

PGR Maverick 1.5 - .22 Short Revolver



Disclaimer

Please read and understand this manual fully before attempting assembly.

This product is not print-in-place. This design requires skilled machining and assembly of additional components for complete assembly. You will need a rotary tool with cutoff wheel at minimum. **These plans are intended for educational purposes only and assembly is at your own risk.**

The Maverick ONLY works with .22 short cartridges. 22lr will not feed in this design, nor should it be attempted. You have been warned.

These plans are provided as-is. They should be treated as a novelty, and nothing more. These files are not an actual gun, they are CAD files depicting design of a handgun. They require skill and knowledge to make into a functional object.

You are responsible for knowing the laws regarding firearms where you live. Before building, please read up on all applicable gun laws and decide for yourself whether or not you can legally build this where you live.

Read all instructions carefully. Do not skip or skim. It's all here for a reason.

Required Parts

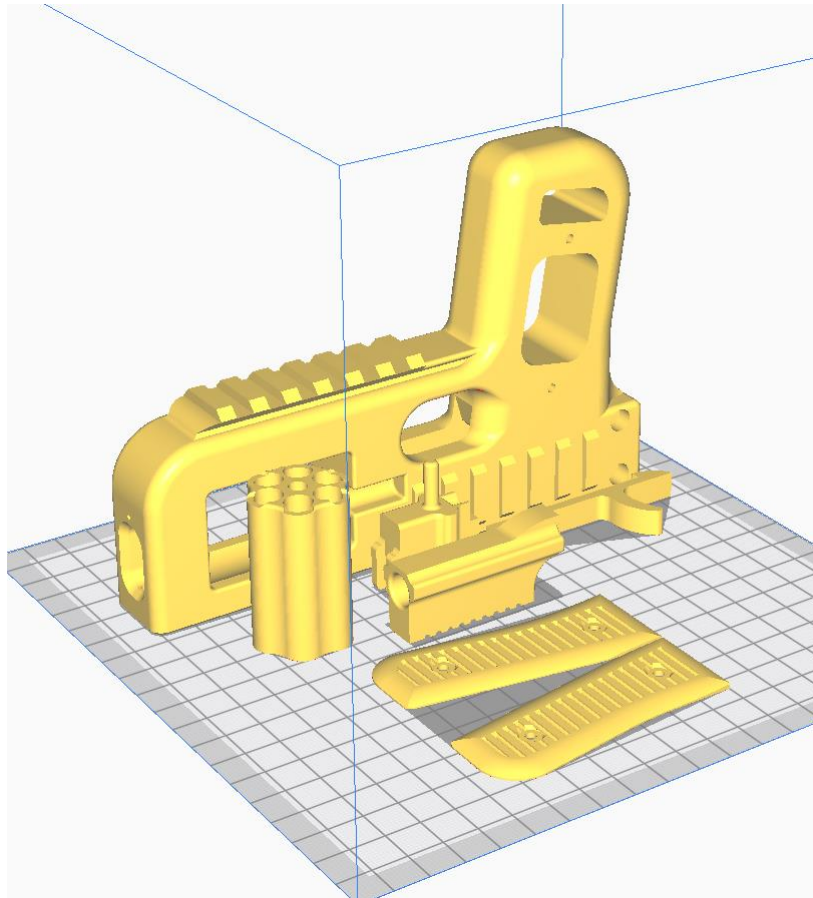
Amazon links are sponsored Affiliate Links

- M3 Screws – Cap or Button Head – 8mm to 20mm - <https://amzn.to/2P5RMaI>
- 22 Caliber Rifled Barrel Liner - 5/16" OD - <https://www.gunpartscorp.com/products/588180>
- Compression Spring - (May need to be cut to length) - <https://amzn.to/36c2an0>
- Firing Pin (1/16" Drill Bit) - <https://amzn.to/37kLv0F>
- Plastic Safe Grease - <https://amzn.to/2F3pUxO>
- 5/16" Ball Bearing - <https://amzn.to/2M4YJq6>
- ¼" Compression Spring, cut to length.
- Epoxy - <https://amzn.to/2F85q70>

3D Printing

General Settings

- Nozzle: 0.4mm
- Print Height: 0.3mm
- Material: High-Quality PLA –PETG or Nylon may work. ABS has not been tested.
- Slicer: Confirmed to print correctly on Cura 3.6 and 4.0
- Print in the orientations shown below



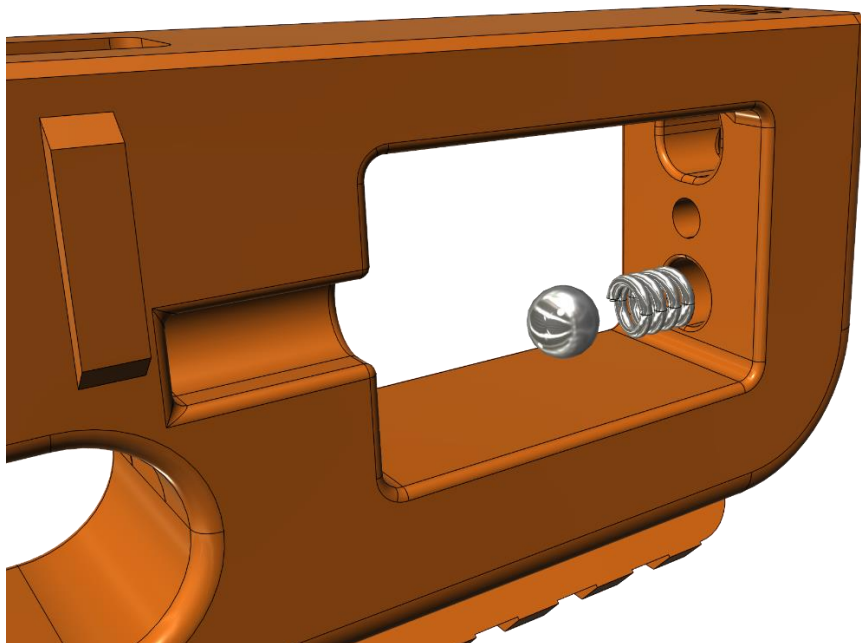
Print Settings

- Infill
 - Print all parts 100% Infill
- Supports
 - Placement: Touching Build Plate
 - Support Angle: 50 Degrees
 - Pattern: Zig-Zag
 - Density: 20-25%
 - Print Frame with a large brim! This was the easiest way I found to prevent the frame from warping. A heated build plate is required. I recommend an enclosure.
- Notes
 - Don't try to print too fast, you want it to be good. Even when using PLA, it helps to build in a warmer environment for strong layer adhesion. I put my printer inside a roll-top desk while printing.
 - Clean and sand all edges of prints. Polish any mating surfaces or moving parts.
 - If available, use plastic-safe grease on all moving parts. It will ease trigger pull & wear.

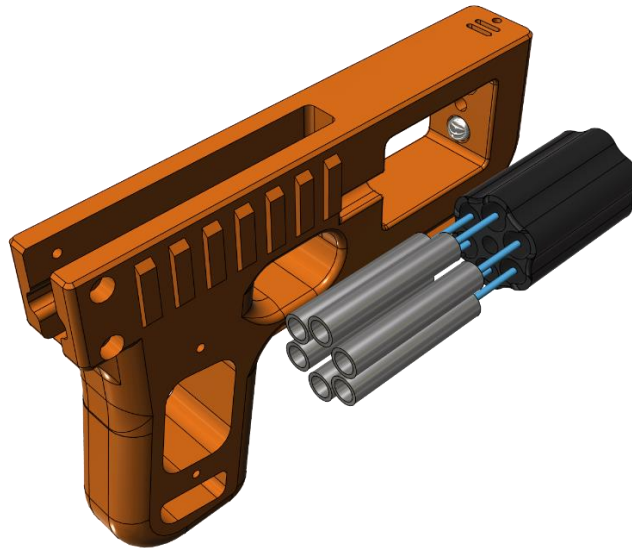
Assembly after Printing

Cylinder Assembly

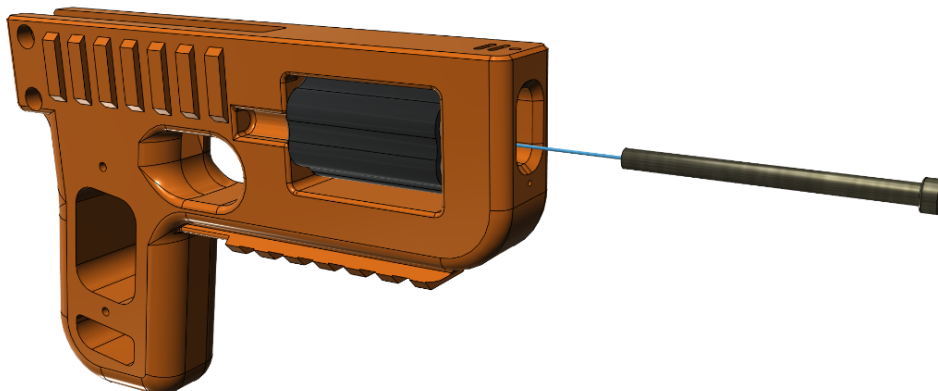
Fit the 5/16" ball bearing and spring into the front of the frame. Sand the frame if necessary, the ball should freely move in and out of the frame without sticking. Use plastic safe grease on the ball bearing. You may need to cut the spring to length. The ball bearing should be able to push flush with the frame for proper cylinder rotation.



Cut each barrel to 44mm and ream a chamber. **Each barrel should be exactly the same length for proper operation!** Clean and sand each barrel and coat exterior with JB Weld or similar epoxy. Chambered end of the barrel faces the notched end of the cylinder. Press the barrels into the cylinder. Clean any excess epoxy. **Ensure no epoxy sets inside the barrel, there should be no obstructions!**



Compress ball bearing into frame, and slide the cylinder assembly into the frame. Grease a 65mm M5 bolt, and use it to secure the cylinder assembly in the frame. The ball bearing should provide enough resistance to firmly and securely click into each barrel position, but still smoothly rotate between barrels without having to force it.

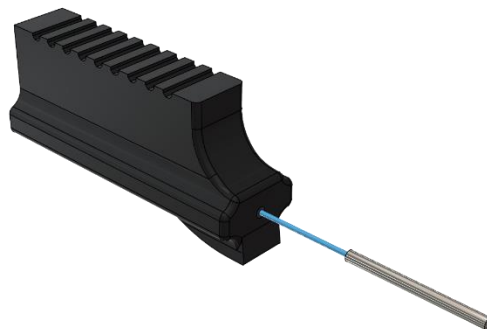


Striker Assembly

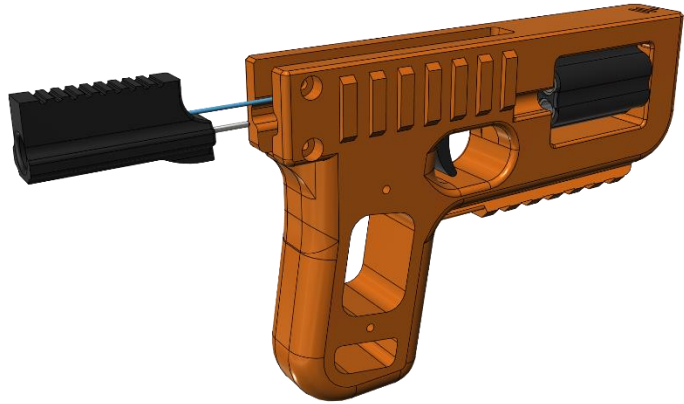
Set trigger into frame rails from the top. Align with screw hole, but **do not install screw yet**.



Cut a length of 1/16" drill bit to 23mm. Chamfer the tip to a small rounded point. Clean and sand the firing pin, and secure into the striker using epoxy.



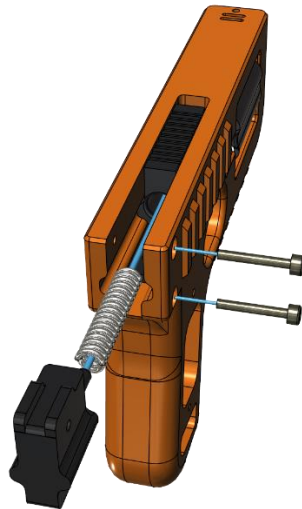
Place the striker into the frame rails from the rear. Sand any sliding surfaces to remove rough finish for best operation. The striker should slide forward and backward in the rails with minimal resistance.



Push the striker to the full forward position. Use an M3x12mm screw to secure the trigger to the frame.



Add the spring between the striker and the sights, and secure rear sights in place with two M3 x 20mm screws.



Grips and Final Touches

Use M3 Screws to attach the grips. Maximum screw length is 12mm. Use an M3 cap head screw for the front sight. Maximum screw length is 8mm.



TEST FIRE THE GUN REMOTELY. Secure the gun to a solid surface and fire remotely with a string attached to the trigger.



Safety

Inspect the condition of the gun during and after each session of usage. Discard any parts which show excessive wear. Always wear safety glasses and ear protection when firing. You do not want ear or eye damage from vented gases in the case of cartridge failures.

Legality

The PGR Maverick is a CAD representation depicting theoretical design of a handgun. These plans are provided as-is for entertainment and educational purposes only. I am not liable for any injury or damage resulting from using these files. These plans do not represent a complete functional 3D Printed handgun, but a frame and components which require additional tools, materials, and knowledge to make into a functional object. You are responsible for knowing the laws regarding firearms where you live. Before building, please read up on all applicable gun laws and decide for yourself whether or not you can legally build this where you live.

