

## Make and remix your own music

Create a tune on the BBC micro:bit, then remix it and change the tempo by pressing button B. Program your own tempo and melody changes and watch your musical creation take on a new life.

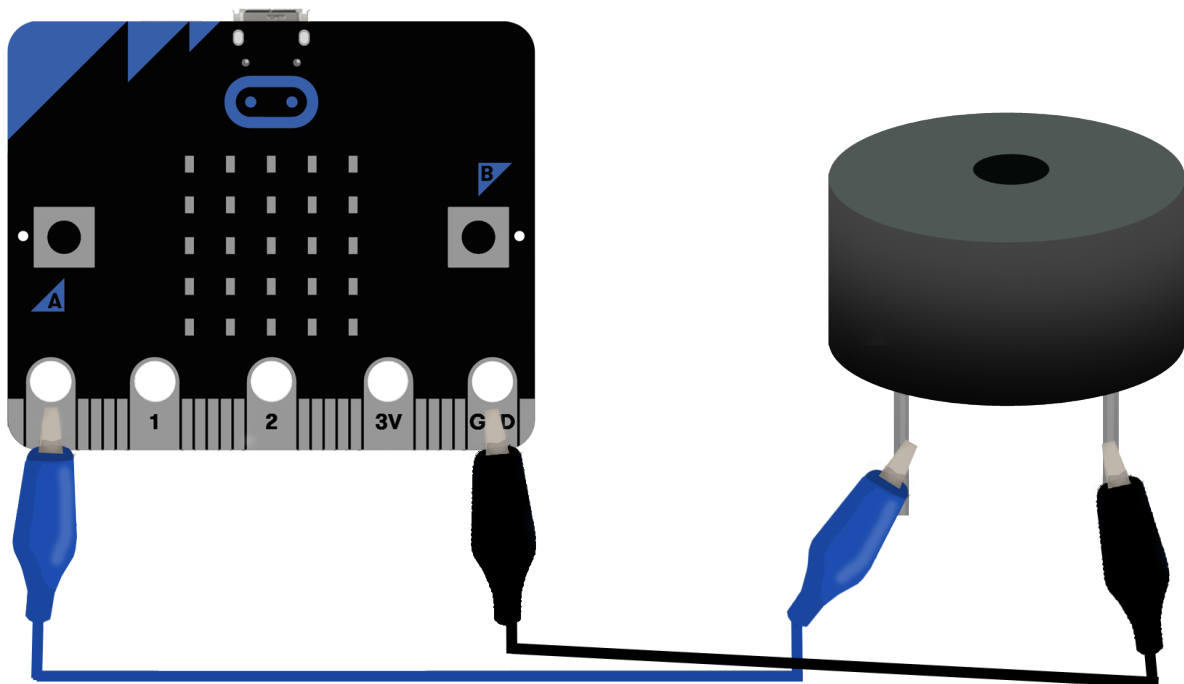
### Step 1: Import the code

Click on the hex file link on the Live Lessons website to view the code on the BBC micro:bit website ([www.microbit.co.uk](http://www.microbit.co.uk)).

The script for your musical creation should now appear in your code window.

Hit 'run' to see it in action on the simulator, or plug in your BBC micro:bit, hit 'compile' and drag the hex file onto your BBC micro:bit.

Connect it to a buzzer using **Pin0** and **GND** (as in the diagram below) to hear it played, then hit B to increase the tempo.



## Step 2: Understanding the code

show leds	0	1	2	3	4
0	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

set tempo to (bpm) 120

play tone (Hz) G for (ms) 1/2 beat (ms)

play tone (Hz) G for (ms) 1/4 beat (ms)

play tone (Hz) F# for (ms) 1/2 beat (ms)

play tone (Hz) E for (ms) 1/2 beat (ms)

play tone (Hz) G for (ms) 1/2 beat (ms)

play tone (Hz) A for (ms) 1/2 beat (ms)

play tone (Hz) B for (ms) 1 beat (ms)

play tone (Hz) F# for (ms) 1/2 beat (ms)

play tone (Hz) F# for (ms) 1/4 beat (ms)

play tone (Hz) E for (ms) 1/2 beat (ms)

play tone (Hz) Eb for (ms) 1/2 beat (ms)

play tone (Hz) E for (ms) 1 beat (ms)

rest (ms) 1 beat (ms)

pause (ms) 5000

### What's on the LEDs?

Here is where you can change what appears on your BBC micro:bit's LEDs as your tune is playing. Here we've drawn a quaver note, but you can put in any image you like.

### Composing your music

Here is where you can program what tune you want your BBC micro:bit to play, and at what initial tempo or speed.

We've designed it to play a small section of the Strictly Come Dancing theme tune, and set the initial tempo to 120 bpm, or beats per minute. The higher you set your bpm, the faster the tune is played.

on button A pressed

do

change tempo by (bpm) 50

### How to remix your music

Here is where you can decide how you'd like to remix your music.

We've programmed it so that as the tune is playing, the tempo is increased by 50 beats per minutes when you press button A. That is, it goes faster.

You can program a different action to change the tempo, like pressing button B or shaking, or program it so the tempo goes slower instead of faster.

You can also program actions to change the tune altogether. Your imagination is the limit.

## Test, play and show us what you've done

Now that you've made your very own music track on the BBC micro:bit, click 'run' to test it on the simulator and 'compile' to see it working on your micro:bit.

Click 'export' to save off your code and send it to us at [live.lessons@bbc.co.uk](mailto:live.lessons@bbc.co.uk). You could see your animations featured on our **Strictly micro:bit Live Lesson** on the 24<sup>th</sup> of March.