

## Cardinal: Open Source Modular Synthesis

# What is modular synthesis?

Separates audio synthesis into individual components. Each component has parameters that can be controlled by a voltage signal.

Looks like you're defusing a bomb or flying a plane.

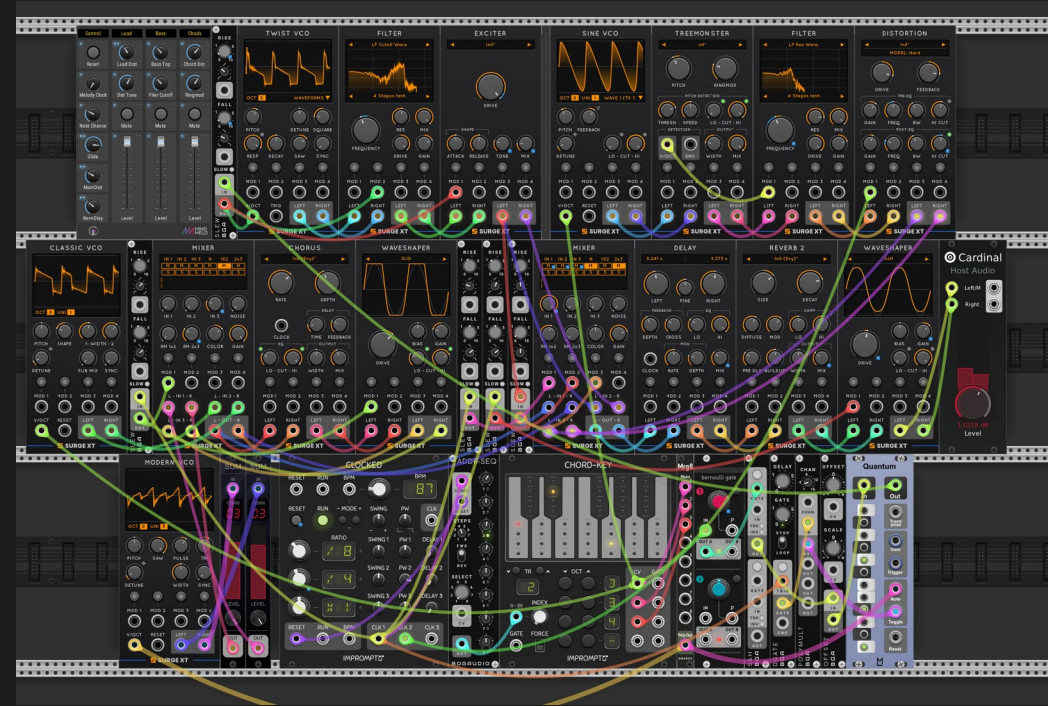
The hardware can get really expensive which is where Cardinal comes in.





# Cardinal

- Software based modular synthesis
- Based on VCV Rack using only open source modules
- Has 1305 different modules
- Can be used as a plugin in a Digital Audio Workstation



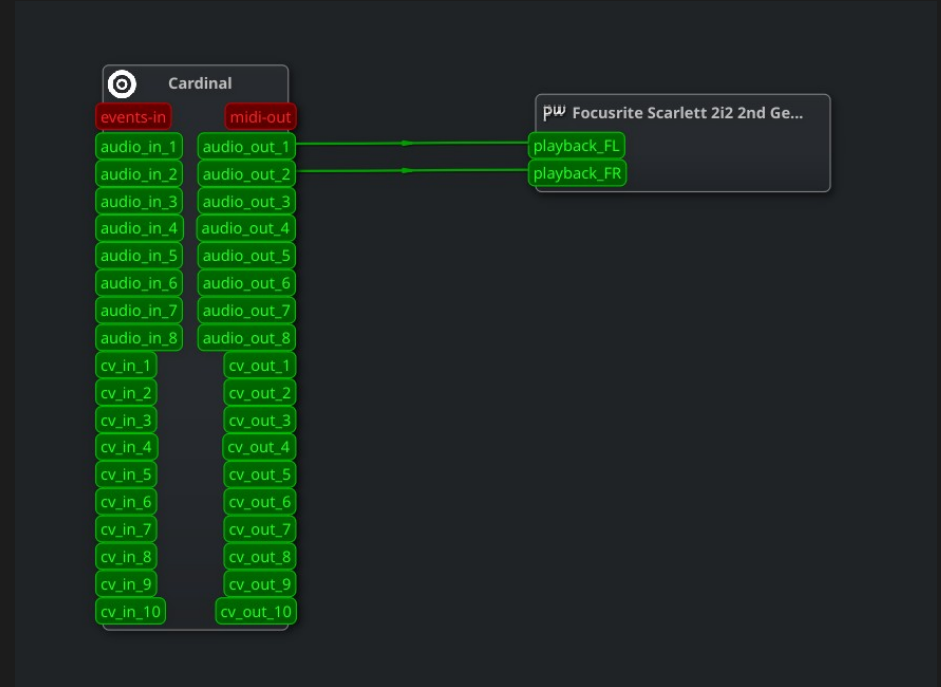
# A Basic Patch



# Some Tips

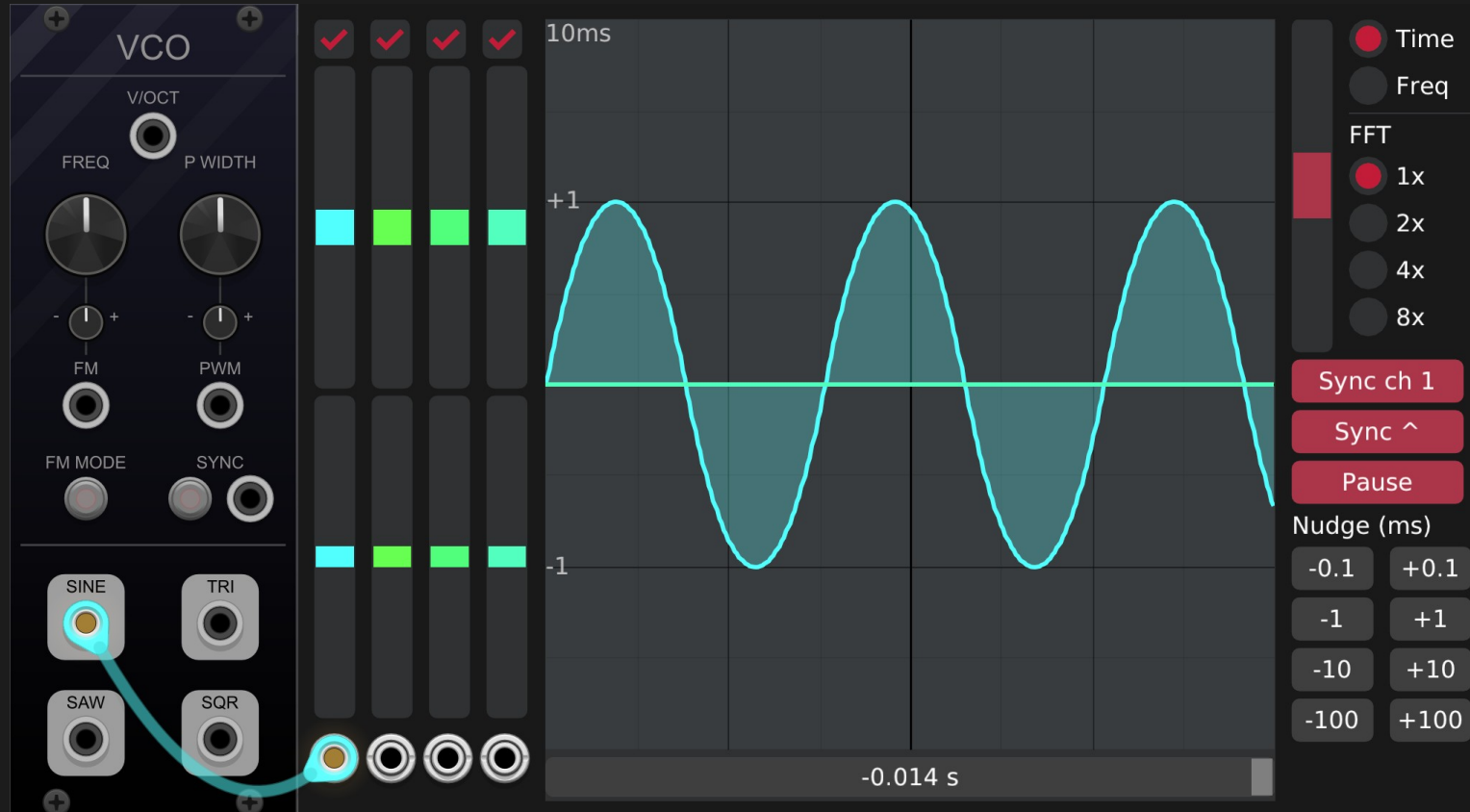
Right click to open the module browser. Filter by brand and select VCV to find the modules in the previous image.

If you're using JACK or Pipewire you might need to manually connect the audio outputs.

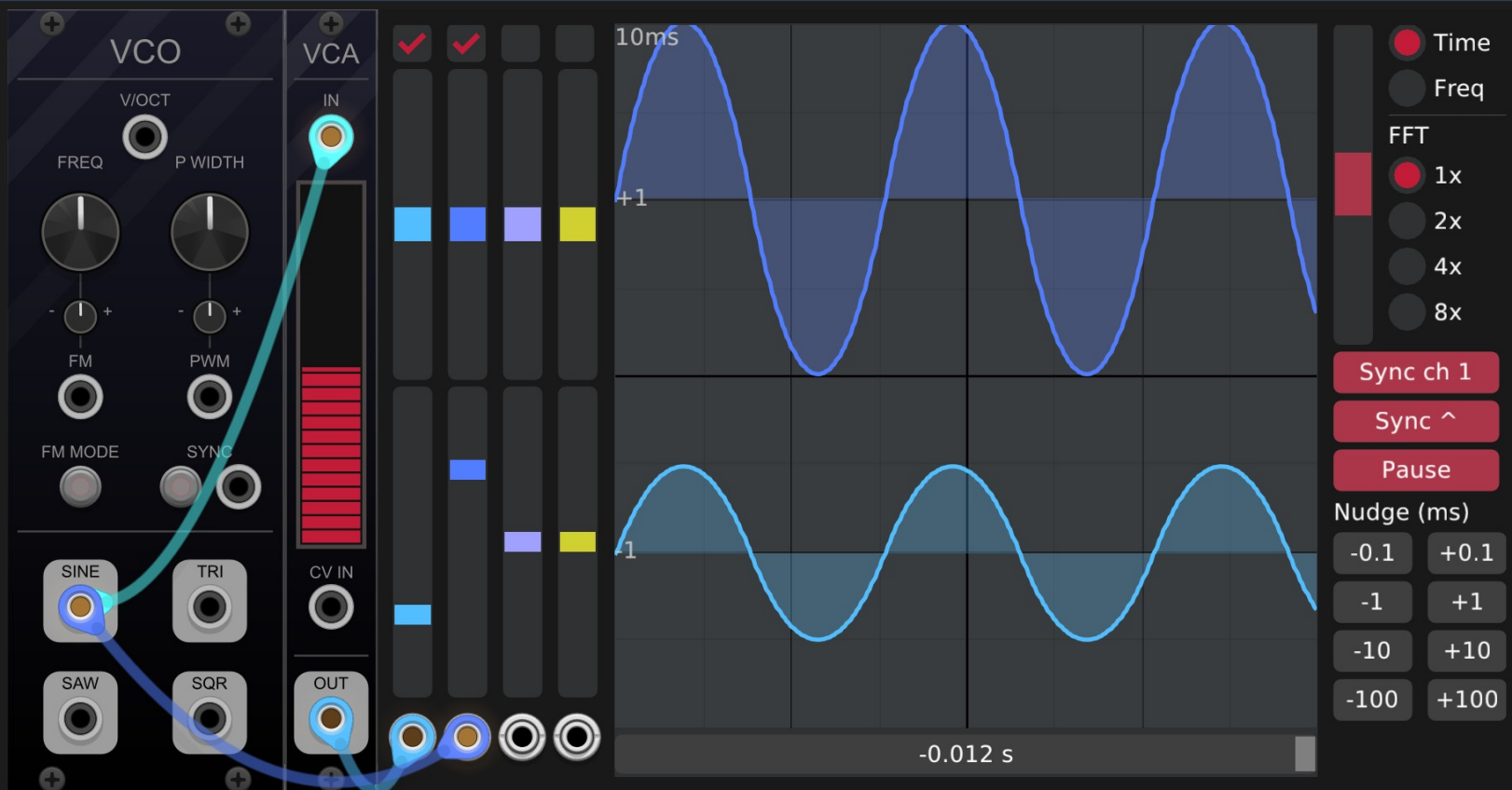


qpwgraph

# VCO: Voltage Controlled Oscillator

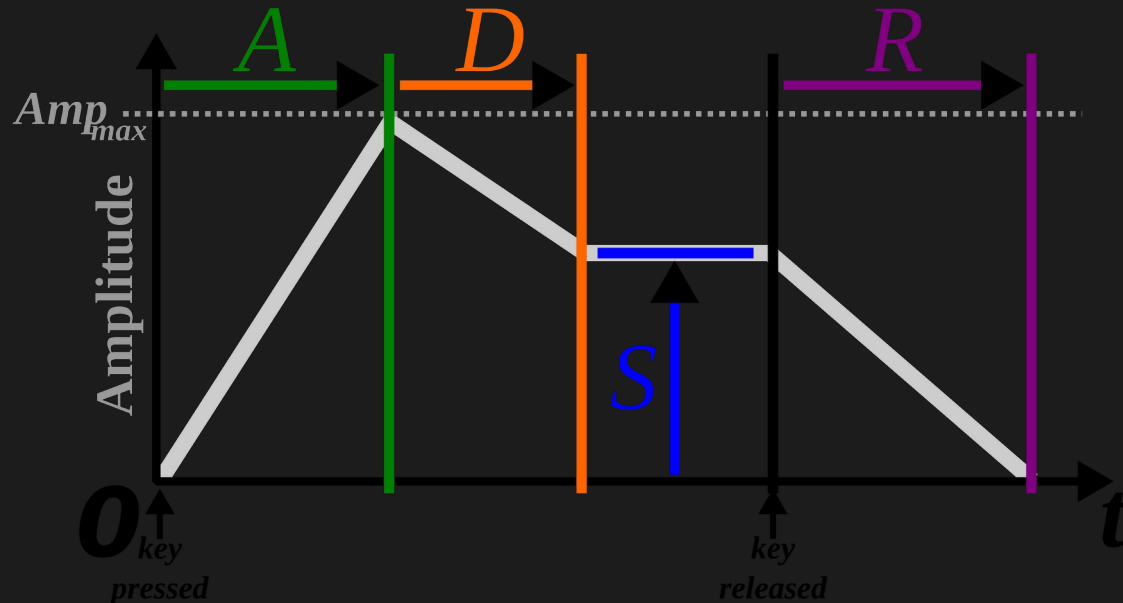


# VCA: Voltage Controlled Amplifier



# ADSR: Attack Decay Sustain Release

- Envelope generator
- “Shapes” the sound





# Sequencer

**Generates patterns of notes. This is used in place of a traditional keyboard.**



# Now You Try! :)

**Now take some time to experiment. I'll be around for the rest of the meeting if you have questions.**