



# Handwire Hot Swap Socket for Mechanical Keyboards

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## Summary

A 3D printed and solderless hot swap system for handwiring Mechanical Keyboards

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[keyswitch](#) [solderless](#) [handwired](#) [assemblyguide](#)

## Version 4 is out!

**The STL orientation is incorrect. Please print the parts with the diode channel facing upwards.**

v4 socket improvements:

- Easier to print
- Improved robustness of row wire connection
- Faster to assemble / put in diode
- Better method of connecting pin and diode

ASSEMBLY GUIDE HERE: <https://github.com/stingray127/handwirehotswap>

## What is it?

This is a completely solderless way of wiring a keyboard matrix together. Using these 3d printed pieces, through hole diodes, and solid core wire, you can put together a keyswitch matrix that conforms to the shape of any build space, with the added benefit of being able to remove and replace all of the key switches.

## How did we get here?

1. I printed a Dactyl Manuform
2. I did not like the idea of soldering switches in a Dactyl Manuform
3. I spent a week designing and printing this project to avoid 4 hours of soldering

## Who is this for?

- Handwire keyboard builders that would also like to change switches at some point in the future
- Any project with keyswitches in hard to solder areas
- Anyone trying to build a keyboard without a PCB, really

## How do I use it?

I wrote a guide complete with pictures, and its hosted on Github.

<https://github.com/stingray127/handwirehotswap>

## Printing Notes

The STL orientation is incorrect. Please print the parts with the diode channel facing upwards.

v4 significantly reduced the difficulty of printing. The features touching the print bed will work even if there is elephants foot warpage.

Layer height did not matter much.

## Other Notes:

The STL file was designed for these wire sizes:

- Diode Legs: 25 SWG
- Solid Core: 24 SWG

If you need other gauges of wire, use the SCAD file to generate your own versions of this print.

As this is a hot swap socket, one should be careful to not damage the switch pins when inserting the switch into the socket.

Slightly bending the switch pins a few degrees before inserting the switch into the socket may improve electrical connection stability, should you run into connection issues.

While this does allow you to "hot swap" a keyswitch out, you can only really do a few at a time, otherwise the entire wiring matrix falls out of the keyboard body.

## Model files



**hss.scad**



**hssv44.stl**

[Find source .stl files on Thingiverse.com](#)

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