

# Edu Modular Synth Thing Usage Notes

Detailed guidelines and instructions can be found here:

<https://diyelectromusic.com/2024/06/17/educational-diy-synth-thing-part-5/>

## Key points:

- There are no internal, default connections. With no jumper wires, it will not make a sound.
- There is no short-circuit protection. If GND and 3V3 or 5V are connected together Bad Things Might Happen to the synth.
- All internal patch signals are 0-3.3V and either (biased) audio or control signals and gates/triggers.
- The GND and 3V3 connections can be used with a fixed “LOW” or “HIGH” signal is required.
- All inputs have some protection against over and under voltage but it is better to convert any external circuits to 0 to 3.3V.
- The GND/3V3 and GND/5V connections can be used to link to a solderless breadboard or power an external circuit (within limitations).
- The EG outputs are not buffered, so should not be connected to anything likely to draw more than a few mA current.
- The EG Trigger and Gate can be patched together for a combined Gate/Trigger input.

**Extra care should be taken when using the GND, 3V3 and 5V power signals.**

## Making the First Noise

### Kit Required:

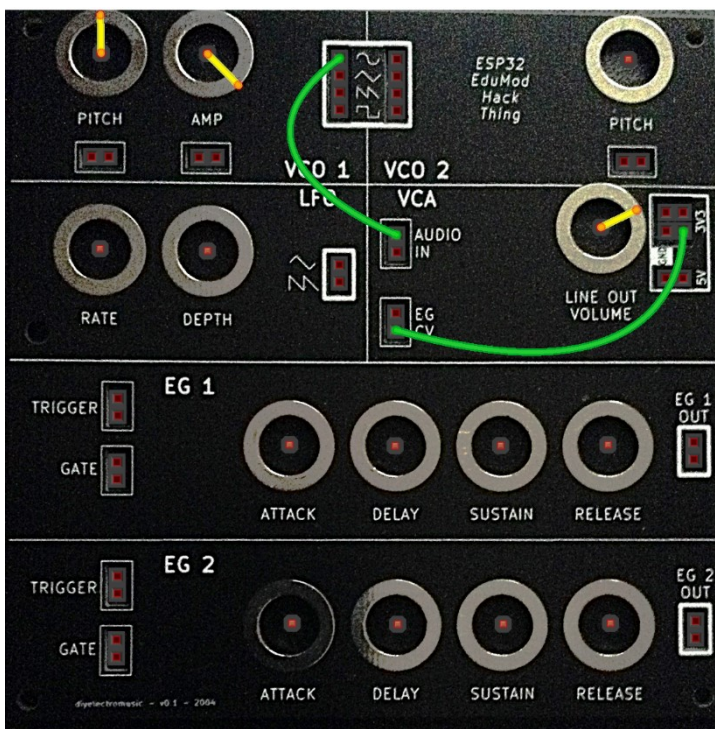
- 9V battery, clip and barrel connector.
- External amplification.
- 3.5mm stereo jack lead to connect to amplification.
- Jumper wires



Note that the 3V3 connector is used as a fixed “HIGH” envelope signal to the VCA.

Both the VCO amplitude and VCA line out volume are turned up.

The VCA gets an audio input direct from the VCO1 output. Any of the four waveforms can be used as the output.



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