Badger 2040w Enclosure

Info

A customizable, 3D-printable enclosure specifically designed for the Badger 2040W. Enhance your programmable E-Ink badge with this easy-to-print design. It provides full access to all buttons, supports optional magnetic mounting, and can be easily modified thanks to the included STEP files.

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Project Overview

This is my version of a 3D printable enclosure for the Badger 2040w. A hackable, programmable badge with E-Ink® display powered by the Raspberry Pi RP2040. This exceptionally affordable badge is sold by Pimoroni: Badger 2040w

The case has the following features:

All buttons are accessible (five buttons on the front and two buttons on the back)

- Optionally, use magnets to make the case stick to magnetic surfaces (e.g. on a refrigerator). You can also use the magnets to attach other add-ons to the case. There are notches on the back to align the case with an add-on.
- The cutout for the display always looks good, even if the e-paper display is not always in the same place.
- You can modify the case yourself because STEP files are included.

The case consists of a few plastic parts which are easily printable without support on any 3D printer. In addition to the plastic parts, you only need four 2 mm (pointed) screws with a length of 10 mm and optionally two magnets, each with a diameter of 10 mm and a thickness of 2 mm.

Overall Required Parts & Materials

Qty	Part Name	Links & Steps
4 x	**2 mm x 10 mm pointed screws**	Amazon 4
2 x	**10 mm x 2 mm Neodym Magnets**	Amazon 2
1 x	**Top.stl**	Printables

Qty	Part Name	Links & Steps
		4
1 x	**Bottom.stl**	Printables 2
1 x	**Bezel.stl**	Printables 1
1 x	**Badger 2040W**	Pimoroni 1
1 x	**Fill.stl**	Printables 5

Instructions

1 Display bezel

Stick the display bezel onto the display with thin double-sided adhesive tape. A strip of tape on the short side where there are no buttons is sufficient (on the left side in this image).

Needed Parts:

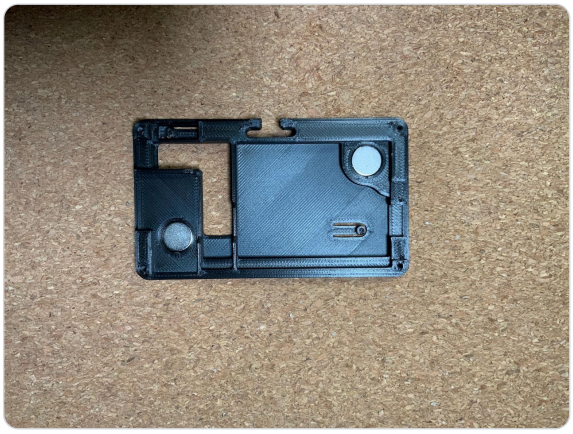
- 1 x Badger 2040W
- 1 x Bezel.stl

2 Bottom part

If you want to use magnets, put one in each of the holes.

Needed Parts:

- 2 x 10 mm x 2 mm Neodym Magnets
- 1 x Bottom.stl



3 Badger on top

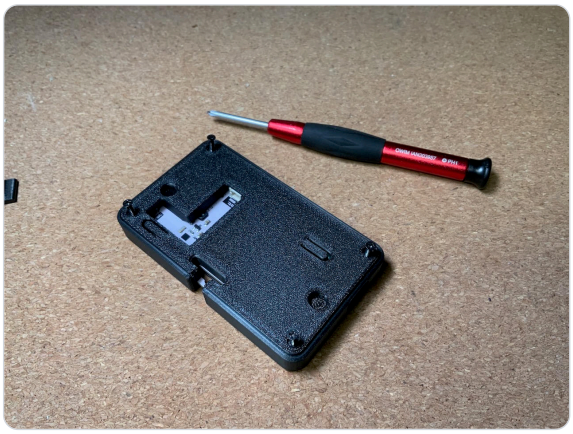
Put the Badger 2040w on top of the bottom part.

4 Add the top part

And screw the bottom and top halves together.

Needed Parts:

- 1 x Top.stl
- 4 x 2 mm x 10 mm pointed screws



5 Filler piece

If you don’t want to wear the badge on a lanyard, you can close the hole for the clip with the filler piece.

Needed Parts:

- 1 x Fill.stl