

Grove Ultrasonic Ranger cover and back plate



nexgenstemschool

VIEW IN BROWSER

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Summary

A cover for the Grove Ultrasonic Ranger v2.0 (wiki.seeedstudio.com/Grove-Ultrasonic_Ranger/). Also has back plate



3.18 hrs



4 pcs



0.20 mm



0.40 mm



PLA



33 g



Prusa
MK3/S/S+

[Hobby & Makers](#) > [RC & Robotics](#)

Tags: [robot](#) [rover](#) [ultrasonicsensor](#) [nexgenstemschool](#)

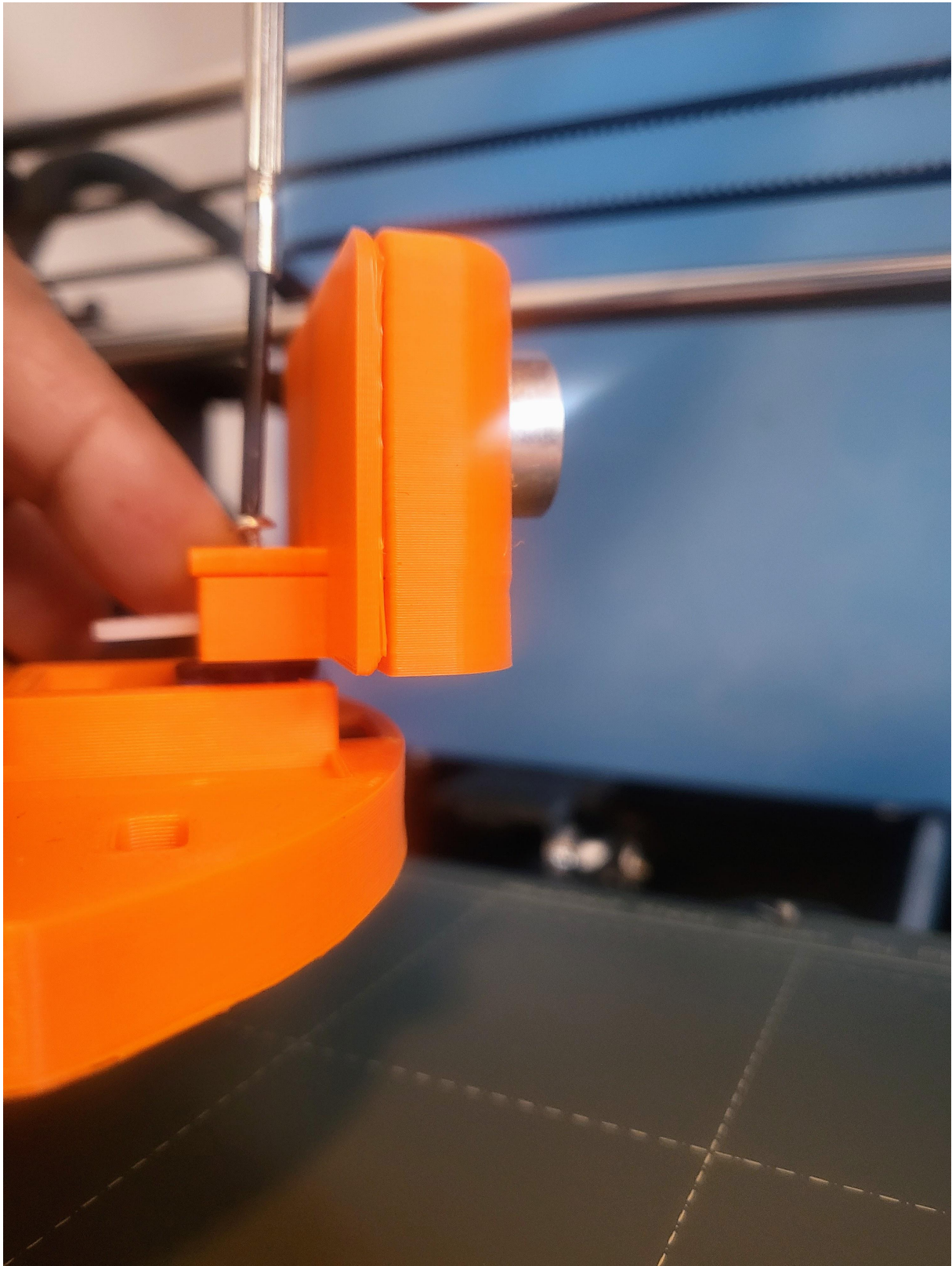
Grove Ultrasonic Ranger Cover with Back Plate

This is a standalone part that is normally incorporated into Nexgen STEM School's Rover robot, an almost fully 3D printed educational robot suitable for STEM activities in schools. We will be uploading all parts of the robot, however you may want to use this one standalone in a different project of your own.

The ultrasonic ranger cover piece fits neatly onto an SG90 Micro Servo:



Just put the servo arm in and screw it down:



I have uploaded 2 versions of the model. The second version is for the longer screw which I favoured over the one that is usually bundled with the SG90. This is really only for fortuitous reasons - I have a load of the longer screws, so use the shorter screw version if you want to use the screw bundled with the SG90.

One thing I have found. Depending on which variant of SG90 you get, sometimes the servo arm will be a slightly different size which is a real pain. There isn't a lot I can do about this other than say I have bought all my SG90 servos from Aliexpress and I only encountered this issue once after using & buying many servos.

So the two screws are approx 9.5mm and 12mm as shown below:

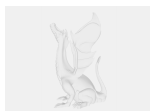


Model files



Fusion 360

1 file



grove_ultrasonicranger_cover_v4.f3d

**3MF**

4 files

**back_plate_longcrew.3mf**☐ Use a self tapping M2 12mm screw**grove_urc_holder_longcrew.3mf****grove_urc_holder_shortscrew.3mf****back_plate_shortscrew.3mf**☐ Use a self tapping M2 9.5mm screw standard with an SG90 micro servo

Print files

**GCODE**

4 files

**back_plate_shortscrew_02mm_pla_mk3s_32m.gcode**☐ PLA ☐ 0.40 mm ☐ 0.20 mm ☐ 0.54 hrs ☐ 7 g ☐ Prusa MK3/S/S+**grove_urc_holder_shortscrew_02mm_pla_mk3s_1h19m.gcode**☐ PLA ☐ 0.40 mm ☐ 0.20 mm ☐ 1.32 hrs ☐ 13 g ☐ Prusa MK3/S/S+



back_plate_longcrew_02mm_pla_mk3s_35m.gcode

PLA 0.40 mm 0.20 mm 0.58 hrs 7 g Prusa MK3/S/S+



grove_urc_holder_longcrew_02mm_pla_mk3s_1h19m.gcode

PLA 0.40 mm 0.20 mm 1.32 hrs 13 g Prusa MK3/S/S+

Other files



readme.txt

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