WarBeast Arduino Kit Installation Guide

This guide will add a little more detail in terms of wiring and some other tips for installing your new kit, or if you are building from scratch with the gerber files and 3D models provided on my github. (releasing at a later date)

PLEASE READ THIS GUIDE CAREFULLY, AS THERE ARE A FEW IMPORTANT PARTS TO THE INSTALLATION PROCESS!

KIT INCLUDES:

- **Mainboard with pre-installed pico and strum switches**
- **D-pad start/select board** (Connects to plug coming from the mainboard)
- **3D printed strumbar** (Optional, stock ALPS strumbar will fit)
- **10ft braided micro USB cable**
- **Two-piece 3D printed cable grommet** (Replaces sync button housing)
- **Cable ties** for routing the USB cable/tidying excess wires

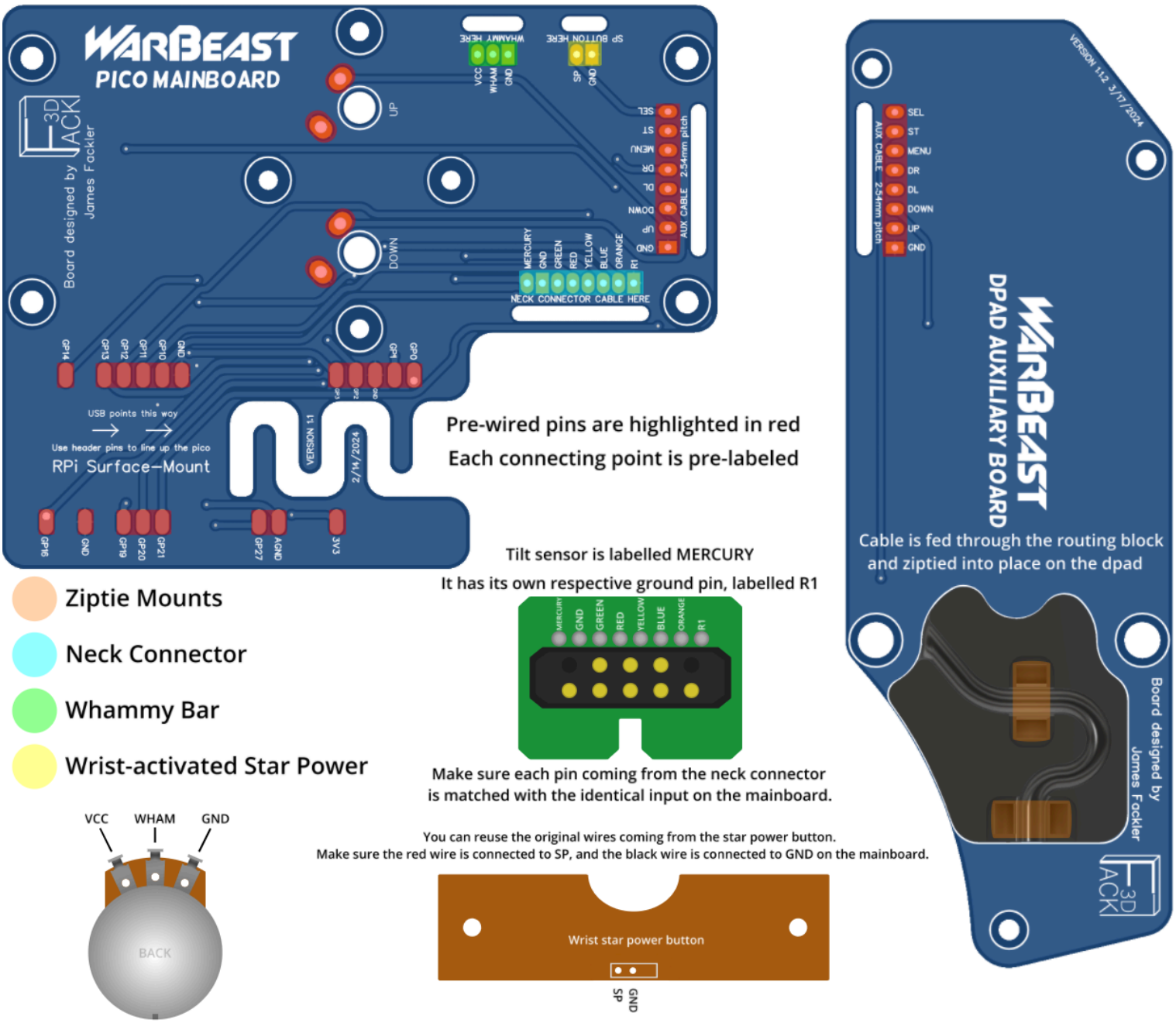
(USB cable exits through the sync button hole, so button + housing must be removed)

REQUIRED TOOLS:

- **Basic soldering skills**
- **Soldering iron**
- **Wire strippers**
- **T-10 Torx** for body screws and **PH1 Phillips** for internal screws

There are two versions of the WarBeast. One has micro switches, and one ALPS switches. If you are planning on reusing your original strumbar, the micro-switch version will not fit due to the difference in height.

PT1: WIRING DIAGRAM & DOCUMENTATION

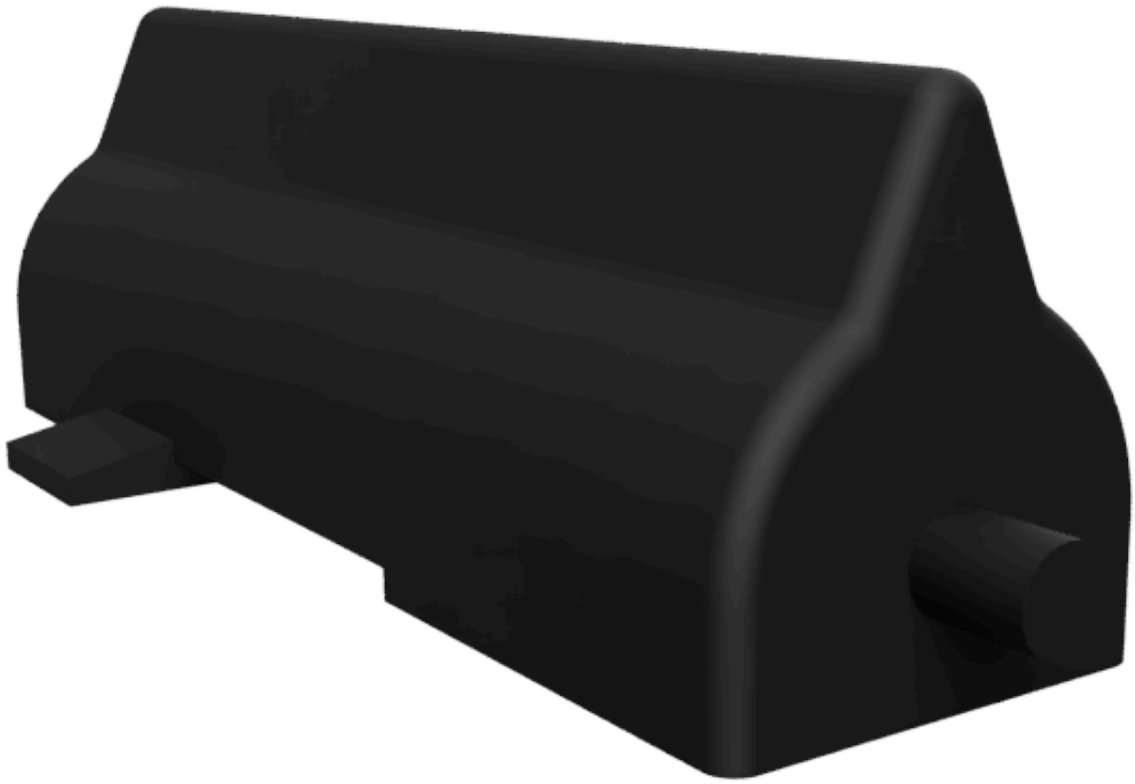


The slots in front of the solder pads are for strain relief. The cable should be woven through the slot in order to add extra reinforcement, and to prevent the cable from breaking at the solder joints if accidentally pulled. It's not completely necessary to do this, but it's there if you want it. The tone switch will be left out, as it's only used for Rock Band.

There are two variants of neck connectors I know about. If your connector is different from the one pictured, look for the pinout on the connector pcb or the original mainboard and connect the wires as they are labeled on your new mainboard.

PT2: INSTALLING THE STRUMBAR

If you are using the replacement strumbar included in your kit, be it your strumboard has microswitches or you just don't like the stock one, installation will be a breeze. Simply remove your old strumbar and the bushings, fit the bushings on your new strumbar, and insert your new strumbar into place. If the bushings don't rotate smoothly, you may have to sand or file a bit off of the underside of the pins. The new strumbar is designed to fit perfectly without extra modification, but this may not always be the case.



PT3: USB CABLE GROMMET

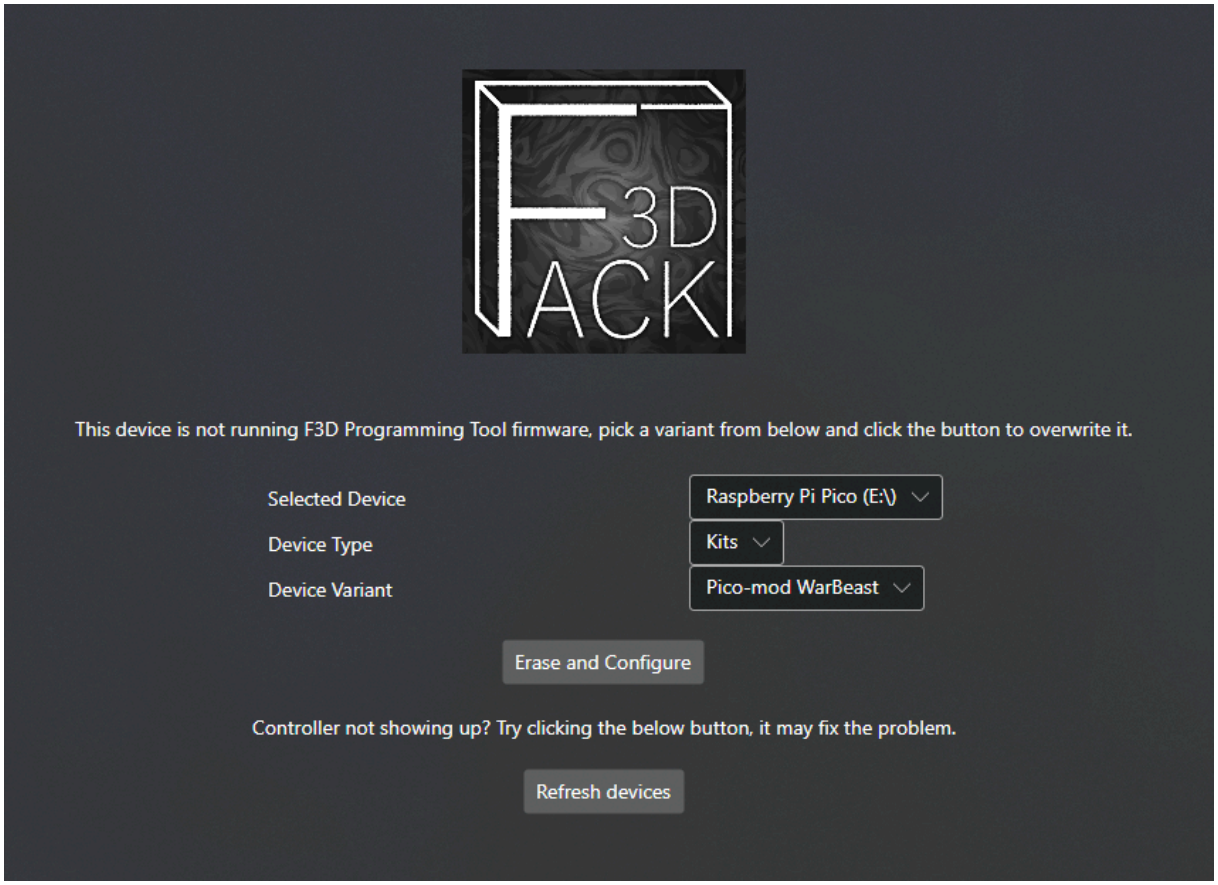
The two extra pieces in your kit is a grommet for the USB cable to exit the body through. The two pieces, labeled “TOP” and “BOTTOM” lock together and form a single piece once you insert the cable through. First, take the sync button and its housing out of the guitar. The bottom piece (with the two notches) slides into the front half of the shell in place of the original sync button location. The cable is now fed through the center hole in the bottom part, and the other half is snapped into place on top of the first half with the cable inside. This piece is merely for aesthetics, so you don’t have a gaping hole in the bottom of your guitar. Please note that if you use a different USB cable than the one supplied it may not fit correctly, so please measure beforehand. (3.2mm diameter)

PT4: PROGRAMMING YOUR GUITAR

Once everything is installed properly, it's time to program your guitar.

Download and run the F3D Programming Tool linked below.
F3D Programming Tool Windows-Mac-Linux
(PDF must be downloaded in order to click hyperlinks)

Once you've opened the configurator and plugged your guitar in, you will be met with a window that looks like this.



Make sure the selected device is "Raspberry Pi Pico".
You may see more than one device type or variant. Please be sure that your type is set to "**Kits**" and your device variant is set to "**Pico-mod WarBeast**". If you select something else, the guitar will not work correctly.
Once everything looks like the picture above, hit "Erase and Configure".
When it's finished writing, click "Configure" and calibrate your whammy bar.

PT5: TESTING YOUR GUITAR

After everything has been correctly set up and calibrated, click “Save Settings” and let it write your new calibration. After that, you are now able to test the guitar in your five-fret game of choice. If everything works as it’s supposed to, congratulations, you’re all done!

If you have issues with sustain dropping/flickering, I would suggest folding up a small piece of paper and wedging it into the neck slot as you’re inserting the neck. I’ve found that since the neck is so long it tends to wiggle a bit, so this may fix that issue if it’s happening to you. You can also hardwire the neck if you don’t care about keeping it detachable.

Please contact me if you have any problems with your kit. Thank you, and enjoy your new and improved WarBeast!

Reference photo

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