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Introduction

The Smart Multibox is a 2-input, 4-output MIDI interface with a microprocessor "brain". You can use custom scripts to filter, route and translate incoming MIDI messages and send them to any or all of the MIDI outputs.

Scripts are written in Micropython, which is similar to Python 3, but is optimized for running on small devices. As of this writing, the Smart Multibox uses version 1.24.1 of Micropython.

Smart Multibox Editor

Setup

The Smart Multibox Editor app is used to edit scripts and send them to the Smart Multibox. It's available for these platforms:

- MacOS 12 (Monterey) or newer
- Windows 10 or newer

To use the app, connect the Smart Multibox's USB C connector to your computer, then start up the Smart Multibox Editor. In the upper right corner, it should show "Smart Multibox:26". If it instead reports "-not connected-", check your USB connection and click the dropdown menu (that currently says "-not connected-"). Select "Scan for Devices". It should connect immediately to the Smart Multibox at that point.

If you have more than one Smart Multibox, you can use the Global Settings window to assign a different name and Sysex ID number to each unit. It's important to have different IDs and names on them so that the computer can distinguish between each unit. When more than one unit is physically connected to your PC, the dropdown menu in the upper right will show all of the connected Smart Multiboxes. You can use that menu to select which device the editor is currently connected to.

When setting a Smart Multibox's name and sysex ID, it's best to only have one Smart Multibox connected to your computer. Once you've changed the name and ID, the editor app can tell them apart and you can plug more than one into your computer simultaneously.

Usage

On the left side of the screen, a list of all scripts you have downloaded or written is shown. On the right, the contents of the currently selected script is shown, and you can edit it there.

A new blank script can be created using the "+" button and the currently selected script can be deleted using the "-" button. The "Sort" button sorts the list of scripts by title.

At the bottom of the left column, there's a button titled "Download More Scripts", and this allows you to download any of the scripts we've put on our website. This list will continue to grow as we write more examples or users contribute their scripts.

To send the currently selected script to the Smart Multibox, press the button "Send Script To Device". Pressing "Read Script From Device" will read the current script from the Smart Multibox and save it as a new script in the list.

At the bottom of the screen is a message log. This displays any errors that occur during the running of the script, and also the output of any print() command in the script, as long as the Smart Multibox is connected.

Accessories

TRS Port

The Smart Multibox has a 1/4-inch TRS input, which can be used to connect an expression pedal, a 1-button footswitch or 2-button footswitch, and scripts can act based on changes to the connected accessory.

Please see the Hardware Access Functions and Callbacks sections to find out how to write scripts using these accessories.

Expression Pedal

> The Smart Multibox accepts a standard tip-to-wiper expression pedal. This is the most common kind, made by Roland/Boss, Mission Engineering, Fractal Audio, etc.
>
> ***NOTE:*** *This is different than all the older RJM Music products. We formerly used the other type of expression pedal, ring-to-wiper, but we're starting to move to the more common format, starting with this product.*

External Switch

> The TRS port can also accept a 1 or 2 button footswitch. The footswitch should be a simple momentary or latching short-to-ground switch, with no LED in series with the switch. A 1 button footswitch can use a 1/4-inch TS (mono) cable, but please note that the ring switch will always be considered "on" when using a mono cable. When using a 2-button footswitch, a 1/4-inch TRS cable is required.