



RatRig V-Core 3.x Power Box



Fractal

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Summary

Powerbox for RatRig V-Core 3.0 and 3.1, compatible with no enclosure or Enclosure 2.0

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Powerbox for RatRig V-Core 3.x. Keep your mains writing tidy! It is unlikely that you will have the exact hardware, but please use this for inspiration, and provide remixes.

If there is enough interest, a will provide a configurable version for different standard power inlets and switches.

Compatibility

Printer

- RatRig 3.0, 3.1 - no enclosure
- RatRig 3.0, 3.1 - Enclosure 2.0
- RatRig 3.0, 3.1 - Enclosure 1.0 - Enclosure 1.0 has panels that span the full depth of the machine.

BOM

Item	Count	Description
Power Inlet: Corcom 20EEJ1	1	
Push-fit power switch ~30 x 22	1	I cannibalized mine from https://www.amazon.com/gp/product/B0B14YC4ML/
M3 x 4mm Heat Insert	5	Heat Insert for mid-plate to back mounting and IEC mounting. Deeper inserts will likely work.
Countersunk M3 x 10 (or larger)	5	Mounting IEC and box to mid-plate, additional space is provided for longer screws
Countersunk M5 x 6	4	
M5 3030 TSlot Nuts	4	

Assembly and Installation

1. Insert heat inserts on mid-plate (for IEC)
2. Insert heat inserts on box (for attaching to the mid plate.
3. Fit power inlet and power switch
4. Attach power inlet to mid plate using 2x M3 screws
5. Attach mid plate to box using 3x M3 screws
6. ✂ [Wire everything up!] ✂
7. Attach front plate to mid plate using guides
8. Insert 4x M5 screws through front and mid plate, loosely screw on
tslot nuts
9. Attach to the **back-right** of your printer using t-slot nuts!

Print Settings

Most settings should work, printed with 15% infill, with 4 perimeters with a 0.4mm nozzle with PLA.

Supports

- Pull-out tab on the cover will need supports. Use paint on supports (or support blockers) for just this area
- M6 void on the box may require supports depending on the bridging capabilities of your filament and printer.

CAD

Designed in onshape, feel free to create a copy and edit away!

<https://cad.onshape.com/documents/daff662ab82fb710663dc978/>

Model files



power-box-box-cover.stl



power-box-front-plate.stl



power-box.step



power-box-mid-plate.stl



power-box-box.stl

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