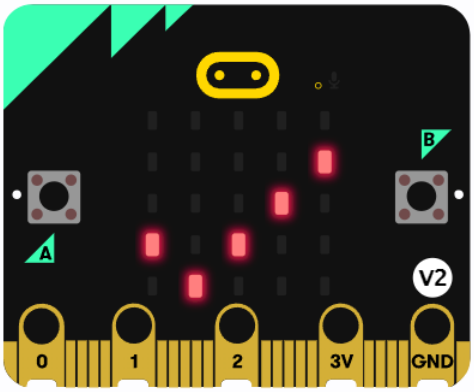
3. On the Android device, your micro:bit will appear among the available devices (the name in square brackets will be different).
4. Select the micro:bit device.



5. If you need to enter a code, press the **A** button on the micro:bit.

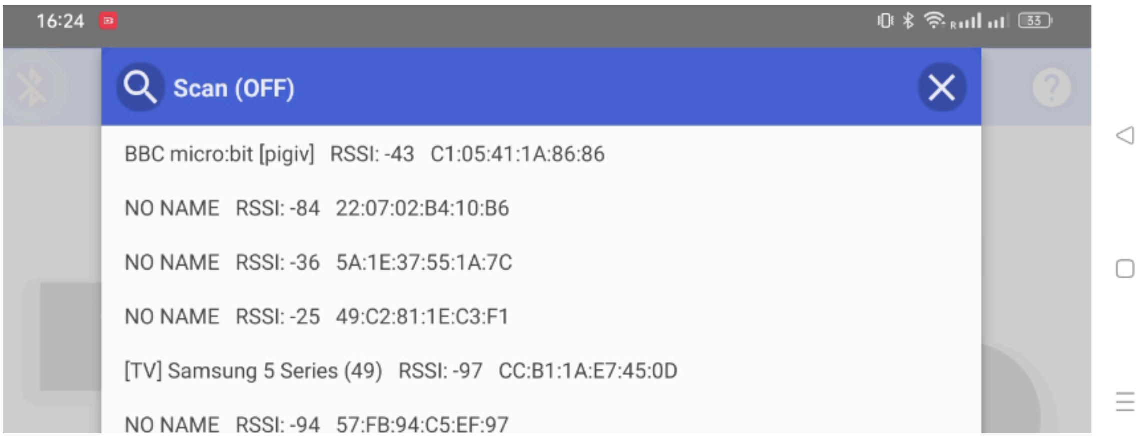


6. After successful pairing, you will see a check mark symbol on the micro:bit. You have successfully paired the micro:bit with your phone.

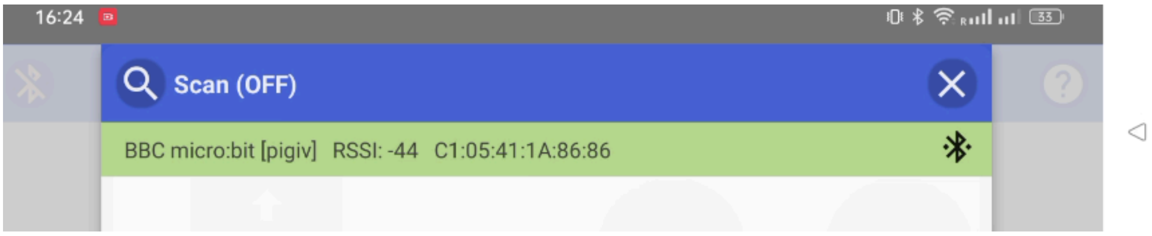


Connecting the micro:bit to an Android

1. When you open the app, click on the Bluetooth symbol in the top left corner. Then select **SCAN (OFF)**, after clicking the value will change to **SCAN (ON)**.



2. Select **BBC micro:bit** from the menu. Should you have multiple micro:bits paired with one device, be careful to connect to the correct one in the DPad app.
3. Once your micro:bit is highlighted, you are **paired** and can move on to **control**.



Controling

The tank is controlled with the arrow keys (1 to 4) on the left side of the app.