



PrecisionPiezo Orion Mount for Creality printers: CR-10, CR-10 Mini, Ender3

 c10l

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Summary

Update 15/07/2019 I've pushed an updated version of the mount. After tens of prototypes I'm finally glad with the...

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Update 15/07/2019

I've pushed an updated version of the mount. After tens of prototypes I'm finally glad with the performance of this one. It's the file named Piezo Mount V3.stl in the files section.

It uses the same screws as the V2:

- 2 cap head M3x6mm to attach the mount to the carriage
- 4 countersunk M3x20mm to attach and probe to the mount, from the top.

With this mount I am able to achieve the promised 0.005mm precision with relative consistency.

The main updates/features added in this version are:

- Larger and more precise screw holes on top so it's easier to screw the rest of the assembly in;
- A cable strain on the right hand side so the cable bundle doesn't dangle;
- A reinforcement on the left hand side to reduce overall flex on the mount;
- Screw holes on the back of the mount are chamfered so the mount slides in easier;
- An updated design of the bottom of the mount, the part that triggers the probe.

Suggested print settings:

- PLA
- 5 perimeters / shells
- 20+% infill

Update 18/05/2019

I've added a v2 of this mount, which is the one I've been used for the last few weeks. It's a little sturdier and easier to print, and requires no supports.

Screws needed:

- 4 countersunk M3x20mm
- 2 cap head M3x6mm

This is a mount for the Creality CR-10 family of printers (and others with the same X carriage) and the PrecisionPiezo Orion probe.

You'll need a PrecisionPiezo Orion. I recommend you get the groovemount kit (<https://www.precisionpiezo.co.uk/product-page/precision-piezo-orion-kit>) and just replace this mount for the top part.

Alternatively, buy the PCB from precision-piezo, print out the groove clamp from this thing (<https://www.thingiverse.com/thing:2841681>), which is the same one that comes in the kit, and sort out the wiring.

You also need an E3Dv6 or compatible hot end.

Screws needed:

- 4 countersunk M3x16mm (the same ones that come with the PrecisionPiezo kit)
- 2 cap head M3x6mm to secure the mount to the carriage

There are basically 2 versions of the mount, one named 5mm and the other named 10mm.

Those numbers represent the vertical distance between the top of the carriage and the top of the mount.

The 10mm should work for most printers but due to some modifications on my printer my Z motor sits higher than normal so I'm using the 5mm version in order to allow the nozzle to reach the bed.

They have both been published with supports on the corner or without them (file name ends in _NS).

If you print and use this thing, please post pictures and let me know in the comments!

For reference, the fan mounts in the pictures is this: <https://www.thingiverse.com/thing:2769783>

Print Settings

Printer Brand:

Creality

Printer:

CR-10 Mini

Rafts:

No

Supports:

No

Resolution:

0.2mm

Infill:

33%

Filament: Filamentive PETG Transparent

Notes:

The supports included in the STLs are quite effective on the corners. They have very little contact with the actual piece and as such break out easily.

Category: 3D Printer Parts

Model files



creality_piezomount_10mm_ns.stl



creality_piezomount_5mm.stl



piezo_mount_v3.stl



creality_piezomount_10mm.stl



piezomount.step



creality_piezomount_5mm_ns.stl



creality_piezomount_v2_5mm.stl

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