Synthia usage guide

Find your way around...

Learn what every button is used for

If you are reading this guide, you successfully assembled Synthia! Congrats!

Here, you'll learn what you can do with it, record your own sound or voice, mix it, and save everything in different samples.

One of the coolest things about Synthia is that everything you need to know to start playing with it is written on its backside.

We decided to use the PCB, and write the short instructions on it, so you don't have to open this guide all the time, but you can just turn Synthia around and remember what every button is for!
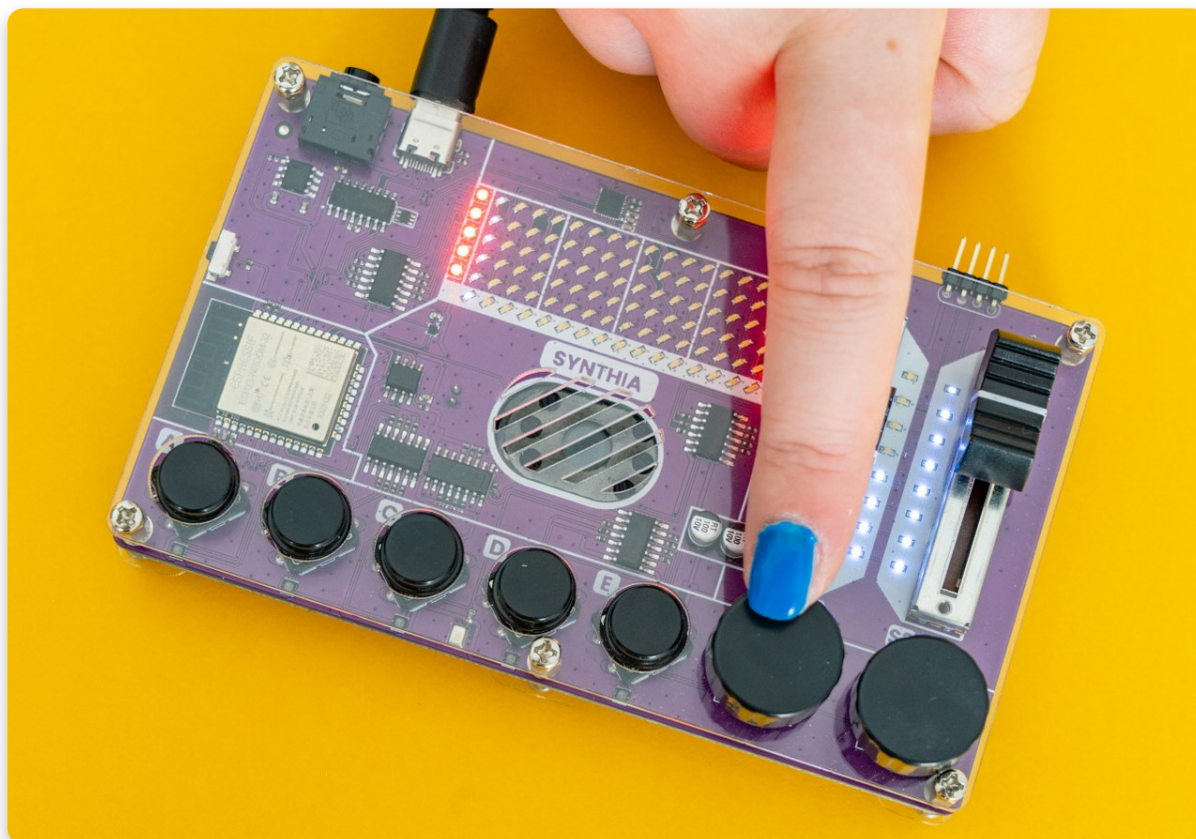

Let's check the encoders!

In this chapter, we won't guide you through every specific action all the buttons, sliders, and encoders can do. We'll just mention the basics!

Let's kick off with the encoders!

With the **left one**, you'll be able to **save your tracks and sounds** in one of four available slots, and you'll use it while deciding which **preloaded sound** you want to **edit**. With the **right one,** you will **navigate the track, enter and exit the playback** of your track, and select the **effect** on the sample you're **editing**.
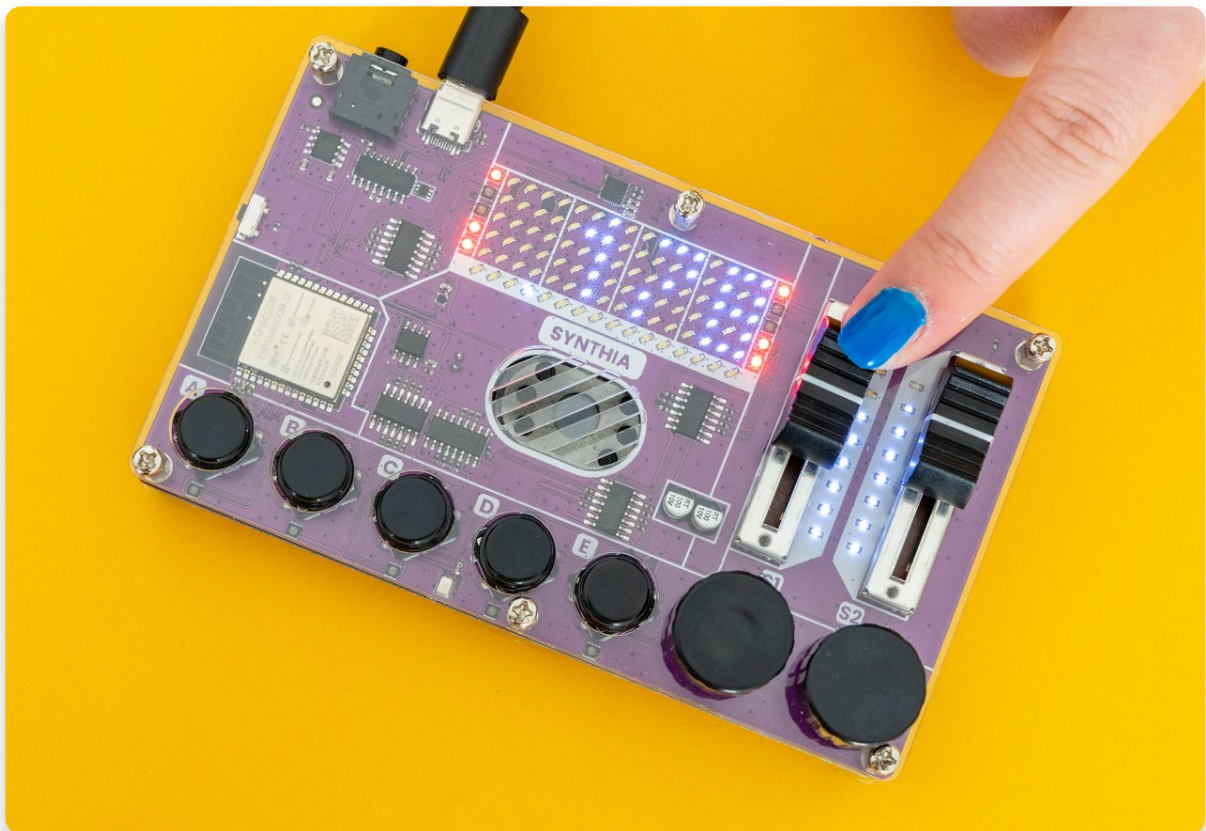
Clicking **both** of the **encoders** simultaneously will restart the **hardware test**!

Now is the slider's time!

Here, we have two of them as well - the left and the right one.

With the **right slider**, you'll be able to change the **volume** and **effect intensity** of the sample you're editing, while with the **left** one, you can change the **speed** of the sample and track **tempo**.

Aaaand, the pushbuttons!

There are five pushbuttons, and they all basically do the same thing.

Each of them has its own sound, but it is very easy to use them - if you learn what one of them can do, you have learned what all of them are for.

They are used for:

- placing samples onto the track

- removing samples from the track

- editing sample slots

- enabling or disabling track channels

- exiting the save menu

- recording your sounds + copying it into the current slot

You learned what each part of Synthia does! Now you are ready to use it!
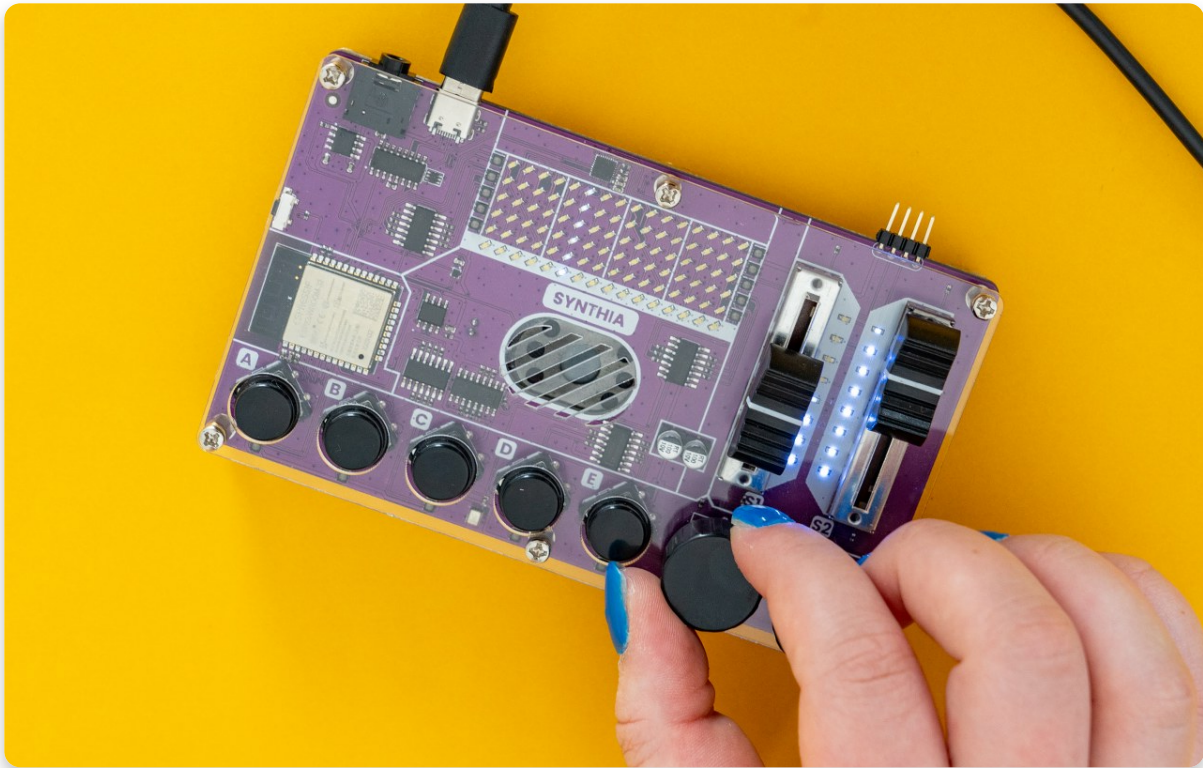
Record, mix, play!

Track mode and playback!

Now that you know what each of the buttons is for, it is time to do some real job!

First, we'll walk you through the track mode!

For **navigating** through the track, you'll use the **right encoder**.

While you're **rotating** the **right encoder**, you'll be able to see your **position** in the track on the **LED matrix** - the LEDs will change position while you are rotating the encoder depending on where you are currently in the track.

Press the **right encoder** to **play** all the samples on the **current track position.**

Hold the **right encoder** for a bit to **clear** the current **track position**.

While **editing** the **track**, you can place, remove or **edit** one of the **samples** in that particular track.

To do that, you'll use **pushbuttons**.

For example, we wanted to place the sample from the fourth pushbutton onto the sample. We had to click on the fourth pushbutton while being in the track to do that. The LED on the fourth row of the track lit up, indicating that a sample is placed in that position.

Changing the sample in track mode

Simply **double-click** that particular button, and the sample will be **removed** from the track.

Also, you can change the **volume** and the **tempo** of the track that is playing. For that, you'll use **sliders**!

If you want to adjust the **volume,** slide the **right slider**, and if you're going to change the **tempo,** slide the **left one**.

On the side of the sliders, **LEDs** show you the volume and the tempo level.

If **all of the LEDs are lighting up** on the side of the **right slider,** that means your **volume level** is at its **highest**. The **same** goes for **tempo**!

By clicking or rotating the left encoder, you can **enter the save menu,** where you'll be able to - save the beat you've made and sounds you've synthesized.

Once you're done with the track and want to play your mix, you'll have to enter the playback!

Hold the left encoder pressed for a few seconds to enter the playback!

While in the playback, rotate the right encoder to **seek through your track**. You can use the pushbuttons to disable or enable the playback of samples on that particular button.

Hold the left encoder pressed to **exit the playback** - as you did for entering the playback.
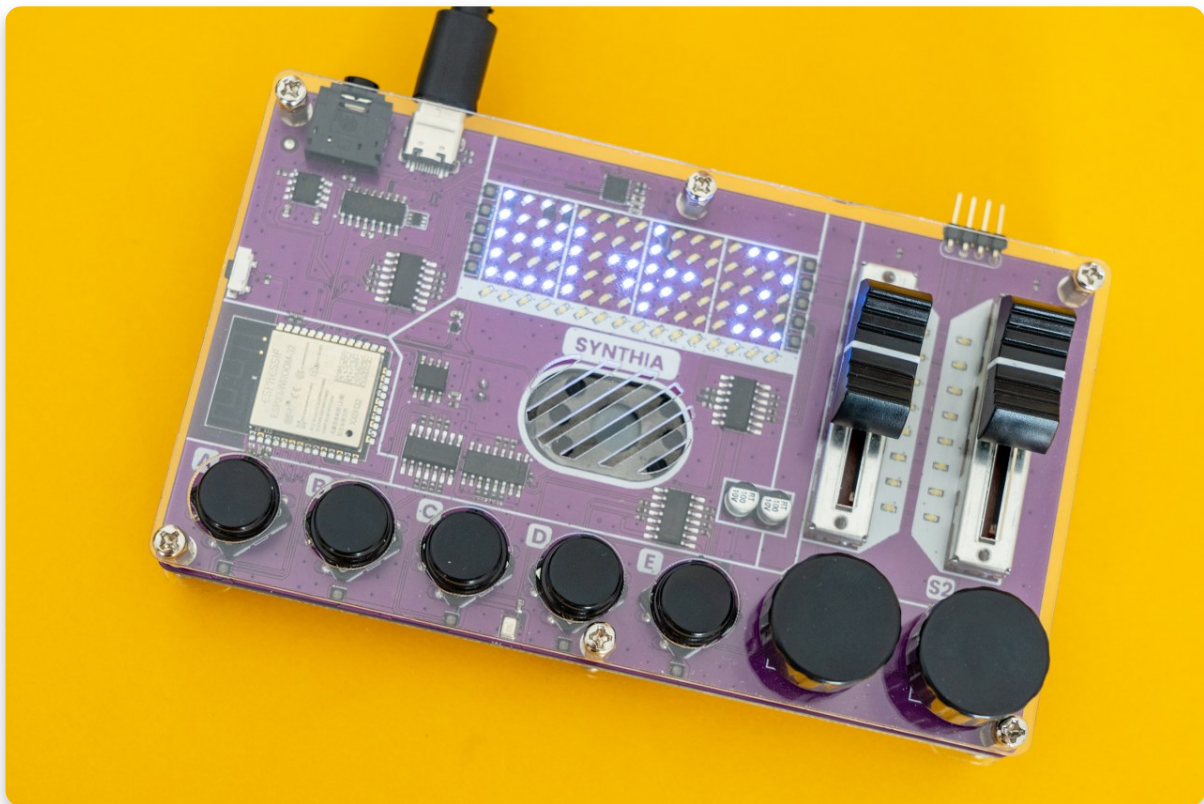
How to save the changes you made?

You will probably make some changes you'll want to save.

As we mentioned in the previous chapter, you'll have to **click** on the **left encoder** to **enter** the **save menu.**
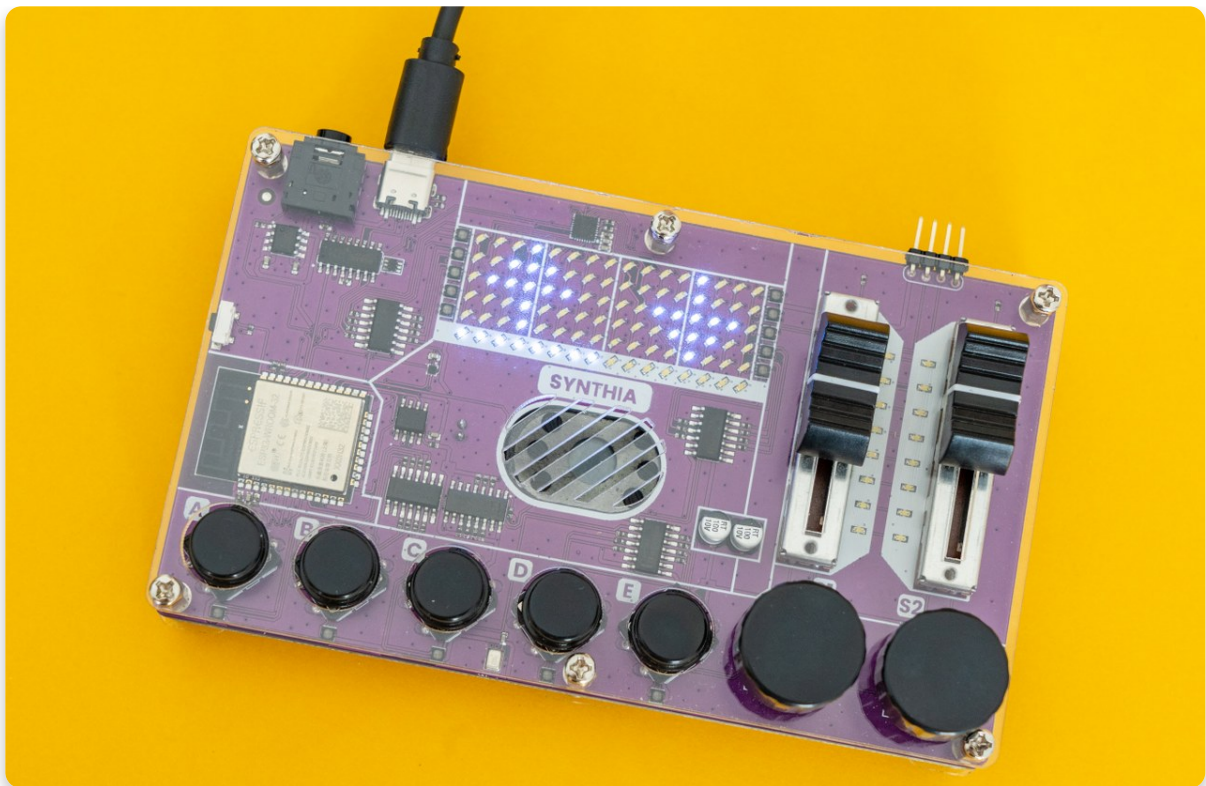
Once you're **in the save menu,** you'll rotate the left encoder to select the slot you want to save or load from. Once you have found it, click the left encoder to confirm the selection.

Synthia has **four slots available for saving** your tracks and sounds, and you'll have to choose which one you want to save the track to.
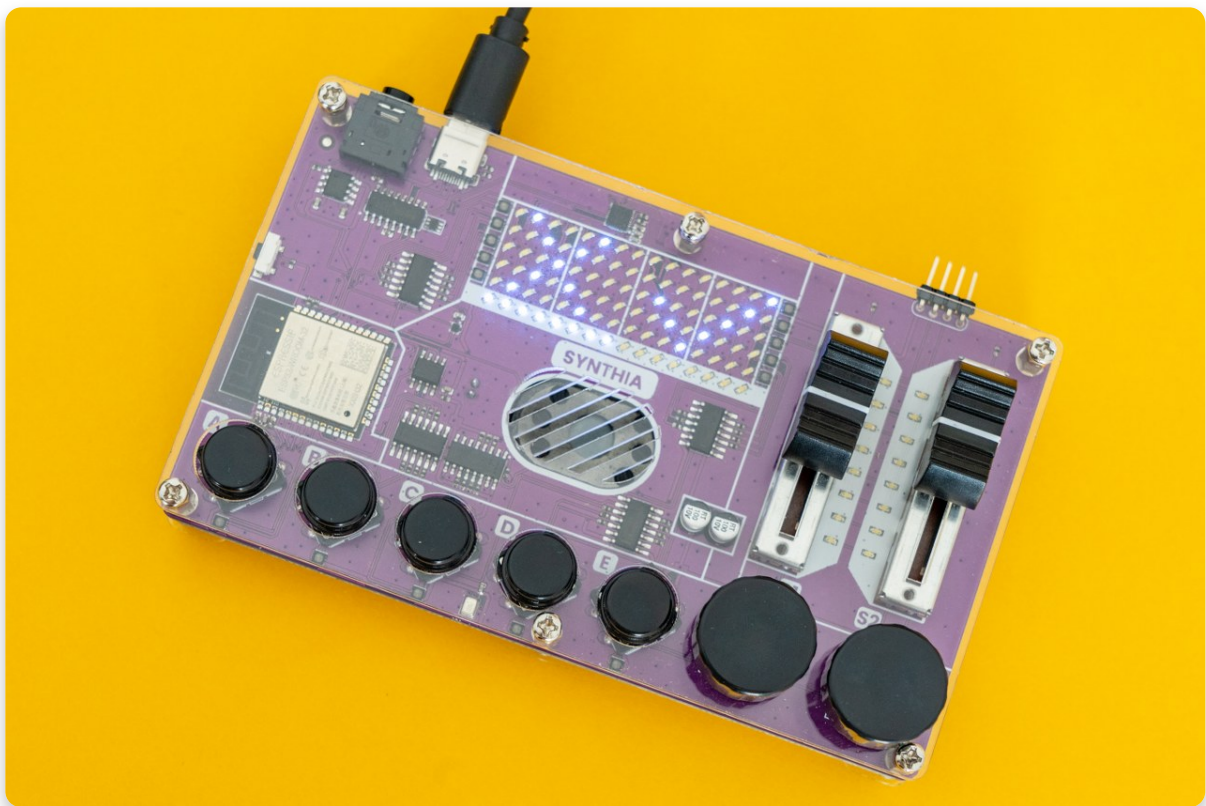
While doing this, the LED matrix will look like this:

Now choose the desired action - **load or save**.

And **confirm or cancel your selection**.

To **exit** the **save menu**, simply **press** any of the **buttons**, **rotate or click the right encoder, or move one of the two sliders**.

Editing the sample slot

If you want to **edit** the **sample slot**, you'll need to know a few things!

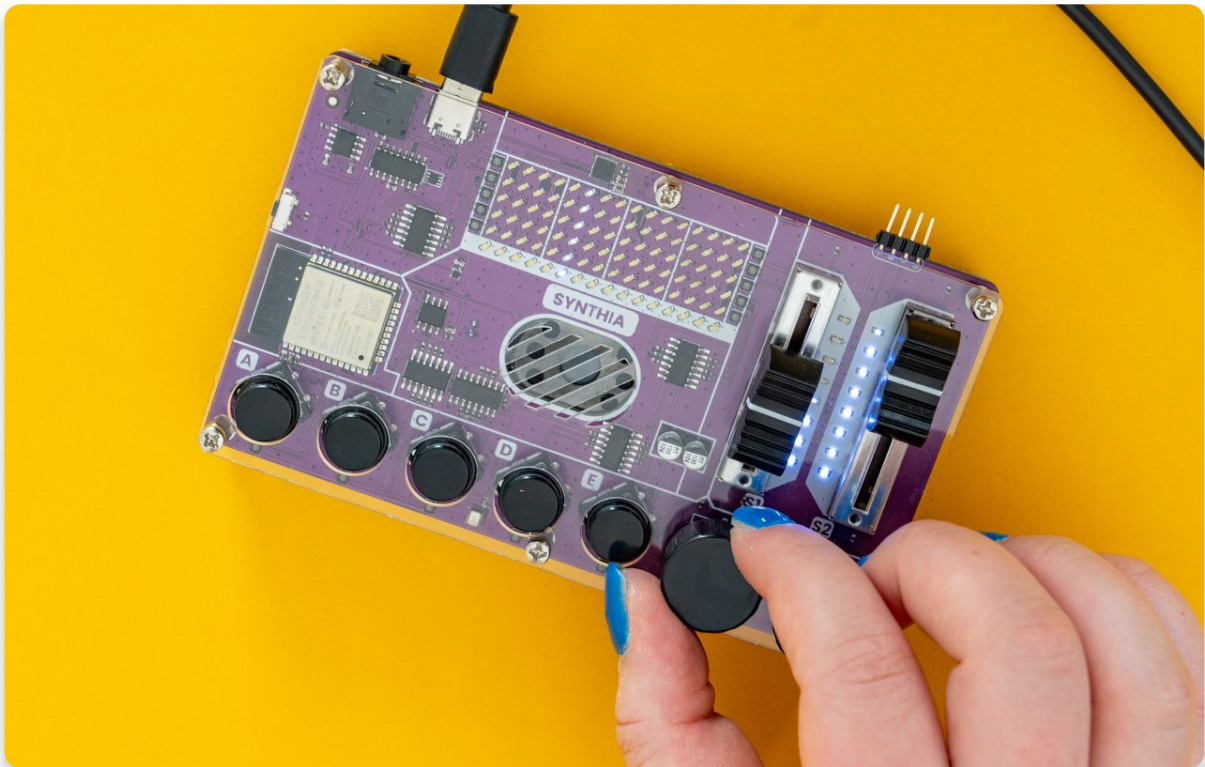To **enter the sample edit mode**, hold the button for the slot you want to edit.

If you want to **edit the sound** on the third button, simply hold that button for a second. Synthia will enter the sample edit mode, and the LED below the slot you're editing will light up yellow.

While **editing a slot**, you can choose which **preloaded sample** will be played when that button is pushed, as well as change the intensity of all the effects applied to the sound.
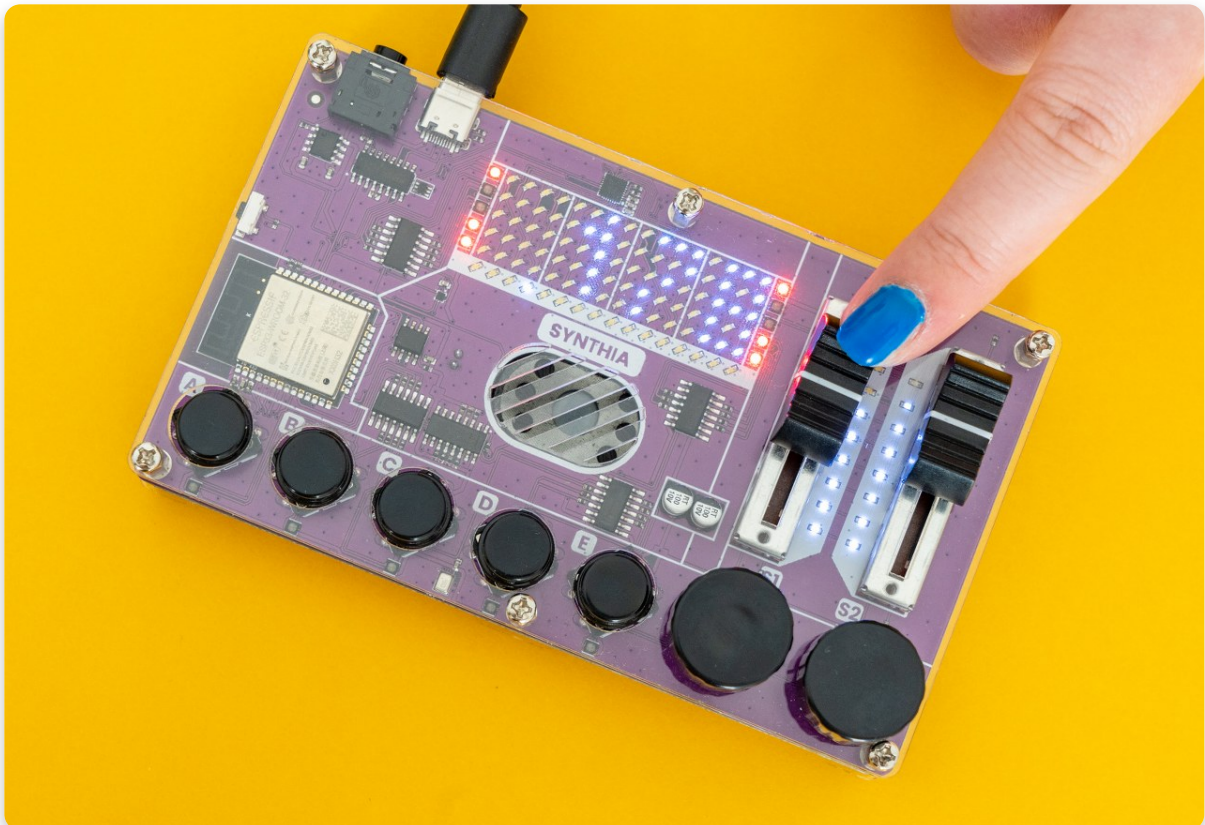
Use the left encoder to change the sample playing on that slot. You will immediately hear the sound of that sample, and the LED matrix will show a visual representation of the instrument that makes that sound.

Synthia comes preloaded with five sounds you can select. The last option when rotating the left encoder is used to record your own samples - more on that in the next chapter!

Rotate the right encoder to **select the effect** you wish to change, and then move the right slider to change the intensity of that effect. You can also use the left slider to **change the pitch of the sample**.

Press the button for the slot you're editing any time to hear how the sample sounds. You can also press any of the other buttons to play those samples too.

Note that there are five preloaded sounds and five effects.

Let's go over the effects:

1. **Volume** - self-explanatory - change the volume of the sample
2. **Bit crusher** - the small robot effect will reduce the resolution or bandwidth of digital audio data making it sound like a robot
3. **Circles** - adds echo to the sound
4. **High pass filter** - focuses on the high frequencies like vocals and reduces the bass
5. **Low pass filter** - focuses on the lower frequencies making the tone deeper with more bass

Recording time!

Now is the time for probably the most exciting part of this guide, and that is - **recording**!

To record your own sample, you have to enter the slot editing mode and use the left encoder to select the last sample (that's the recording one).

Once we are in the recording mode, the **little LED under the slot you're editing should light up red** to let you know that you are recording. Just like in the movies, right?

To record press and hold the button you're currently editing. The moment you press the button, Synthia will start recording until you let go of the button, with a maxium of one second.

After you're done recording, Synthia will need to process and save the recording, which might take a second or two. You may think that Synthia is blocked, but don't worry; it's just working on the recording.

Note:
While in recording mode and one of the **LEDs** under the pushbuttons **emits blue light**, that means you have something recorded on that slot.

You can press any of the blue indicated buttons to copy the recording from that slot into the one you're currently editing.

What's next?

The fun does not end here.

There is still **coding** waiting for you!

We are currently in the process of creating a coding guide, so we'll have to ask you for a bit more patience.

In the meantime, we invite you to join our [Discord channel](#) and [Facebook group](#) where you'll be able to share ideas, photos, and feedback with fellow makers and get exclusive news from CircuitMess.