

# THE MOTHER

( of all breadboard rigs )



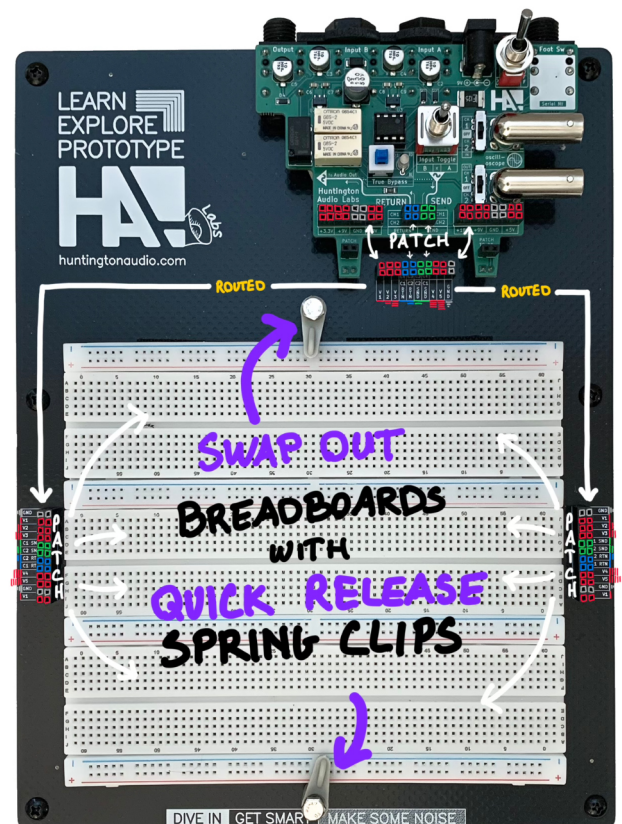
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## Overview

The MOTHER is a companion rig that brings the functionality of the HA! Labs Breadboard Butler (or similar breadboard modules from other brands) to a breadboarding platform that makes swapping projects as easy as changing sheets of paper in a three ring binder.

After attaching your Butler (or other module) to the cradle, patch your module's power and signal I/O to the labeled socket just below. The MOTHER then routes these to both the LEFT and RIGHT sockets that flank the breadboard loading zone. Use these LEFT and/or RIGHT sockets to feed your breadboard and off you go.

When you're done with your breadboard project, or when you need to switch to something new, mid-project, instead of ripping it up to clear your breadboard, just disconnect the patches from the LEFT/RIGHT sockets, release the little spring clips, and lift off your breadboard (parts still inserted) to replace it with a fresh one.



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# Parts

Here's what's included in the kit:

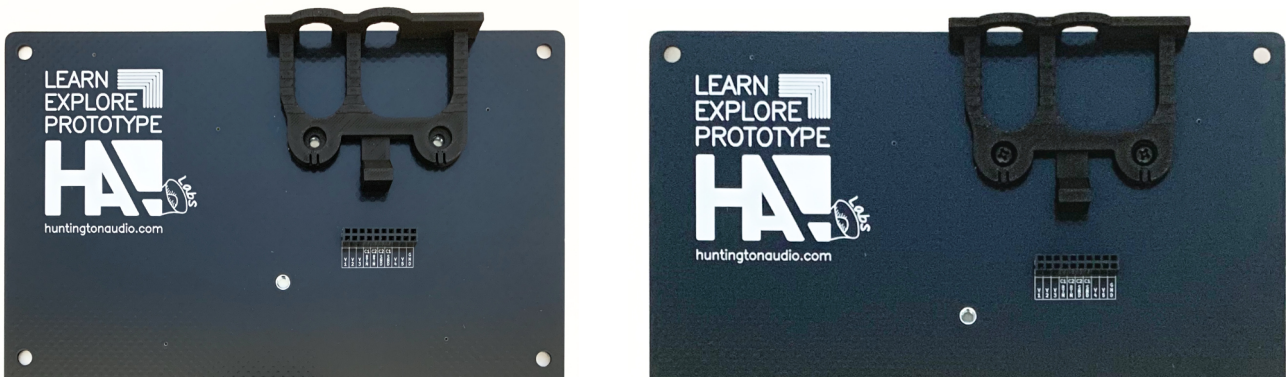
Part	Qty	Part	Qty
MOTHER PCB	1	springs	2
plastic module cradle & fittings	1	plastic clip tab	2
5 x 14cm grip tape	2	M4 x 25mm hex bolt	2
M4 x 10mm black machine screw	2	2x10 header socket (2.54mm pitch)	1
#6 x 3/8" black screw	2	2x12 header socket (2.54mm pitch)	2
#6 x 1" black screw	4	wooden sides	2



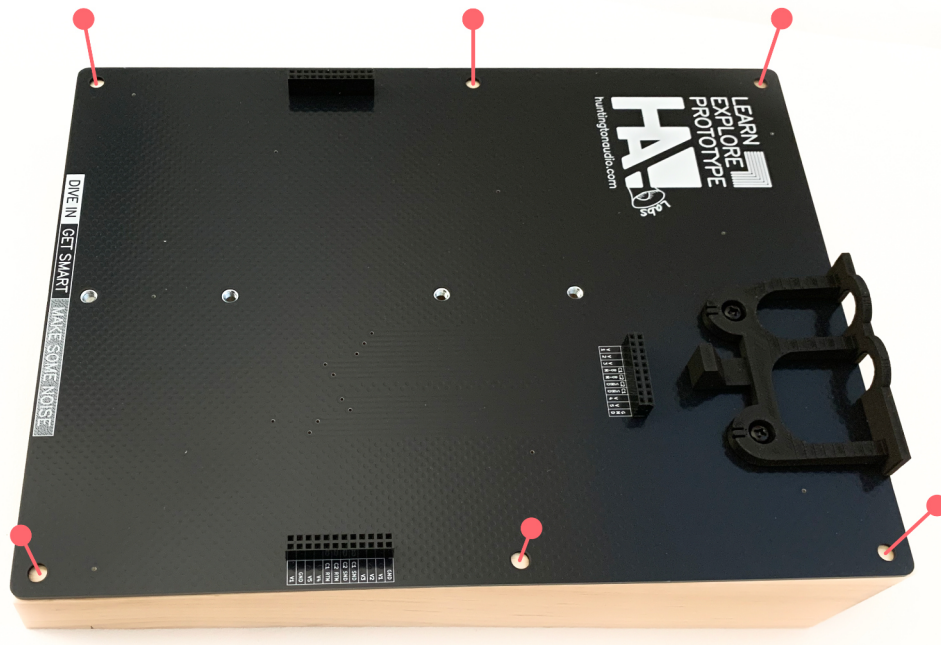
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# Assembly

1. Solder the 2x10 and 2x12 header sockets into place. You may want to use some sticky tack or masking tape to hold the sockets squarely in place while you solder them in.
2. Line up your module cradle to the mounting holes on the PCB. Then use the M4 x 10mm pan head machine screws to fasten the cradle to the PCB.



3. Next, align the PCB on top of the wooden sides. Note that the solid edge of the wood sides should be on the bottom and the notched side should be facing up, with the notch on the inside edge. With the sides aligned, use a pencil or a center punch to mark the center of each hole.

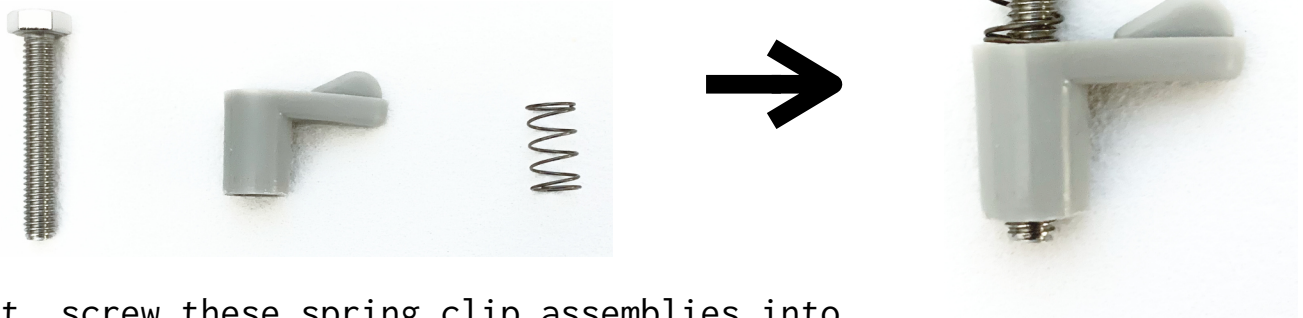


4. Set the PCB aside and use a 3/32" (or similar) bit to drill pilot holes down through your center marks into the wood. Then, attach the PCB to the wood sides using the six #6 screws. Be sure to use the two short screws (#6 x 3/8") on the bottom (lowest) edge where the wood is shortest. Then use the remaining four screws (#6 x 1") in the other locations.

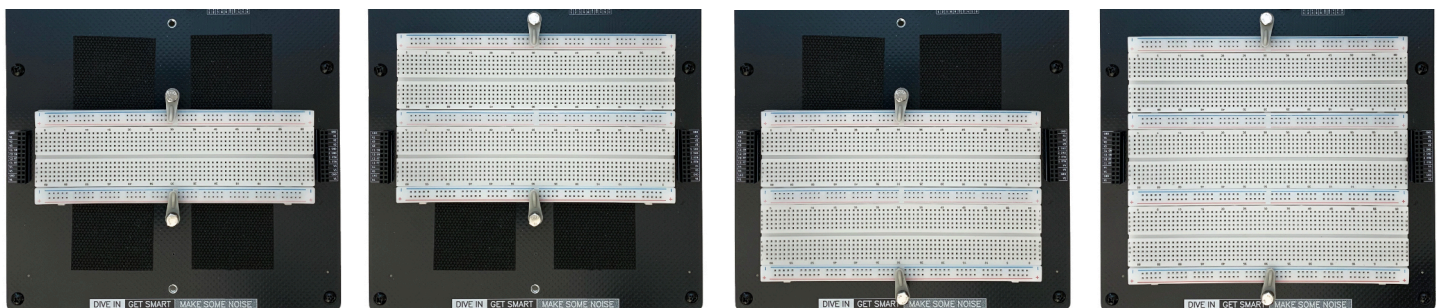


5. Apply the grip tape to your PCB surface as shown here on the right.

6. Locate the springs, the hex bolts, and the clip tabs. Create two assemblies as shown below.



7. Next, screw these spring clip assemblies into the appropriate holes for your breadboard configuration. Which holes you choose will depend on the size of your breadboard. Don't screw the bolt all the way down. The spring should be about 50% compressed and the clip should have some play/give and move freely.

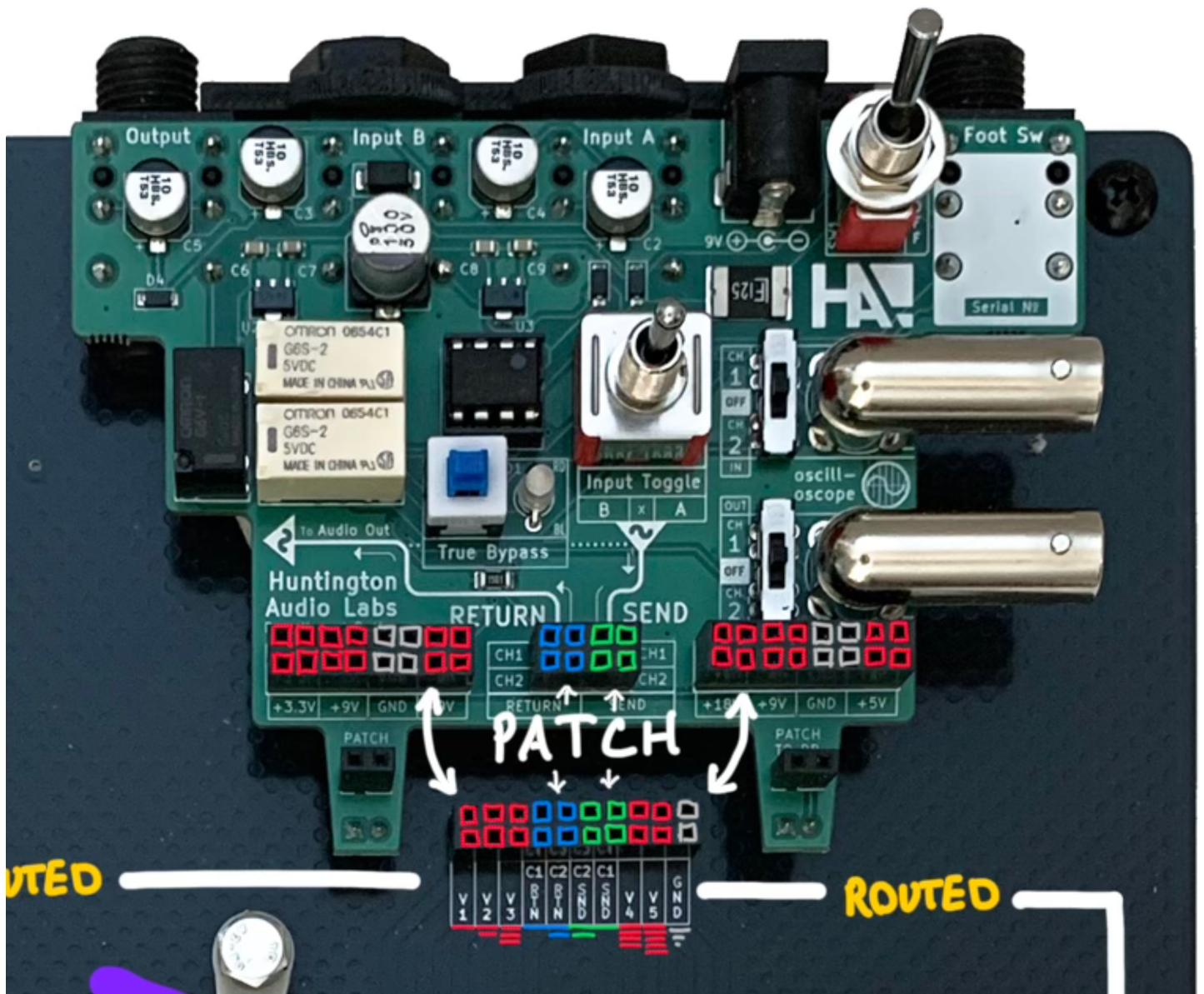


- The last thing you'll need to do is insert your Breadboard Butler (or other module) into the cradle and secure it using the supplied fittings.

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## Usage

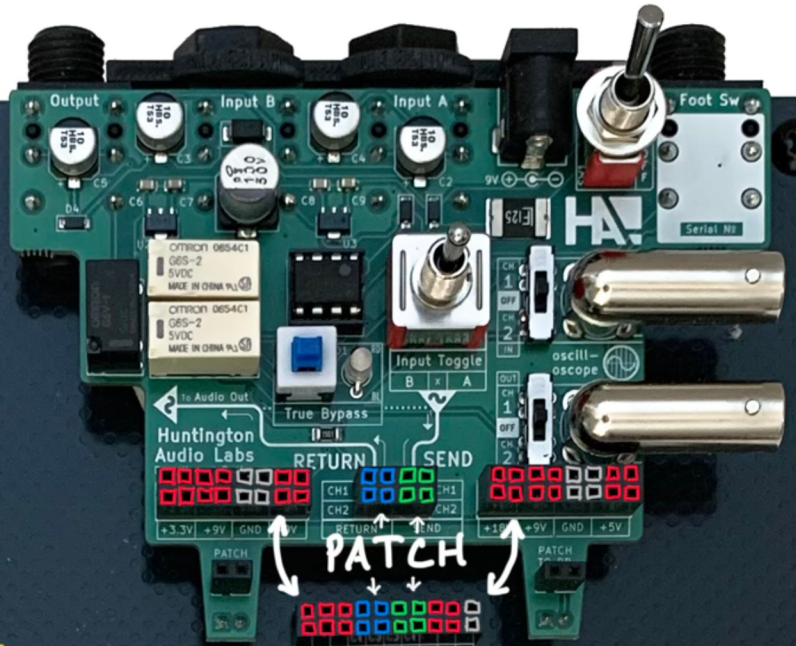
There's not much to using THE MOTHER that isn't already explained in the diagrams in this guidebook. 99% of the electronics whizbang is supplied by the Breadboard Butler (or other module). THE MOTHER adds some very handy routing and provides a hefty, ergonomic platform for a fast and effective breadboarding workflow.



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