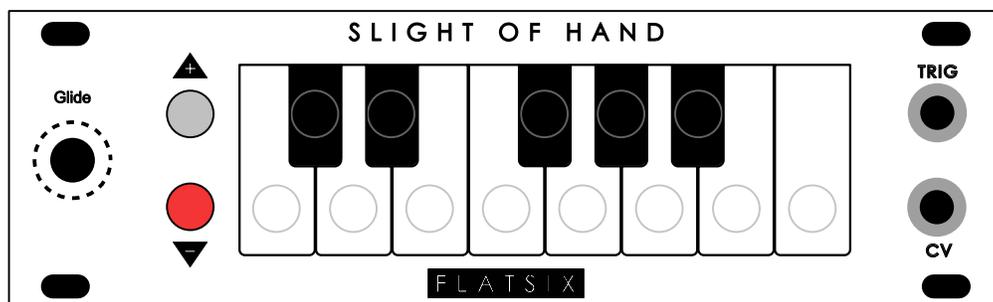


SLIGHT OF HAND
USER MANUAL

Firmware v1.5.3



WWW.FLATSIXMODULAR.COM

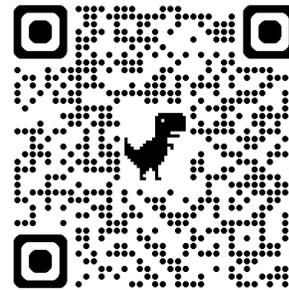


Nocturne Alchemy PLATFORM

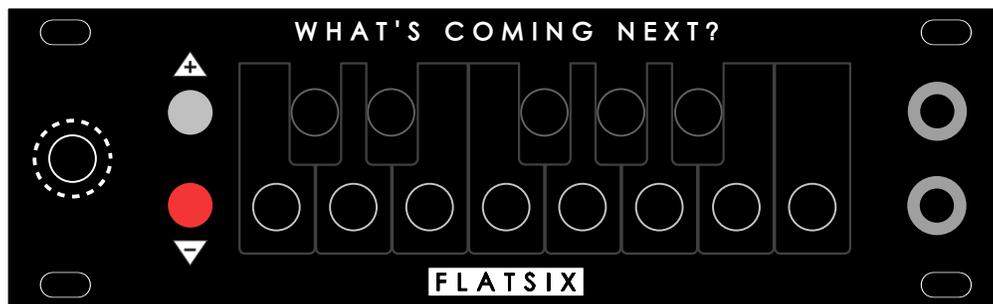
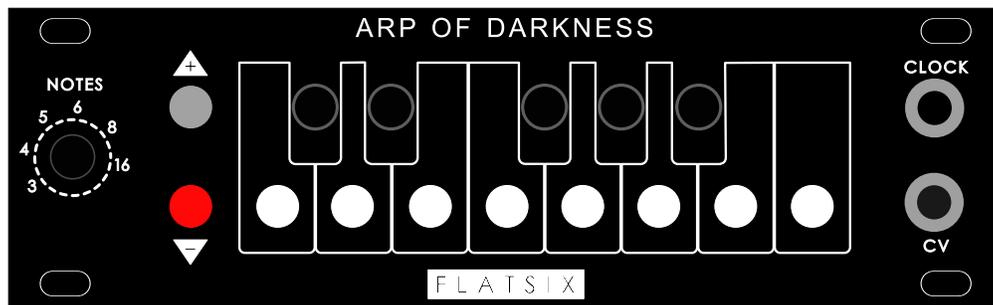
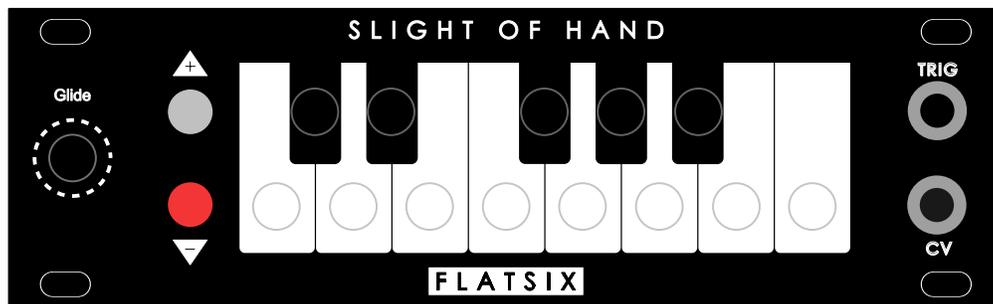


Introducing the **Nocturne Alchemy Platform** – a flexible eurorack module series that redefines versatility and creativity. Each module within the Nocturne Alchemy Platform shares the same robust Arduino-based hardware, allowing you to effortlessly swap functionalities through our intuitive web firmware loader. By purchasing one module, you gain access to the full range of available firmwares, including our current creations, **Slight of Hand** and **Arp Of Darkness**, as well as others planned for future release! This innovative approach means your module can evolve with your music, with new and exciting functionalities just a simple firmware update away. Embrace the magic of endless possibilities with the Nocturne Alchemy Platform.

Install FREE firmwares here:



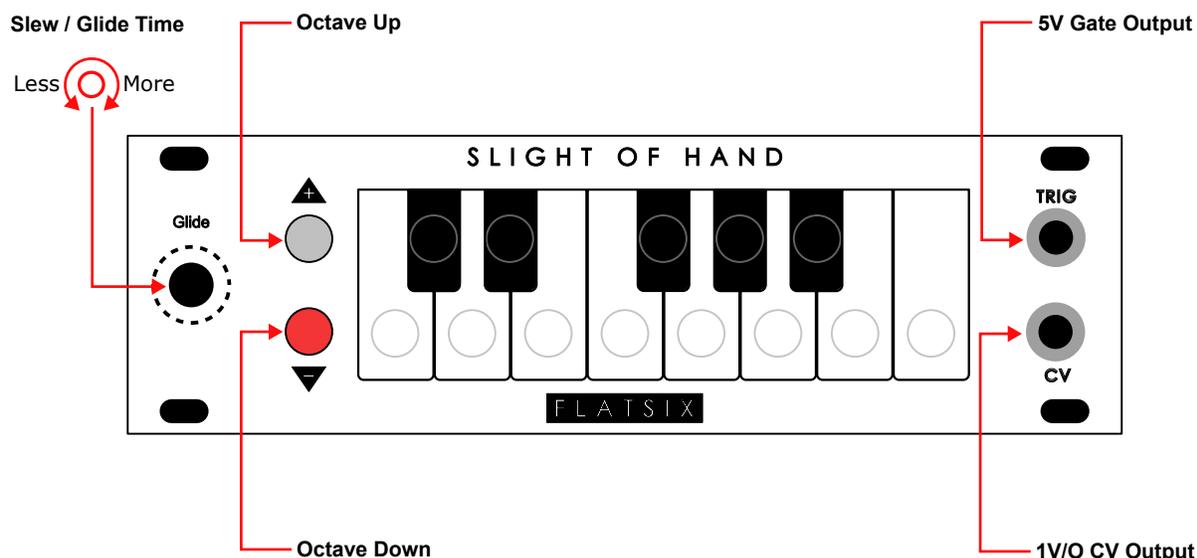
<https://flatsixmodular.com/firmware/>



SLIGHT OF HAND QUICK START



A play on words of the phrase "Sleight of hand" due to its "slight" footprint, Slight Of Hand is a 1U (Intellijel format) Eurorack module that functions as a monophonic CV keyboard. Designed to be extremely playable with responsive, light-touch, tactile switches for keys, a wide portamento/slew range which is adjustable in real-time, as well as octave up and down buttons, it's a perfect way to get hands on with your live performances.



Specifications

- Height:** 1U (Intellijel format)
- Width:** 26HP
- Depth:** 40mm ("Skiff-friendly")
- Current Draw:** 40 mA +12V, 0 mA -12V, 0 mA +5V
- CV Output:** +0 to +4V Calibrated to 1V/O Standard
- TRIG Output:** +5V Gate

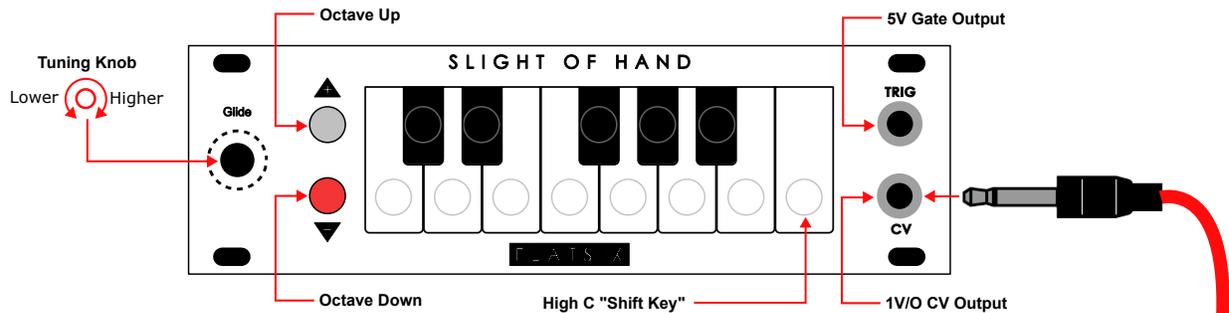
Each module comes pre-calibrated and with the latest firmware version. Check www.flatsixmodular.com for more info and firmware updates or share your patches with us on Instagram [@flatsix.modular](https://www.instagram.com/flatsix.modular)



SLIGHT OF HAND CALIBRATION MODE



The Slight Of Hand features a Calibration Mode that allows users to fine-tune the voltage output for each note, ensuring precise pitch control. This mode is particularly useful for adjusting the module to align with specific musical tuning requirements or to compensate for hardware variances. All modules come pre-calibrated (every note across 4 octaves) to the closest 100th of a volt. Most users will never need to calibrate it, but should you choose to, the following procedure is how it is done:



Entering Calibration Mode

Connect multimeter & cable to CV out: Make sure the tip of the cable is connected to signal (red) and the sleeve to the ground (black).

Initiate Calibration Mode: Press and hold both the "Octave Up" and "Octave Down" buttons simultaneously while powering on the device. Confirmation: The module indicates entry into Calibration Mode by setting the gate output to HIGH.

Calibration Process

Selecting a Note: Press any note button (except High C) to select it for calibration. The High C knob acts as a "Shift Key" which enables calibration of the note you selected.

Confirming Selection: Press the High C button to confirm the selection. This action activates the potentiometer for calibration adjustment.

Adjusting Calibration: Turn the potentiometer to adjust the voltage for the selected note. The adjustment range is limited to one full step above and below the default voltage for finer control.

Saving Calibration: Release the High C button to save the adjusted voltage. The new calibration value is stored in EEPROM, ensuring persistence across power cycles. Now move to the next note. A best practice is to start at C0, and work your way up through every note across four octaves. This may take some time. (I know because I have hand-calibrated every unit sold, so you hopefully won't have to.)

Special Note Handling

High C (C4): Because the calibration mode uses the high C button on the keyboard as a "shift" button to confirm editing a pitch, the calibration of the final high C4 note is handled differently. When in calibration mode, the octave buttons will allow the keyboard to shift up one additional octave, forcing C4 into the low C key for tuning. No other pitches in that octave will be calibrated, but this allows for calibration of the final high C4.

Exiting Calibration Mode

Exit: Press and hold both the "Octave Up" and "Octave Down" buttons simultaneously for 2 seconds. The module exits Calibration Mode, indicated by the trigger output set to LOW. Now go make some music.

Eurorack Calibration Table For Reference

| C | C# | D | D# | E | F | F# | G | G# | A | A# | B |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.000 | 0.083 | 0.167 | 0.250 | 0.333 | 0.417 | 0.500 | 0.583 | 0.667 | 0.750 | 0.833 | 0.917 |
| 1.000 | 1.083 | 1.167 | 1.250 | 1.333 | 1.417 | 1.500 | 1.583 | 1.667 | 1.750 | 1.833 | 1.917 |
| 2.000 | 2.083 | 2.167 | 2.250 | 2.333 | 2.417 | 2.500 | 2.583 | 2.667 | 2.750 | 2.833 | 2.917 |
| 3.000 | 3.083 | 3.167 | 3.250 | 3.333 | 3.417 | 3.500 | 3.583 | 3.667 | 3.750 | 3.833 | 3.917 |
| 4.000 | | | | | | | | | | | |



Calibration Mode is designed for precision tuning. It is recommended to use a reliable multimeter for accurate calibration.

Resetting to Default Values

If for any reason you want to reset all of the calibration values to the module defaults, and start calibrating from scratch, use this function:

Initiate Reset: While in Calibration Mode, press and hold the "Octave Down" button for 8 seconds without pressing the "Octave Up" button.

Confirmation: The module confirms the reset by blinking the trigger output 6 times. All notes are reset to their default calibration values.

SLIGHT OF HAND FIRMWARE UPDATE

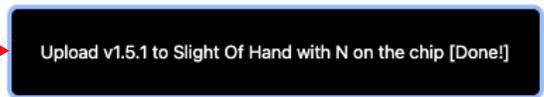
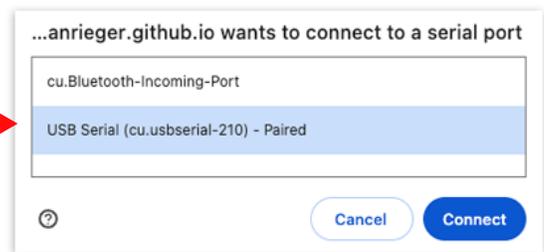
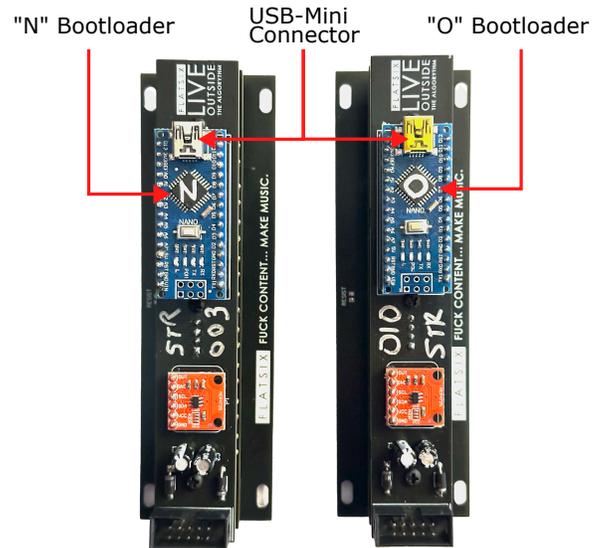


The Slight Of Hand has an Arduino Nano at the heart of it. Firmware updates can be made using a USB-A to USB Mini cable connected from your computer to the Arduino underneath the module. One can always find the latest firmware version and a link to an online uploader utility at www.flatsixmodular.com/firmware/

Browse to the Firmware Web Uploader Page

The firmware uploader for Arduino-based modules such as Slight Of Hand only works in Google Chrome on a Mac or PC. You will also need a USB-A to USB Mini cable. If you don't have one laying around, you can find many inexpensive ones on Amazon

- Make sure to unplug your module from the Eurorack power cable first!
- Plug in your USB cable to the mini USB port on the Slight Of Hand. It's okay to leave the Arduino plugged in to the sockets of the module.
- The chip next to the USB port will have an "O" or an "N" written on it - On the web uploader page, click the matching red button to upload that firmware.
- Note: If you don't have an "N" or "O" on the chip, try "O" first, then "N". Guessing won't hurt anything because the uploader will just fail. If it does fail, try the other one (It has to be one or the other and you have a 50/50 chance of getting it right the first time!)
- Select the "USB Serial" option from the prompt that pops up. It should be highlighted when selected.
- Click "Connect" and wait while the file uploads until the button says [Done!]
- That's it. Unplug from the USB cable, plug in the case power, and go make some music.



SLIGHT OF HAND PAIRINGS: DISTING MK4

FLATSIX

The Slight Of Hand has many obvious applications as a CV keyboard, but there are many ways that it can be patched creatively as a CV controller to open up your performances and patches. One of which is using the much loved/hated multi-tool of the Eurorack world known as the Disting MK4 (or the EX). Here's two personal favorites of mine:

Performance Loop Controller

Turn your Disting Mk4/EX into a hands-on, loop triggering powerhouse in a very HP efficient way.

- Set your Disting to Algorithm I2 - Clocked Audio Playback
- Select your disting folder with the loops you will be using
- Patch a clock source into the Y input on the Disting (In this case the clock output from the uO_C running Hemisphere Suite.)
- Patch the CV output of the Slight Of Hand into the Z input on the Disting
- Now patch your stereo outputs (X & B) from the Disting to your audio outputs or mixer

That's it. Just start your clock, and tap different keys on the Slight Of Hand to trigger loops on the fly. You can also run another clock trigger at the beginning of each bar into the Disting's X input for perfect sync. Try changing octaves for the full range of samples (depending on how many you have loaded into the folder on the Disting.)



Finger Drummer

Turn your Disting Mk4/EX into a multisample finger drumming playground (for those of you with mad skillz.)

- Set your Disting to Algorithm J6 - Multisample Audio Playback
- Select your disting folder with the multisample kit that you will be using
- Patch the Trig output of your Slight Of Hand into input X on the Disting
- Patch the CV output of the Slight Of Hand into the Y input on the Disting
- Now patch your stereo outputs (X & B) from the Disting to your audio outputs or mixer

Now have at it. Your kick, snare, hats, etc... should all be mapped to different keys on the Slight Of Hand. Tap away, and show the audience how it's done.

SLIGHT OF HAND PAIRINGS: DFAM

FLATSIX

The DFAM holds a lot of power, and there's no better way to try control a drummer from any mother than with both hands. (Drummers hit things for a living, after all.) So why not grab dualing Slight Of Hands, and put both of those beautifully beefy Moog oscillators to work for you?



Damn Man Dualing DFAM Hands

Use two Slight Of Hands to split control of the two DFAM oscillators giving you a bass and lead control with the ability to harmonize your notes.

- Setup your DFAM with the knob and switch positions as noted in the image above.
Note: The two oscillators should be tuned to each other (by ear, or tuner, but the point is that the Frequency knobs positions are relative. Your milage may vary, so use your ears.)
- Patch your left Slight Of Hand from the CV output to the DFAM VCO 1 CV input.
Patch your right Slight Of Hand from the CV output to the DFAM VCO 2 CV input.
- Now hit start stop on the DFAM and you will hear a sequence playing. Simply play the notes you want on each Slight Of Hand.
- Try pushing the right Slight Of Hand up a few octaves for a real lead sound, or even play with the slew time to bend the notes around.
- Experiment with the cutoff and other settings on the DFAM.

Come up with something really cool? Post your video of it to Instagram and tag @flatsix.modular. It's awesome seeing what people come up with and maybe you'll get featured and reposted.



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Additional Disclaimers:

- FlatSix Modular cannot be held liable for damages resulting from a breakout of a sudden dance party in your house from the sick beats you are dropping with our products. Dance at your own risk.
- Not responsible for any sudden elephant stampedes due to emissions of extreme low frequency sounds. Check your local wildlife regulations before cranking up those bass knobs.
- In no event shall FlatSix Modular be liable for any incidents involving spontaneous time travel, inter-dimensional shifts, or reality distortions that may occur while using our products.
- Use of FlatSix Modular products may not be used as a reason for alien contact, nor can FlatSix Modular be held responsible for any galactic disturbances that follow.
- FlatSix Modular is not responsible for any blisters, calluses, or finger sprains resulting from excessive tweaking, patching, or knob-turning. Modular synthesis is an art and should be approached with caution...and possibly gloves.
- FlatSix Modular accepts no responsibility for any social consequences of becoming too cool or musically enlightened from using our products. If you find yourself suddenly inundated with new friends, handle your popularity at your own risk.
- Be advised that prolonged exposure to modular synths from FlatSix Modular may lead to an insatiable appetite for more modules. FlatSix Modular is not liable for any subsequent financial distress or the need to explain to loved ones why you've converted the dining room into a sound lab.
- FlatSix Modular cannot be held accountable for lost time, be it hours, days or weeks, as you fall down the rabbit hole of patch cables and endless sonic exploration. Users are advised to set alarms, reminders, or have someone check in on them periodically.

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