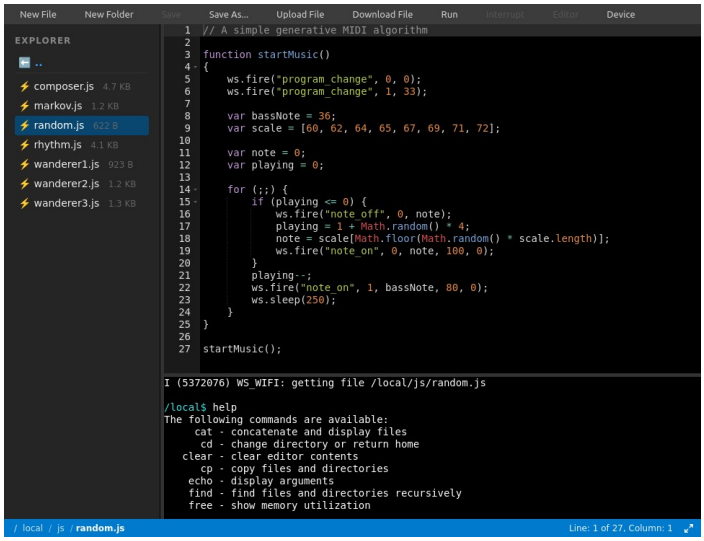
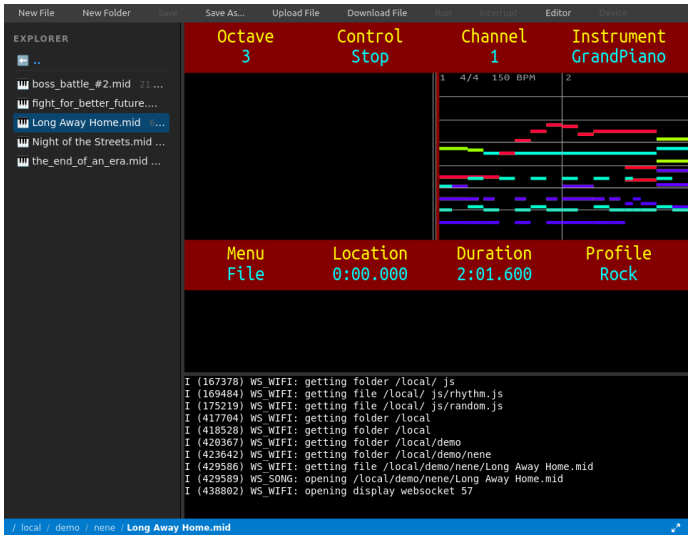
Developer Tools – Quick Start Guide

Express, Lightning and Rivet now provide support for web-based developer tools that let you view the device screen in a web browser, upload and download files, navigate through files and folders and develop and edit programs to control your device using JavaScript (ES5).

To access the developer tools, you need to use the device's Network Menu to connect to WIFI (or launch the builtin Access Point) and start the builtin web server. Then visit the developer tools page from a web browser on the same WIFI network. The URL is of the form http://192.168.1.37/tools.html where 192.168.1.37 is the IP address of your device, visible in the Network Menu after your device has connected.

The developer tools feature a familiar three pane layout, with a file explorer on the left, a content pane on the top right and a console pane on the bottom right. At the top of the screen is a menu bar and at the bottom is a status row. There is also a right button context menu for the navigator items.





JavaScript Editor

The builtin JavaScript editor makes it easy to write or edit programs to control your device using events.

When you interact with your device, like pressing a touch sensor, the firmware fires an event. You can hook these events and handle them in your program, or fire events to control the device. You can even clear the existing handlers for an event to remove the default action and totally customize your device.

The interface to the device firmware is a JavaScript object named ws (for Wildwood Soundworks). It provides hook and fire methods.

The editor has code completion assistance, so when you start typing ws. for example It will prompt with the methods the ws object supports. When you type ws.fire(it will prompt with the events the ws.fire method supports.

The example program on the left plays notes on two channels. It starts by firing the program_change event to set channel 0 to piano (0) and channel 1 to bass guitar (33).

It then fires note-on and note-off events to play notes on those channels. A set of example programs is available on the website, with more on the way. The device supports about 190 events, so if there is a particular capability you'd like to know more about, let us know at support@wildwoodsoundworks.com.

Use the Run item on the menu bar to run your JavaScript program, and when it's running you can use the Interrupt menu item to stop it. Also, be sure to Save your program before running, in case something goes wrong and you need to restart the device.

Device View

Click on the Device item on the menu bar to see the device view in the content pane. You can then interact with the view using the keyboard or mouse. Press space to see the keyboard help. On Lightning and Rivet you can also use the mouse to access the Softkeys or press on the items in the Chord or Note Wheels.

The navigator pane provides quick access to the device's files and folders, including local storage, as well as SD card and USB storage if available. To open a MIDI or WAVE file in the device view, just click on the file name. You can switch between Device and Editor view using items on the menu bar. If you select the Editor on a MIDI or WAVE file, you'll currently see a read-only representation of the file's binary content.

File Management

Use the Upload File item on the menu bar to upload a file from the web browser to the device. Use the Download File item to download a file from the device to the web browser. Right click on items in the Explorer pane to copy, rename or delete them. Be careful with delete. You're prompted to delete, and if you proceed, the files are deleted and cannot be recovered.

Console View

The bottom right pane is the Console view. In this view, you'll see messages from the firmware. It also supports a command line interface. To see what commands are available, type help.

The command line interface handles POSIX-style wildcard characters (e.g. * for multiple character wildcard, ? for single character wildcard, etc.). It also supports I/O redirection. For example to save a list of files to a file, enter ls > files.txt.

Troubleshooting If you're having trouble connecting to your local WIFI, try moving closer to your router / access point. If you're still having trouble, try cycling the power on your router / access point to clear its internal cache and reset its tables. If you're able to connect to WIFI but cannot access the tools, make sure you entered an address of the form http://192.168.37.1/tools.html and not https//192.168.37.1/tools. Browsers frequently change http to https and then hide that portion of the URL in the address bar so you're not aware of the change. The device supports only http.