



TA Targets Popper Assembly and Set Up



Upon un-boxing your newly acquired target system, you'll notice some initial set up is required. Inside this box, you'll find all the hardware to finish setting up your new popper.

Tools needed to finish assembly:

1. $\frac{3}{4}$ " deep socket and ratchet, or $\frac{3}{4}$ " wrench, or adjustable wrench to tighten base to legs.
(cordless impact works great here!)
2. Mallet or hammer to drive target stakes into ground.

Step One: Pull target plate/popper base assembly from box and set aside.



Step Two: Locate bag with hardware to attach legs to base. Inside you'll find:

1. (4) ½"-13x1-½" carriage bolts
2. (4) ½" flat washers
3. (4) ½"-13 stover locking nuts

Step Three: Pull cotter pin from clevis holding popper and base hinge closed and unfold your target assembly. Here, you'll notice four square holes in the bottom of the popper base. These are for attaching your legs.



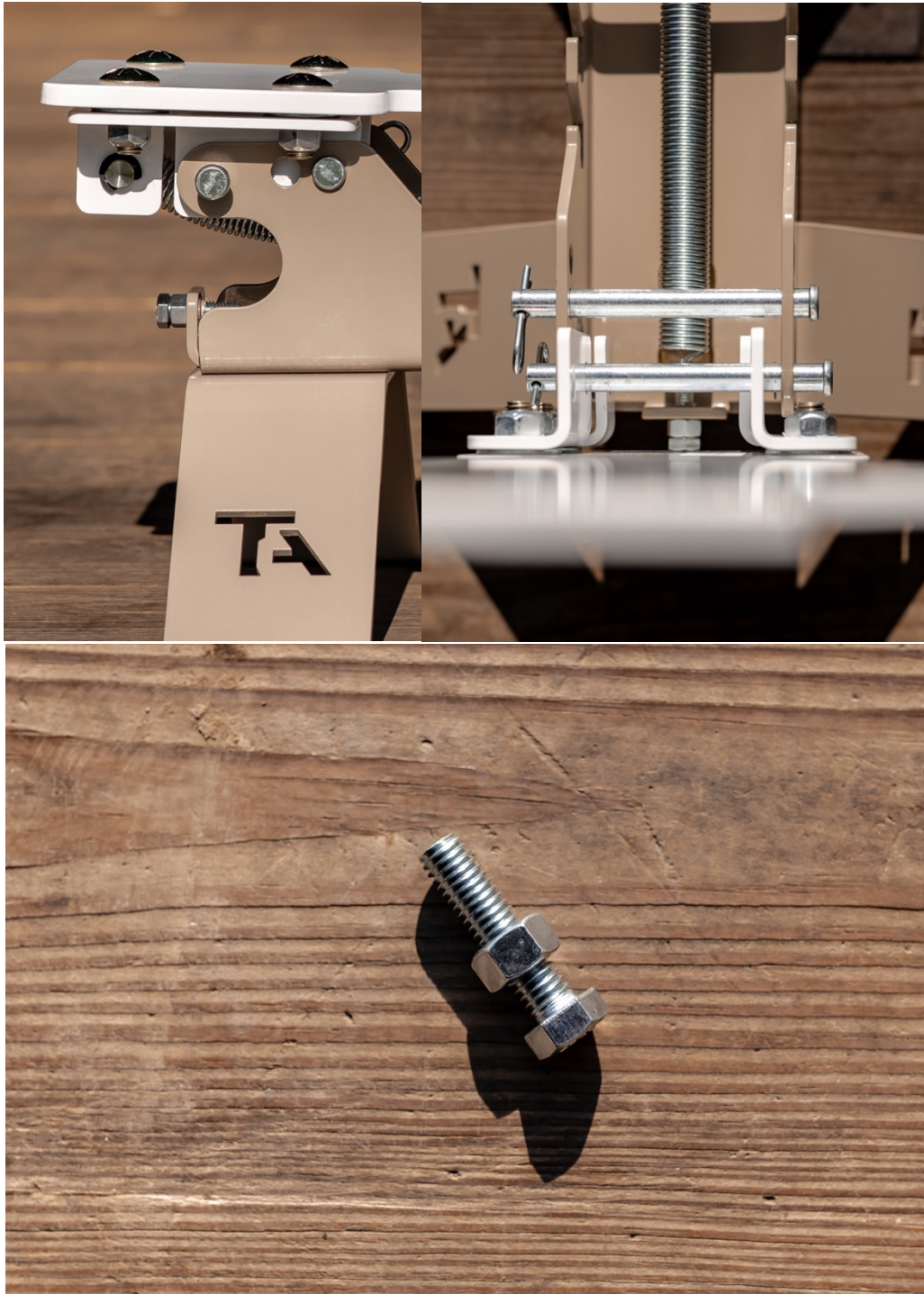
Step Four: Line up popper legs, one at a time to the base and start inserting the bolts top>down to have threads protruding from the bottom. Note: it may help to have target assembly on its side.

Step Five: Install one flat washer and one locking nut onto each bolt and check for straightness and begin tightening. You'll notice that it is difficult to tighten hardware, as it should be, this will keep it from working itself loose as the target takes impacts over time.

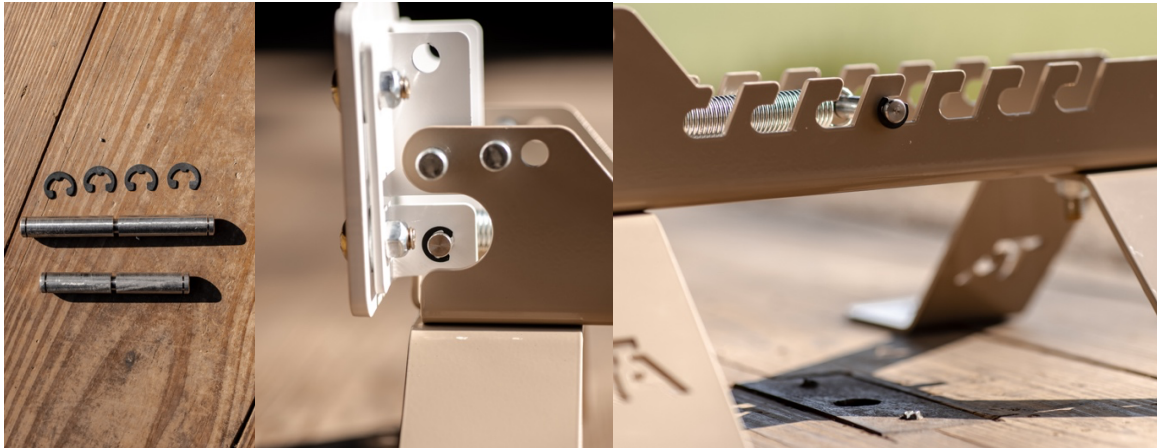


Step Six: To finish tightening hardware, it might be easier to fold up target and place face down on your working surface with legs in the air.

Step Seven: Once all hardware is tightened, set up target on its legs and unfold. Set the forward lean using the previously installed bolt in the front of the base. The bottom of your target plate will rest against this. Forward lean will help with fine tuning your target and how reactive it is to what you are shooting it with.



Step Eight: Setting spring tension. Here, you'll notice the spring attaches to two pins. Make sure the spring is riding in the machined groove in the center of your pins. Take the rearward pin and stretch the spring to the rear of the target until tension is applied, forcing the target plate to stand under tension. Test by pushing at the top of your target. It should lean back and return to upright position.



Step Nine: Re-installing the locking clevis and cotter pin. You'll notice two holes in the target base that retained your target in the locking position. After set up, re install the clevis pin through the holes in the target base to keep the target from camming over and staying in the downward position. This limits the rearward travel of the target plate, which aids in adding some bounce and over-all returning to upward position during heavy usage.



By following these set-up steps, your target should perform as intended with hours of consistent return. If the target leans back and doesn't return to upright position, either use the other clevis pin hole in the target base, or try adding more/less tension on the return spring.

Basic Target use Guidelines:

PLEASE REFER TO OUR SAFE SHOOTING INSTRUCTION MANUAL PRIOR TO USING THIS PRODUCT. HANDLING FIREARMS, AMMUNITION, STEEL TARGETS AND OTHER RANGE EQUIPMENT CAN BE DANGEROUS. IF YOU HAVE ANY QUESTIONS ABOUT THE SAFETY OR USE OF THE PRODUCT, EMAIL OR CALL US PRIOR TO USING. DO NOT USE THIS PRODUCT IN AN UNSAFE OR CARELESS MANNER. SERIOUS INJURY OR DEATH OR PROPERTY DAMAGE CAN RESULT FROM MISUSE OF THIS PRODUCT

Basic Target Guidelines:

The VTAR Popper Target System is offered in 3/8" AR550 Steel. The below rules of use are applicable to ALL shapes and sizes of VTAR target plates.

Distance requirements MINIMUM: Pistols at 10 yards, rifles up to 308 at 50 yards. Larger than 308 should be used 100 yards minimum.

BE SURE to use ONLY Lead core, copper jacketed bullets, lead bullets, or frangible ammo. DO NOT use penetrator, steel core, or ANY armor piercing ammunition! EVER! Fast projectiles and hollow point ammunition MAY cause minor dimpling on the surface of the target. IF the dimpling is pronounced and can be felt with your finger tip, discontinue use with current ammo OR increase distance to target.

-All rifle distance ratings are determined from ammunition with a muzzle velocity of 3,000 FPS. Use of ammo over 3,000 FPS may require either the target to be placed at a steeper lean angle, or shooters must increase distance or BOTH to avoid damaging the steel plate. Inspect for damage. If cratering occurs, increase lean angle and/or distance and test until cratering no longer occurs. For close range carbine use we recommend steepest setting with ammo of 3,000 FPS or less muzzle velocity.

- The base of the VTAR is NOT armored and is NOT designed to be shot. Impacts to the base can cause damage. Only engage perpendicular to the target face. Engagements at extreme angles will eventually damage the base from missed projectiles.

- Please note that this system WILL require staking to the ground ANY time the spring return assembly is used. This is not optional. Do NOT engage the target plate if it is "stuck" in a laid down position as this can cause unpredictable fragmentation over your shooting berms. In the event of a "hang up" of the system, reset system manually and INCREASE spring tension.

-ALWAYS WEAR APPROVED EYE AND EAR PROTECTION WHILE SHOOTING!

- ALWAYS HANDLE USED TARGETS WITH GLOVES AND OTHER PPE. NEVER EAT WHILE ON THE RANGE. ALWAYS WASH HANDS AND CLOTHES AFTER RANGE TIME OR TARGET HANDLING.

-Please read our separate safe shooting pamphlet included with this packaging. It outlines basic range safety and safe shooting practices. Please consult with trained professionals BEFORE partaking in ANY range shooting

Maintenance Considerations:

While this system is powder coated, a fresh coat of paint from time to time will be necessary and will keep the system from rusting. While performing maintenance, **ALWAYS** remember sharp jackets and sharp edges **CAN** be present. **NEVER** perform maintenance of used systems with bare hands. Always assume sharp edges could be present. Check for:

- Smooth plate surface free from large craters (if divots or craters deeper than 1/8" exist, unbolt plate, rotate, and shoot new side.
- Check bolts, pins and spring for wear.
- If any hardware is missing or damaged at all, replace before next use.
- Hardware kits can be purchased on our website. Contact us if you need assistance.

VTAR Popper Calibration Table

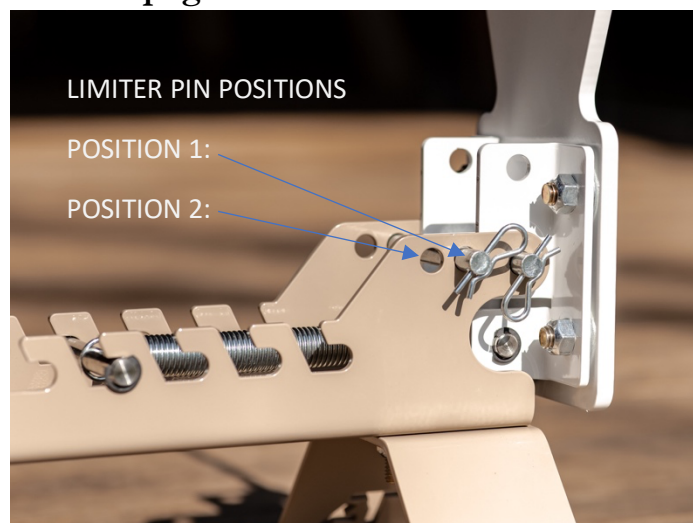
The table below shows recommended setup for spring tension and limiter pin positioning based upon calibers used and distances engaged. Each caliber will react differently. Generally speaking, the closer limiter pin hole should be reserved for **SMALLER** caliber types. This is because smaller calibers will **NOT** produce enough impact energy to "slam" the plate back and return to battery IF the pin is in the second hole. If the plate falls back and stays in a lying down position, more spring tension is required. Read the below table for recommendations. If questions exist, email or call us prior to using.

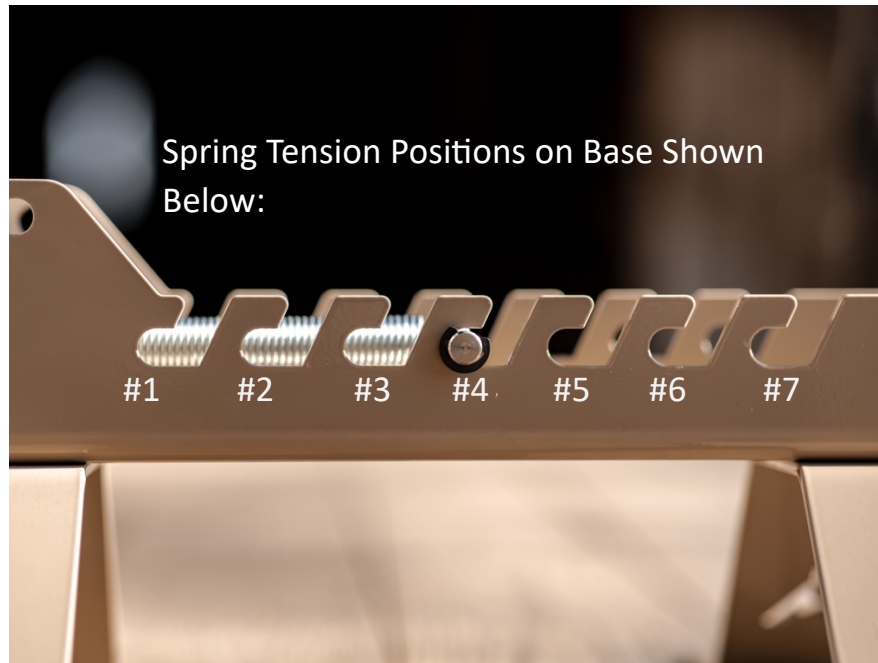
***NOTE:** adding spring tension can result in pinched fingers. **ALWAYS** make sure fingers are **AWAY** from the notches when setting spring tension. **ALWAYS** wear eye protection when adjusting spring tension.

***Note:** several of the forward spring retention positions **CANNOT** be used with the current revision of the VTAR poppers. These slots are included in the base for possible future lighter springs for other plate variations for small calibers.

***Note:** As spring tension wears over time, consider increasing tension by one slot. If action of system is no longer consistent, purchase replacement hardware kit which includes a new spring.

See next page for tension and caliber table.



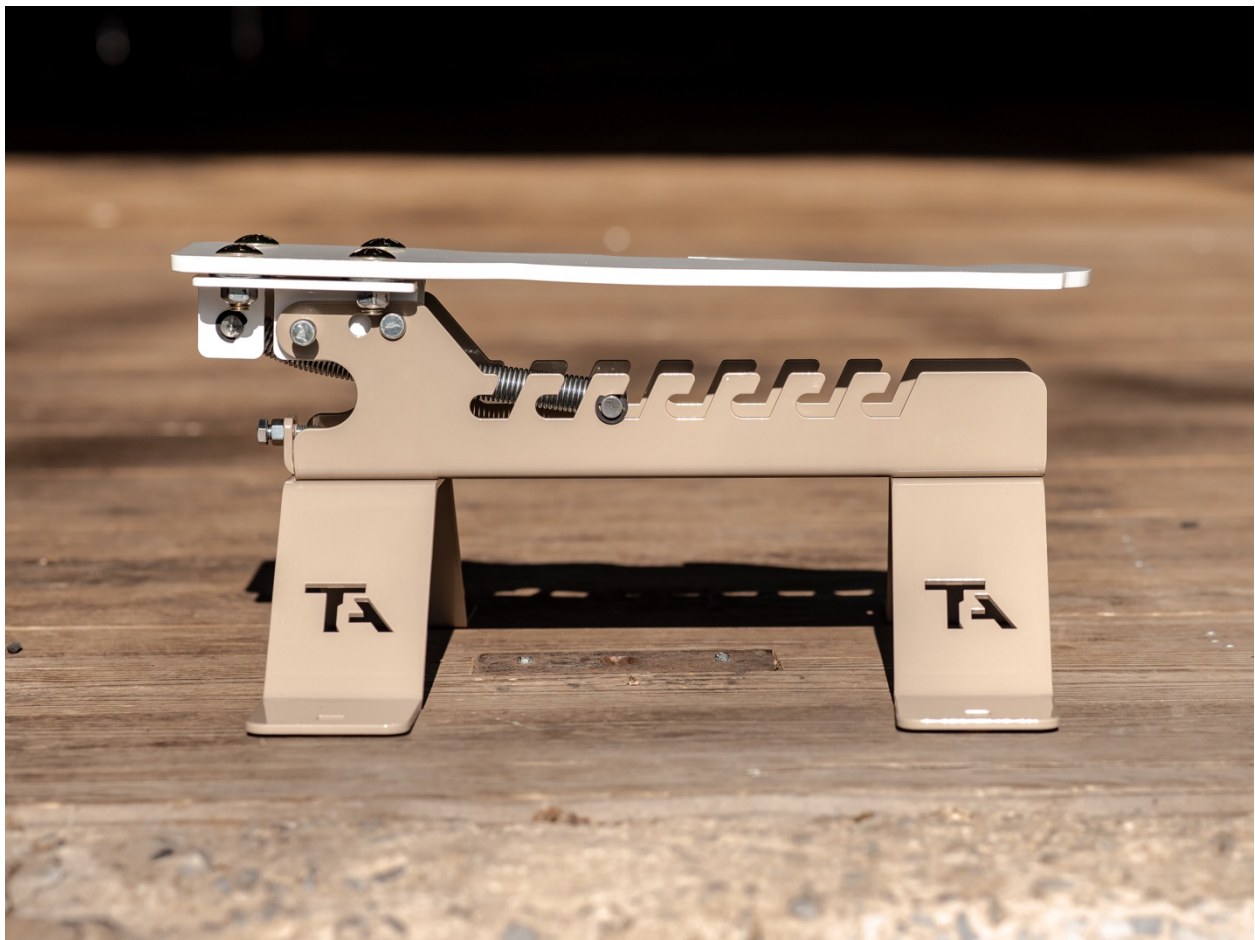


Calibers	Limiter Pin Position	Spring Tension Position	Distance Minimum with proper ammo
9mm, .40 S&W, 45ACP, 10mm, 44 Mag or 12 GA bird shot (no steel shot) (option 1, less tension)	#1 Position	Fourth Position from front of base	10 yards
9mm, .40 S&W, 45ACP, 10mm, 44 Mag (option 2, More tension)	#1 Position	Fifth Position from front of base	10 yards
.223/5.56 NATO, 300 BLK, 7.62X39, 5.45X30	#1 Position	Fifth Position from front of base	50 Yards
Heavier ammo 5.56, 300 BLK, 7.62X39, 5.45X39	#2 Position	Fifth Position from front of base. MUST test fire prior to full use to check plate movement.	50 yards
12 GA Slugs	#2 Position	Sixth Position from front of Base.	100 Yards
308, 6.5CM, and other comparable calibers	#2 Position	Sixth Position from front of base	100 yards

*Note: When using as a knock down only system, the same distance ratings apply. When using the system as a knock down only system, the adjustment screw may be used to fine tune the knock down settings of the system.

Storage and Transport

*Note: when stowing the target plate after use, remove the limiter pin. Slide spring and spring retainer pin into the third position. Reinstall the limiter pin as shown below. This will keep the target plate in the “folded down” configuration for storage and transport. ALWAYS KEEP FINGERS CLEAR OF PINCH POINTS.



If you have any other questions, please feel free to email our team and we'll be able to further assist you with setting up your new target system.

Customer Service Email: info@tatargets.com