Hit Box Breakout Adapter Kit Installation Notes

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Liability statement

Hit Box LLC is not responsible for damages caused to your controller or your controller PCB when installing this mod. **Install at your own risk.** For all support inquiries regarding Hit Box brand products, we are available at support@hitboxarcade.com. For any other support or advice, we are also available at our discord. (https://www.hitboxarcade.com/discord)
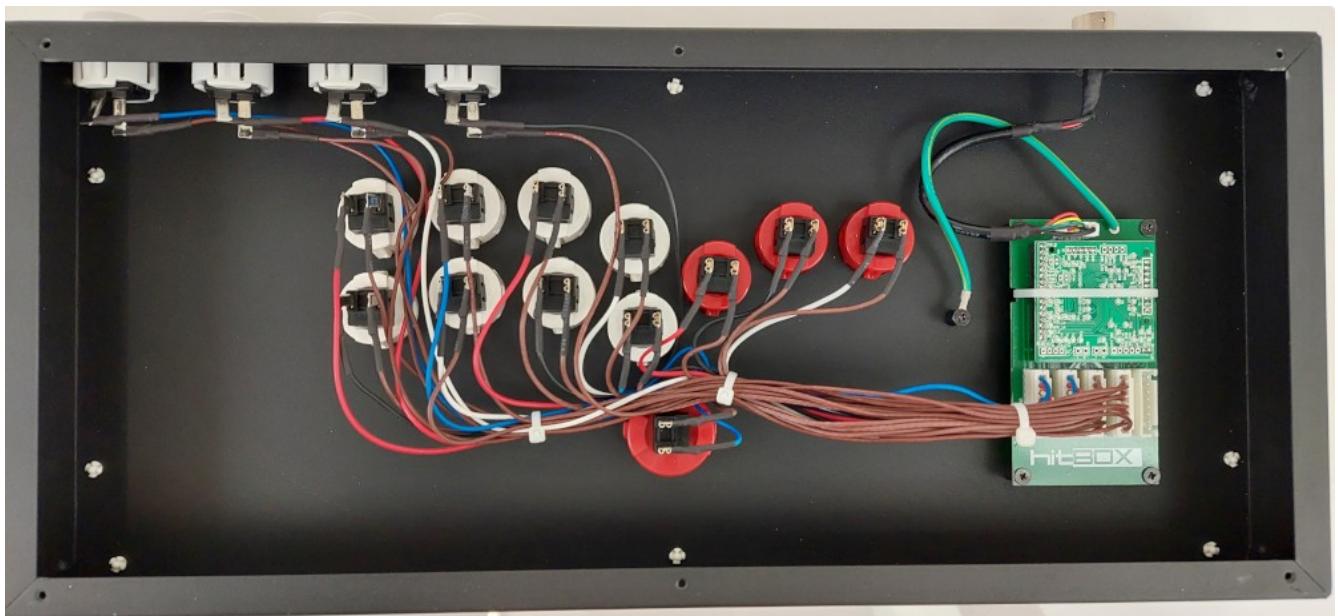
What is this?

This kit helps you connect your Hit Box to third party fightstick PCBs by breaking out all of the buttons to the 20+4 pin connector. It also routes your replacement board to the Hit Box's USB port so you can continue to use the cable that came with your controller. It's a drop-in replacement board for Hit Boxes made after April 2020. Installation takes less than 15 minutes from start to finish.

Who is this (not) for?

This kit is only for Hit Box users who have purchased a Hit Box made after April 2020. These controllers are identified as having 5 white connectors on the left side of the board (4 of which are populated and 1 that is not). They are labeled as connectors CN1 ~ CN5 and the connectors can be unplugged from the board by hand.

It is not made for any PS4-compatible Hit Box made before June 2020. If the inside of your Hit Box does not look like the one below (4 auxiliary buttons, detachable wire harnesses, a Hit Box branded PCB breakout) then this kit is not drop-in compatible with your controller.
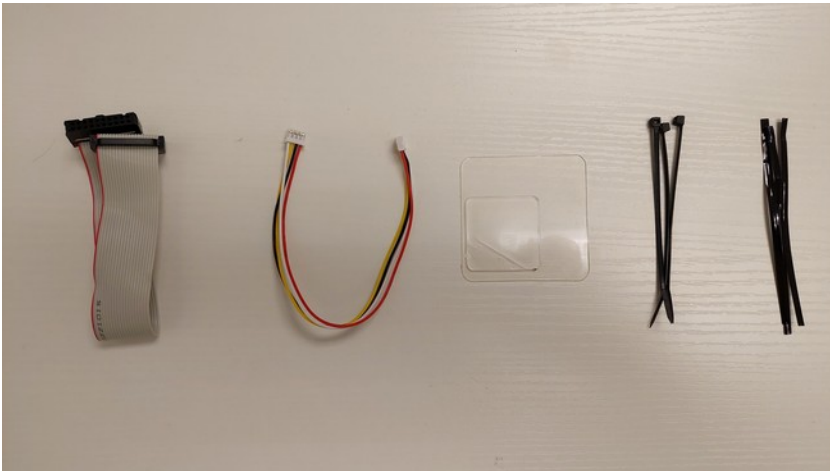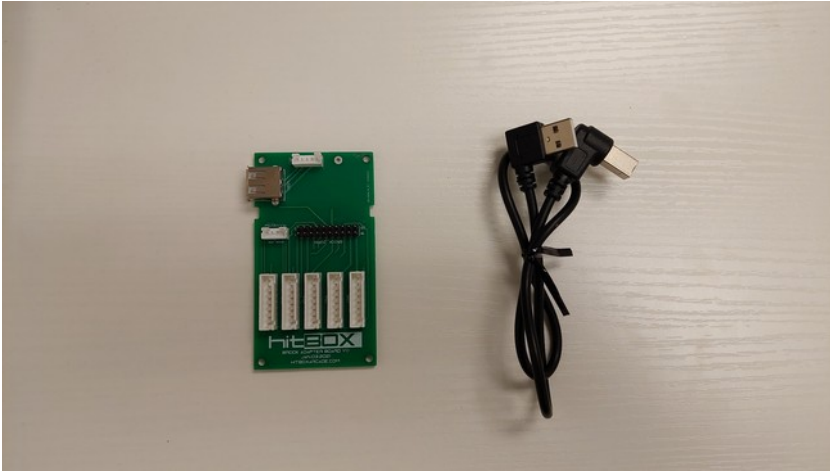
Compatibility

The breakout adapter kit is compatible with 3rd party fightstick PCBs that have a 20-pin connector for the main buttons and an additional 4 buttons for the auxiliary functions (L3, R3, TouchPad). The kit is compatible with (but not limited to) the following PCBs:

- Brook Accessories Universal Fighting Board
- Brook Accessories PS4 Audio+ Fighting Board
- Brook Accessories XB Fighting Board
- Brook Accessories Wireless Fighting Board
- Brook Accessories PS3 PS4 Fighting Board+
- Akishop Customs PS360+
- UD Game Tech Undamned USB Decoder Plus"

Hit Box LLC is not responsible for ensuring third party compatibility with this kit. Modifications are performed at your own risk. The modder is responsible for ensuring that third party accessories are safe and compatible. Hit Box LLC cannot warranty, replace or fix controller modifications.

What is in the kit?

Top Photo

- Hit Box Breakout Adapter
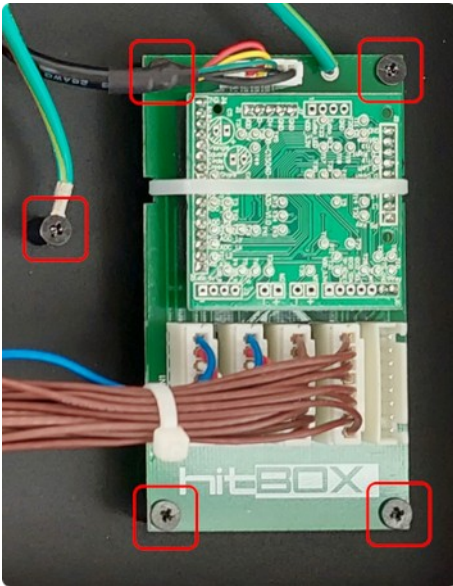- USB-B to A-Cable

Bottom Photo ((From Left to Right)

- 20-pin IDC Connector
- 4-Pin JST-PH Connector
- Adhesive Mounting Pads
- Zip Ties
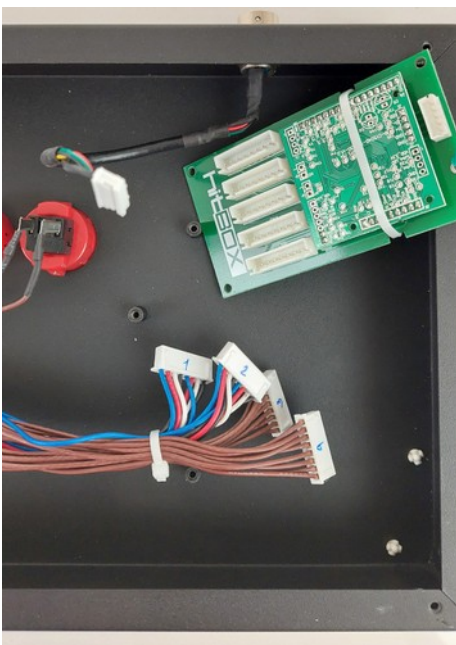- Twist Ties

Installation

Remove the back cover

Six bolts fasten the back plate to the rest of the Hit Box. In some cases, the center bolts may be hex bolts (2.5mm). For the remaining bolts, you will need a Philips #1 screwdriver.

Remove the mounting bolts from the PCB Breakout

Five bolts fasten the PCB breakout to the mounting posts. Make sure not to lose these because you will need them for your replacement PCB.

Remove the 4 button harness connectors and USB connector

The button wire harnesses are usually (but not always) numbered. The Hit Box breakouts connectors have the designation CN1, CN2, CN3, CN4 and or CN5 above each connector. Make sure you know which harness attaches to which connector because the adapter kit retains this connection scheme.
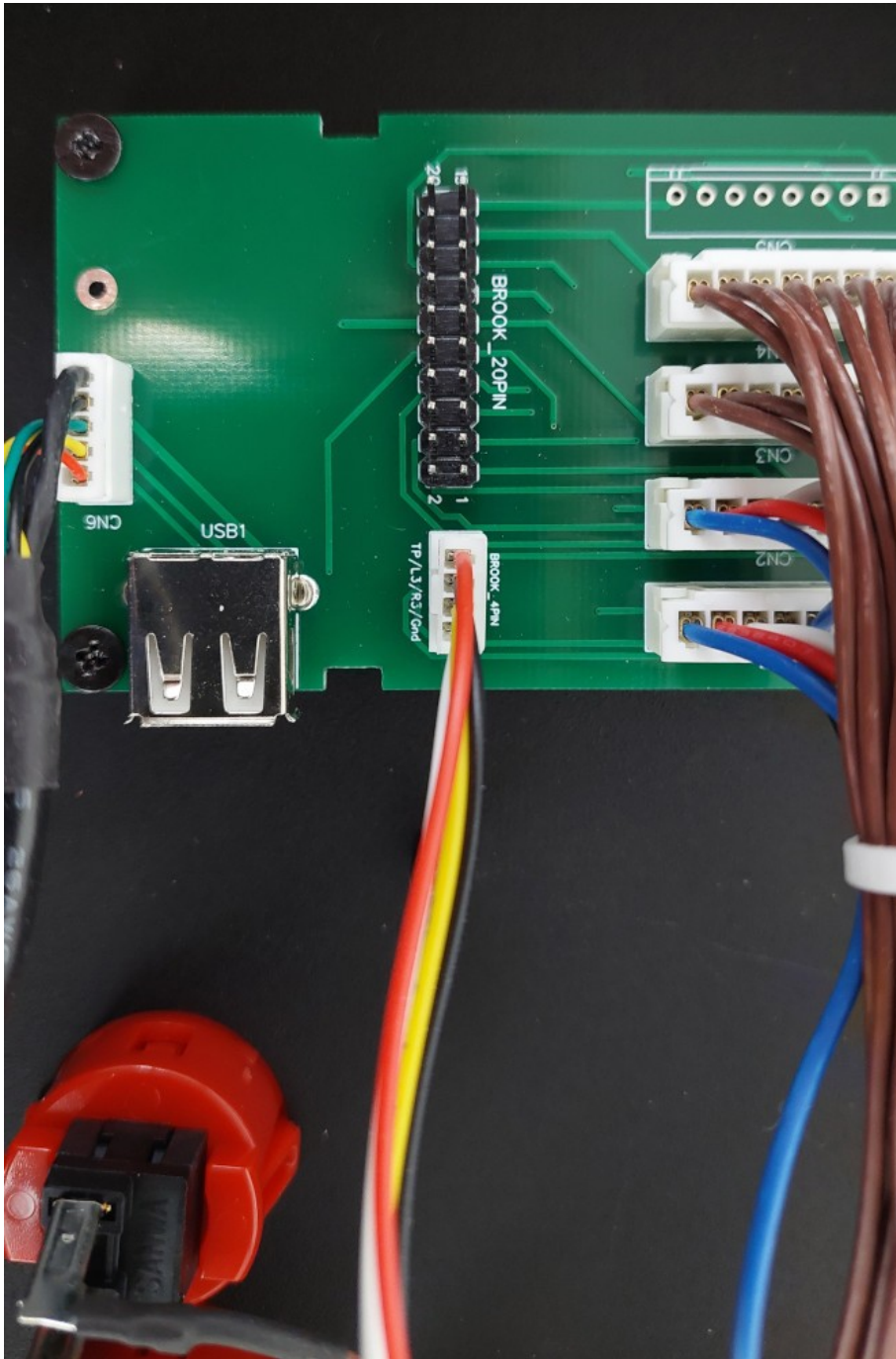
Install the Breakout Adapter

The adapter fits over the mounting posts using the same bolts that you took out of the original breakout.

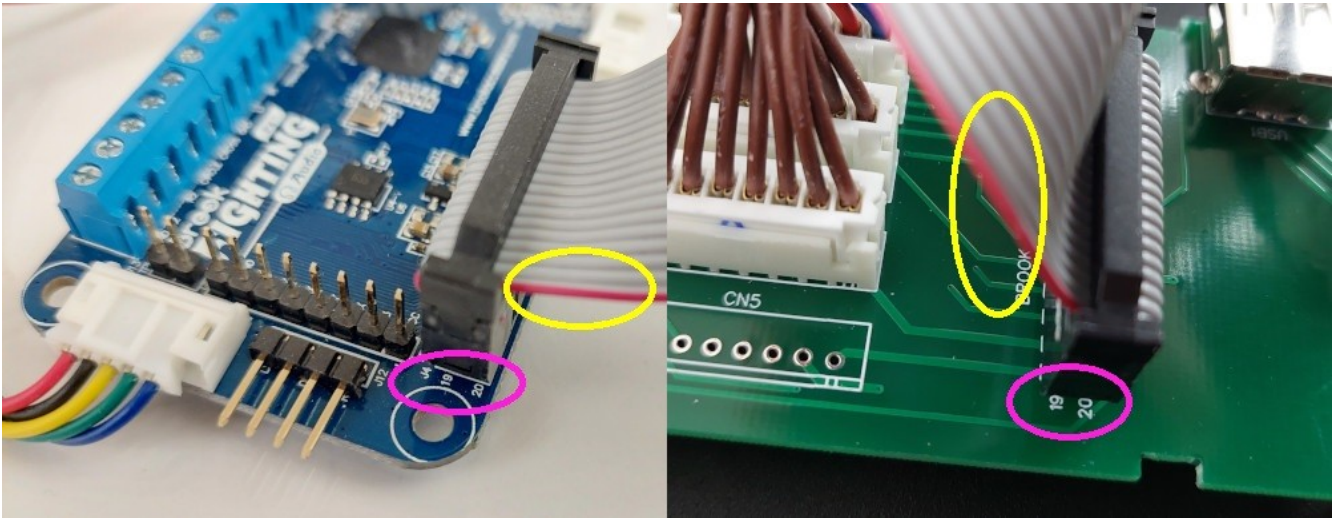## Replace the 4 button harness connectors and USB connector

The button harness connects to this board in the same order as it does on the original board.
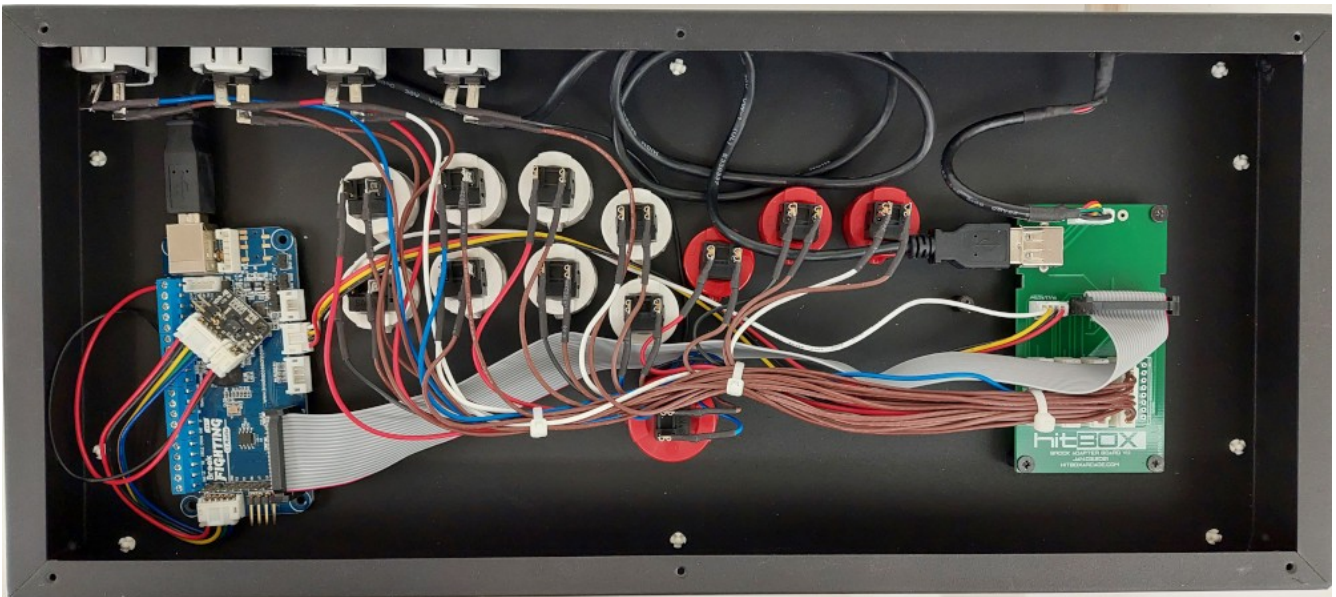
Connect the 4 Pin cable

The 4-pin cable connects L3, R3 and Touchpad. This connector is not always present on Brook boards, so you may have to solder it in yourself. The notch on the cable is situated to plug into the most common orientation found on Brook boards.

Connect the 20 pin cable

The 20-pin cable has a stripe on one side. Make sure to orient your cable such that the red stripe faces the same side on both the breakout and the board. In the above photo, the stripe (circled in yellow) is closer to the side labeled the pin designators 19 and 20 (circled in magenta). This orientation must match or else your controller will not receive inputs.

Connect the USB Cable

The included USB cable will connect your alternate PCB to the Hit Box case USB port. Our existing detachable cable can then be used on any system that connects through USB.
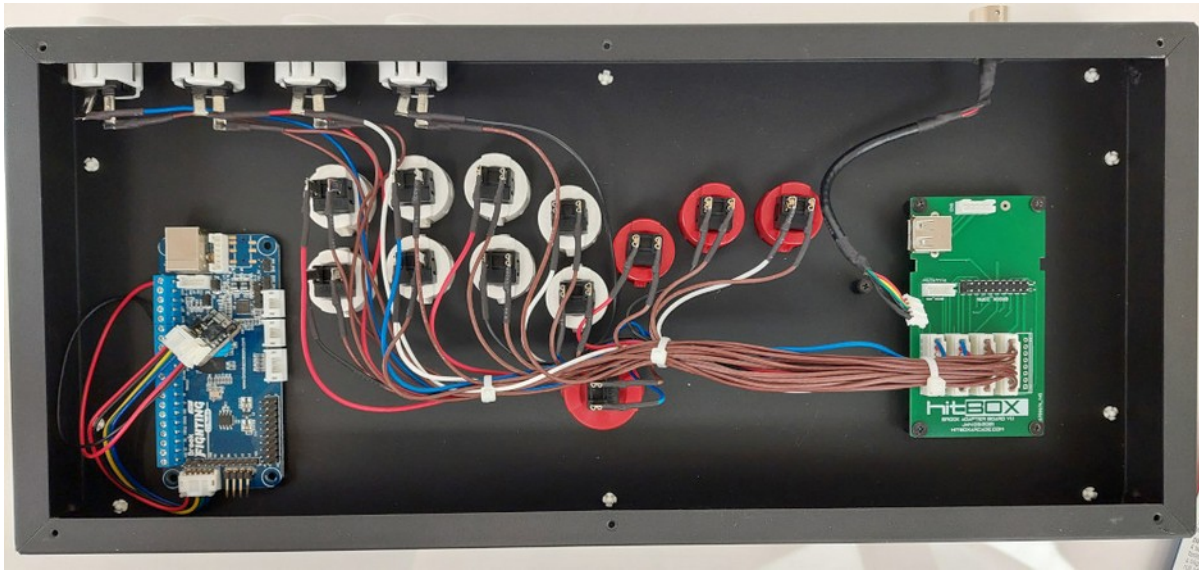
Find a spot to mount your alternate PCB

The Hit Box controller's metal case does not have extra mounting posts for alternate boards. It's up to the user to come up with a mounting solution for their alternate PCBs. However, the kit comes with zip ties, twist ties and adhesive pads to help make this easier. You can even use the anti-static bags that this kit ships with as part of your mounting setup.

Warning: there is a risk of destroying your PCB if uninsulated leads make direct contact with the case. To prevent this, make sure the underside of your alternate PCB is properly mounted such that solder blobs on the underside do not touch the metal case directly.
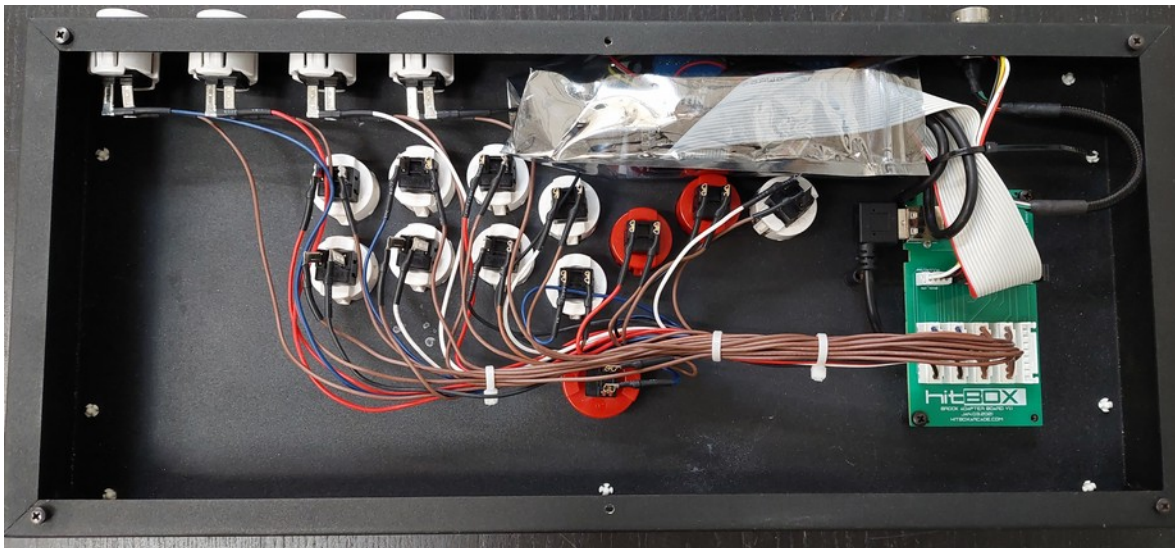
There are several options for mounting your alternate PCB. Adhesive-backed PCB standoffs, mounting putty, and electrical or gaffing tape are common solutions. **The Hit Box case is steel and is electrically conductive. Make sure that solder joints from your alternate PCB don't make contact with the case.**
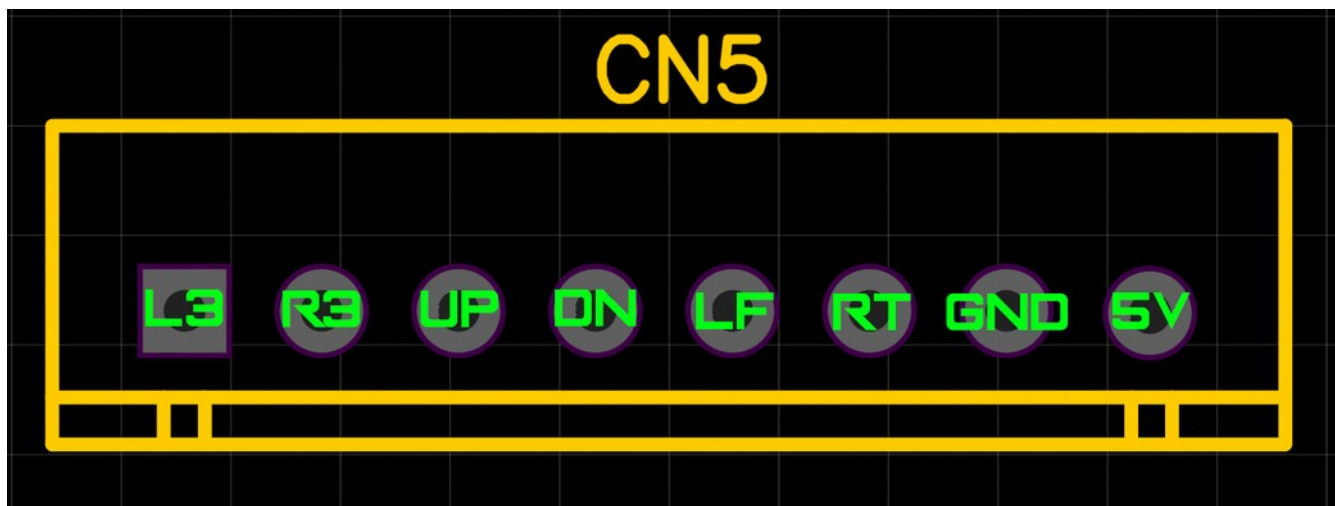
Mounting examples

In the above example, the PS4 Audio+ Fighting Board has a layer of gaffing tape on the underside of the board and is fastened to the case with double-sided mounting tape. The Brook UP5 board is also insulated with gaffing tape and is fastened directly to the Audio+ board using Loctite Mounting Putty.

In the picture below, you will see another mounting setup where the user has taken one of the anti-static bags provided with the kit, and used it to insulate their Brook UFB+UP5. The alternate board (and the anti-static bag that it's in) is mounted to the case with the provided adhesive mounting pads.

Replace the back lid and you are done

About the unpopulated CN5 connector

The unpopulated connector breaks out L3, R3, the 4 dpad directions, along with a ground and 5v line. These ports can be tapped for any number of mods (LEDs, optical switch boards, adding extra directional buttons, adding dedicated L3/R3 buttons). Again, all mods are performed at your own risk.

Contact Us

If you have any questions about this or any other Hit Box products we're available at:

Website: https://www.hitboxarcade.com

Twitter: https://twitter.com/hit_box

Facebook: https://www.facebook.com/hitboxarcade

Discord: https://www.hitboxarcade.com/discord