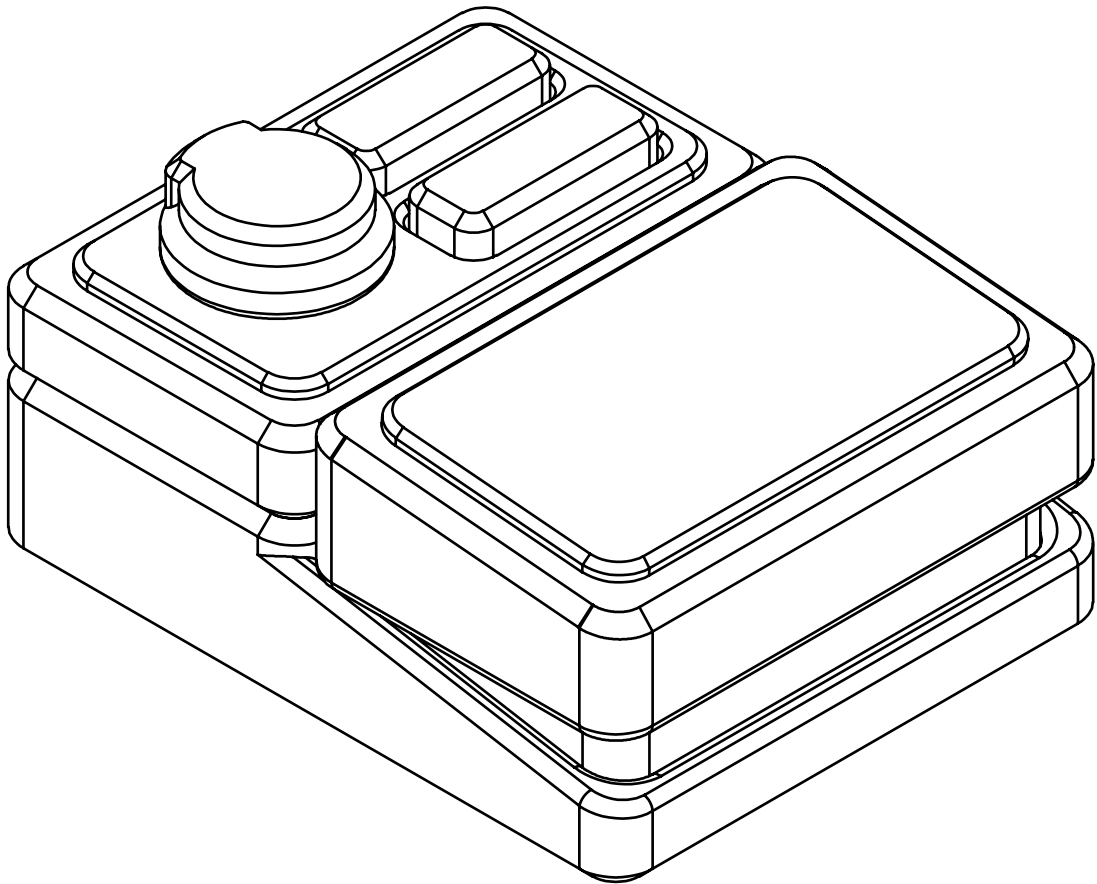


OFFICIAL BUILD GUIDE

— FOR THE —

Polypedal



INTRODUCTION

THANK YOU FOR DOWNLOADING THE POLYPEDAL PROJECT!

This guide will assist you with assembling your pedal accessory.

This guide assumes that you have a general understanding of soldering as a concept. This guide does not provide any soldering tutorials, it covers the assembly of the controller and placement of PCB components.

You can find soldering tutorials online for the various components you will find in this guide. Don't be afraid to ask for help in our Discord server!



**Join our
Discord!**

We are more than happy to help!

CREDITS:

Be sure to say thank you when you see these users on the Discord Server!
From me to the contributors, thank you!

roadsidebomb - Modeling, Diagrams, Testing

PossumOG - PCB Design

Moose - Assembly Guide

GetRektRyan - Modeling & Testing

MerakiG23 - Animation & Video

Pits - Testing

My deepest thanks and gratitude to everyone that has contributed their ideas and time, you are the best! Thank you!

DISCLAIMERS

LIABILITY AND USAGE:

Three Pieces Controllers, its owners, and affiliates are not liable for any consequences arising from the use or misuse of this product or its components. The information provided in this guide is offered without any expressed or implied warranty. The end user is responsible for errors in handling components, assembly, or information interpretation. Exercise caution when working with soldering equipment, and 3D printers.

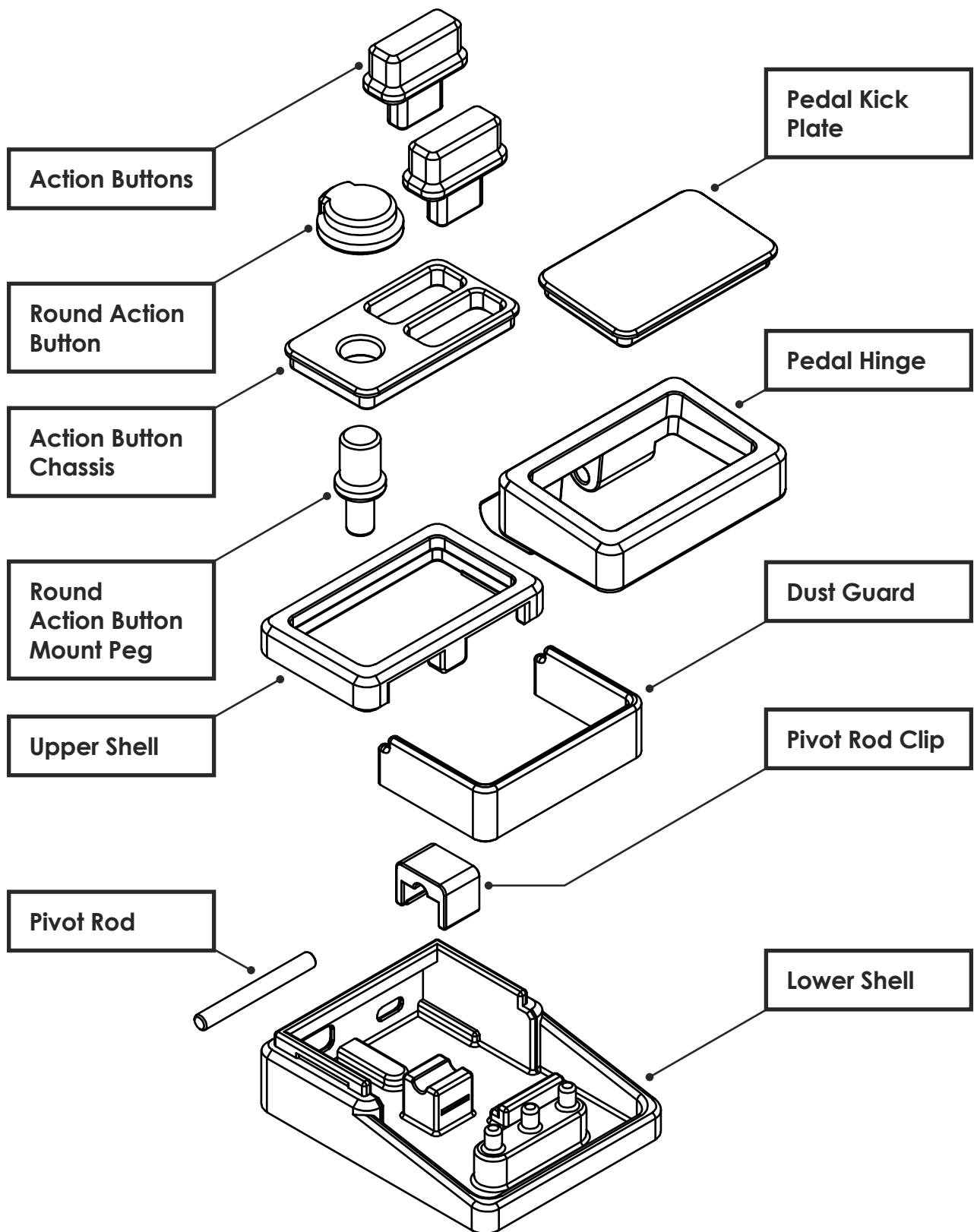
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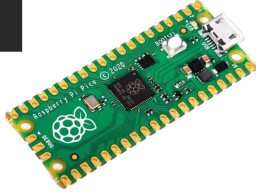
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DIAGRAM VIEW - POLYPEDAL



COMPONENTS - STANDARD PARTS LIST

1



(1) RASPBERRY PI PICO

2



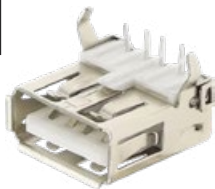
(3) TACTILE SWITCH (6X6X5)

3



(1) OH49E LINEAR HALL
SENSOR

4



(1) USB A PORT
(THRU-HOLE TYPE)

5



(1) 10UF CERAMIC THRU
HOLE CAPACITOR
($\geq 20V$ RATING)

6



(3) 20X5X2 MAGNETS

7



(2-3) 7X20 SPRINGS

8



(1) METAL DOWEL
(5MM X 40MM)
(OPTIONAL)

9



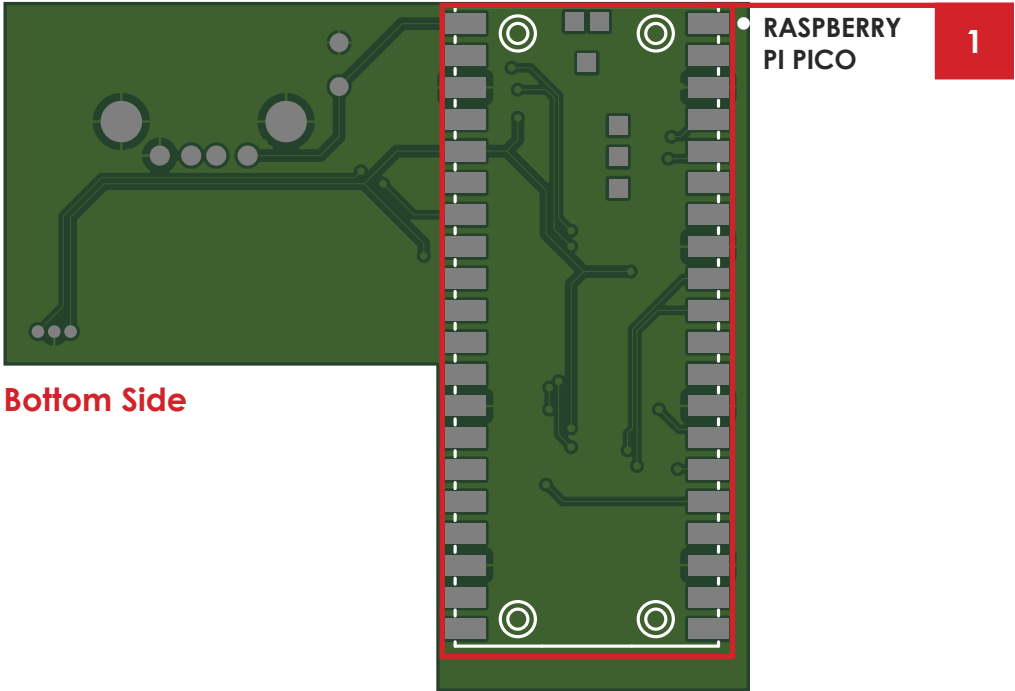
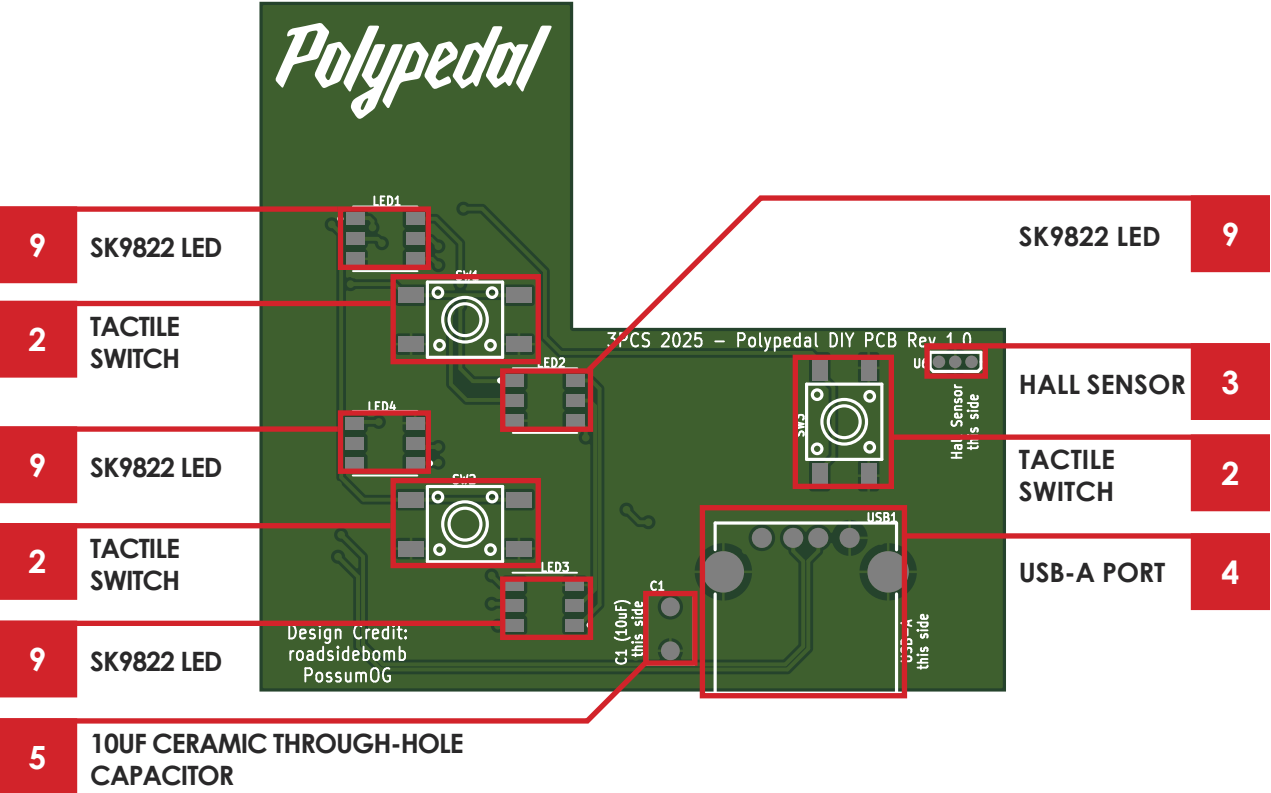
(4) SK9822 LEDs
(OPTIONAL)

!

MAKE SURE YOUR 10UF CERAMIC CAPACITOR IS $\geq 20V$ RATED

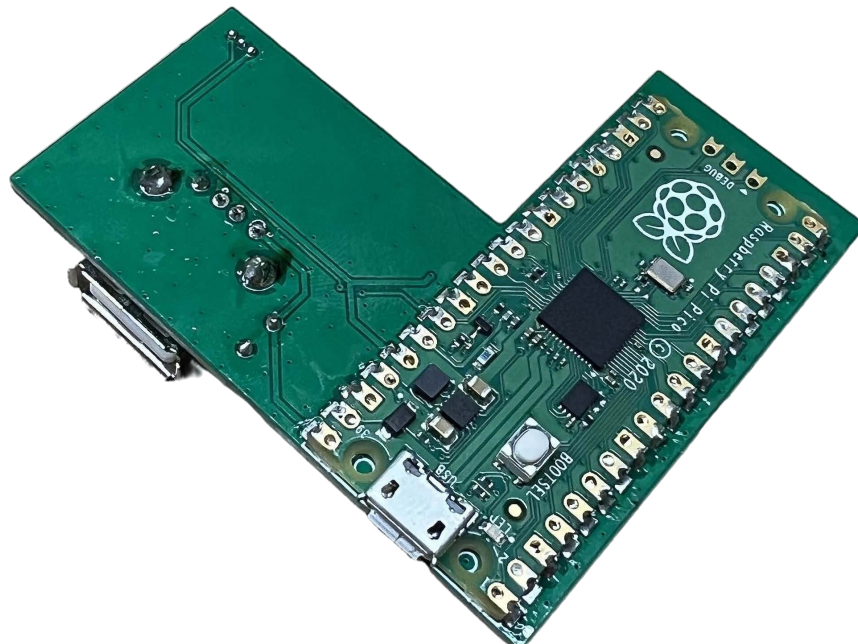
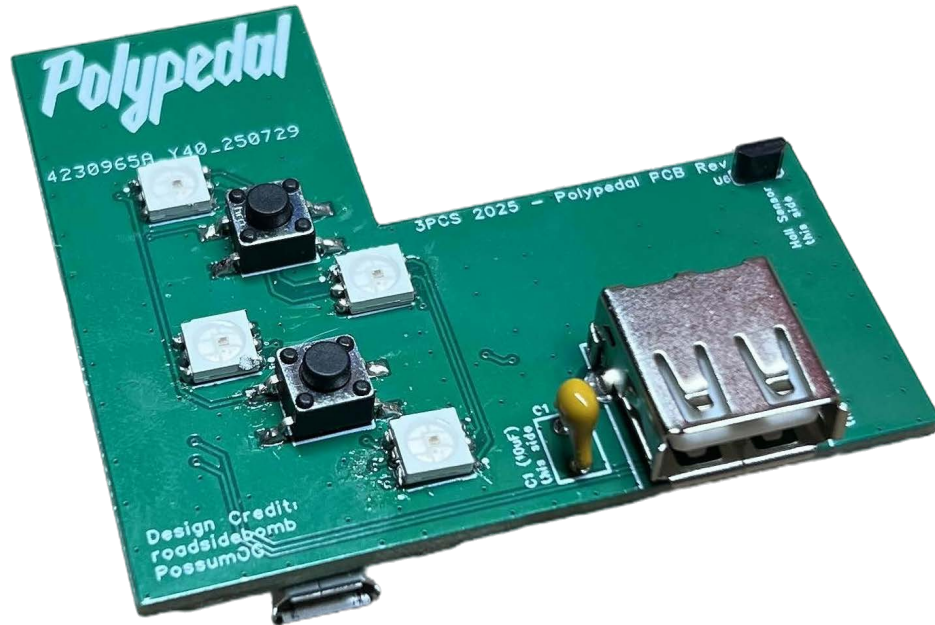
POLYPEDAL PCB

Top Side



Bottom Side

COMPLETED PCB EXAMPLES



TOOLS & SUPPLIES



THE TOOLS SHOWN ABOVE ARE RECOMMENDED FOR BUILDING THE POLYPEDAL.

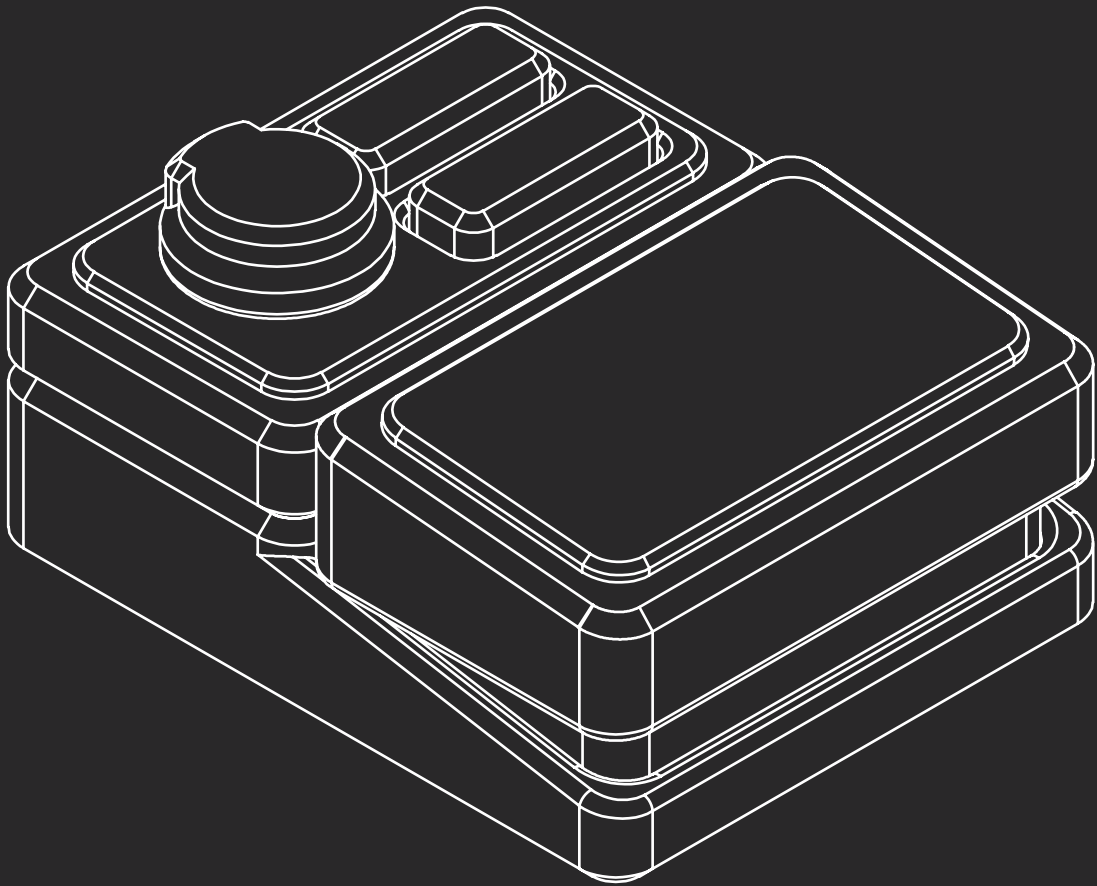
While all of these tools aren't completely necessary, it will save you time and headache if you plan on building multiple units.

You can build the Polypedal with a basic soldering kit from online retailers such as Amazon or Aliexpress.

- Soldering iron
- Rosin core solder
- Soldering flux
- Flush cutters
- Tweezers
- Helping hands
- Misc. Wire
- Superglue

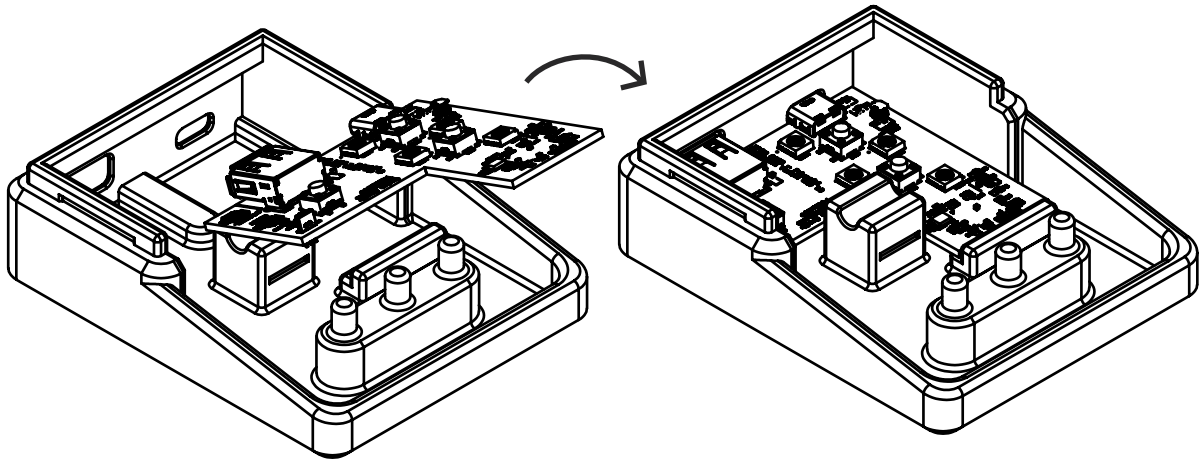
Polypedal

— ASSEMBLY —



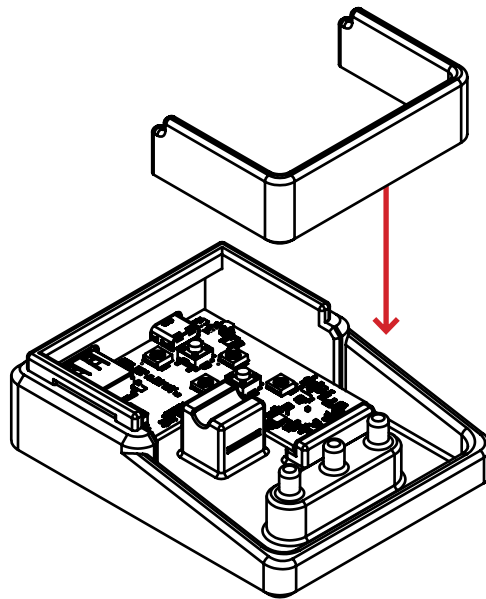
POLYPEDAL ASSEMBLY

STEP 1



To begin, slide the PCB into the bottom shell at an angle. Make sure to firmly press the front of the PCB into the retainer tab until it's fully seated.

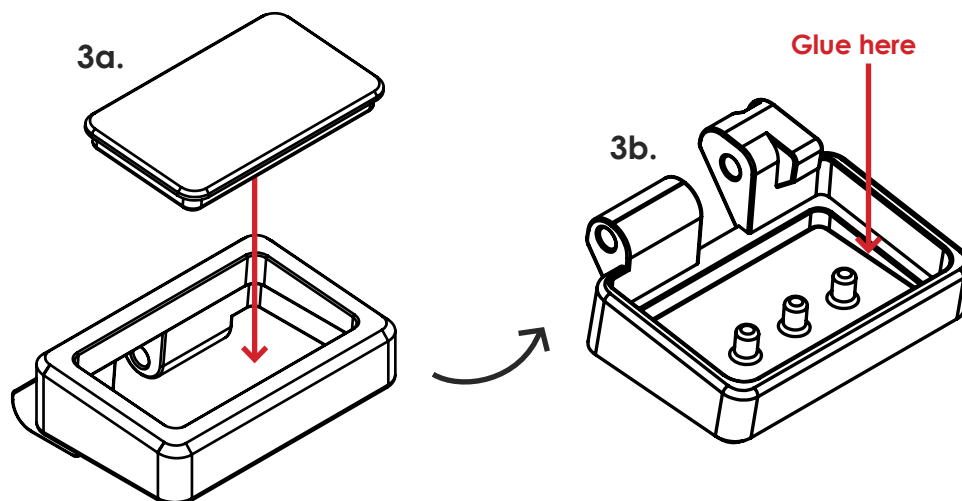
STEP 2



Insert the dust cover into the front of the bottom shell; this is a press fit. Glue is optional if you feel it requires a more secure hold.

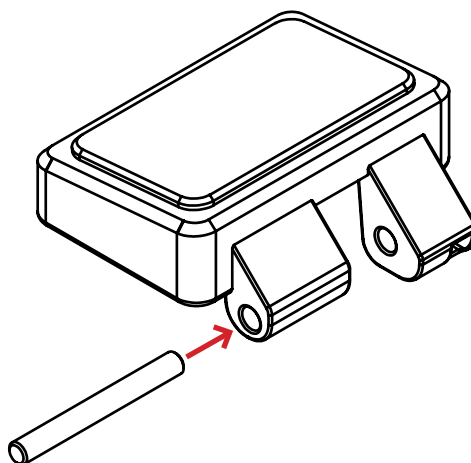
POLYPEDAL ASSEMBLY (CONT.)

STEP 3



Insert the kick plate into the pedal hinge. Then, flip the assembled parts and apply glue along the inside edge to permanently bond the pieces.

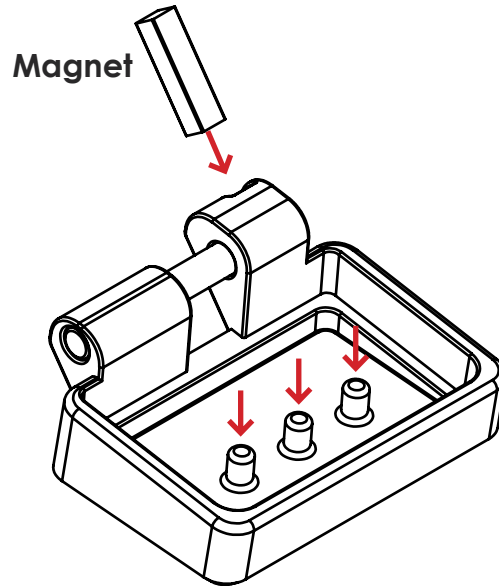
STEP 4



Insert the pivot rod into the pedal hinge, making sure it fully seats into both hold downs. Glue is optional if you feel it requires a more secure hold.

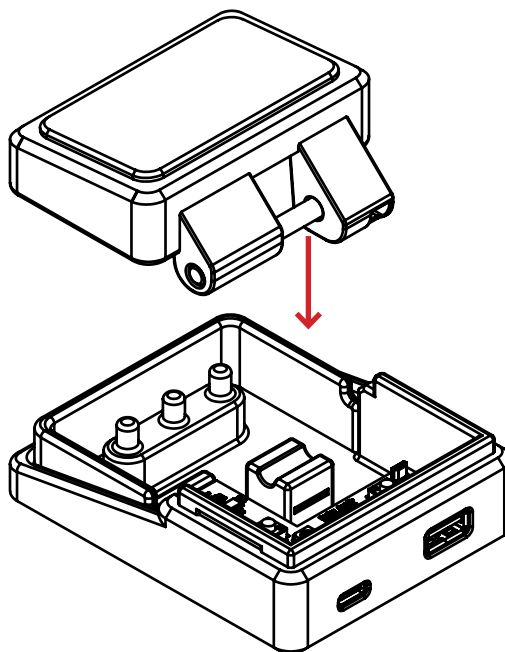
POLYPEDAL ASSEMBLY (CONT.)

STEP 5



Install the three magnets into the pedal hinge as shown, then fit two to three springs (to preference) onto the spring retention pegs.

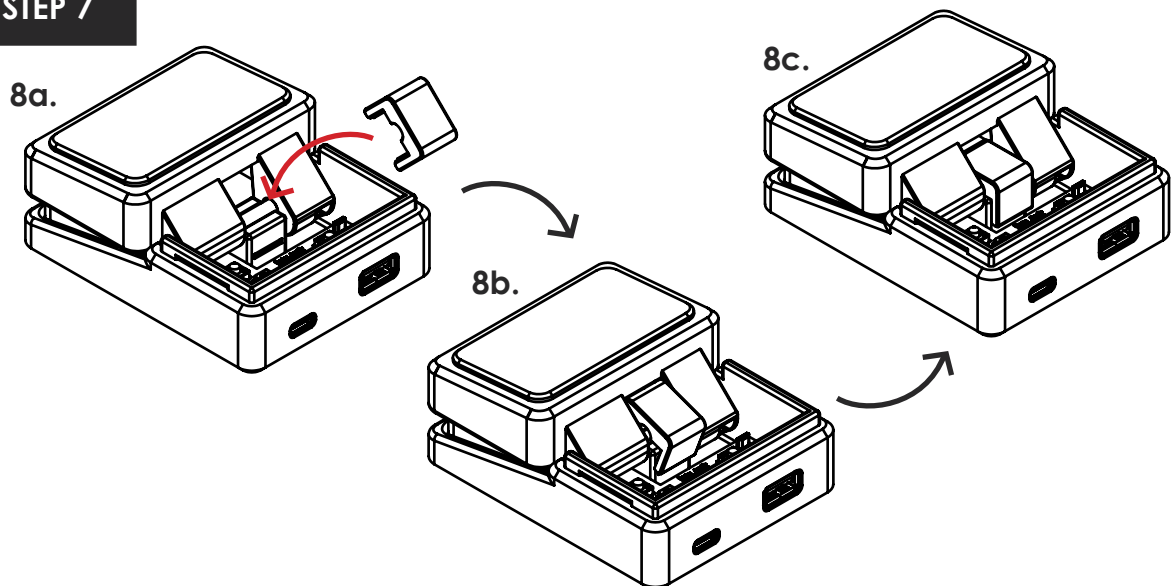
STEP 6



Set the pedal hinge assembly onto the curved pivot standoff in the bottom shell.

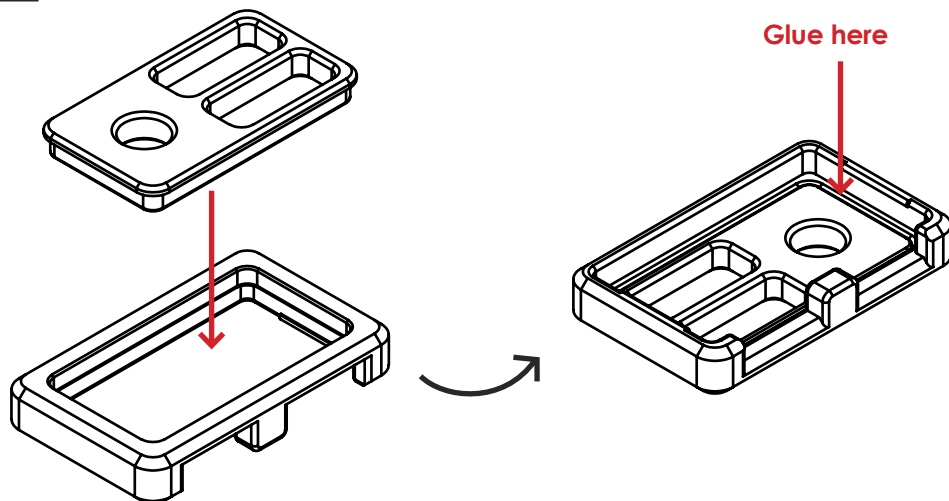
POLYPEDAL ASSEMBLY (CONT.)

STEP 7



Press the pivot rod clip onto the curved pivot standoff as shown, applying firm pressure to ensure it's fully seated.

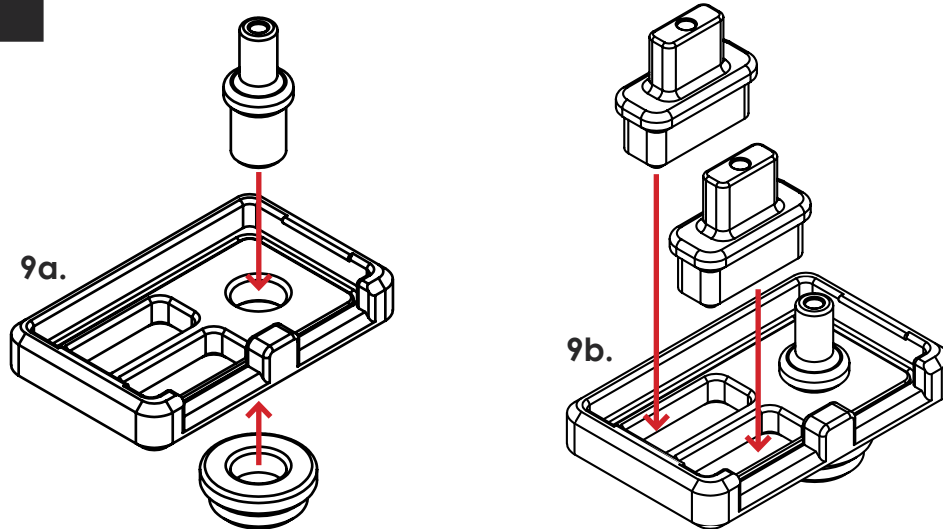
STEP 8



Insert the action button chassis into the top case shell. Then, flip the assembled parts and apply glue along the inside edge to permanently bond the pieces.

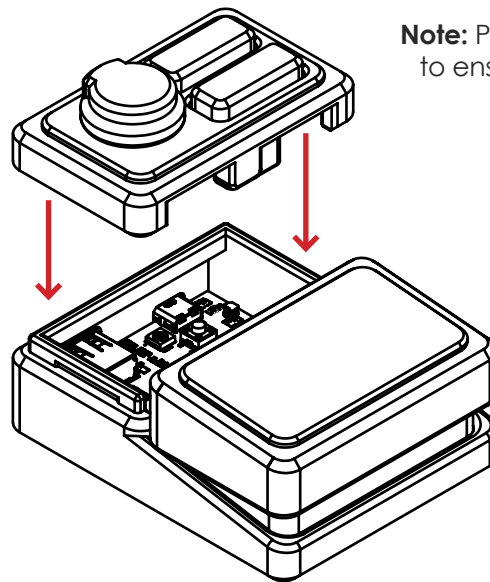
POLYPEDAL ASSEMBLY (CONT.)

STEP 9



Insert the round action button peg into the bottom of the chassis, and then attach the round cap. You may glue the cap to the peg if needed. Next, insert the action buttons into the bottom of the chassis.

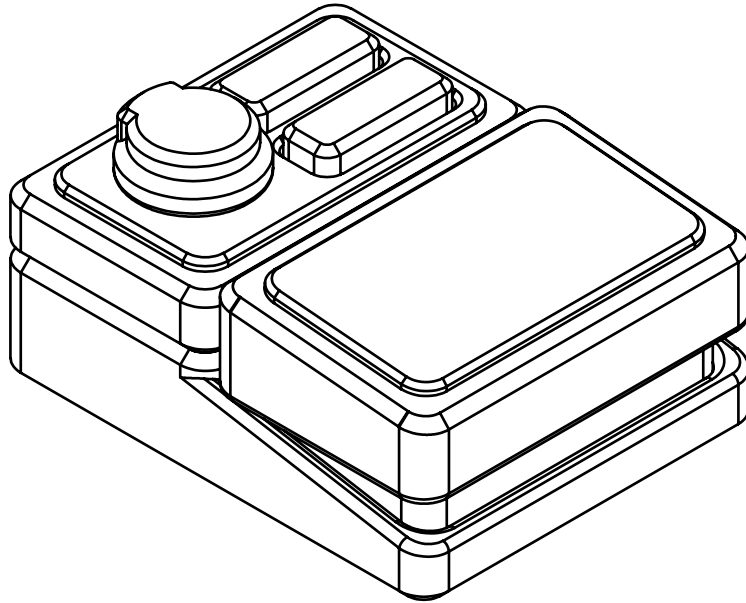
STEP 10



Note: Press firmly on all three buttons to ensure the PCB is fully seated for proper button actuation

Attach the top case shell assembly to the bottom case shell assembly. The two halves are held together by press-fit clips on either side. Firmly press around the entire edge of the top shell until both halves are fully seated and locked.

POLYPEDAL ASSEMBLY (CONT.)



ENJOY YOUR COMPLETED POLYPEDAL

PROGRAMMING & CONFIGURING

SETTING UP YOUR POLYPEDAL WITH CUSTOM FIRMWARE

Here's how to set up your controller with custom firmware. For the latest files and help, check out our Discord server.



Join our
Discord!

CONTROLLER SETUP:

You can either use our provided presets, or create your own:

USING OUR PRESETS

You can find official presets on our Discord server. Download them to get started.

NOTE

If you ever run into problems, you can always reset the Polypedal to factory defaults and flash back our preset. **No harm no foul!**

MAKING YOUR OWN SETUP

For more control, you can download Sanjay900's Santroller firmware tool. It's the easiest way to customize your controller.

WHAT THE SANTROLLER TOOL DOES:

- It lets you import our setups and save your own.
- You can change things like the LED colors, button mapping, and add shortcuts.
- Play around with the settings to get it just right. You can import our setups, and then change them to your liking if need be.