

PVC Pipe Loom: An Affordable Loom for Teachers and Beginning Weavers

Part One: LOOM CONSTRUCTION AND STARTING TO WEAVE

Ends/Inch

Each PVC pipe loom is set up for a specific weaving width. This particular loom has a 6½ -inch width. The warp threads are spaced at 8 ends per inch (epi), with an initial 54 ends. Later one warp on the left side is dropped for a total of 53 ends.

Assemble and prepare these materials:

A table equal to the desired length of warp, scissors, masking tape, 2 rulers, crochet hook, darning needle, a heavy fork or two forks taped together for a beater, 3 safety pins, paper punch. Mini-blinds from a thrift store. Three 2- or 3-inch C-clamps and cardboard to protect table. One bowl to hold the warp. Cotton rug warp. A cord from mini-blinds, or shoelaces tied together, to be used to tie the loom around your waist.

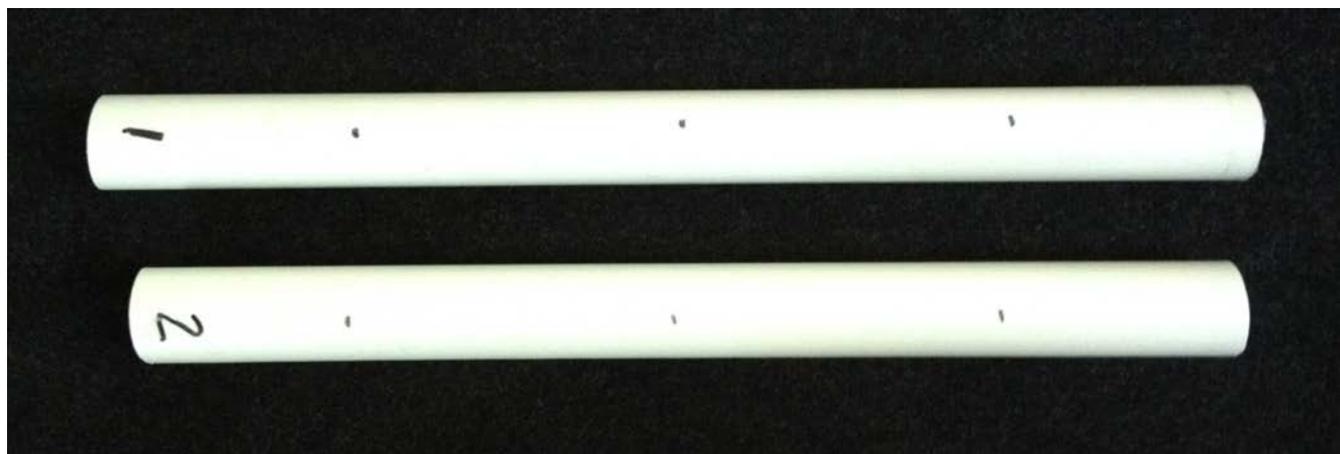
Make a long, narrow hook from a coat hanger.

Make 5 shuttles: Cut mini-blinds into 7-inch lengths. Tape 3 together for sturdy shuttles. Cut notches at each end and round the corners. Choose 5 colors of medium-weight weft yarn. Wrap shuttles on both sides in figure 8s.



Make 39 string heddles. Cut a piece of cardboard 6 inches long. Use cotton rug warp or thrums. Measure warp around the cardboard. Tie a square knot. Cut leaving ends 1/2-inch long. Bundle every 10 heddles.

Cut 3/4-inch PVC pipe into 2 12-inch lengths. Label 1 and 2, respectively. Mark center and 6½-inch weaving width on each pipe.



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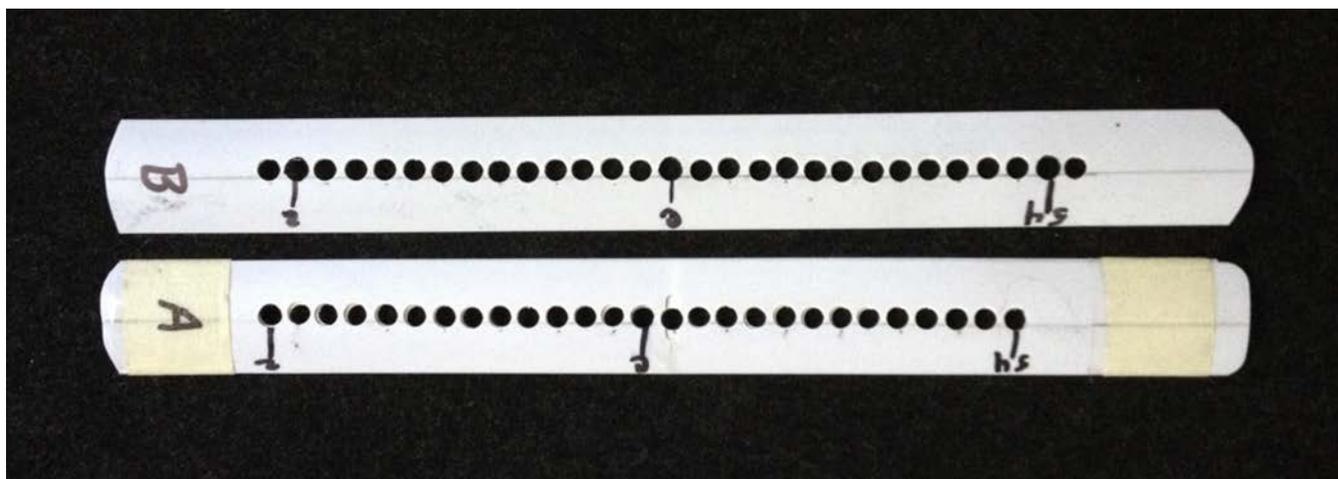
Make warp spreaders. From mini-blinds cut 3 pieces 10 inches long. One piece is used singly. Tape the other 2 together.

-Draw a line down the center lengthwise.

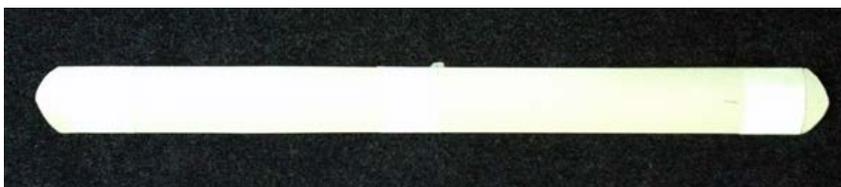
-Mark center and 6½-inch weaving width on each piece.

-Then mark every ½ inch, about 1/8-inch above the line between the width marks.

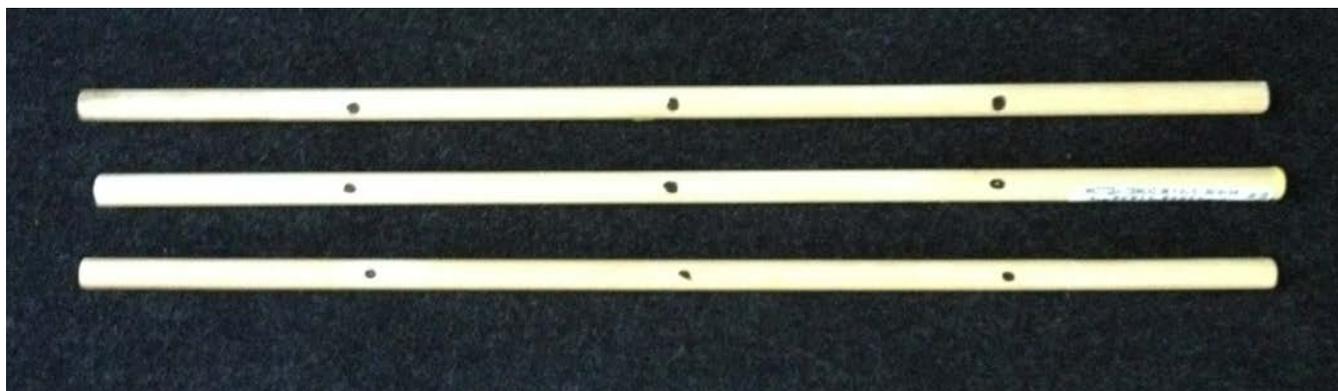
Punch holes slightly under the 1/2-inch marks on the lengthwise line. Turn the mini-blind and punch holes between the first holes slightly below the line. (Holes need to be staggered to accommodate the width of the hole punch.) This results in 8 epi when warp is doubled through each hole. The loom now has 2 different kinds of spreaders. Label the double-thickness spreader A, and the single-thickness, B.



Make a pick-up stick. From mini-blinds cut three 12-inch long pieces. Tape together at each end and in the middle. Round the corners.



Cut three 5/16" dowel sticks 12 inches long for heddle sticks and to aid the warping process. Mark the center and width of weaving on each dowel.



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Prepare Table for Warping

Use table/s the desired length of warp (50 – 70 inches). In the following instructions, dowels and rulers should stick out as far as possible from edge of table.

- C-clamp one dowel to the right end of the table.
- C-clamp the second dowel about 1 yard to the left of the first.
- Place the bowl on the floor at the other end of the table.
- Clamp a C-clamp with the screw side up above the bowl.
- Tape rulers to the table about 5 inches to the left of each dowel.
- Insert pipe 1 on the middle dowel.
- Insert pipe 2 on the dowel at the right end.
- Notice the width markings on the pipes. Align marks on the spreaders to those on the pipes. With convex side up, tape spreader A to left edge of middle ruler so that the holes overhang the ruler. Repeat for spreader B to left of pipe 2.
- Put warp yarn in bowl. Tie a loop at the end. Slip this over the C-clamp.

Warp the Loom

- Measure a loop of warp from the C-clamp at the left end of the table to pipe 1.
- Slip crochet hook into the left-most hole on spreader A from the bottom upwards. Hook the loop and bring it through the hole. The C-clamp at the left end of the table holds the tight side of the loop. It should be held to the left. The loose side of the loop unwinding from the cone or ball of warp should be held to the right throughout each round of warping.
- Now the loop will be used to create an upper and lower shed around pipe. *Split the loop:*
 - (a) Hold the left side of the loop in your left hand and the right side with your right hand. With the right side of the loop, go around the pipe clockwise one time. Switch the “U” of the loop which is now in your right hand to your left hand and hold it out from the pipe. Allow the left side to curl around the pipe.
 - (b) Continue to hold the loop out from the pipe. Hold the right side of loop with your right hand. Go around the pipe clockwise 1½ more times slipping the right side of the loop around the end of the pipe. Pull on the “U” in the loop being held in your left hand.
- Looking at pipe 1, it now has upper and lower ends flanked by turns going around the pipe.
- Pull on the loop to lengthen it. Slip the crochet hook into the left-end hole in spreader B from the bottom upwards. Bring the loop through.
- Slip the loop around pipe 2.
- Keep the loop taut around pipe 2. Pull on the loose side of the loop. Put tension on it and follow it backwards to the C-clamp at the other end of the table. Tension prevents twisting. Drape the end around the clamp from right to left. Any short ends should be tied together at this C-clamp.
- Continue until 27 loops (54 ends) have been warped. Proceed with the next steps keeping the warp under tension between the end-most clamps.

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Use Needle Weaving to Remove Tangles

- Thread a darning needle with weft yarn 3 times as long as the width marked on pipe 2. Between pipe 2 and spacer B starting at the right, go under the raised ends. Leave a 6-inch tail. At the mark on the left, skip the "down" end at the selvedge. Turn on the second-to-last "up" end. Pick up the next "down" end with the needle. Continue over the "ups" and under the "downs" to the right selvedge. You will end by going over the "up" end at the right selvedge. Leave both tails at the right selvedge

Secure Spacer B to Pipe 2

Untape and push the spacer and needle weaving toward pipe 2. Adjust the weft used for needle weaving to ease out excess, or conversely, to remove draw-in. Turn spacer B on its side so that the concave side fits the round pipe. Wrap the weft tails at the right around spacer and pipe. Tie. Next, cut the left-most warp about 1 yard up from pipe 2. Release it from the rest of the warp until it reaches spacer B. Wrap it around the spacer and pipe, and tie.

Pull Backstrap Cord through Pipe 2

Use cord from mini-blinds or tie shoelaces together. Use the coat-hanger hook to pull the shoe laces through the pipe.

Attach Heddle Stick

Lay dowel on top of warp between pipes 1 and 2. Both selvedges are in the up position. Look through the warp and pick up the down end to the left of the selvedge. Place a string heddle loop under it. The heddle then forms two loops that go around the heddle stick. Move the string heddle to the center mark on the stick and tape it down. Look between the next two up ends to find the down end between them. Place a string heddle under it and around the heddle stick. Continue placing string heddles under the down ends and around the heddle stick, across. Lift the heddle stick each time to determine which down end falls between the next two up ends. When the heddles start to fall off the stick, untape the first heddle and move it into position on the mark at the left end of the stick. Tape 3-4 heddles to the stick at this end. After all down ends receive a string heddle, space all heddles between width marks on the stick and tape the last few heddles on the left to the stick.

Examine Loom and Remove from Table

- With tension still on the loom, ensure that all warp ends are centered between markings.
- Remove rulers and tape.
- Tie the loom around your waist.
- Move heddle stick to pipe 2.
- Remove pipe 2 with spacer B from its dowel stick.
- Keep tension on the warp by stretching it between C-clamp at far end of the table and your body.
- Stand up.
- Remove pipe 1 from its dowel and move it to pipe 2.

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- Move spacer A to pipe 2.
- Reach out as far as you can. Smooth the warp bundle by pulling on it between your hands. (If tangled, have someone stand opposite you, remove the warp from end C-clamp, and whap it against the table.)
- When warp is smooth, keep pulling on it, step forward, and tie a slip knot as far as you can from your body. Place the slipknot around a finger.
- Remove warp from end C-clamp. Pull out the remainder of the extra warp end.

Tension the Loom

Attach slip knot to the left-end C-clamp. Tension the warp between it and your body. It should feel tight. To aid tensioning, pull on tail of slip knot and move pipe 1 back and forth. Position spacer A just behind pipe 1. Position heddle stick in front of pipe 1. Look at the loom and ensure that everything is parallel and perpendicular to each other.

Spread the Warp

Pass a weft yarn through the natural shed. Lift the heddle stick. Pass weft through second shed at an angle. Without beating, pass a third weft shot at an angle through the natural shed. With the fork, beat all three down together. The ends should spread out at 8 epi. For the ends that are too close together or too far apart, troubleshoot by using fingers to manipulate these ends into place.

Practice Bubbling the Weft and Beating

Lift the heddle stick. Pass a fourth weft shot at an angle through the shed. Drop the heddle stick. Keeping the angle, pull on the weft until it encircles the left selvedge. Pinch the weft at the left selvedge. Bring the weft down to the right selvedge. A bubble forms (See photo at right). Squish the bubble down in the center. Beat down the weft for about an inch at the left selvedge. Then starting at the tail end at the right selvedge, beat across to the left selvedge. If the left selvedge draws in, pull the weft up into a steeper angle at the right. Bring it down to form the bubble. Try squishing the bubble in two evenly spaced places. Beat as before. Bubbling prevents draw-in at the sides. Too much draw-in on this loom makes it very difficult to weave.



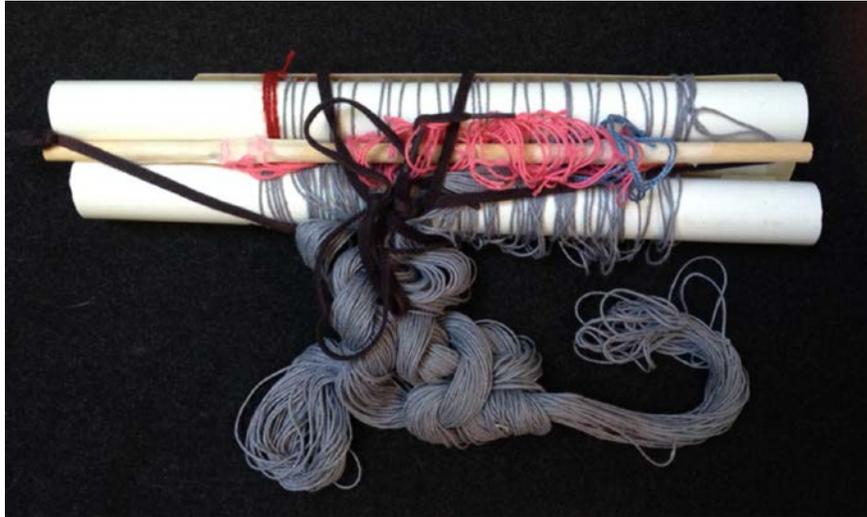
Roll the Loom Up and Stash It Away

- Under tension, bring heddle stick, pipe 1, and spreader A down to pipe 1.
- Lay the shuttles and pick-up stick on top.
- Untie shoe laces from waist.
- Apply tension and roll everything toward the slip knot.
- Tuck one end of the shoe lace through the slip knot to preserve the knot.
- Remove the slip knot from the C-clamp.
- Wind the ends of the shoe lace in opposition to each other around the loom.

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- Tie with a bow tie.
- Wrap the warp bundle around the loom.

The photo below shows a loom warped and ready to go. In this case, the warp is loosely chained rather than wound around the loom.



Weaving

Weaving is covered in a separate handout. It includes weaving a header in plain weave, stripes, kjerringtenner (pick and pick), krabbasnar, krokbragd, and flossa.

Advancing the Warp

As you weave, the already-woven section will move the weaving area away from your body, and you will want to roll up the portion of the piece you have woven. Under tension, roll cloth around PVC tube held at waistline. Secure with safety pins. (See photo.) Reposition the slip knot in the warp if necessary to advance warp at back of loom.

