



## THE TARGET MAN™ DIY PLATE RACK ASSEMBLY INSTRUCTIONS

The Target Man™ DIY Plate Rack allows you to own a high quality plate rack assembly at an affordable price. We've done all the hard work for you. Remember, you **MUST** source the materials with the EXACT specifications listed.

### **TOOLS REQUIRED:**

Tape measure

Metal cutting saw (abrasive, carbide, or metal cutting band saw are all acceptable)

Angle grinder with 4.5" "flapper" (aka sanding) disc

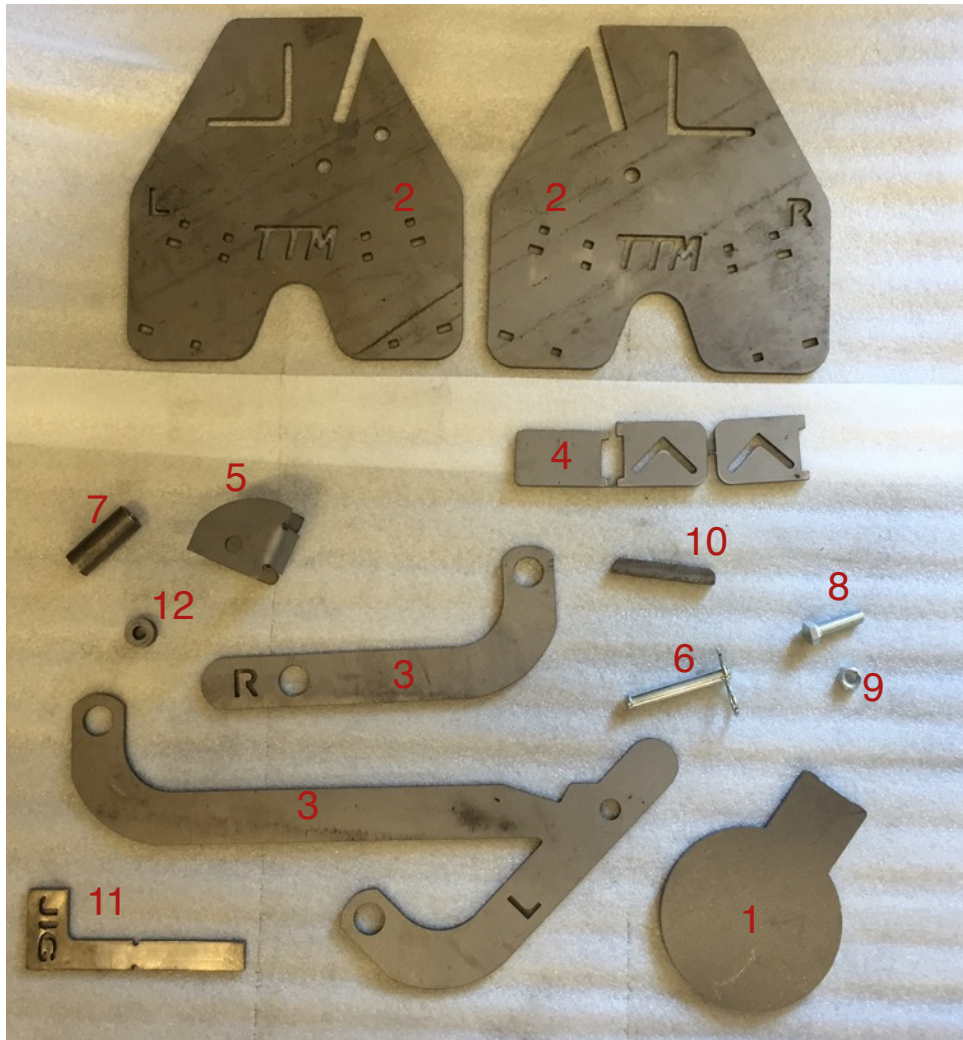
3/4" wrench and socket wrench

Magnetic welders square (optional, but highly recommended)

Proper Personal Protective Equipment (PPE) for welding, grinding and cutting

### **MATERIALS YOU MUST SOURCE:**

- ◆ Round tubing 1" OD cut to 69" (.120 walled or greater. Do NOT use solid bar stock). The heavier the tubing, the harder it will be to reset the target system.
- ◆ 1.5x.25" Angle Iron. (4) pieces cut to approximately 40". These are used for legs, the height is preference.
- ◆ Piece of 3" x .25" Angle Iron cut to 66"
- ◆ 4" x .5" hot rolled Flat Bar cut to 70"
- ◆ Heavy -Duty rope for target resetting (available at ACE, Home Depot, etc.)



## KIT SUPPLIED MATERIALS:

**FIGURE 1:** AR500 Plate paddles (6" or 8" diameter depending on the kit you purchased (qty 6)

**FIGURE 2:** Left and Right (Marked L and R) "A" pillars (qty 2, one of each)

**FIGURE 3:** Left and Right reset brackets (Marked L and R) (qty 2, one of each)

**FIGURE 4:** Angle iron insertion brackets (qty 4)

**FIGURE 5:** Pivot Mounting Plates (qty 6)

**FIGURE 6:** 1/2" Clevis pins with hair pins (qty 6)

**FIGURE 7:** Pieces of 1"x.25" DOM cut to 2.5" (qty 6)

**FIGURE 8:** 1/2-13 X 1/34 hex head bolts (qty 3)

**FIGURE 9:** 1/2-13 nylon hex jam nuts (qty 4)

**FIGURE 10:** Weld on deflector retainers (qty 2)

**FIGURE 11:** Assembly Jig (qty 1)

**FIGURE 12:** 1" OD x .5" DOM spacers (2)

## CUT RAW MATERIALS

Source and cut raw materials to spec. List can be found on first page of this instruction sheet under "MATERIALS YOU MUST SOURCE". Use the angle grinder and flapper wheel to debar all cut edges.

## WELDING PIVOT MOUNTING PLATES TO ANGLE IRON

The 3" x .25" angle iron is the piece in which the pivot mounting plates mount to. Using a tape measure, mark the center of the 3" angle iron using a Sharpie marker or paint pen. Since the angle iron was cut to 66", the center mark line location should be 33" from the edge.



Using the supplied welder's jig, place the center notch cut-out on top of the line you made with the Sharpie marker or paint pen. Grab the Pivot Mounting Assemblies and "tack" (DO NOT PERMANENTLY WELD) into place at each end of the jig (make sure center notch stays on the top of the line marked on the center of the angle iron).



Use the jig to evenly space assemblies along the angle iron. Make sure all the paddle retaining holes are closest to the back edge (see photo). Now weld into place



After the initial Pivot Mounting Plates are tacked into place on both the left and right side of the jig pictured on previous page, we're now ready to tack into place all of the Pivot Mounting Plates. Use the provided jig to provide the proper space between each pivot mounting plate for each target. See pictures below.



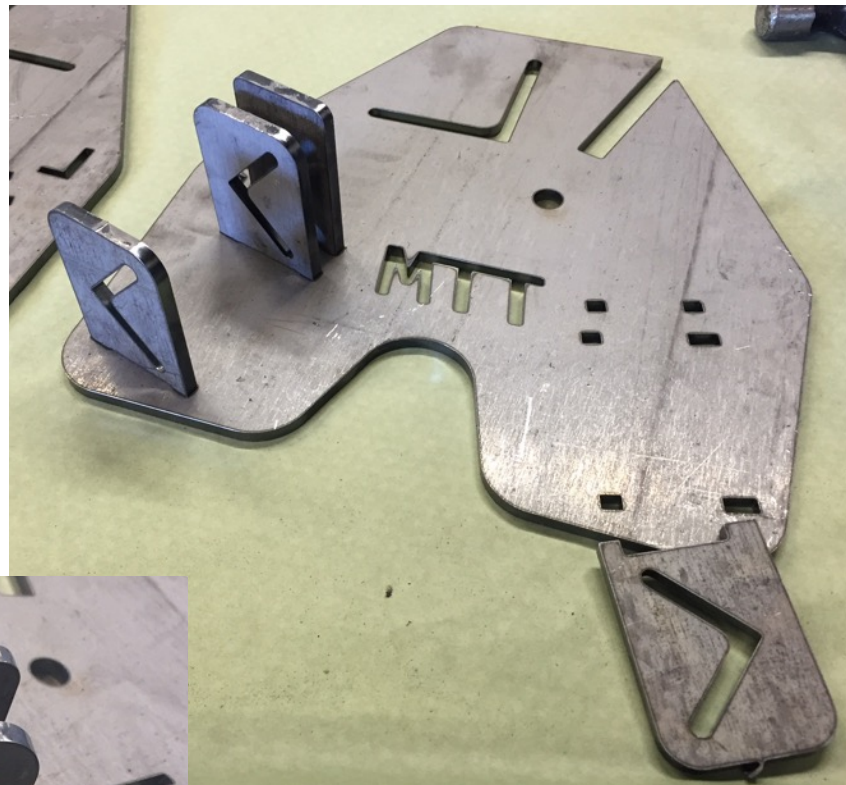
## WELD PADDLE TO DOM

Take the 6 paddle mounting tabs and position them centered onto the DOM tubing. Tack into place and check squareness. Use the jig to raise the end of the paddle to make sure the tube is welded to the middle of the paddle. Once you determine they are positioned squarely, proceed to weld into place on both sides. Make a slim bead profile if possible.



## WELD LEG HOLDERS AND LEG STOPS TO THE A PILLARS

Since the legs sit inboard of the “A” pillars, you need to place each “A” pillar flat onto a welding bench so that the letter is upside down. Using the recut leg holders and leg stop, break apart steel piece and insert into “A” pillars as shown. The pieces will fit snug and may need to be tapped into place. Check squareness and weld.

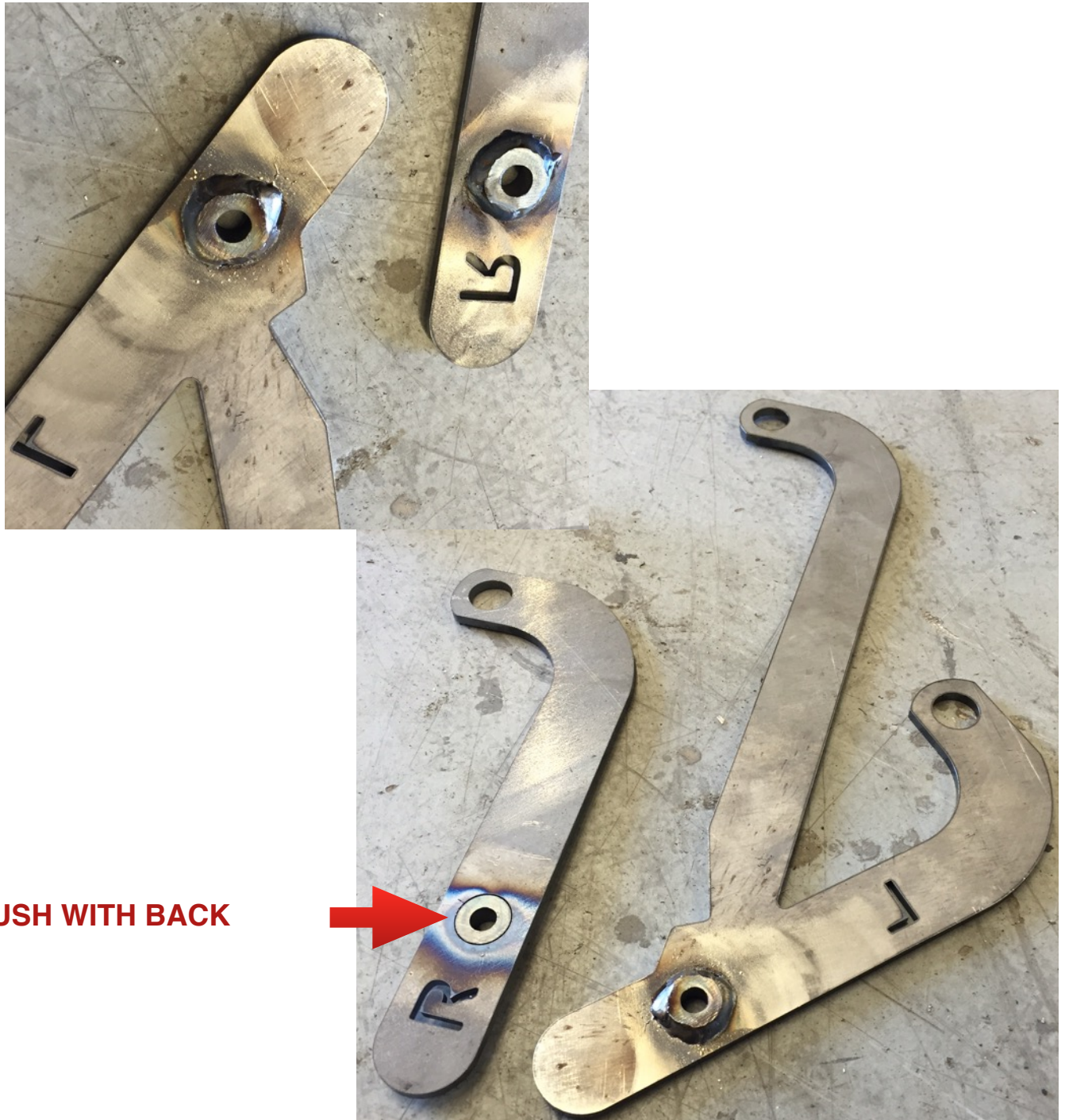


It is usually only necessary to weld one side of leg supports.



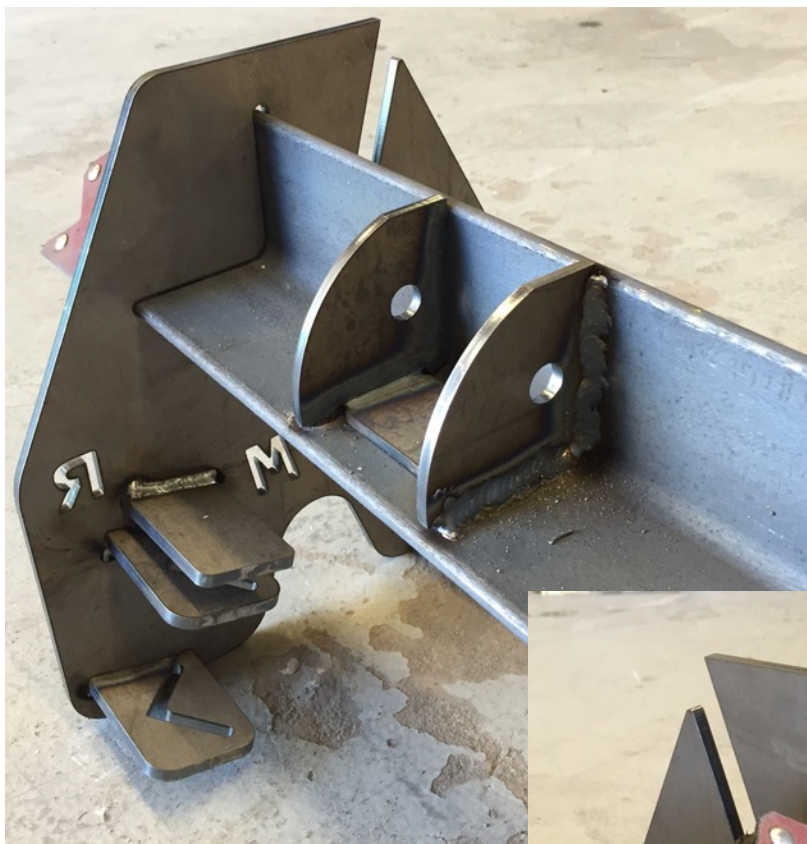
## WELD DOM SPACERS ONTO RESET BRACKETS

As shown below, place the reset brackets onto a flat welding table and weld in the supplied DOM spacers. The spacers should be flush with the inward surface of the reset brackets. No need to run a bead around the entire piece of DOM. Two .5" beads will suffice for a permanent mount.



## WELD 3" ANGLE IRON TO "A" PILLARS

It is extremely important to get this part right. You need to insert the 3" x .25" angle iron ends into the "A" pillars. Make sure the "A" pillar marked "R" (right ) is on the right side of the angle iron, as pictured below. Using a welder's square, seat the angle iron in flush with the "A" pillar, tack into place and verify squareness. See photo below. Must look EXACTLY like photo with the pivot tube opening towards front.





## PERMANENTLY WELD 3" ANGLE IRON TO "A" PILLARS

After you have tacked the angle iron to both "A" Pillars and verified everything is seated nicely and square, it is now time to permanently weld the angle iron to the "A" pillars. See photo below.



## INSERT ANGLE IRON INTO ANGLE INSERTION BRACKETS

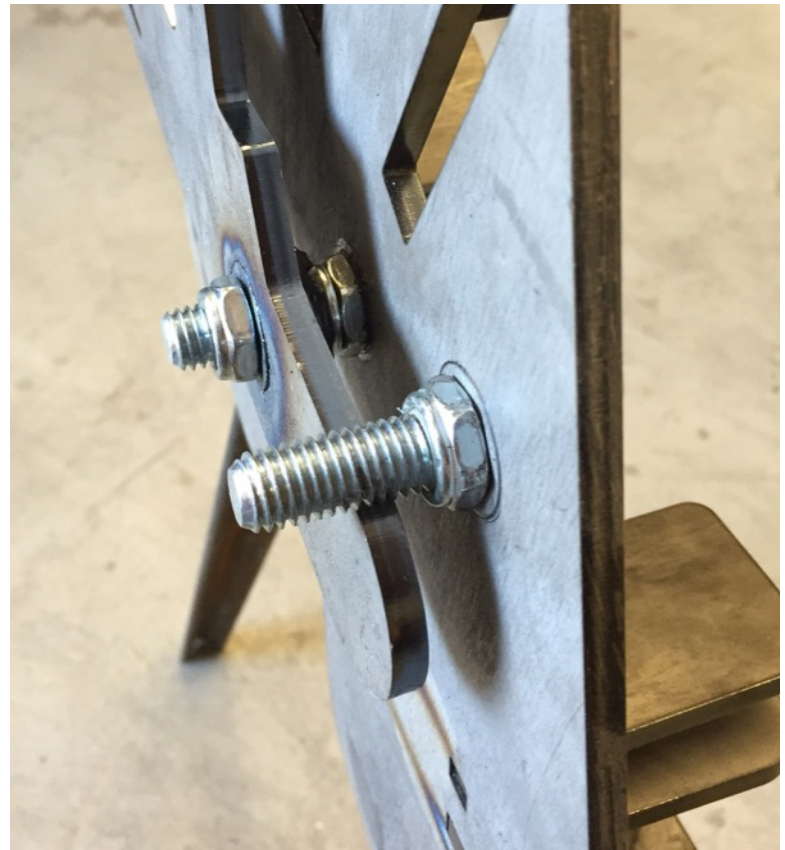
At this point, we're ready to erect the plate rack. You may need to recruit the help of a buddy as this is starting to get heavy and cumbersome to manipulate. Grab the four pieces of 1.5" x 25" x 40" and insert them in the Angle Insertion Brackets that are welded to your "A" pillar. Once all the legs are inserted, your DIY Plate Rack can now stand and hold itself up.





## ASSEMBLE RESET BRACKETS

On the “A” pillar marked L, insert bolts through the “A” pillar so that the threads are sticking outboard of the plate rack. Both hole locations on the left “A” pillar will receive a bolt and nylon jam nut. Tighten both nylon jam nuts all the way and make sure they are tight. On the bolt directly above the “TTM” logo is where your “pull side” reset bracket with the letter L will go. Position reset bracket with welded DOM spacer onto the remainder of the exposed threads and secure with another nylon jam nut. DO NOT over tighten the second jam nut. These reset brackets need to move. See picture below.



On the “A” pillar marked R, repeat the same steps.



## INSERT TARGETS ONTO PIVOT MOUNTING PLATES

The next step is to install the targets onto the 3" angle iron via the Pivot Mounting Plates. Utilizing the six supplied Clevis Pins/Hair Pins, secure each of the 6 target assemblies on the Pivot Mounting Plates. See photograph.





## PERMANENTLY INSTALL 1" ROUND BAR FOR TARGET RESET

This portion of the assembly may require two people. The best way to weld on the 1" tube through the resetting arms is to slide the tube completely through each target hole on both ends of the resetting arm. With all of the targets in the "ready to shoot" position, lift up the 1" bar until it is flush with the back faces of all the targets. Secure into place with a clamp. See picture below.



At this point, you are ready to weld in the 1" round bar permanently. For this portion, you only need a few good "tacks" to permanently weld in the bar. Two 1/2" beads on each side of the bar will provide a permanent hold. See picture below.





Tie rope to reset arm on left side.



## **INSTALL 4" X 1/2" DEFLECTOR**

This is the last portion of the assembly. Grooves have been pre-cut onto the "A" frame so you may slide the deflector into place. A mallet may be required because mill tolerance vary. For added stability, it might not be a bad idea to tack weld the deflector into place. However, you do NOT want to permanently weld the deflector into place because over time it will get beat up and may need replacing. The weld-on deflector retainers (FIG 10) prevent movement should your deflector move left or right from vibration during use. If necessary (though unlikely), weld on the deflector retainers to the back side of the deflector just outboard of the "A" pillars. These are designed to function as "stops" if needed to prevent lateral movement of the deflector.

## TESTING AND TARGET OPERATION

Congratulations! You've now finished building your Target Man™ DIY Plate Rack! Here are some things to note....

- ◆ For a more stable platform, you may want to weld the angle iron legs onto the "A" frame. Though the current setup is plenty stout, there is certainly some wiggle room in the legs due to cutting tolerances. If you were to weld on the angle iron legs, the plate rack would be much sturdier.
- ◆ If necessary, you may want to use a sandbag, or something of the like to anchor down the feet. However, this should not be an issue in 99% of the cases.
- ◆ As always, use proper safety precautions when using any target. Stand at least 10 yards from the target when using handgun calibers. 100 yards when using shotgun slugs and rifle calibers like .223 and .308.

Have lots of fun and as always reach out to us should you ever have any questions. We're always glad to help.

