



## PY2A Space Trench M500 Assembly Instructions



### Bill of Materials

Mossberg 500 or Maverick 88 barrel, magazine tube/spring and follower, bolt assembly, trigger group, safety with plate/detent/spring/screw/lug (Mossberg 500), ejector/screw, action slide tube assembly, elevator and shell stop levers

10-24 heat insert	M3 heat inserts (x12)
10-24 x 24" threaded rod	M3 x 8mm screws (x4 for shell holder)
10-24 nuts (x2)	M3 x 15mm screw
6-32 x 24" threaded rod (x2)	2 x10mm steel pin (x2)
6-32 nuts (x4)	8-32 x 1/4" tee nut
6-32 heat inserts (x2)	PrintYour2A M500 Reinforcement
M3 x 150mm(x2) and 200mm(x2) threaded rod	
5/16-18 x 1¼ and 2 ½" socket head cap screw ( for Stock and Stock Adapter)	
M4 x 50mm socket head cap screws (x2 for Stock)	
M4 x 12mm socket head cap screws (x8)	
M4 x 16mm socket head cap screw (x10)	
M4 x 25mm socket head cap screw (x8)	
M4 nuts (x16)	

### Required Tools

Hobby or Utility Knife  
Flathead Screwdriver  
Printed Templates(if fabricating flats)  
Dremel or Hacksaw  
Hammer/ Mallet

Metal File  
Heat insert or Soldering Iron  
6"Allen Wrenches or T-handles  
Drill/ Drill Bits  
Bluing Kit (optional)

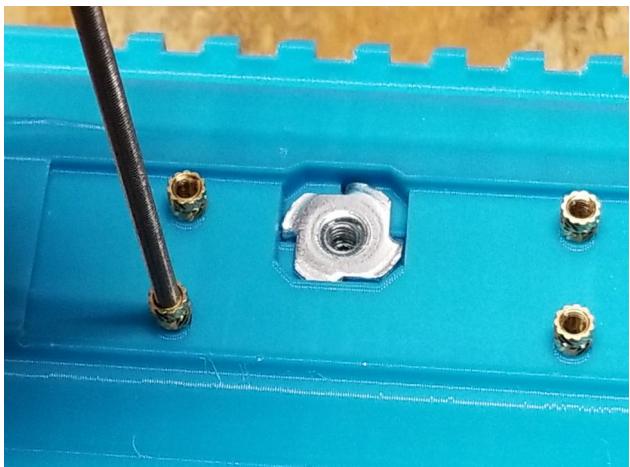
## 1. Install Heat inserts and Reinforcement

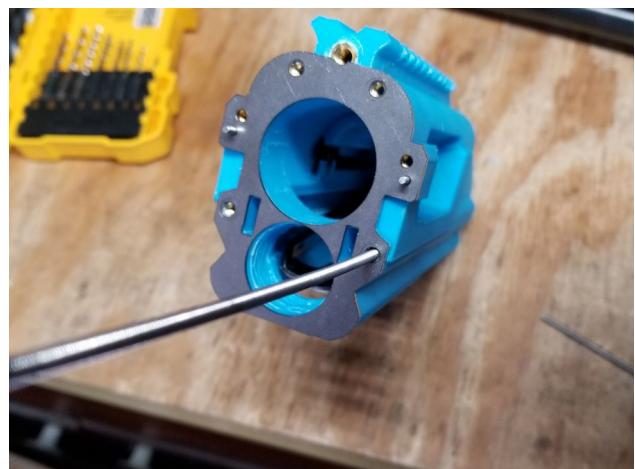


With a soldering iron, heat inserts and push into receiver in their respective holes until flush. 10-24 insert is installed in front top hole (top left). 6-32 installs into outer side holes (top right).

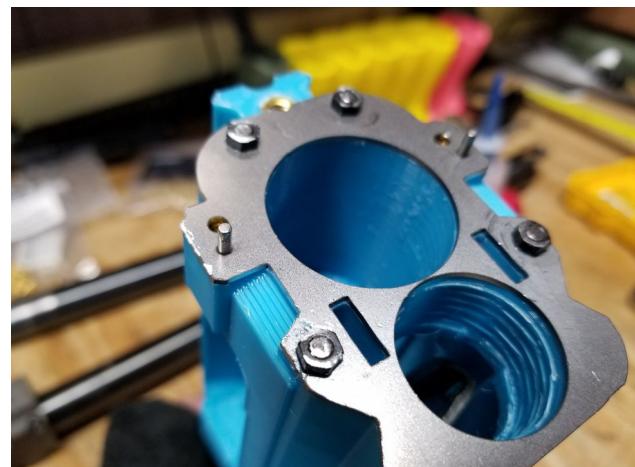


M3 heat inserts install in remaining holes on front back and side of receiver (above and bottom left). Make sure all inserts line up and are flush with the front face of the receiver (lower right). Adjust any inserts that are not centered, flush or perpendicular to the faces. Install 2mm steel pins into receiver face, double check insert alignment. Fix any alignment issues before continuing.





Install the M3x150mm on top and M3x200mm rods on the bottom. Use two nuts tightened together on the end of the rod or clamp the end of the rod in a drill chuck to install. Screw in rod until it reaches into the threads of the rear insert.

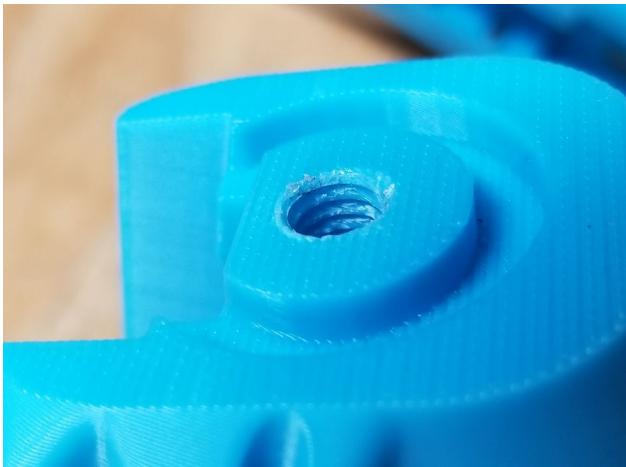


Use a medium strength thread locker on the M3 threaded rods and install M3 nuts until tight. Cut rods flush with the M3 nuts, file down any rough surfaces. Blue cut ends if desired.

## 2. Stock/Grip Install



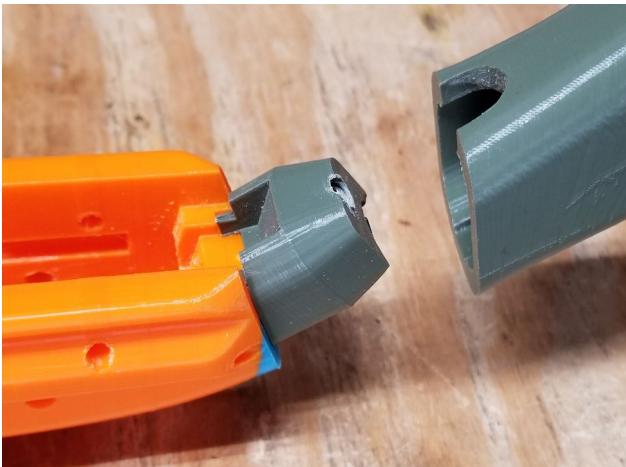
Use a 5/16-18 bolt or tap, if available, to create threads in the receiver stock mounting hole. If using a bolt, it may be easier to install the bolt in the stock adapter first to line up the hole.



Once threads are made, adapter or grip can be mounted to receiver using 5/16-18 x 1 1/4" socket head screw.



Install the sling hook on the preferred side, then connect the front and rear portion of the printed stock with 2 M4 x 50mm socket head screws.



Slide stock assembly over adapter and install 5/16-18 x 2 1/2" socket head screw through the bottom of stock into the adapter. Make sure connection is snug and parts meet flush.



Slide the forend over the action tube with the internal cutouts facing rearward. Install castle nut and tighten. Set aside until needed.

### 3. Internal Parts Installation



Assemble the safety parts as shown. This section does not apply to 88 receivers. Check the fit of safety spring in the receiver hole. Clean up hole with drill bit, if needed. **Do not check fit with detent ball!!!**



Install safety spring and detent ball once spring moves freely. Hold in place while installing safety lug.



Hold the safety lug in position from inside the receiver while attaching the plate and switch with the safety screw.



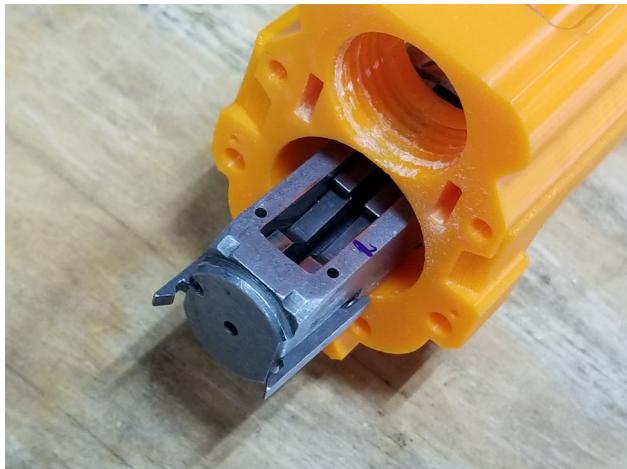
Fit magazine tube with out the spring and follower. Once fit properly, remove tube from receiver and reinstall with spring and follower.



Install elevator, check that it clears insides of the receiver without binding.



Slide forend assembly over magazine tube and insert action bars into the receiver. If the bars bind, move them up and down until they slide into the receiver.



Install bolt through barrel opening. Line up action bars and bolt, then insert sled through bottom of the receiver making sure the sled engages the bolt and action bars.



Tilt the front end of the sled to drop it into position. The bolt and action bars will need to be moved around a little to line everything up. Once engaged, pull the forend forward to hold the sled into place. Holding the sled down while pulling it forward will prevent the action bars from jumping out.



Insert M4 nuts into slots on the underside of the upper barrel clamp until holes line up. Then install barrel upper and lower clamps with M4x25mm screws M4 nuts.



The front and rear rails can be assembled with the rail connector using 4 M4x15mm screws and M4 nuts. Front rail section can then be attached to the barrel clamp. Slide the end cap into position and secure with M4x15mm screws



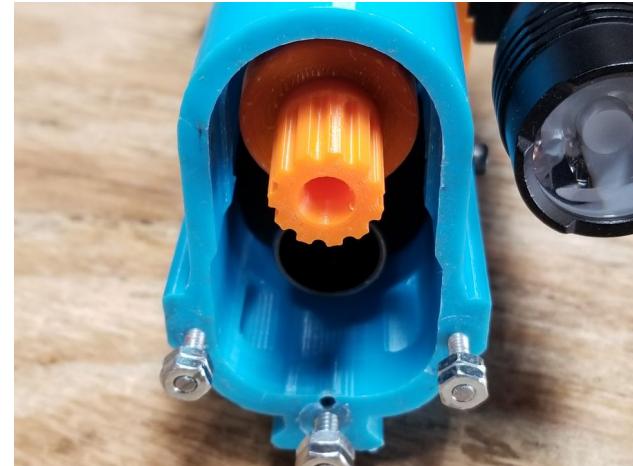
Cut 10-24 and 6-32 threaded rod to 24 inches. Install rods with a drill. If too much resistance is felt when installing rods, there may be a problem tightening up the rail to the receiver later on.



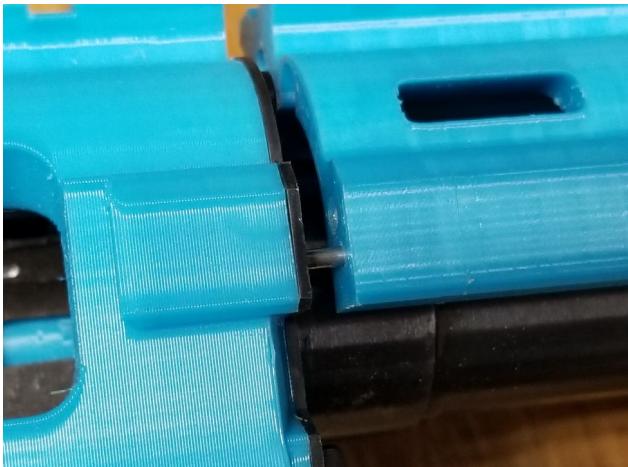
Leave rods about 1/16" from the rear of the rail. Use the thread inserts to measure where rods should be trimmed with double nuts on each end.



10-24 nuts will need to be notched for end cap plate bolt to clear. Insert fully into receiver with flat facing up. Mark bottom side and remove threaded rod enough to notch. Use medium-strength thread locker and secure nuts to the ends of the rod once proper length is obtained.



With the action tube in the middle of its travel, install the barrel and secure it to the magazine tube by tightening screw lug. Ensure receiver pins line up with rail holes when barrel is inserted.



Ensure receiver pins line up with rail holes when barrel is inserted. Once fully tightened the rail should be flush with the reinforcement plate.



With the action towards the front of it's travel, install both the shell stop and advance levers.



Be sure there is no gap between the receiver wall and the shell levers. If they protrude, the trigger group will not fit.



Install trigger group into the front slots and tip down into position, making sure shell stop levers remain in place. Align pin hole and install pin. Pin will click when in place.



#### 4. Check Function

Ensure that all safety mechanisms function properly, including the trigger and out of battery safety. Make sure shells feed properly with dummy rounds.