Build A Backyard Archery Backstop

This backstop is intended to be placed behind an existing archery target to reduce the chance of arrows traveling past the target. Ensure the placement of your target allows for the archer to shoot in a safe direction. The backstop is not intended to allow users to shoot in an unsafe direction. The following instructions are a guideline and can be modified to suit the users' exact needs.

Materials

- 1 Pressure treated 4"x4"x8'
- 2 Pressure treated 4"x4"x10'
- 2 Pressure treated 2"x4"x8'
- 12 HeadLOK 6" screws
- 4 HeadLOK 8" screws
- 1lb box of 1 ¾" Roofing nails
- 1lb box of #9x3" Construction screws
- ½"x3'x4' Stall mat

Tools Required

- Saw (Circular or Miter Saw)
- Electric drill
- Speed square
- Tape measure
- Eye protection
- Hearing protection
- Pencil
- 3/8'' Drill bit
- Hammer
- Clamps (optional)

Cost

Roughly $170.

Construction

Start by cutting all your lumber to the appropriate length:

- Cut the 4”x4”x8’ into two equal length pieces (48”) to serve as the horizontal feet for the backstop.
- Next, cut the 4”x4”x10’ to 41” in length to serve as the horizontal pieces of the backstop frame. Cut the remainder of the aforementioned 4”x4” to 72” as this will be upright section of the backstop frame. Repeat this process for the second 4”x4”x10’. From this step you will have two 72” and two 41” 4”x4” pieces.
- Cut one 2”x4”x8’ into two 48” pieces. Both pieces will sandwich the bottom section of the backstop frame to provide extra support.
- Cut the second 2”x4”x8’ down to 54”. This will brace across the horizontal feet. Take the remainder of this 2”x4” and cut it into two equal length pieces (should be roughly 21” each). Cut opposing 45-degree cuts on both ends of both 21” pieces ensuring both boards maintain their 21” length. Both 21” pieces will serve as support braces to the backstop frame.

Construct the upright frame of the backstop:

- Begin to loosely assemble the frame using the two 41” 4”x4” pieces as the top and bottom of the frame. Use the two 72” 4”x4” sections for the sides of the frame. When assembled, the outside dimensions of this frame should measure 48”x72”.
- Use two 6” HeadLok screws to secure the top left and right of the frame (two screws per corner). Secure the bottom left and right corner of the frame with only one 6” HeadLOK screw at this time.
- Place one 48” section of 2”x4” across the face of the bottom section of the backstop frame making sure the 2”x4” is flush with the bottom and sides. Attach the 2”x4” to the bottom of the frame with 3” construction screws placed roughly every 6”. Flip the frame over and repeat this process with the remaining 48” 2”x4”. When assembled, the 4”x4” frame should be sandwiched between the two 2”x4” sections (shown in picture). At this time, remove the 6” HeadLok screw from each bottom corner.

Predrill holes to attach the frame to the feet of the stand:

- Sketch out where you will predrill your holes when attaching the frame to the feet. To accomplish this, start at one end of the 48” section of 4”x4” and begin to mark off the following measurements: 20 ¾”, 22 ¼”, 25 ¾”, 27 ¼”.
- Using the speed square and pencil, draw a line at each of these increments. In doing this, we can ensure each predrilled hole connects to the proper anchor point.
- Predrill six holes as shown in the image below. Repeat the process on the other 48” 4”x4”.

Attach the frame to the feet of the stand:

- Line up the feet parallel to the frame and stand the frame upright (help from a second person makes this step much easier).
- Begin to attach the legs to the side upright frame while ensuring the frame and legs form as close to a 90-degree angle as possible. Four 6” HeadLOK screws will be used to fix the legs into the 2”x4” sections of the upright frame (outer four predrilled holes) while two 8” HeadLOK screws will be used to fix the legs into the 4”x4” section of the upright frame (center two predrilled holes).

Attach the stall mat to the upright frame:

- With the help of a second person or use of clamps, place the first stall mat onto the frame ensuring to orient the three-foot length vertically. The mat should be flush with the outside of the frame and should be lightly resting on the bottom of the upright frame.
- Secure the mat to the frame using a hammer and 1 ¾" roofing nails (screws greater than or equal to 1 3/4'' could be used if preferred). The spacing of these nails should be roughly 3-4" apart.
- Repeat the process with the second stall mat. There will be an excess of mat above the frame that can be trimmed off if desired.

Install the upright support pieces:

- Place the 54” 2”x4” cross brace across the feet on the mat side of the frame. The exact measurement of where this piece will be installed will be dependent on how square your upright section is in relation to the stand feet. For reference, the center of the cross brace should be roughly 8” from the end of the 4”4” foot. Anchor this in place using two 3” construction screws per side.
- Attach the two 21” 45-degree support braces, to each side using two 3” construction screws per end. One side of the brace will connect through the upright frame while the other side of the brace will connect to the 54” cross brace (as shown).