# Demo Proposal: Synth Kitchen

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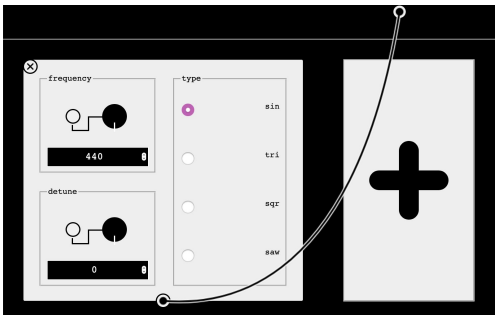
## ABSTRACT

Synth Kitchen leverages the Web Audio API and Web MIDI API to bring interactive modular synthesis to the web. The goal of this project is to make modular synthesis cheap and accessible to anyone with a modern browser.




## 1. INTRODUCTION

Synth Kitchen began as a set of JavaScript tools for defining Web Audio Node graphs, and grew into a React-based UI for defining and manipulating said graphs. The addition of support for the Web MIDI API enables the use of Synth Kitchen alongside external hardware and software.

Synth Kitchen was created by Spencer Rudnick, and is supported with contributions from Olha Danylchenko for design and CSS, Stefan Osorio for React, and Ika Podola for Project Management.

## 2. PROJECT GOALS

The goal is twofold: to invite newcomers to explore and learn about synthesis, and to provide a free internet-accessible alternative to hardware and software.

### 2.1 Accessibility

Being based on the web platform, Synth Kitchen is intended to be usable by anyone who can use a keyboard or pointer device. Relying on HTML5 and JavaScript, we strive to create a meaningful accessible experience, making this project unique in its approach to the design of a software synthesis system.

### 2.2 Education

There are plans to add tutorials to the site. These will be geared toward absolute beginners in the synthesis world, and will cover various aspects of modular synthesis with the goal of empowering anyone to build their own patches.

### 2.3 Sharing

As a publicly available website, Synth Kitchen will eventually support the ability to save and share patches. All patches will be licensed under Creative Commons and will be free for anyone to use and change.

### 2.4 MIDI Integration

By supporting Web MIDI, Synth Kitchen integrates with any external MIDI sequencer. This allows Synth Kitchen to transcend the web platform and be used as a tool for musicians and artists.

## 3. TECHNICAL REQUIREMENTS

To properly demonstrate Synth Kitchen requires a laptop with headphones. A headphone splitter could enhance the experience by allowing pairs to learn together. Depending on the available space, a projector and speaker could be used to demonstrate more complicated patches.

## 4. MEDIA

Included are screen-shots of the prototype, a version of which is public at https://synth.kitchen. Also included are links to recordings made with the prototype: synth-kitchen-beta-0, synth-kitchen-beta-1, synth-kitchen-beta-2.