

User Manual

LoFi Generative Sequencer

Regional Electronic Music Australia



The LoFi Generative Sequencer is a self-contained, DIY electronic musical instrument. It is battery powered, with a built-in loudspeaker and headphone output, and driven by an ESP32 microcontroller. It can generate and playback repeated monophonic musical patterns up to 16 steps in length.

Quick Start Guide:

- Turn it **on and off** with the switch in the centre of the top plate. The red LED should indicate the power status.
- **Start** and stop playback by pressing the Green (left) button.
- Adjust the **volume** with the top-right dial (White).
- Adjust the **timbre** (brightness) with the bottom-left dial (Yellow)
- Adjust the **note density** with the bottom-right dial (Green)
- Adjust the **pitch range** with the top-left dial (Red)

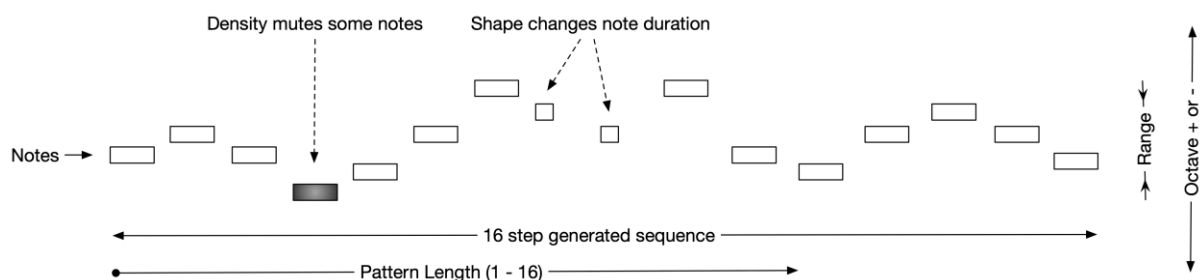
- **Generate** a new pattern by pressing the Blue (right) button
- **Perform** live changes to the pattern playback by adjusting the timbre, density and range dials.

Accessing More Controls:

Hold down the Blue (right) button and turn a dial to change more parameters.

- Hold-Adjust the **tempo** with the top-right dial (White).
 - From 60 – 180 bpm in 10 bpm increments, with 120 bpm in the centre
- Hold-Adjust the **octave** with the top-left dial (Red).
 - Form –2 to +2 octaves with 0 in the centre.
- Hold-Adjust the envelope **shape** with the bottom-left dial (Yellow).
 - From short to long envelope shapes.
 - Turning the dial all the way to the right changes the oscillator type between sawtooth, square, and noise.
- Hold-Adjust the pattern **length** with the bottom-right dial (Green).
 - Sequence lengths between 1 and 16.

Visual representation of sequence variation options



M8 Audio Synthesis Library

The LoFi Generative Sequencer uses the M8 audio synthesis library for the ESP32 microprocessor. This open source library is available on GitHub -

<https://github.com/algomusic/M8>

LoFi Generative Sequencer Information

The LoFi Generative Sequencer is an open source project and documentation about the project and how to build it are available on GitHub - <https://github.com/algomusic/lofi-sequencer>

Project Information: <https://www.regionalelectronicmusicaustralia.com/>