

AR 15 Trigger and STR 15 Trigger Instructions



Both the Standard AR 15 trigger and the STR 15 trigger use the same instructions for printing and assembly. This design requires a 3/8" T-50 staple and standard hand tools too complete. In this design the staple acts as the edge of the trigger where it contacts the hammer.

Below is picture of the pack of staples I used:



I recommend using a staple with a square end. I tried ones with an angled point and they tend to twist as they are inserted into the trigger.

Required Components:

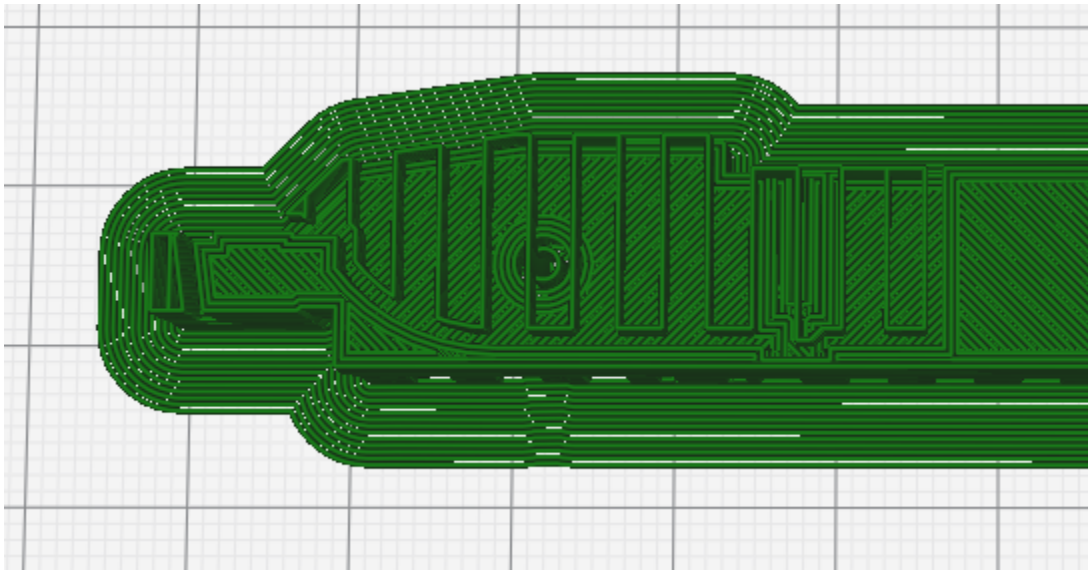
- Printed Trigger
- 1 3/8" T-50 staple

Required Tools:

- Small Pliers
- Soldering Iron
- Drill with a 5/32 inch drill bit

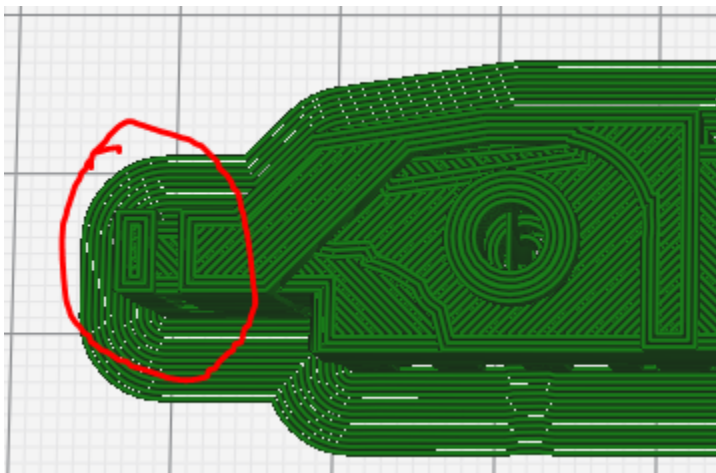
Printing:

PLA+ is recommended. I used eSun PLA + printed at 220 degrees with 100% infill. Ensure that your printer has been calibrated for dimensional accuracy since a small error in the magnitude of .1 to .2 mm can cause issues. Support location and density is important in this print to ensure supports can be removed from the disconnecter pocket. I used 15% support density with them oriented as pictured below:

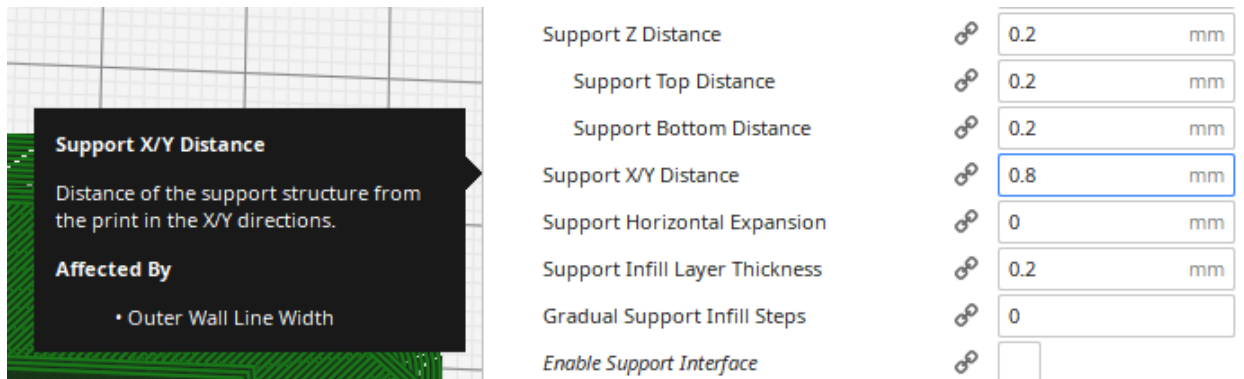


Make sure that the support material is running vertically like this in the disconnecter pocket.

In the front of the trigger is two small shafts for the legs of the staple. Adjust your support settings until there is no supports in those shafts.



I was able to exclude supports in the shafts by setting the “Support X/Y Distance” to 0.8mm in Cura.



Post Print Prep:

While removing supports make sure that the disconnect can move freely. Remove material until this is achieved. Be careful to remove all of the support material in the disconnecter spring area. Drill out the trigger pin hole with a 5/32 drill bit.

Installing the Staple:

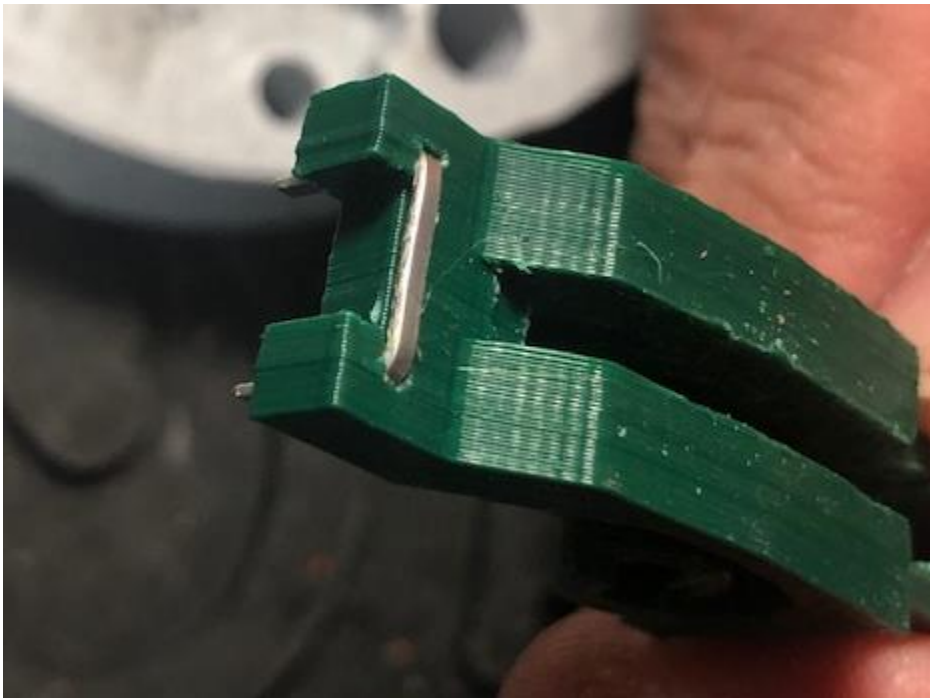
1. Insert the end of the staple into the openings on the trigger. The staple will not slide into the trigger but you should be able to get the ends to hold it in place.



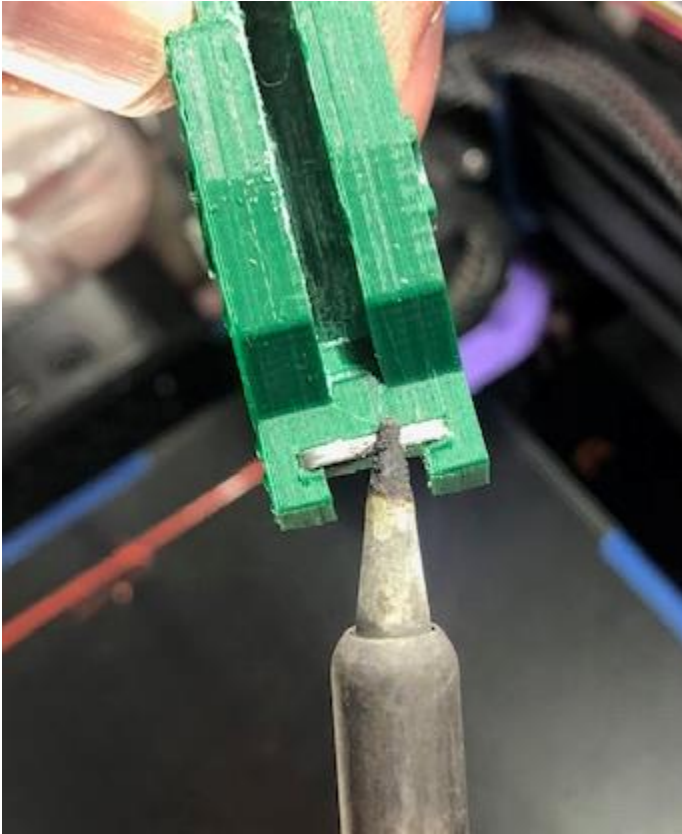
2. Gently tap in the staple using an armorer's hammer while supporting the end of the trigger with an armorer's block. If the staple deforms in any way you are using too much force and need to start again with a fresh staple.



3. The staple should stop just short of being fully seated in the trigger as pictured below.



4. Use the end of a soldering iron to heat and gently press down the staple to seat it in the trigger.



The staple should be flush with top of the trigger. Trim any excess plastic that may have bulged out on the top and front of the trigger around the staple. When finished that top of the trigger and front of the trigger should be flush with the staple.

5. Allow the trigger to completely cool. It is important that it be completely cool before moving on too the next step or it may be damaged.
6. Using the pliers gently bend the ends of the staple down flat with the bottom of the trigger.





7. The trigger is complete and can be installed in the receiver.

Trouble Shooting:

While designing this the number one issue I ran into was with the disconnecter not functioning correctly. Depending on the firing group components you are using and the specs of your receiver you may experience these issues. If the disconnecter releases too early the gun will fire a second shot when the trigger is released. If the disconnecter releases too late then the trigger will be stuck and you will be unable to fire a second shot. To solve this, you will need to adjust the area of the trigger where the front edge of the disconnecter contacts the trigger circled in the image below:



In the image above you can see some discoloration where the disconnecter contacts the trigger. To resolve a disconnecter releasing too early you will need to remove a small amount of material from this spot. If it is disconnecting too late then you will need to add some material to this spot. Adjustments as small as .1 to .2 mm may resolve these issues so make small changes.

If you have any questions you can contact me at thedecliner on Keybase.