

R&B Tactical Tooling, Inc.

Tool Kit Insert ¼” End Mill

“Instructions”

Intro

Congratulations, you have just taken ownership of the most bad ass custom tool kit on the market for 80% Lower Receivers. 100% American Made! Yep, you heard right. R&B Tactical Tooling is proud to provide you the industry’s first custom tool kit for 80% Lower Receivers. This tool kit was designed and manufactured from the ground up to optimize the machining of 80% Lower Receivers, by hand and at home with power tools you may already have.

This tool kit was designed to be used with the industry’s most popular jigs. This kit will work with almost any jig that requires an End Mill with a cutting diameter of ¼”. Also, our Drill Bits will work with any jig on the market because they are the exact size you will need to drill out the safety selector, trigger and hammer pins as well as the trigger slot pilot hole.

Before you start, it is recommended that you read the instructions that come with the specific jigs that we recommend. Those jigs are the **80% Arms “Gen 1” Universal Fit Easy Jig, and the Juggernaut Tactical Ultimate Jig** These jigs are the most well built on the market and will enable you to machine many lowers without the jigs wearing out of required tolerance. It is **VERY IMPORTANT** to do the following machining steps in order. Failure to do so may damage your lower and damage the bits. Always make sure to use a quality cutting or

tapping oil on **ALL FOUR BITS!** WD-40 and 3M oil are not cutting fluids, so **do not** use these!
Any home improvement store will have quality cutting and tapping oils.

WARNING: READ ALL INSTRUCTIONS FIRST BEFORE CUTTING!

#1. 3/8" Drill Bit or 5/16" Drill Bit used for bulk material removal (3/8" Drill Bit for the 80% Arms Gen 1 Jig) or (5/16" Drill Bit for the Juggernaught Tactical Ultimate Jig) in the trigger pocket. Since we sell the Juggernaught Tactical Ultimate Jig, a 5/16" Drill Stop Collar will be in the kit, and not a 3/8" Drill Stop Collar. Have your drill press set at a moderate to slow speed. When the drill bit begins to make contact with the material, feed the drill bit very slowly. This extra time will allow the drill bit to create a "side wall" in the hole. This side wall will support the bit, and prevent it from pulling your jig up off the table. Once the side wall is created, you can gently accelerate the plunge feed. Failure to start the hole slowly could result in damage to your lower or the bit.

#2. 1/4" End Mill to machine the trigger pocket. If your lower receiver is made out of 6061 T6 aluminum, your depth of cut for the first four passes are 1/4" deep, or if you are new to machining please use a 1/8" depth of cut for all passes. The last two passes will be 1/8" deep. This means you can complete the milling process rather quickly. Make sure that you are using cutting or tapping oil on the end mill for every pass and run the router motor at a MediumHigh speed. Make sure to clean out the chips between each pass. When machining the trigger pocket with the end mill, take your time and go slow. Use clockwise circular motions and feed the end mill through the material slowly. This will give a nice finish and it will prevent the end mill from pulling out of the collet from trying to cut too much material too quickly. The last two passes

will be a “plunge cut”, that means there won’t be a hole to start the end mill inside of. So, you will have to rest one edge of the router motor on the jig and gently swing the end mill with one smooth rocking motion down into the material. Make sure you hold the router motor at the base with both hands securely. If you incorrectly hold it at the top it may bounce. If your lower receiver is made out of 7075 forged aluminum, the steps are the same as above. If you are new to machining lowers, use a 1/8” depth of cut. The final passes “plunge cuts” will be approximately 1/8” deep. Before your final cut, always make sure to consult your jig’s depth gage to ensure your final cut is at the proper depth.

Pro Tip: If this process makes you nervous, here is a tip to help you. Instead of using a “plunge cut”, before this step you can remove the trigger pocket milling block and replace it with the trigger slot template. You can use this to drill a hole straight through the bottom of the trigger pocket, (this is where the trigger physically protrudes through the bottom of the trigger pocket and goes into the trigger guard). After that, you can switch back to the trigger pocket milling block. Insert the End Mill into the hole you just drilled, and you can then finish up the final two milling passes without having to use a plunge cut.

#3. 3/8” Safety Selector Switch hole, 5/32” Trigger and Hammer Pin holes and 5/16”

Trigger Slot Pilot hole. When drilling the three holes on the side of the receiver, it is critical that you drill these holes after the trigger pocket has been fully machined. There are no short cuts, if you drill these holes first or “out of sequence” it will cause the drill bit to “bind” on a previously drilled hole. This can damage the drill bit, the drill press, and possibly give you an unsatisfactory

finish on your safety selector and trigger pin holes. Make sure to start drilling the holes slowly to create a 'side wall' in the hole to support the bit, then continue to drill down. When you are ready to pull the bit up and out of the hole, do it slowly as to prevent the bit from 'catching' on the under-side of the material.

#4. Milling the Trigger Slot with the ¼" End Mill. This is the final step! You may find that you have to pull the end mill out of the router collet a little bit to have enough length to reach through the trigger slot pilot hole, as well as creating enough clearance between the collet nut and the top of the jig. Make sure you do not cut into the trigger guard.

#5. Pro Tips. Always make sure the collet of the router, the end mill shaft and the threads on the router motor itself has been degreased with a high-quality carburetor cleaner or rubbing alcohol to ensure the collet doesn't let the tool slip. Perform this after every three milling passes. The collets on inexpensive hand-held routers are usually not high quality, so having a clean collet and end mill shaft that is tightly secured to the tool will give best performance.

For a video tutorial please go to our website and visit our Tool Kit page

www.rbtacticaltooling.com