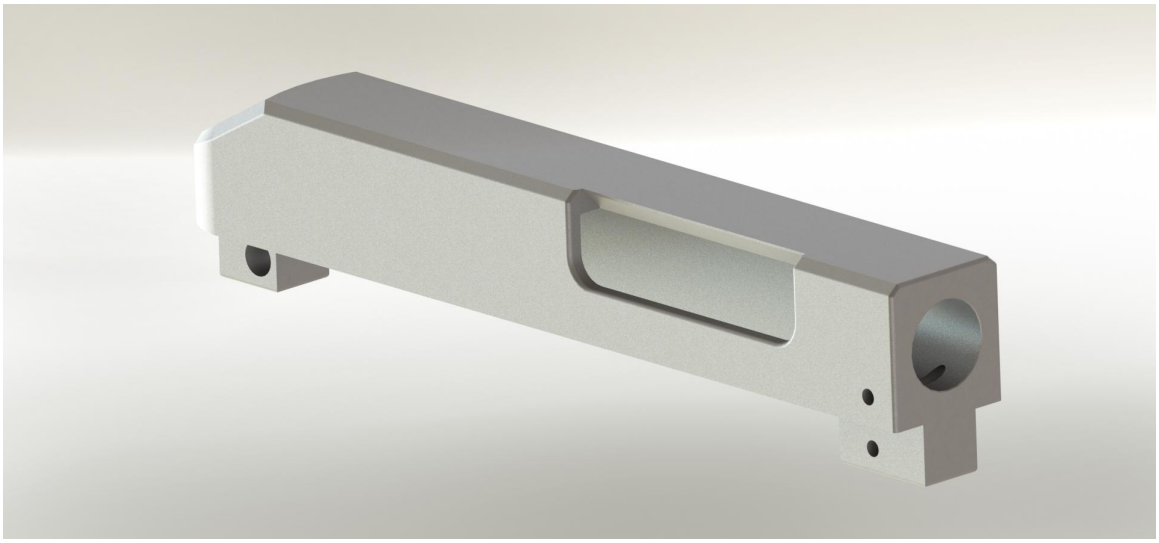
Project Merlin

Printable receiver for the Marlin 60/795 style rifles



Acknowledgements

I’d like to give thanks to Deterrence_Dispensed for hosting this project along the way. My contributing beta members for the feedback and testing. My CAD team for the design help. (maybe someday I’ll break away from Tinkercad)

-TJB556

Description

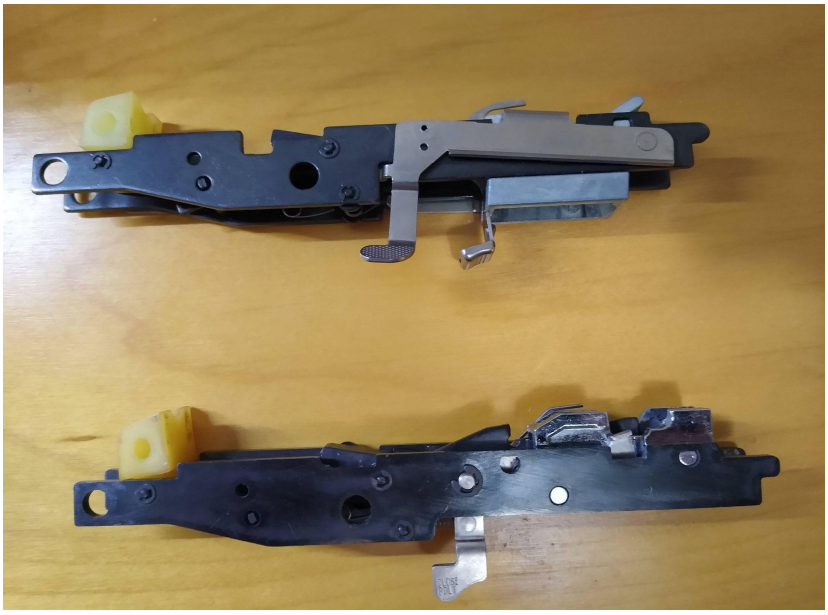
The Marlin 60 and variants is the tube fed magazine while the 795 and its variants have a detachable box style magazine.

There were many variants produced over the years and I try to find the newest kits as possible as they offer the most reliability and features. (single piece feed throats, LSHO (last shot hold open))

Marlin 795 variants can include the Models 70 and 995.

Marlin 60's are also commonly found under the Glenfield name.

Here we have the newer 60 and 795 action with LSHO lever



For troubleshooting any problems with the actions I recommend this youtube channel. His videos are short and to the point.

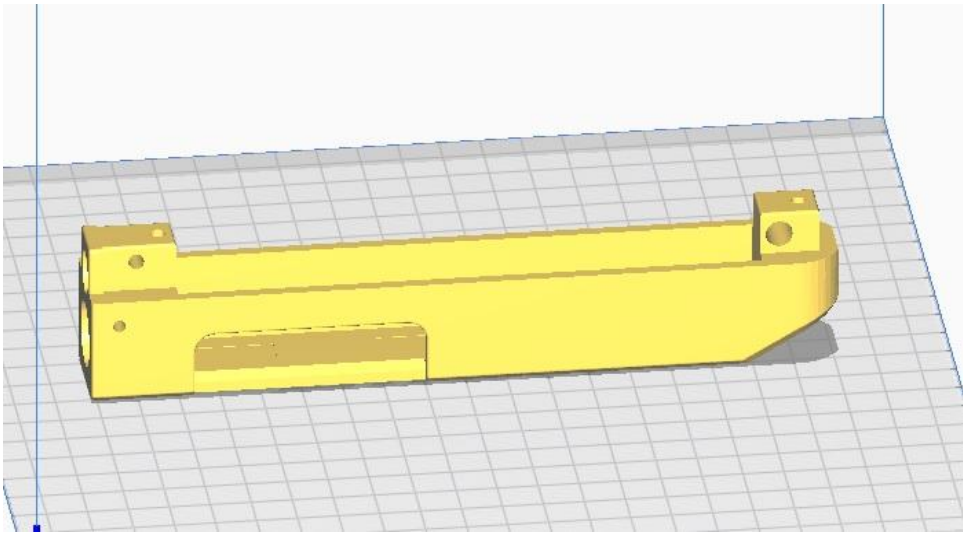
https://www.youtube.com/channel/UCWws-7msGERbVBNw03n5ljw

Printing specs

Esun PLA+ preferred

225 nozzle and 50 bed

Print receiver with the top side on the bed.

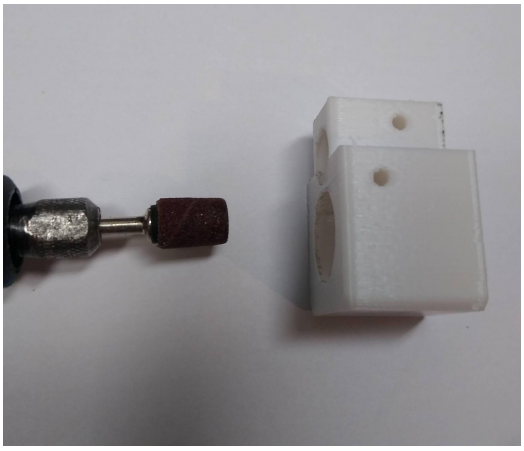


In Cura all I change from their recommendations is 10 walls, 8 top, 8 bottom and 99 Gyroid infill.

Tree Supports for the ejection port. None are needed on the rear overhang or barrel opening if your printer is properly tuned.

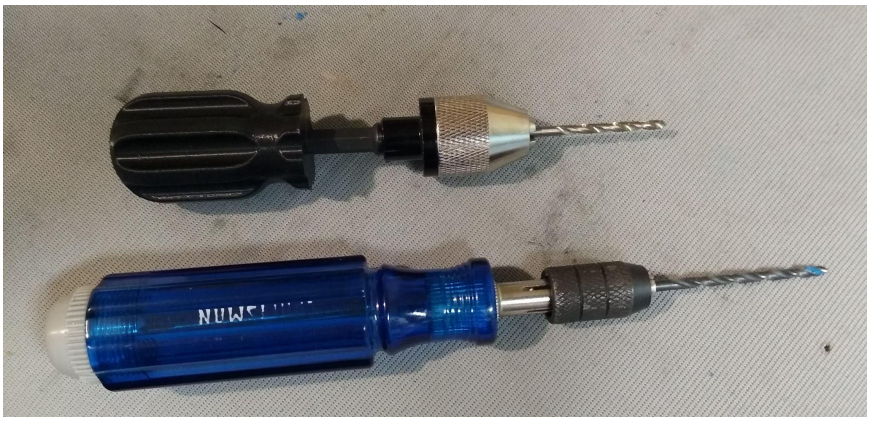
Post processing

I do a quick pass with a sanding drum for the barrel hole to clean it up. Depending on your printer settings you shouldn't have to do much work to get the barrel to fit. I've included a test print of this section if you want to practice or tune your printer.



For the barrel pin hole I use a 7/64 drill bit to clean it out.

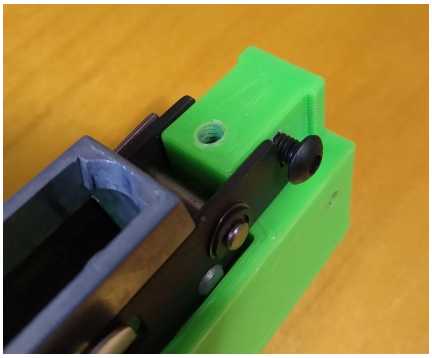
On the 60 receiver a 19/64 bit can be used to clean up the tube hole to allow rounds a smooth transition into the action.



Assembly

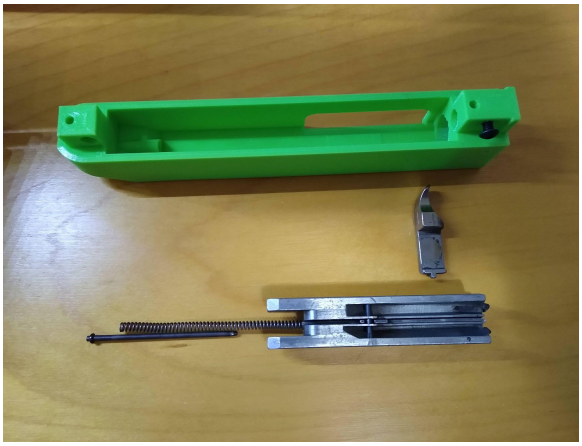
Barrel install: You may get a barrel pin with your kit if not a 1/8th dia x 1" long (3mmx25mm) standard pin from your local hardware store works perfectly. **Press in slowly to avoid cracking.**

Depending on model and year the front of your action will be either held in place with screws or a cross pin from the factory. If your kit came with screws just thread them into the holes and let them self tap. If your kit was held down with a pin you can use a variety of methods (m4x8 screws, 3.5mmx20 pin, 5/32x3/4 pin..etc)



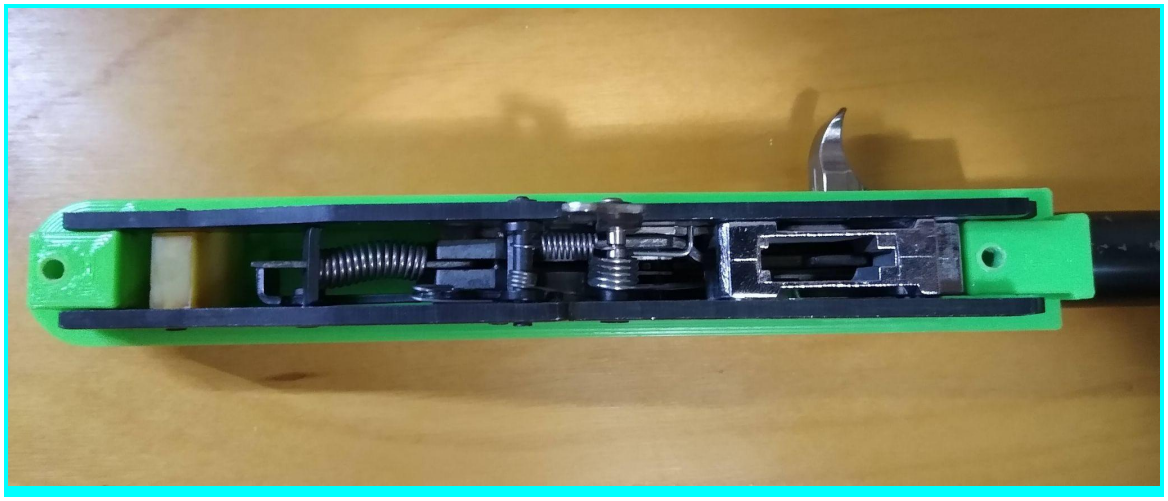
Bolt, recoil spring/guide rod, handle installation:

Line up the parts like so and install them, careful on not bending or kinking the guide rod/spring assembly.



Next install your action and secure it with the rear pin.

Tip: Pull the charging handle back a bit when dropping the action in. It prevents the ejector from getting knocked out of place.



At this point you should be ready to drop it in the stock. Front and rear action to stock screws are self tapping.

Next step... PEW PEW PEW!

795 10 round Magazine

Esun PLA+

220 nozzle 50 bed

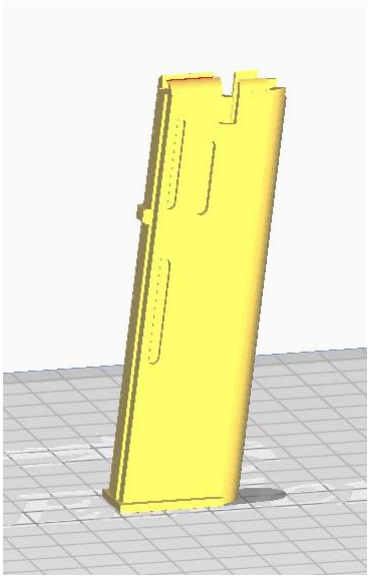
6 walls

99% infill (parts are small enough this doesn't really matter)

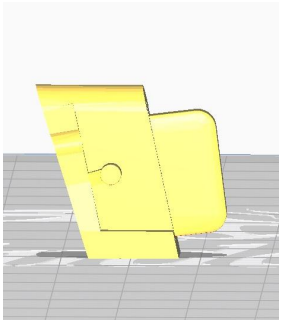
.12 layer height

No supports needed

Print the body standing up, baseplate flat on bed.



Follower, back flat side on bed (slicer should load it correctly)



If printer is tuned correctly all parts should fit with no problem.

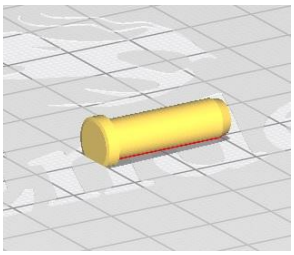
If you have good bed adhesion you shouldn't even need a brim on any of the parts.

Once printed and assembled, cycle the follower several times to make sure it doesn't hang up.

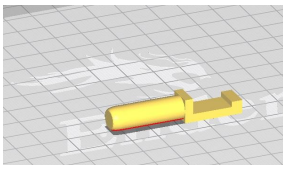
Spring used is an 18 coil z-spring. Can be found at Taylor-Tactical-Supply.com or their ebay store. (GSG firefly,Sig Mosquito, etc...)

Extra printable items

Rear action retainer pin: (print flat on bed not standing up .12 layer height)

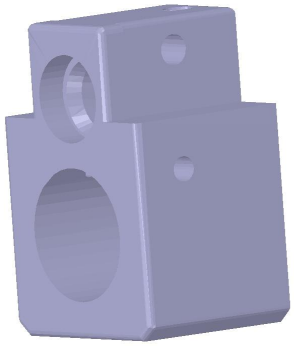


Charging handle: These don't last long I've found out but can get you by till a metal one is found. Print flat .12 layer height.

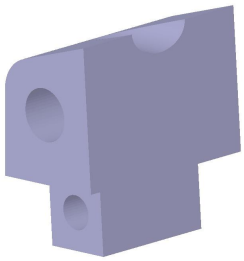


60 extended tube band: this item extends the tube farther away from the barrel so you can run a suppressor without having to remove it when you need to reload.

Barrel test print: Use this to to practice sanding for barrel fitment, pin insertion...etc



Replacement buffer: handy to have if yours is broken or missing.



22lr snap cap: print out and load in spent cases. Handy for function testing.