

# SWIFT DIY Synthesizer

tim gourley ┌─────────┐ phase 2 lightning talks ┌─────────┐ november 16, 2023



\$4,999



MATT JOHNSON  
MONTAGE M



\$5,699

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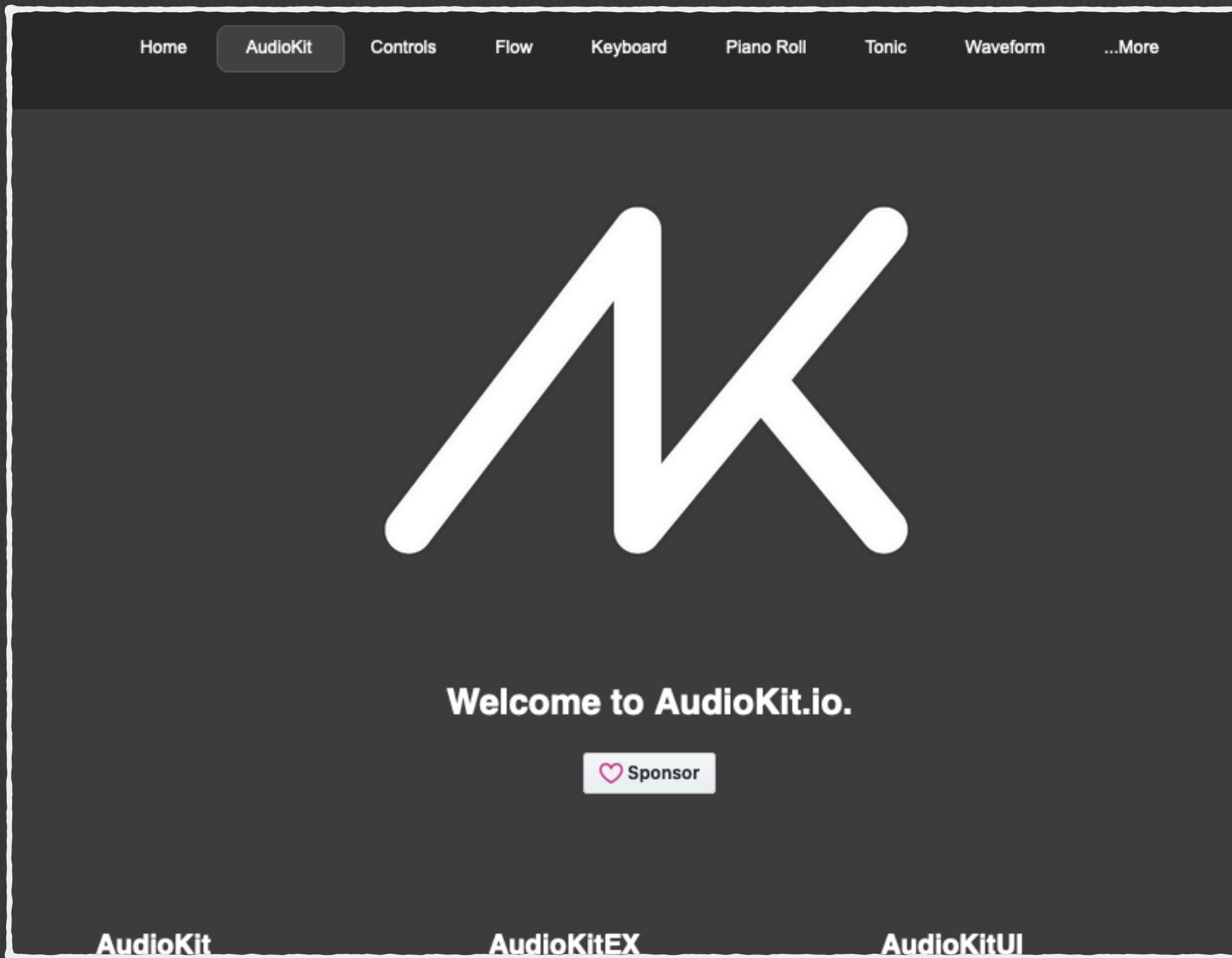
# Why not DIY?

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Modular is fun, but can be an expensive rabbit hole of patch cables, solder and despair.

Image credit: Thomas Barnwell, [@thomasthefourth](#)

# AudioKit



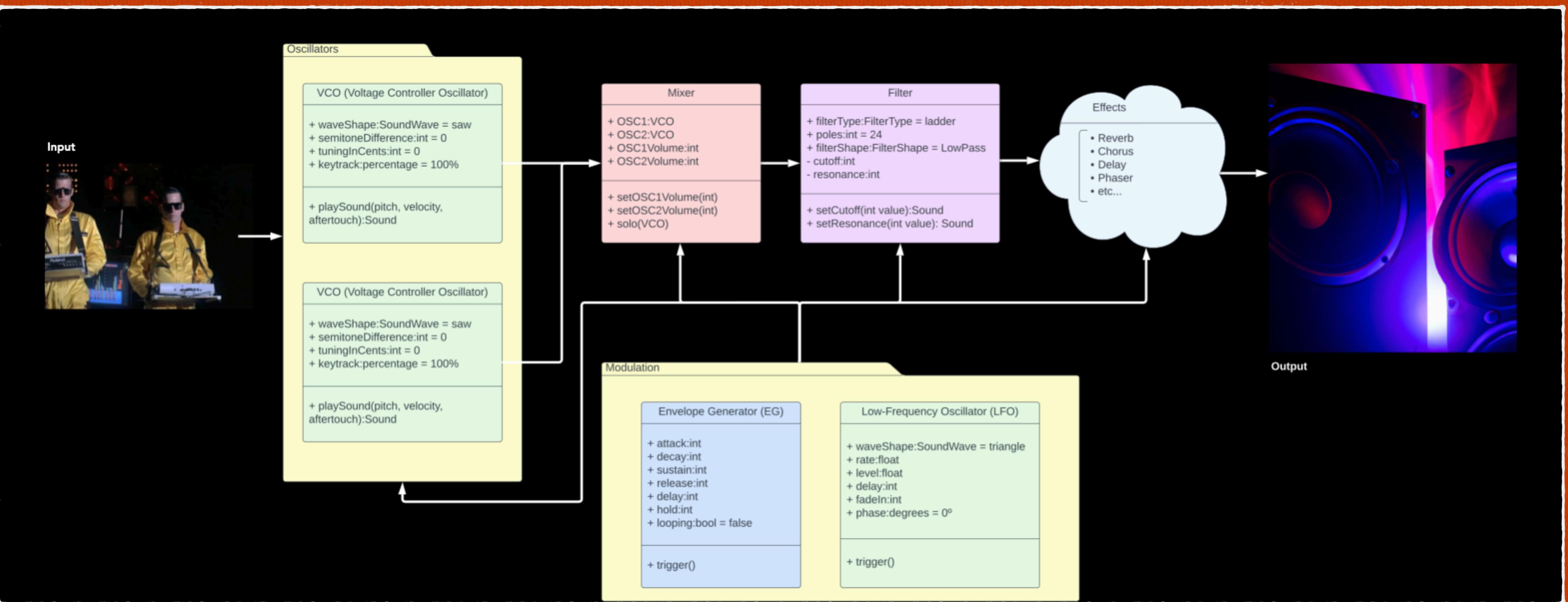
- [\*\*https://audiokit.io\*\*](https://audiokit.io)
- Swift audio synthesis, processing, and analysis platform for iOS, macOS, and tvOS.**
- Full-stack suite of audio tools from low-level audio manipulation to SwiftUI views, including MIDI support.**
- Good documentation, a starter cookbook application, Youtube videos, and plenty of activity on Github and StackOverflow.**

# Start a new SwiftUI Project

- Select File -> Add Packages
- Click the + icon on the bottom left of the Collections sidebar on the left.
- Choose “Add Swift Package Collection” from the pop-up menu.
- In the “Add Package Collection” dialog box, enter the URL:  
<https://swiftpackageindex.com/AudioKit/collection.json> and click the “Load” button.
- It will warn that it is not signed. That’s fine. Click “Add Unsigned Collection” and then you are good to go.

## Package Dependencies

- >  **AudioKit** 5.6.1
- >  **AudioKitEX** 5.6.0
- >  **Controls** 1.1.2
- >  **Keyboard** 1.3.6
- >  **KissFFT** 1.0.0
- >  **SoundpipeAudioKit** 5.6.1
- >  **Tonic** 1.0.10



# Subtractive Synthesis

A reminder of how it works; from the Summit 1.0 presentation “Sound Design is Programming”