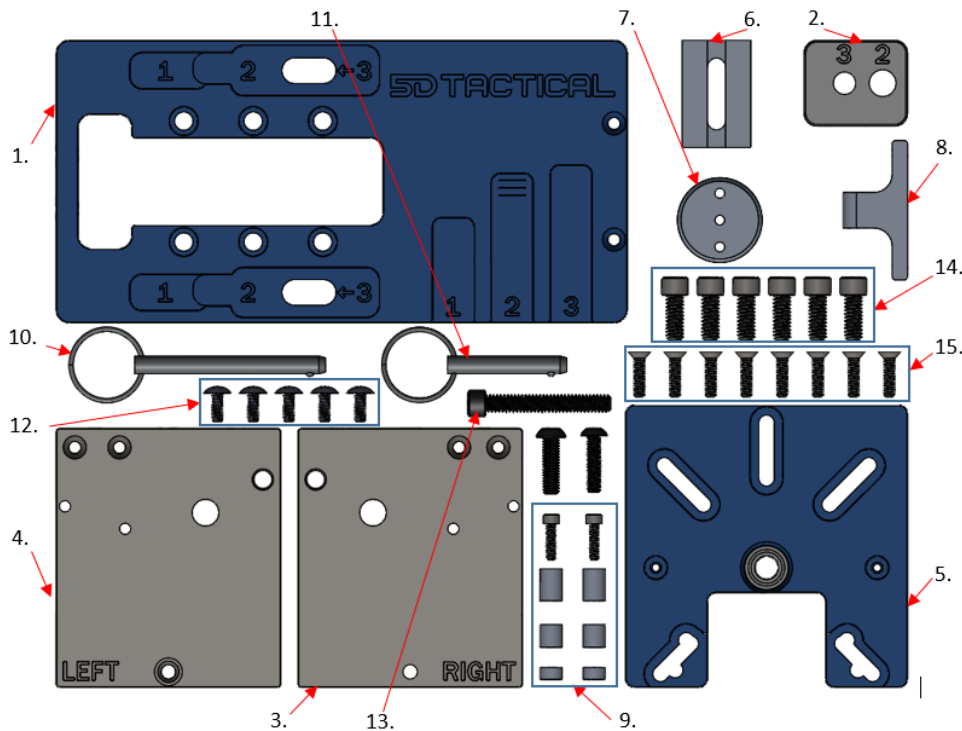




## AR-15 & AR-308 Router Jig Instructions



### AR-15 + AR-308 Router Jig:

1. Guide Plate	6. Router Adapter Side Block	11. Short Quick Release Pin
2. Drill Guide	7. Buffer Adapter	12. (5) M4x10 Phillips Truss Screw
3. Right Side Plate	8. Front Takedown Adapter	13. (1) ¼"-20 x 2" Socket Screw
4. Left Side Plate	9. Guide Pin Set	14. (6) ¼"-20 x 5/8" Socket Screws
5. Router Adapter	10. Long Quick Release Pin	15. (8) #8-32 x 5/8" Phillips Screws

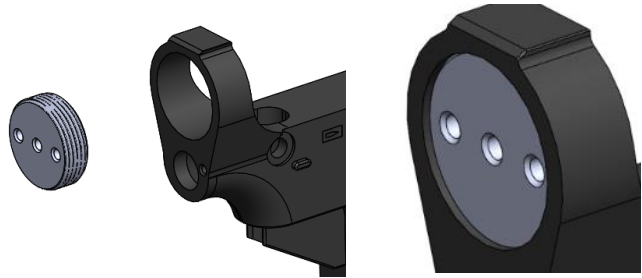
### Additional Tools Needed:

Router	3/8" Drill Bit	7/64" Allen Wrench
Drill	5/16" Drill Bit	3/16" Allen Wrench
SD Tactical End Mill	5/32" Drill Bit	Vise, clamps etc.
Phillips Screwdriver	3/8" Drill Stop	WD-40 or similar
Eye Protection	Hearing Protection	Shop Vac or Compressed Air

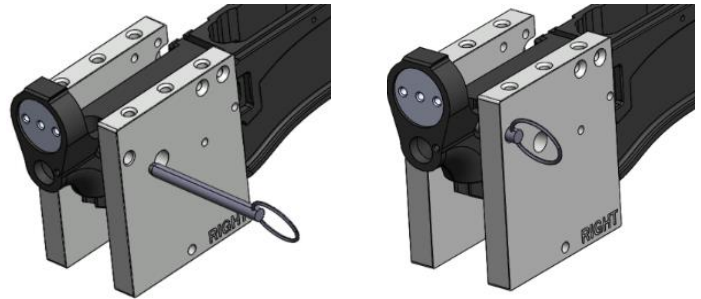
## Part 1: Jig Assembly

**1-1:** Thread Buffer Adapter into Lower Receiver. Buffer Adapter must sit just below surface of the Lower Receiver with the threaded holes horizontal.

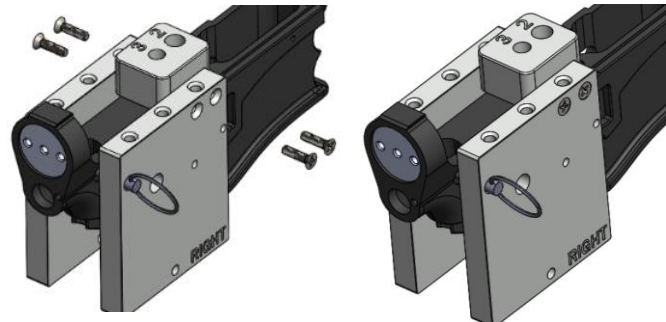
**Note:** If Buffer Adapter is difficult to thread, #8-32 Screws can be installed for leverage.



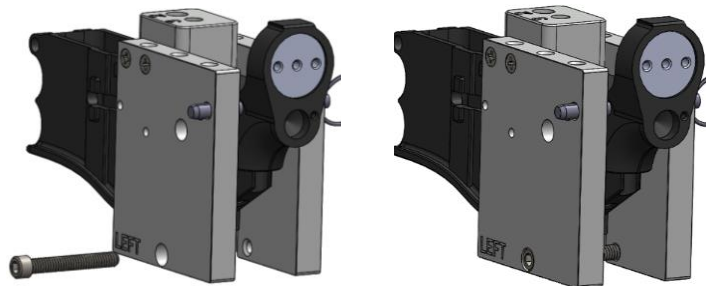
**1-2:** Orient side plates on each side of the Lower Receiver, taking note of RIGHT and LEFT as it would be oriented in a shooting position. Insert Long Quick Release Pin through RIGHT Side Plate, Receiver and out LEFT Side Plate. **Tip:** For best finished results, use masking or painters tape on the sides of the receiver before installing the side plates to the Jig. This will reduce any chance for scratches when drilling the safety selector and hammer/trigger pin holes.



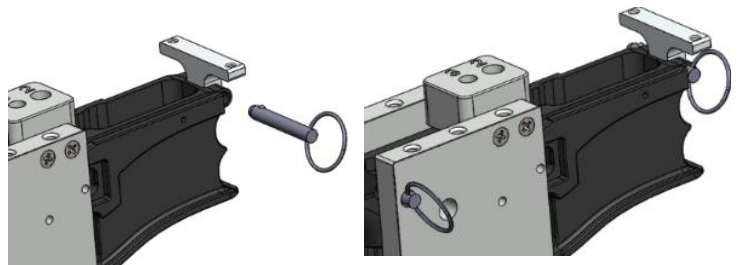
**1-3:** Place Drill Guide between Side Plates as shown, align screw holes. **Note:** It will only align one way. Pinch side plates against drill guide and tighten (4) #8-32 Screws.



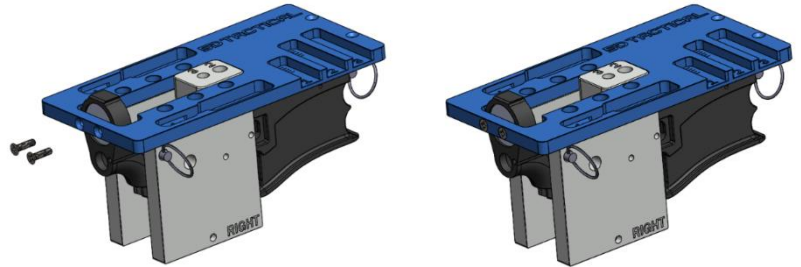
**1-4:** Use 3/16" Allen wrench to thread ¼-20 x 2" Screw through LEFT Side Plate and into RIGHT Side Plate using care not to cross-thread. Stop when seated. Do not overtighten.



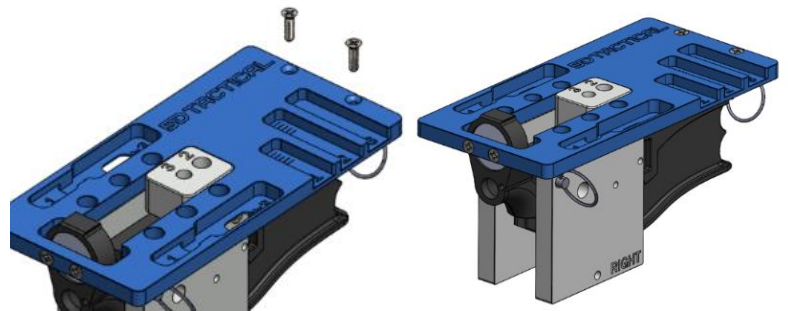
**1-5:** Align Front Takedown Adapter between front takedown holes. Push Short Quick Release Pin through Receiver and Adapter as shown.



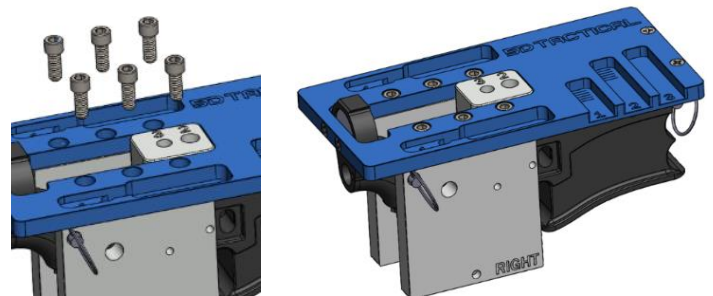
**1-6:** Place Guide Plate atop Side Plates as shown. Align screw holes on Guide Plate with Buffer Adapter screw holes. Thread (2) #8-32 screws and leave **LOOSE**.



**1-7:** Align Front Takedown Adapter with holes in Guide Plate. Insert and tighten (2) #8-32 screws, tightening each screw a little at time. Now, tighten (2) #8-32 screws from Step 1-6 above. **Note:** Buffer adapter will self-center in buffer mount. Guide plate may move as these are tightened. Allow Guide Plate to move freely during tightening.

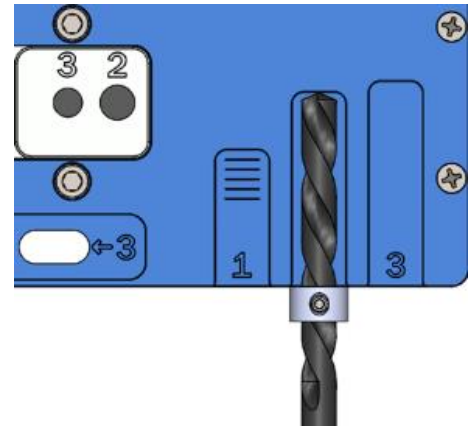


**1-8:** Loosely thread (6) ¼-20 x 1/2" screws through Guide Plate and into Side Plates. Tighten screws using 3/16" Allen wrench. The Jig assembly is now complete.

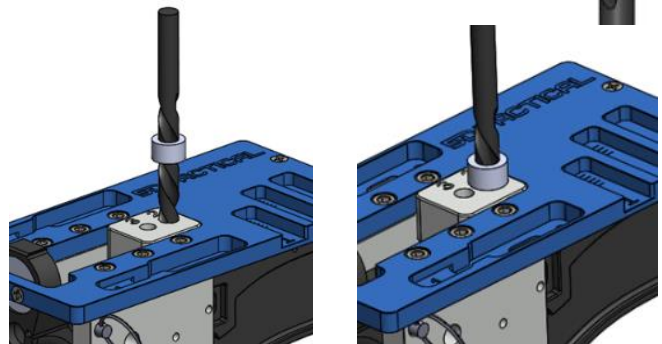


## Part 2: Drilling Step 1

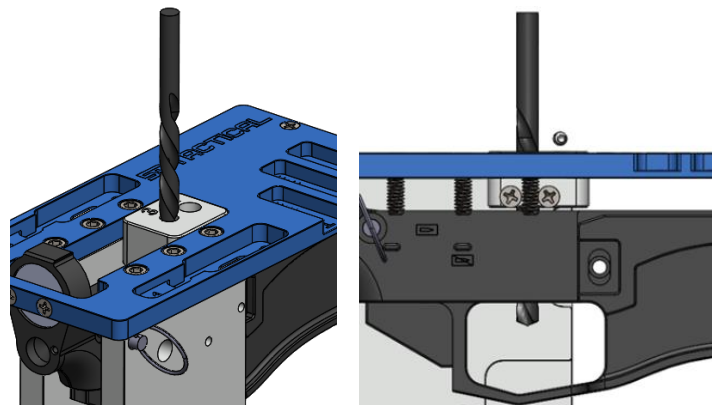
**2-1:** Slide 3/8" drill stop onto shank of 3/8" drill bit. Insert drill bit to full depth of Depth Gauge #2. Place the drill stop against the edge of the Guide Plate. Secure drill stop onto drill bit.



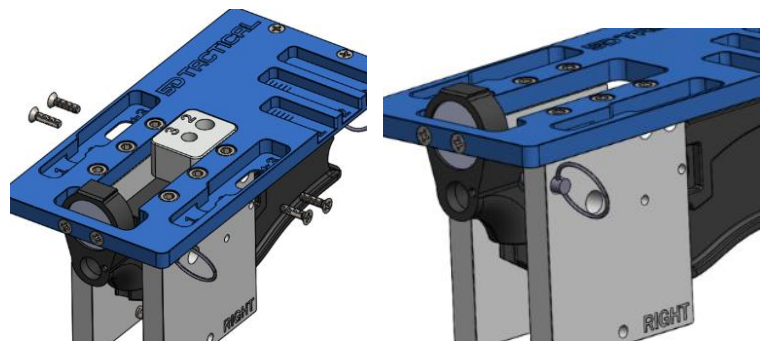
**2-2:** Spray WD-40 into Hole #2 of the Drill Guide. Insert 3/8" drill bit into hole. Do not start drill until bit is fully inserted. Start drill and apply firm pressure. Periodically, lift drill to assist in chip removal. Reapply WD-40 as necessary. **Note:** Stop drilling just before the drill stop touches the drill guide.



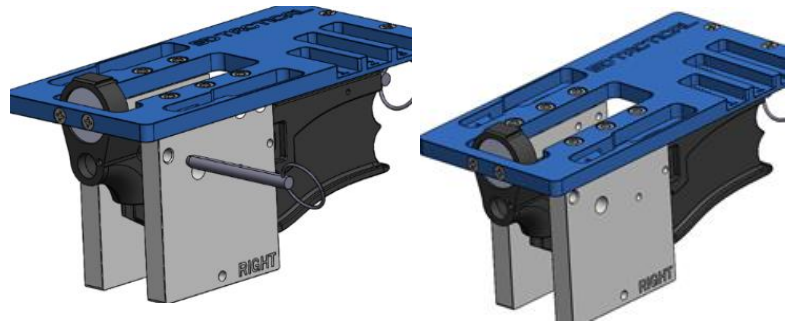
**2-3:** Prior to drilling, ensure the Jig Assembly is level. Spray WD-40 into Hole #3 of Drill Guide. Insert 5/16" drill bit into hole. Do not start drill until bit is fully inserted. Start drill and apply firm pressure. Periodically, lift drill to assist in chip removal. Reapply WD-40 as necessary. Stop drilling when the drill bit exits the bottom of the receiver. Pay attention not to drill into the trigger guard. **Note: It is important to keep the drill bit perpendicular to the Lower Receiver. Drilling at an angle can result in an oblong trigger slot.**



**2-4:** Remove (4) #8-32 screws and remove the Drill Guide. It may be necessary to loosen the Vise and/or use a screwdriver to gently pry the drill guide from between the side plates. Simply insert the screw driver shank into Hole #2 and gently pry upward.



**2-5:** Remove Long Quick Release Pin from rear takedown hole.



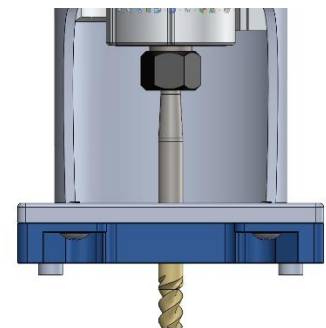
## Part 3: Milling Step 1

**GENERAL NOTES ON MILLING - READ ENTIRELY:** Prepare your router for milling by installing the Universal Router Adapter. Instructions on how to install the Adapter on your router are available on our website: <http://www.5dtactical.com/instructions-s/114.htm>. Be sure that the depth adjustment lock is tight. In testing we found that many routers come from the factory with the locking clasp left loose. If the depth adjustment slips while milling, the end mill and/or lower can be damaged.

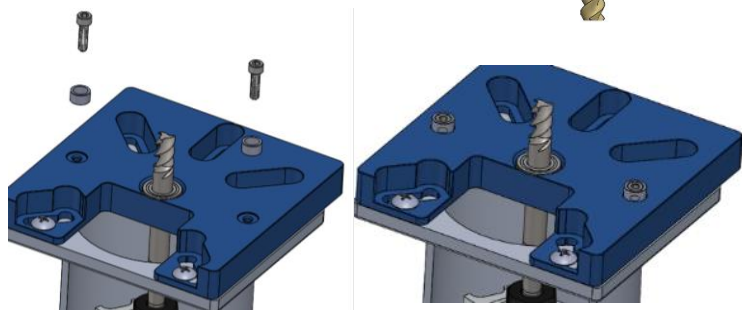
If using a variable speed router (recommended), start router on middle speed and gradually increase speed until optimal milling results are achieved. Generally speaking, start on speed "5" on variable speed models with "1" to "10" speed adjustments and work your way up. Many times, the highest speed is typically the best. If you know your router's no-load speed range, aim for 25,000 RPMs. Do not insert or remove the end mill while the router is spinning.

Move router smoothly in a clockwise manner, do not mill in straight lines for extended periods. Avoid abruptly pulling the end mill or exerting excessive force to move the end mill. Slowly nibble away at the material. If at any point, you begin to experience the end mill chattering or jumping, slow down and/or take shallower passes. Apply WD-40 liberally while milling to reduce excess heat. Remove chips frequently. Attempting to take depth increments higher than recommended can cause the router to pull out from the router and ruin the lower receiver. **TAKE YOUR TIME!!**

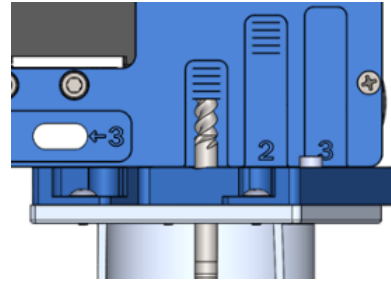
**3-1:** Install 5D Tactical 5/16" Hybrid End Mill into the collet of the router up to the beginning of the taper. No portion of the taper should enter the collet. Tighten the router collet. **Note:** It is important to tighten the collet as much as possible to prevent the end mill from pulling out of the router and damaging the lower receiver or end mill.



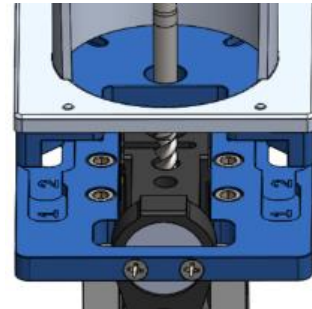
**3-2:** Install #1 (short) Guide Pins on Router Adapter using the (2) smallest socket cap screws and 7/64" Allen Wrench. Do not overtighten. Open end of pins should be facing up. Make sure pin seats are clear of debris prior to installing. Check that guide pins are properly seated.



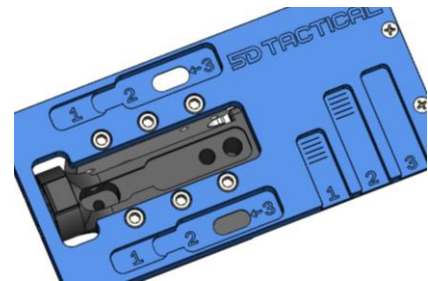
**3-3:** Set end mill depth to the first hash mark using Depth Gauge #1. Set depth by holding base of Router Adapter against the edge of the Guide Plate. Be sure Guide Pins are not between Adapter and Guide Plate. Make sure router depth adjustment is locked.



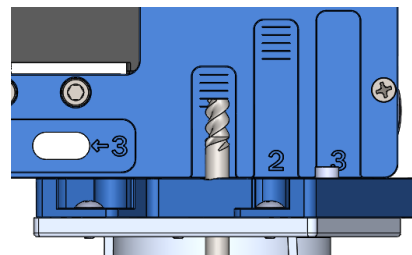
**3-4:** Orient Lower Receiver Assembly so the buffer extension is closest to the user. Place Router Assembly atop Guide Plate, with end mill entering the earlier drilled 3/8" hole. The notched side of the Router Adapter should be facing the buffer extension as shown. The Guide Pins should be positioned inside the Guide Cavities on both sides. Turn router on slowest speed and increase to operating speed once ready to mill. Mill using consistent pressure and speed, moving in a clockwise manner.



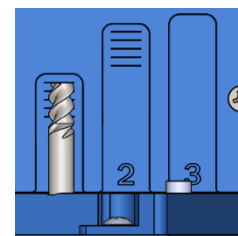
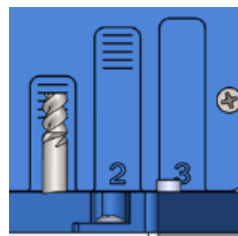
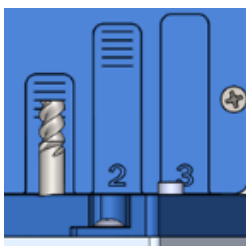
**3-5:** Make the first pass of milling allowing the Guide Pins to follow the entire area of the Guide Cavities. When milling corners, gently twist the router side to side to assist in completing the entire corner radius.



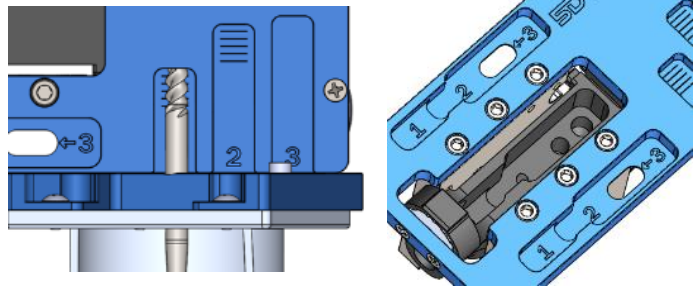
**3-6:** Once the entire pass has been milled to depth, set end mill depth to the second hash mark. Mill second pass following the same method and process as shown in steps 3-4 and 3-5.



**3-7:** Continue milling in this manner, adjusting end mill depth by 1 hash mark until you reach the final hash mark of Depth Gauge #1. Do not attempt to mill more than 1 hash mark. Doing so may result in poor quality, longer time, and broken end mills.

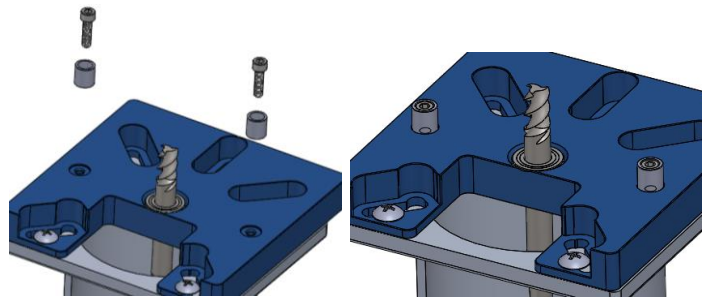


**3-8:** Complete the final pass to full depth of Depth Gauge #1 and **STOP**. Before continuing to Depth Gauge #2, the #2 (medium) Guide Pins must be installed.

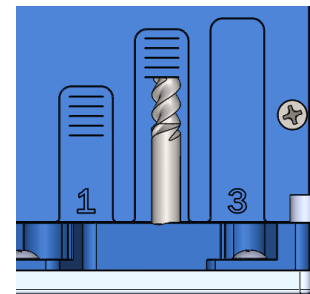


## Part 4: Milling Step 2

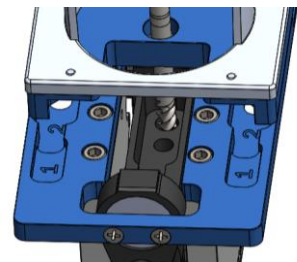
**4-1:** Remove #1 (short) Guide Pins and install #2 (medium) Guide Pins on Router Adapter reusing the (2) screws and 7/64" Allen Wrench. Do not overtighten. Make sure pin seats are clear of debris prior to installing. Check that guide pins are properly seated.



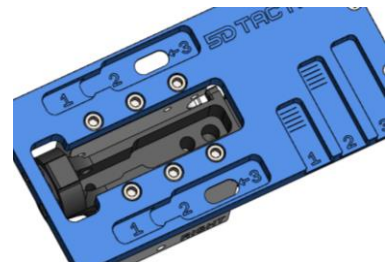
**4-2:** Set end mill depth to the first hash mark using Depth Gauge #2. Set depth by holding base of Router Adapter against the edge of the Guide Plate. Be sure Guide Pins are not between Adapter and Guide Plate. Make sure router depth adjustment is locked when complete.



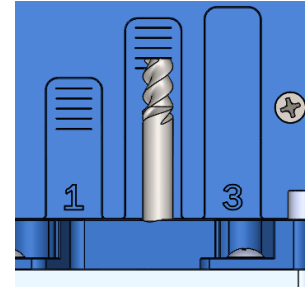
**4-3:** Place router assembly atop Guide Plate, with end mill entering the earlier drilled 3/8" hole. The Guide Pins should be positioned inside the #2 Guide Cavities on both sides. Turn router on slowest speed and increase to operating speed once ready to mill. Mill using consistent pressure and speed, moving in a clockwise manner.



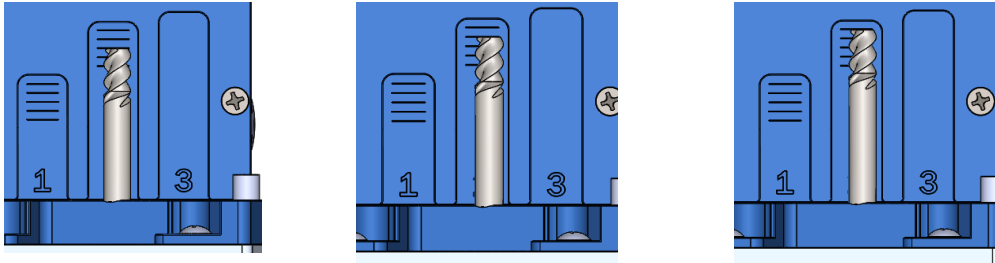
**4-4:** Complete the first pass allowing the Guide Pins to follow the #2 Guide Cavities. When milling corners, gently twist the router side to side to assist in completing the entire corner radius.



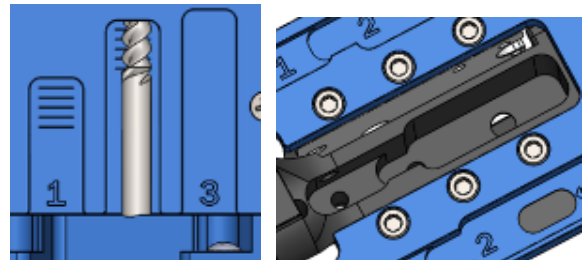
**4-5:** Once the entire first pass has been milled, set end mill depth to the second hash mark. Mill second pass following the same method and process as outlined in steps **4-3** and **4-4**.



**4-6:** Continue milling in the same manner, adjusting milling depth by 1 hash mark until you reach the final hash mark of Depth Gauge #2. Do not attempt to mill more than 1 hash mark. Doing so may result in poor quality, longer time, and broken end mills.

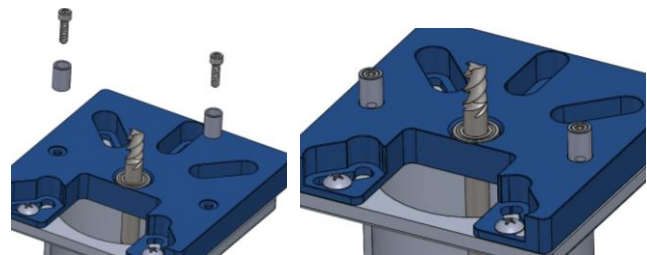


**4-7:** Complete the final pass to full depth of Depth Gauge #2. You must start the end mill in the 5/16" pilot hole. **Start the router at slowest speed setting and mill the hole larger before increasing the router speed. HOLD FIRMLY.** Once complete, **STOP**. Before continuing to Depth Gauge #3, the #3 (long) Guide Pins must be installed on the Router Adapter.

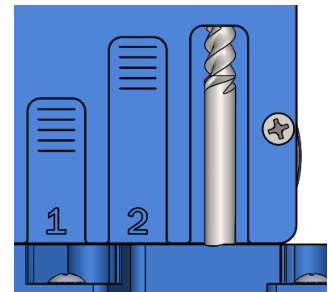


### Part 5: Milling Step 3

**5-1:** Remove #2 (medium) Guide Pins and install #3 (long) Guide Pins on Router Adapter reusing the (2) screws and 7/64" Allen Wrench. Do not overtighten. Open end of pins should be facing up. Make sure pin seats are clear of debris prior to installing. Check that guide pins are properly seated.

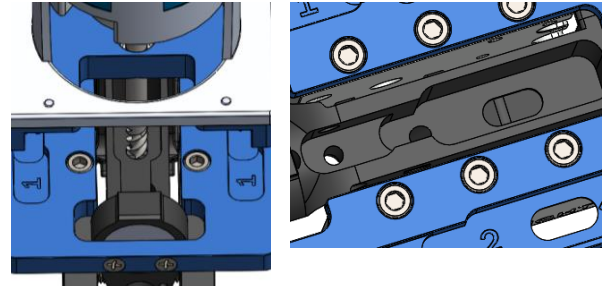


**5-2:** Set end mill depth using Depth Gauge #3. Set depth by holding base of Router Adapter against the edge of the Guide Plate. Be sure Guide Pins are not between Adapter and Guide Plate. Make sure router depth adjustment is locked before when complete.



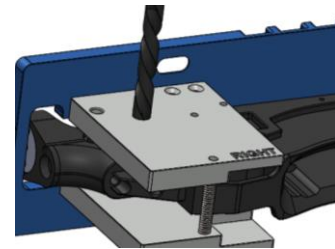


**5-3:** Place router on Guide Plate, with end mill entering the earlier drilled 5/16" hole. The Guide Pins should be positioned inside the #3 Guide Holes on both sides. **Start the router at slowest speed setting and mill the hole larger before increasing the router speed. HOLD FIRMLY.** Gently mill in a clockwise manner until the trigger slot is formed.



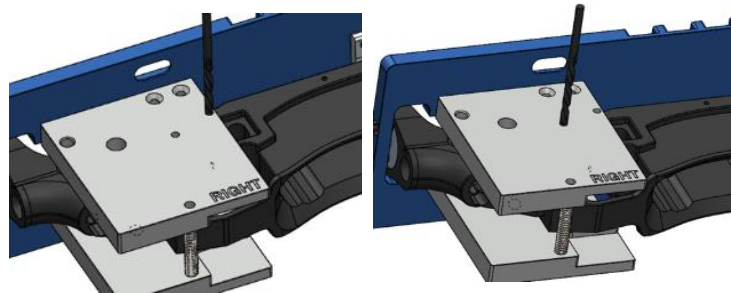
## Part 6: Drilling Step 2

**6-1:** Clamp Jig Assembly in the Vise by the Guide Plate so RIGHT Side Plate is facing up and ensure that the assembly is level. Use a rag or cardboard between the Vise and Guide Plate to prevent damage to the top surface of the Guide Plate. **Tip:** It is highly recommended to put tape on the sides of the receiver before this step to avoid any scratches to the receiver. If not already done, remove and reinstall the lower making sure to install both quick release pins.



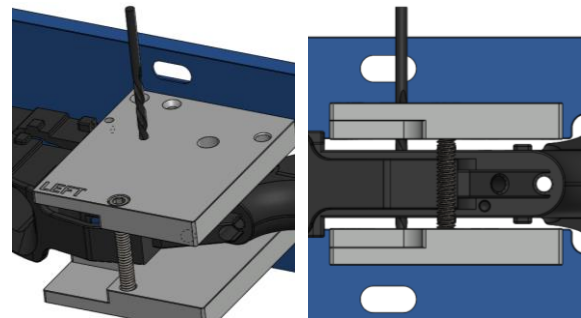
**6-2:** Spray WD-40 into large hole. Insert 3/8" drill bit into large Guide Hole (large left hole as shown). Do not start drill until bit is fully inserted in the Guide Hole. Apply moderate pressure and drill until the bit penetrates the right side wall. Do not drill through both sides.

**6-3:** Spray WD-40 into both small holes. Insert 5/32" drill bit into either remaining Guide Holes. Do not start drill until bit is fully inserted in the Guide Hole. Apply moderate pressure and drill until the bit penetrates the right side wall. Do not drill through both sides. Repeat in last hole.

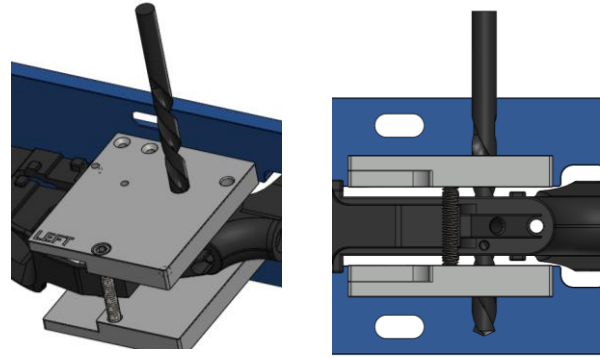


**6-4:** Unclamp Jig Assembly from Vise and flip it over so the LEFT side plate is facing up and re-clamp by the Guide Plate. Ensure that assembly is level. Use a rag or cardboard between the vise and Guide Plate.

**6-5:** Spray WD-40 into both small holes. Insert 5/32" drill bit into either small Guide Hole. Do not start drill until bit is fully inserted in the Guide Hole. Apply moderate pressure and drill until the bit penetrates the left side wall. Continue drilling so the bit passes through the opposite side wall connecting the holes from either side. Repeat on remaining small hole.



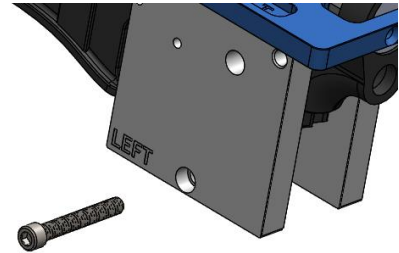
**6-6:** Spray WD-40 into large hole. Insert 3/8" drill bit into large Guide Hole. Do not start drill until bit is fully inserted in the Guide Hole. Apply moderate pressure and drill until the bit penetrates the right side wall. Continue drilling so the bit passes through the opposite side wall connecting the holes from either side.



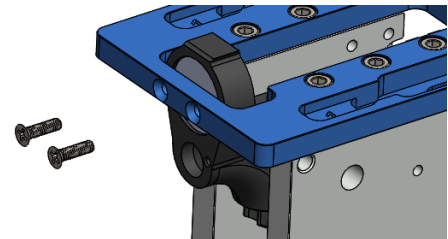
## Part 7: Lower Receiver Removal

A key feature of the 5D Tactical AR-15 and AR-308 Router Jigs is they do not require the user to completely disassemble the Jig Assembly to remove or mount an 80% lower receiver.

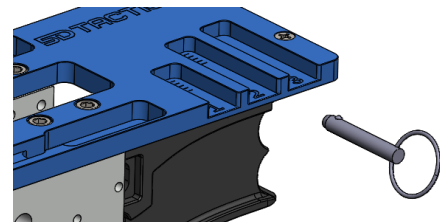
**7-1:** Remove 1/4-20 x 2" Screw from Left Side Plate using 3/16" Allen wrench.



**7-2:** Remove (2) #8-32 screws from the Buffer Adapter.

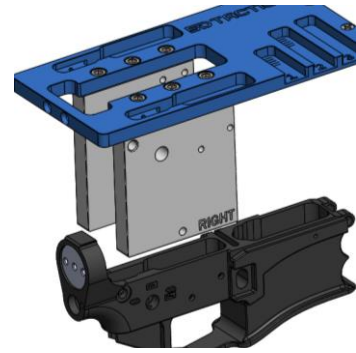


**7-3:** Remove Short Quick Release Pin from Front Takedown Adapter.



**7-4:** The Jig Assembly and Lower Receiver should now be separable.

**Note:** For the AR-308 Router Jig, loosening or removing one of the Side Plates may be necessary on some brands to extract the Lower Receiver.



**7-5:** Unthread the Buffer Adapter from the Lower Receiver.

