## Thrown Weapons "No hassle" tripods

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## Materials List and relative prices (listed per stand)

- 2 QTY $2 \times 4 \times 10$ or $2 \times 3 \times 10$ Pressure Treated Lumber. ( $2 \times 4 \times 8$ will also work but you need 3 QTY) - ~\$10-16 for (priced for $2 \times 4 \times 10$ )
- 4 QTY 4" screws (I use Grip-Rite PTN4S1) - ~\$0.60 (\$6.47 for a box)
- 1 QTY 3/8"x6.5" \#16 steel bolt - ~\$1.09
- 1 QTY 3/8" wingnut - ~\$0.78
- 4 QTY 1" or 1.5 " washers - ~\$0.40
- Duct tape


## Tool list

- Circular Saw or Miter Saw
- Drill press (optional but recommended)
- Hand held drill
- $1 / 2$ " woodboring drill bit or $1 / 2$ " standard drill bit works fine
- 5/32" Drill bit
- \#2 Phillips head drill bit
- \#16 socket or wrench
- 10’ Tape Measure
- Sharpie or carpenter's pencil


## Step 1: Cutting the lumber

- Measure the lumber and cut the following lengths from the 2QTY $2 \times 4 \times 10$ lumber
-1QTY @ 5'4" length (This is the back leg)
- 2QTY @ 5' length (These are the two front legs)
- 1QTY @ 18" (This is the horizontal brace for the front legs)
- 2QTY @ 12" (These are the adjustable arms that hold the target)


## Step 2 Making the holes on the front legs

- Select an end on the 2 front legs ( $5^{\prime}$ lengths)
- Measure 5"down from the selected end
- Mark a large dot right under the 5 " mark on both in the center of the 4 " side of the lumber
- Use the drill press or hand drill with the $1 / 2^{\prime \prime}$ bit to make a hole through the dot on both legs
- Set these aside


## Step 3: Making the hole on the back leg

- Select an end on the back leg ( 5 ' 4 " length)
- Measure down 2" from the selected end
- Mark a large dot under the $2^{\prime \prime}$ mark on the 4 " side of the lumber
- Use the drill press or hand drill with the $1 / 2$ " bit to drill a hole through the leg


## Step 4 Reinforcing the legs

- Wrap 3 layers of duct tape individually around the section of each leg where the holes were previously drilled.
- Take the $3 / 8^{\prime \prime} \times 6.5^{\prime \prime}$ bolt and force it through the tape and into the hole previously drilled on each taped leg


## Step 5 Aligning and bolting the legs together

- Take the $3 / 8$ " $\times 6.5$ " bolt and place a washer on it.
- Stick the bolt with the washer through the $1 / 2^{\prime \prime}$ hold in the first front leg.
- Place a washer on the opposite side of the hole.
- Place the bolt through the hole in the back leg.
- Place another washer on the bolt on the opposite side of the back leg hole
- Place the bolt through the hole in the final front leg.
- Place the final washer on the bolt.
- Screw the wing nut onto the bolt loosely.


This is the order in which the bolt, washers and wing nut should be placed through the holes in the wood

## Step 6 Prop front legs apart

- While the three legs are laying on a flat surface pull the front legs apart at the bottom
- You can use the 12 " arms as props to hole the legs apart at the bottom
- Once it is propped in position tighten the top wingnut as much as possible



## Step 7 Attach the front horizontal brace

- Measure $23^{\prime \prime}$ down both front legs from the top and use your marker to line on each leg
- Take the $18^{\prime \prime}$ piece of lumber and place it on the front legs with the mark at the top of the brace. Make sure the brace is centered. There should be $1.5^{\prime \prime}-2^{\prime \prime}$ overhang at the top of the brace
- Mark a dot on the brace where the fastening screw will penetrate through the brace and into the center of each of the front legs. There are no exact measurements on this step
- Drill a pilot hole using a $5 / 32$ " drill bit through the marked dot and into the front legs
- Using the \#2 Phillips head drill bit screw the 4" screws through the pilot holes fastening the horizontal brace to the front legs.

FRONT


## Step 8 Fastening the adjustable target arms

- Flip the target stand onto it's side. It helps if you prop the top up with something to make the leg you are working on level. See diagram.
- Place the $12^{\prime \prime}$ adjustable arm onto the front leg you are working on. The bottom of the arm should be level with the top of the brace.
- Mark a dot on the arm where you will drill the pilot hole. No exact measurements are necessary at this step just so long as it is centered and at least an inch from the bottom of the arm.
- Use the 5/32" drill bit to drill a hole through the arm and into the front leg.
- Use \#2 Phillips head drill bit to screw the 4" screw through the arm and into the front leg.
- Repeat on the opposite leg.



FRONT

*Not drawn to scale

