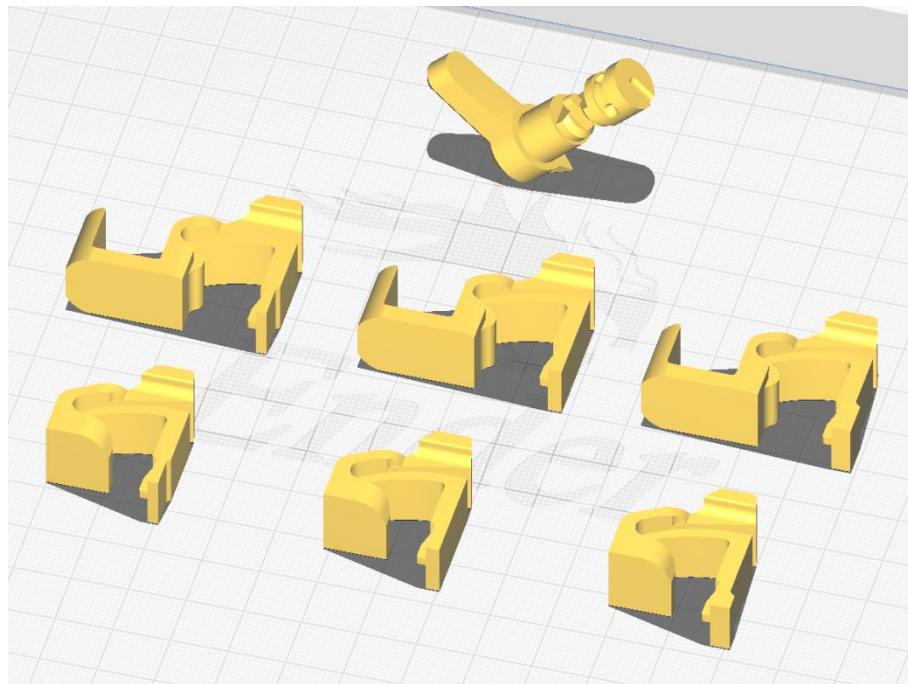


## The Choosy Express V2, DIY select-fire for ARs.

Now works with Geissele Triggers, some high-shelf lowers, and more!

By [jimothy.perkins](https://www.thingiverse.com/jimothy.perkins)



Disclaimer: Follow the necessary laws and only produce this design if you are properly certified/licensed. If you produce this set of files, it is of your own volition and your responsibility.

## Design Introduction

This product is a modified version of the Yankee Boogle to have select fire functionality without modifying the receiver or FCG. It is designed to function with most variations of AR setups. It needs an M16 cut BCG and a certain, common geometry in the right, inside wall of the lower. The Choosy Express does not fit with M16 FCGs.

The design functions by actuating the trigger disconnector bar when the BCG goes into battery to release the hammer like the original YB, but it has a secondary spring that makes the sear sit clear of the disconnector by default. This is achieved by designing the sear to be partially recessed into the specially designed safety selector by default. In both safe and semi, the sear is mated with a notch in the selector; when in full auto, the sear is kicked forward by a nub just far enough for it to engage the disconnector.

The files included have a few options for the Choosy Express for different FCGs and lower types (high and low). The selector is an improved design from the V1 with only one style, but prints much more easily. The version that works for Geissele triggers such as the SSA-E and G2S are the Deep versions. For the high shelf versions, the lower needs to have the right wall bulge inwards above the selector plunger and spring as depicted below. Fun note: the high shelf versions should work with the ARK designs from AWCY by Invader Zip as they are high shelf and have that geometry.

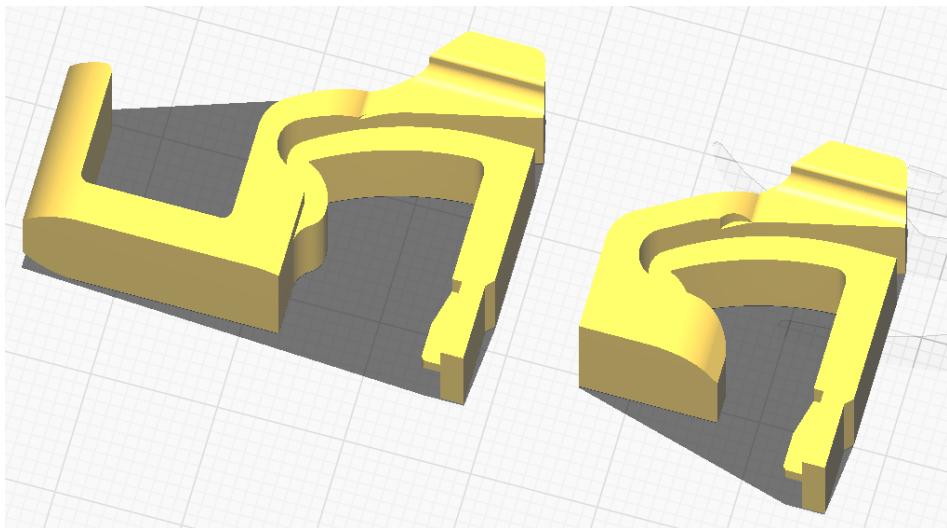
- Needed bulge above the selector, a straight wall or other variant won't work:



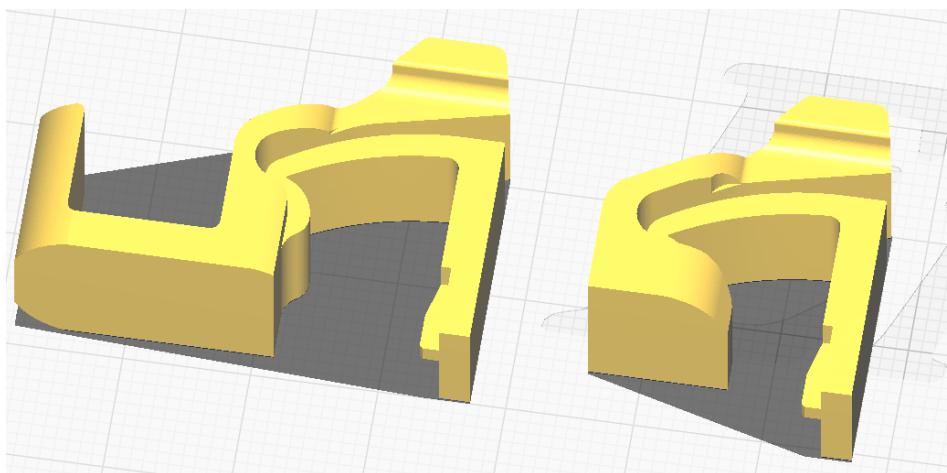
## Instructions and Required Materials

There are renders of the files in Cura slicer in the package folder and shown in figures below. These renders are followed by print setting suggestions and post processing. The stl files are all set to the recommended orientations and the stp files are provided for anyone to modify as needed.

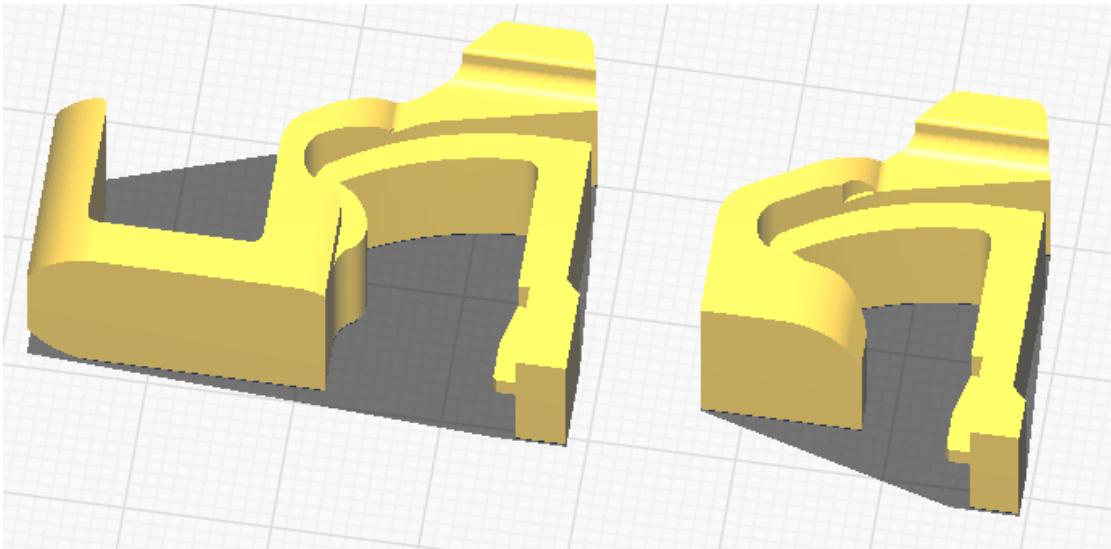
- Materials:
  - o PLA+ (a printed set of a selector and the Choosy Express takes about 8 grams).
  - o Standard selector spring and plunger (you already have this if you are replacing your existing selector).
  - o Flathead screwdriver or long Allen wrench to remove your grip.
- Renders:
  - o Choosy Express Shallow



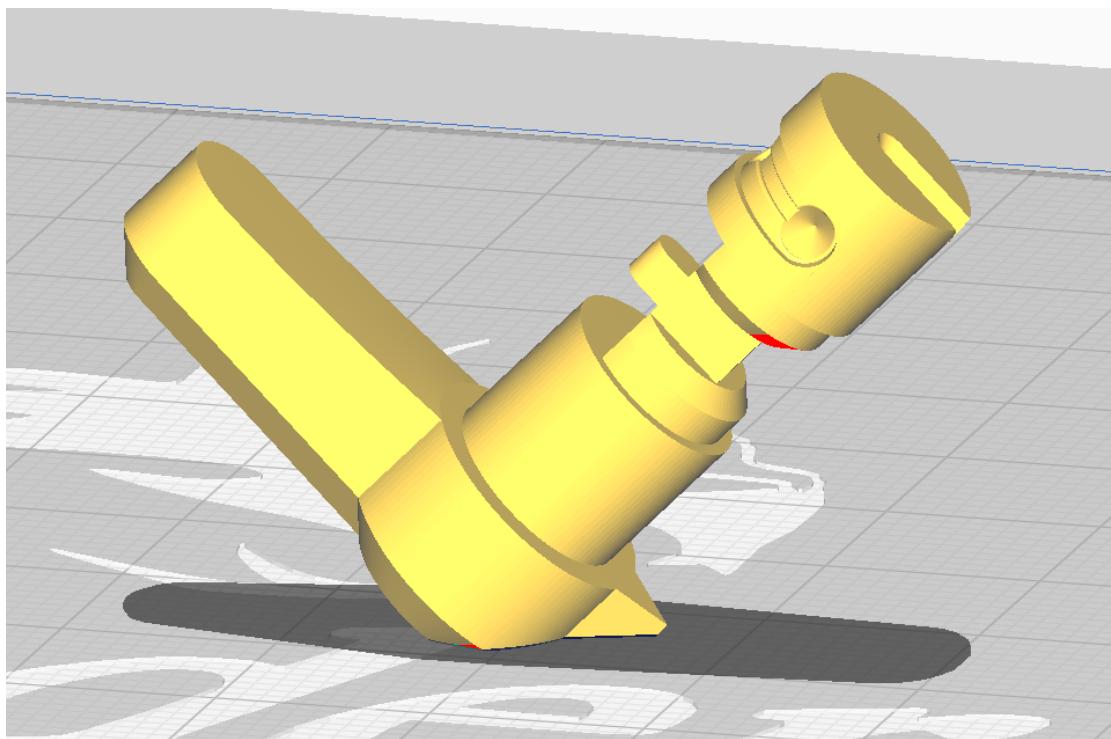
- o Choosy Express Medium



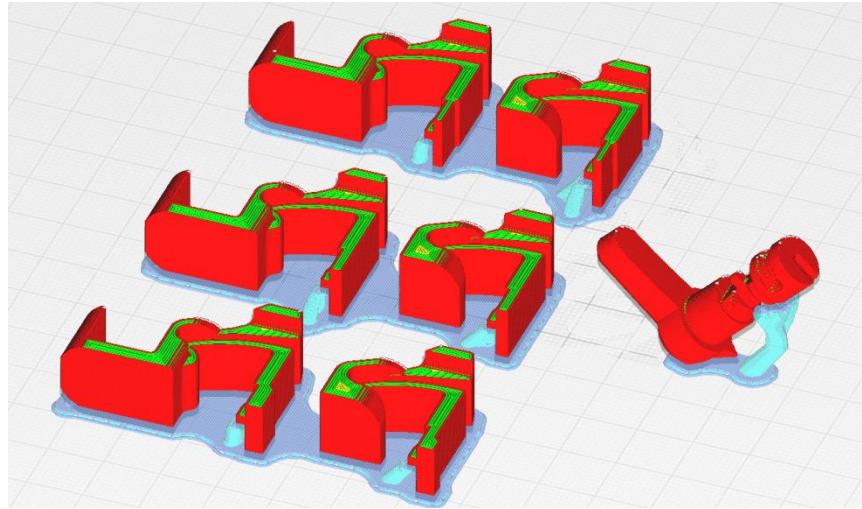
- Choosy Express Deep



- V2 Selector



- Examples of the recommended amount of support and print settings.



- General:
  - Use PLA+ for material
  - 0.2mm layer height
  - 0.4mm nozzle
  - 210 C nozzle temp
  - 60 C bed temp
  - Slow printing speeds i.e. the Ender 3's default of 50mm/s and 25mm/s
    - It is a small amount of material so high speed isn't that helpful.
  - Print at the given orientations.
    - Selector in a V position, CE laying on its flat side.

#### Part Specifics:

- Selector:
  - Use a brim or raft for adhesion
  - Tree support is easier, but normal works fine.
  - Use support angle of 46 degrees or higher, touching the build plate.
  - Use at least 5 walls, 10 top/bottom layers and at least 50% infill.
- Choosy Express:
  - Use raft, skirt, or none for adhesion; brim is too challenging to reliably remove.
  - Use at least 3 walls and 6 top/bottom layers and at least 50% infill.
  - Normal or tree support is fine. Only used on a small ledge on the back of the trip.
- Post Processing
  - The selector should be examined closely to ensure that the outer areas of the cylinder are smooth since they are the main contact points and fit flush in the lower. The notches in the middle of the receiver should have no irregularities that would interfere

with the sear's bump from mating cleanly, failure to do so could potentially cause the sear to engage with semi auto.

- Depending on how it fits in the lower, you may have to sand the sides to have a proper fit (it should fit without wiggling, but not need to be forced/wedged into place).
  - Do not sand one side significantly more than the other. Otherwise, the nubs on the selector and sear could potentially slip off each other and not work properly.
- Something of preference: the Choosy make cling to the stud on the upper that the rear takedown pin goes through; you can sand the rear inside face of the Choosy to allow it to slide off freely.

## Installation and Closing Comments

- First, install the selector. Start by partially or entirely removing the pistol grip. This disengages the spring and plunger from the existing safety. Replace/install the new selector in from the left side of the lower. Orient it into the safe position, replace the plunger and spring, then reinstall the grip to secure the selector in place.
- To install the Choosy Express, orient the spring and sear leg to be over the selector/behind the FCG and lower it into the rear of the lower receiver. Carefully close the upper onto the lower, allowing the stud to index on the Choosy Express. Close the rear takedown pin.
- To see which depth works for your setup, test with dry fire:
  - o When installed, you can check that the semi position properly resets and that the FA position trips the disconnector such that the hammer is released. This hammer release can be audibly heard and the trigger cannot be pulled again.
  - o The incorrect depth will make both semi and FA modes be semi if the face is too shallow or both be FA if it is too deep. So, be should to check with dry fire that it works correctly for your setup.