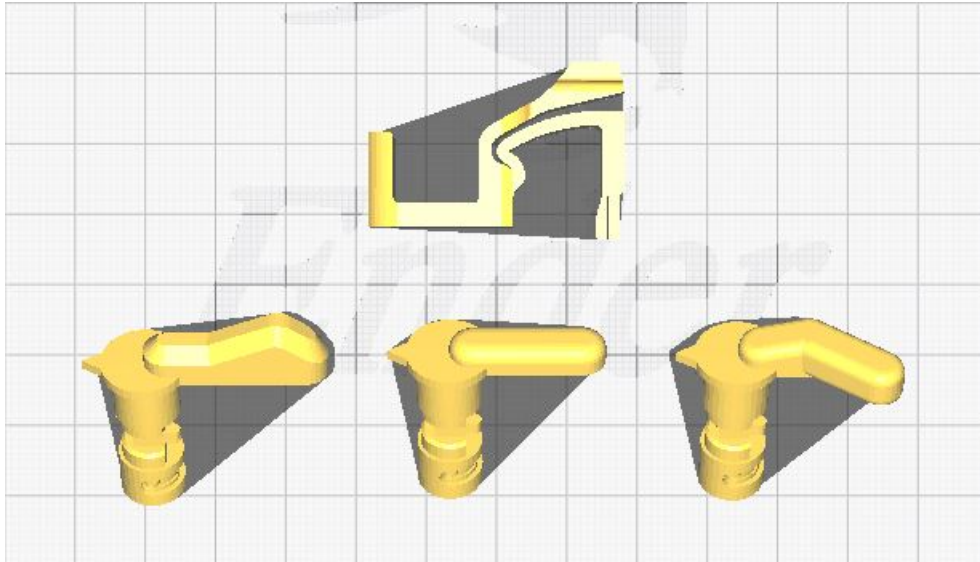


The Choosy Express, a select fire solution for standard AR-15 systems

By jimothy.perkins



Disclaimer: disclaimer

Design Introduction

This product is a modified version of the Yankee Boogie to have select fire functionality without modifying the receiver or FCG. It is designed to function with Milspec pattern AR lower receivers and FCGs, and M16 cut BCGs. The Choosy Express does not fit with lowered shelf lower receivers nor M16 FCGs.

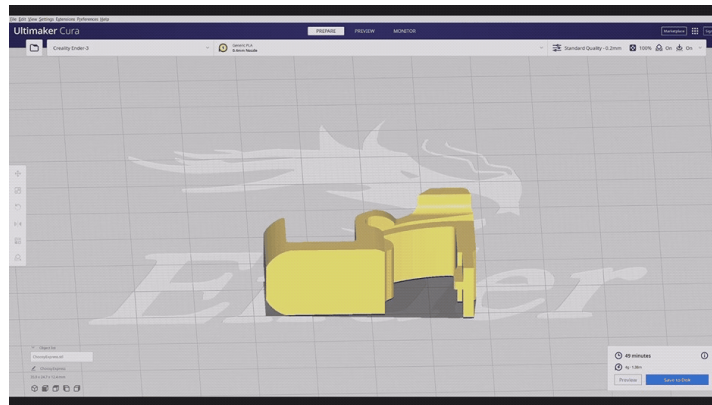
The design functions by actuating the trigger disconnect bar when the BCG goes into battery to release the hammer like the original YB, but it has a secondary spring that makes the sear sit clear of the disconnect by default. This is achieved by designing the sear to be partially recessed into the specially 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 disconnect.

The files included have a few options for the selector that change the lever design. The options for selectors in this package are a standard selector lever design, an enhanced lever that is longer and wider for better thumb contact, and an HK inspired selector lever. The step files are available for anyone to make their own design to fit their needs.

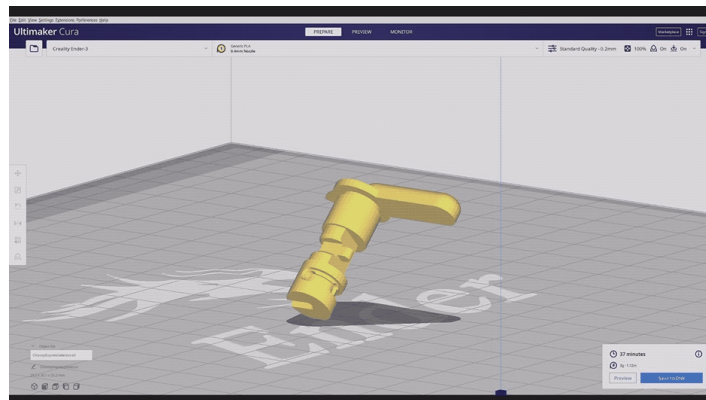
Instructions and Required Materials

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.

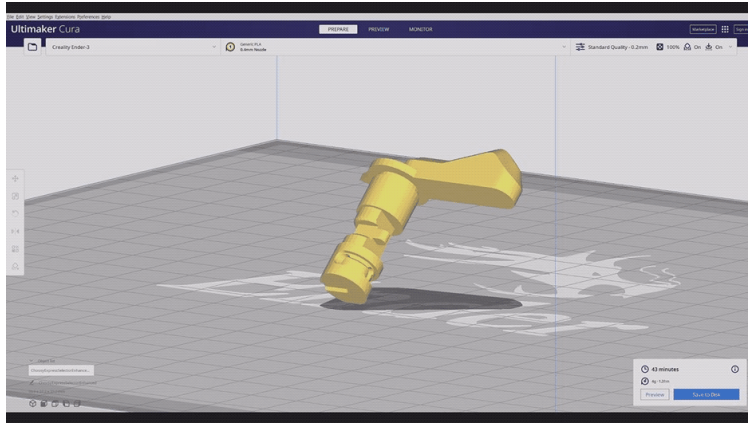
- Materials:
 - >10 grams of PLA+ (a printed set of a selector and the Choosy Express takes about 8 grams).
 - Standard selector spring and plunger (you already have this if you are replacing your existing selector).
 - Flathead screwdriver or long Allen wrench to remove your grip.
- Renders:
 - Choosy Express



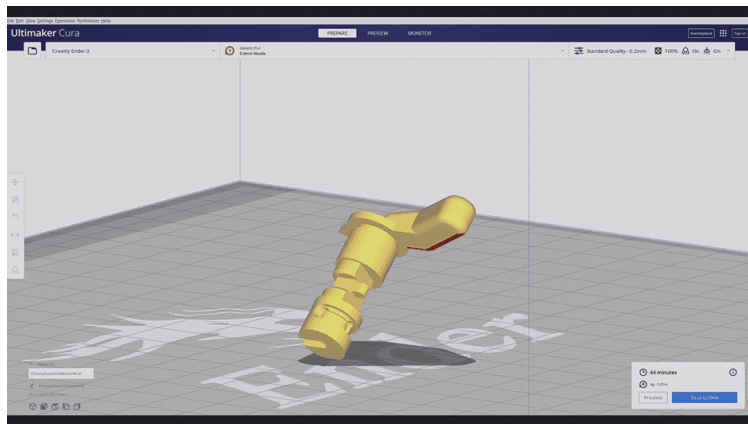
- Normal Selector



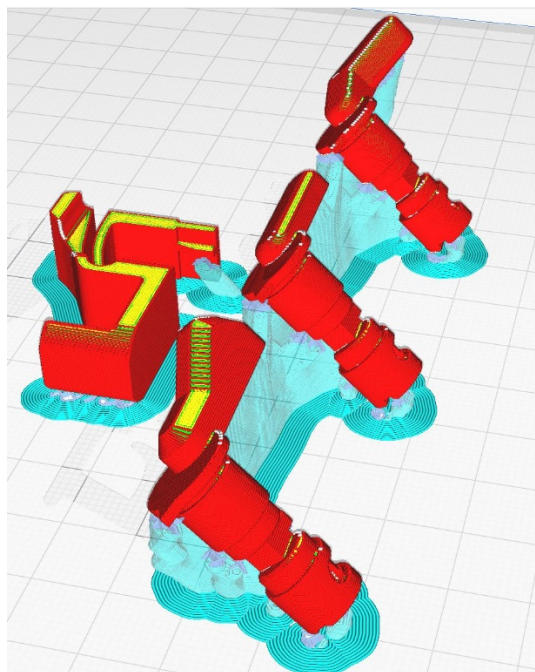
- Enhanced Selector

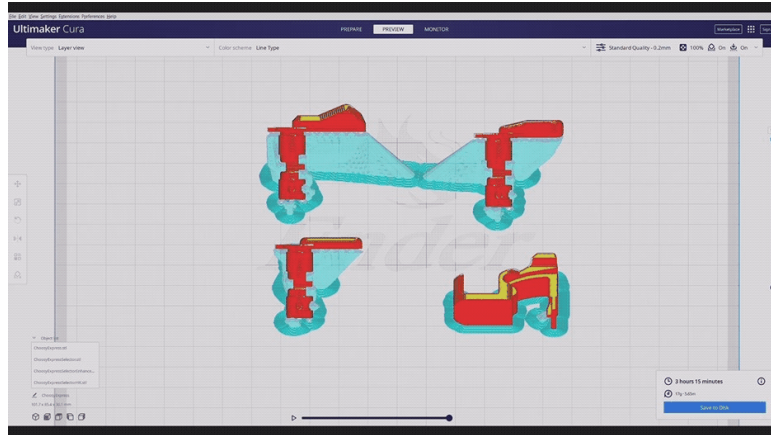


- HK-style Selector



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





- Print setting recommendations:
 - Layer height - .2mm
 - Temperatures - 220 C nozzle, 65 C print bed
 - Speeds - 10mm/s initial layer, 40-60mm/s for walls and infill
 - Infill - 100% for selector and Choosy Express
 - Travel - Retraction 'on' to avoid stringing
 - Support - tree with 10% infill and ≥ 45 degrees overhang
 - Adhesion - Brim with ≥ 3 mm width (if this doesn't work, print with a raft)
 - Experimental (optional) - exclusive slicing tolerance can be helpful to lessen post processing if you find your printer over extruding
- 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.
 - The Choosy Express's brim should be carefully removed so that the secondary spring moves freely. 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). 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 face of the Choosy to allow it to slide off freely.
 - 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.

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.
- Voilà

There are vague plans to make a version to work with some Geiselle triggers i.e. G2S style. However, that should be simple enough for eager, ambitious people to make for themselves with the stp file.

Second 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.

Choo Choo!