ZINC 2.0 Assembly Guide

Updated 8/5/2021

118 Design

DON’T RUIN THIS FOR EVERYONE.

Like any toy blaster this one has the potential to be mistaken for a real firearm depending on its appearance. This blaster must be printed in bright colors so that it cannot in ANY circumstances be misconstrued for a deadly weapon. If you fail to build this blaster responsibly you will jeopardize not only your own life, but also the future of this hobby.

Introduction

- The files for all 3D printed parts can be found at: https://github.com/118design/ZINC/
- Please send any questions or comments to: support@118.design
- Hardware kits may be purchased at: www.118.design

Spring Overview:

Pin Overview:

Front prep

FRONT
2x Magnets (ignore for now)
Thumbnut
SEAR
3/32” x 3/8”
3/32” x 1 1/8”
Sear spring
2x (#4-40 x 1/2”)

Step 1

Front heat-set

- Use a soldering iron to insert the thumb nut into the front piece.
- Work slowly and cool the part with water immediately after to ensure the best joint
- If you don’t have a soldering iron you can heat the insert up over a flame, just be careful.

Step 2

Magnet install

- Use superglue to glue the magnets into the front piece. Set them up as pairs to ensure they will **attract** towards each other when the others are set in the slide

- After the front piece has cured, glue the other magnets into the slide. **DON’T GLUE THE PRINTED PARTS TOGETHER!**

Step 3

- Insert the sear spring as shown and slide the 3/32” x 3/8” pin through the holes
- Line the sear up with the front and slide the 3/32” x 1 1/8” pin through the entire assembly, forcing the 3/8” long pin out
- The 3/8” long pin is just used to keep the spring in place during assembly

Step 4

Frame prep

- Printed parts: FRAME, TRIGGER, GUARD, RELEASE
- Hardware: 3x 4-40 nut, 3/32” x 3/4” pin, 3/32” x 1/2” pin, 5/32” x 3/8” pin, release spring, eject spring, trigger spring, #4-40 x 3/4” bolt.
- Deburr all parts.

Step 5

Magazine release prep

- Ensure that the magazine release slides smoothly in the slot in the handle.
- Insert the release spring (the shortest of the springs) into the slot as shown
- Add a #4-40 nut to one and and screw a #4-40 X 3/4” bolt through until it is threaded into the nut and the spring can be compressed

Step 6

Magazine release installation

- Insert the release into the handle
- Slide the GUARD into the location forward of the trigger
- Pull outwards on the bolt, compressing the spring, and pop the guard into place

Pull on this bolt as you pop the guard into place to set the spring correctly

Step 7

Magazine release finish

- Verify that the release functions smoothly and springs back into place
- Add a 3/32” x 3/4” pin through the hole to secure the GUARD piece
- Unscrew the bolt and leave the nut & spring captive in the assembly

Step 8

Barrel prep

- Sand the bottom of the barrel slot (where the overhang occurs while printing) until the barrel slides in without too much friction
- The fit should be as firm as possible without damaging the frame or making the barrel impossible to remove
- Remove the barrel by knocking it out through the back of the frame until enough is proud to grip it

Step 9

Barrel & trigger installation

Trigger spring with ends facing the trigger guard

- Insert the trigger and trigger spring
- Make sure the ends of the trigger spring face down towards the trigger guard
- Ensure the trigger slides smoothly and returns under spring pressure

Step 10

Barrel finish

- Insert the barrel until it sits flush with the front of the frame

Step 11

Install frame nuts

- Insert 2 #4-40 nuts into the slots at the front of the frame
- The correct orientation is shown below

Step 12

Mag eject spring prep

- Clean up the mag ejection spring slot if needed. Use a 5/32” drill bit

Step 13

Mag eject spring installation

- Slide the mag eject spring into the slot followed by the 5/32” pin
- Hold the pin under tension and slide the 3/32” x 1/2” pin into the hole in the handle to retain the assembly
- Verify that the pin moves and returns under spring pressure

Step 14

Slide prep

Step 15

Slide clean up

- Remove the support structure from the slide with a sharp blade
- Be sure the highlighted edges are clean and slightly chamfered

Step 16

Plunger tube installation

- Ensure the inside of your slide is smooth and without burrs
- Spread the ends of the slide apart until the plunger tube can fit through and push it in
- If your part isn’t flexing enough or cracking during this installation then print in PETG if you aren’t already

Step 17

Slide captive nuts

- Insert 2 #4-40 nuts into the slots at the rear of the slide
- Be sure to orient them in the correct position as shown below

Step 18

Catch install

- Insert a #4-40 nut in the slot beneath the screw hole
- Insert the catch and the 2 springs
- Ensure the cut ends of the springs are facing up
- Secure the cover with a #4-40 x 5/16” bolt. Do not over tighten.

Place a nut in the slot behind the catch for the cover!

Step 19

Plunger prep

Step 20

Internal o-ring install

- Lubricate and then insert the smallest ring into the plunger

Step 21

Plunger finish

- Thread the plunger core in the plunger body
- Lubricate the external o-ring thoroughly and then add it to the plunger

Step 22

Plunger rod prep

- Slide the remaining small o-ring onto the plunger rod until it is resting against the hex nut
- DO NOT FORGET THIS. The o-ring acts as an important buffer against wear

Step 23

Plunger assembly

- Lubricate the plunger rod and slide the plunger onto it
- Add your choice of spring

Don’t forget this o-ring!

Step 24

Rear assembly

- Lubricate and add o-rings to the REAR piece
- Attaching this piece to the slide will require two #4-40 x 1/2” bolts. Set them in the piece for now.

Step 25

Final assembly

- Slide the plunger assembly into the plunger tube
- Tighten the plunger rod into the thumb nut at the front of the frame
- Insert the rear piece into the plunger tube and bolt it into place
- Lubricate the rails to get the smoothest motion

Step 26

Magazine assembly

- Deburr the inside of the magwell and verify the follower moves freely, lubricate if needed
- Insert the follower and spring, then snap the baseplate into position
- Remove the baseplate by using a screwdriver or rod to push in the “wings’ through the slots in the side of the magazine body

Step 27

Adjust mag ejection force

- Trim this spine down to adjust the amount of compression the eject spring undergoes. As printed the magazines will eject with maximum force.