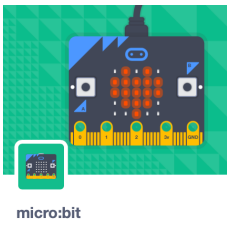
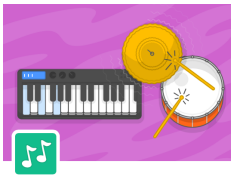
Scratch-Synth

Register/login at https://scratch.mit.edu

Create a music synthesiser with the micro:bit.



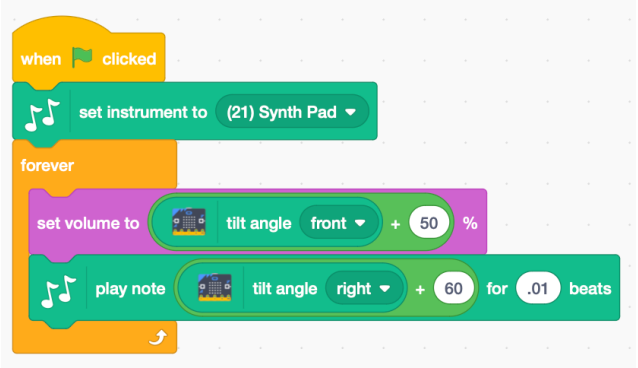


1. Create a new Scratch project and add the **micro:bit** extension.
2. Also add the **Music** extension.
3. Plug the micro:bit into the PC with the USB cable.
4. Click on the new micro:bit blocks section. If you see at the top you need to connect the micro:bit.
5. Click on to **Connect** the micro:bit. If more than one device is shown look for the name matching the one on the micro:bit display (“tapav” in this example).

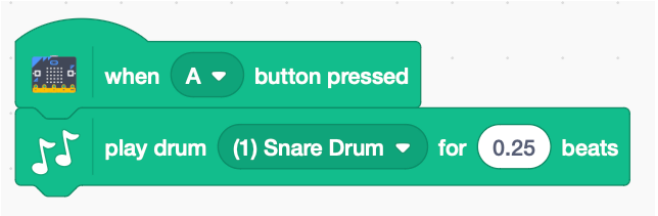
6. Once it connects, click Go to Editor to get back, and you should now see a at the top.

*The micro:bit can detect **tilt** left/right and front/back. Use this to change the pitch and volume of a sound.*

7. Add the following code.
   - The tilt values are 0 when the micro:bit is level.
   - The volume is a percentage (%) so add offset 50 to make the volume 50% when it's held level.
   - A note of 60 is "Middle C" so add offset 60 to make this the note when it's held level.
   - Try different instruments



8. Use buttons A and B to add percussion.



***Save** your code with a good name.*
File > Save now

Preparation

1) *You need the micro:bit and a USB to USB-micro cable.*
2) *Install **Scratch Link** so Scratch can talk to the micro:bit.*
   https://scratch.mit.edu/microbit
3) *If Scratch Link is not already running (eg. after a reboot) search for and run the app. It appears on the menu bar.*
4) *Connect the micro:bit to the PC, with the USB cable. The micro:bit appears as a new drive (typically D: on a PC, or MICROBIT on a mac).*
5) *Download **micro:bit HEX** from the address above, and drag it to the micro:bit drive.*