



The **Piezothings** is a small feedback instrument containing a piezo microphone, a FET preamp, an amplifier and a small high quality transducer. The mechanical feedback through an object touching the mic and transducer produces both a physical signal vibrating the surface it is placed on as well as an electronic signal available at the headphone/line output.

The unit is powered by a built in battery and charges via a mini USBconnector. It consumes very little power so it can be run for weeks on a charge or, when used as an installation, run for around 6-8 hours continuously. The size is 54 x 85 x 11mm and it weighs 70 grams

How to use it

The on button is situated next to the USB jack and on is indicated by a green LED. A red LED light is on when the unit is charging and a green LED turn on when the charging is finished.

The knob controls the level of the microphone preamp, the signal is then sent to the amplifier and is outputted through the transducer. The signal is also split before the transducer and is available at a stereo 3,5mm jack that can be used for headphones or as a line out to feed other equipment or record.

At low volume settings the unit can be used as a contact microphone. At maximum setting the feedback is very pronounced, lower settings give more subtle but also sometimes more complex effect.

Placing the microphone and the transducer in contact with a guitar or piano string produces very interesting results as does placing it on boxes or flat surfaces, thin surfaces vibrates louder than more compact and thicker materials.

The frequency and timbre of the feedback can be adjusted by moving and damping the surface or the unit with your hands or other objects.

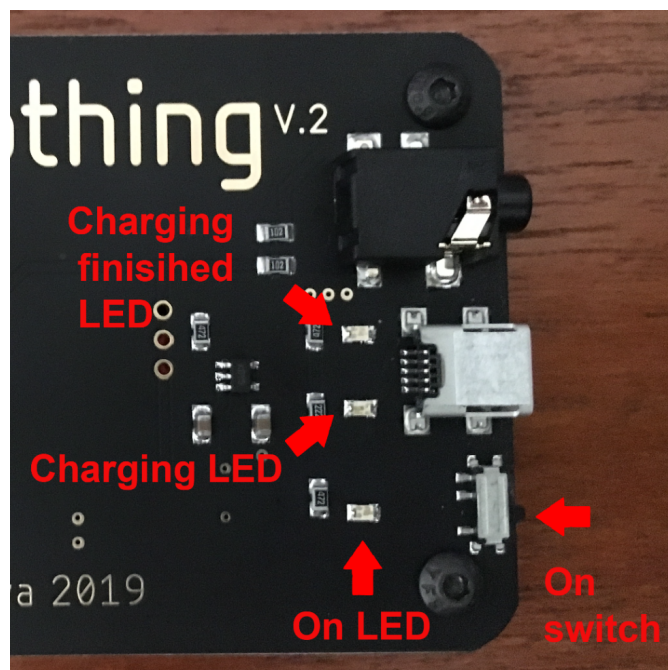
Very small movements or adjustments can have big effects on the sound so very little force is needed to operate the Piezothings, too much force can stop it from oscillating since the transducer movement is restricted. Be careful about hitting or banging the transducer, it may result in damage.

If you want to use it as an installation and simultaneously use the line out a very light cable is recommended so the weight of the cable doesn't dampen the vibrations, a one made from an old pair of in ear headphones works well.

If you need to clean it use a dry microfiber rag.

Since anything can happen in experimental music I made the transducer easily changed out by unscrewing four screws and desoldering two wires. The same applies to the piezo microphone. The transducer is Dayton Audio DAEX13CT-8 from www.soundimports.eu and the transducer is www.mouser.com article number [81-7BB-20-6L0](https://www.mouser.com/ProductDetail/Dayton-Audio/DAEX13CT-8)

If you want to modify or need to repair it let me know and I will try to advise, contact me at this address: instruments@araya.se



Note: The unit comes with a shipping charge in the battery so it can be used straight away but it should be charged for longer operation. If the power LED flickers at high feedback settings it is time to charge!

Note#2: If you want to use the shipping box as storage container for the unit remove the shipping label and cut the tape along the top edges to lift the lid:



Do's

Try it on any materials, windows, bowls, metal objects, boxes!

Try it on string instruments and inside pianos!

Try it both as an instrument and as a stand alone drone maker!

Use it as a contact mic!

Try using the line out to feed a speaker creating a second feedback loop!

Use two or more for interference experiments!

Don't

Don't use it in moisture and water!

Don't heat it over 50 degrees Celsius, it is bad for the plastic and the battery!

Don't drop it!

Don't open it if you don't know what you are doing! :)

Manual rev2.5, 17-06-2020 by Daniel Araya