

# The Double Weave

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The Double Weave variations are a highway to a great deal of loom versatility. The Double Weaves produced on a four-harness twill threading may be woven on any loom in which the harnesses may be raised independently. Often thought of as the weave for ornamental pick-up designs, the versatile Double Weave has many simple and practical applications. It may be used for producing fabrics with a different color on each side, for weaving fabrics twice as wide as the loom, for joining two fabrics directly on the loom without seams, for making double quilted and padded fabrics.

The variations are made through different systems of treading on the twill basis. These are not difficult and become very simple once the theory of Double Weaving is understood. The fabrics are tabby, or plain weave—two different plain-weave surfaces, one on top and one on the bottom. If two harnesses are woven alternately, the result will be a plain weave fabric. If 1 and 2 are used, 3 and 4 will float on the back of the fabric unwoven. If three harnesses are used, 1-2-3 and 1-2-4, the result will be a woven background with the top layer floating unwoven on the surface of the fabric. When these two methods are combined using two shuttles, one for each surface, weaving 1,2,with shuttles on and 1-2-3, 1-2-4 with shuttle two, two independent fabrics will be produced. Sometimes it is desirable to weave one shot on each surface: 1, 1-2-3, 2, 1-2-4.

Sometimes it is desirable to use a two color warp, 1 on the top surface and 1 on the bottom surface, thus producing a fabric of one color on the top and a different color on the bottom. The three most commonly used color arrangements used are:

1. One color warp
2. Two color warp with alternating pairs
3. Two color warp with colors alternating.

The complete tie-up for making all of the color and surface changes requires twelve treadles. However, since most 4-harness looms do not have this many, it is best to use a single direct tie-up. In the weaving directions which follow all references will be made to harnesses, rather than treadles.

Double Weaving should have a warp setting to produce a tabby fabric on both surfaces, which means that twice as many threads per inch should be warped as for the usual fabric. However a normal twill setting may be used with a weft much heavier than the warp, for example for bags, for using novelty materials, and for all similar projects which do not require a tabby balance. The Double Weave Pick-Up (known as Finnweave or Mexican Double Weave) is the only one of the Double Weave variations which requires the double sett warp all of the time.

There are many variations of the Double Weave technique, each producing a different type fabric. In the directions given, the color arrangement draft suitable for each is given first. Most of the Double Weaves require the use of two shuttles carrying the same type of thread of two different colors. When two shuttles are used, the underlined figures indicate dark weft, the plain figures indicate light weft.

## A. Double-Faced Twill

This is not a true Double Cloth; however it is a double faced fabric. The upper and the lower layers are two different colors. The two surfaces are interwoven and both are done in a 3-1 twill. A standard twill sett is used with a heavier weft than warp.

Treadle:

1	Light color	
1-2-3	Dark color	
2	Light color	
1-2-4	Dark color	Reverse the color order to make color stripes.
3	Light color	
1-3-4	Dark color	
4	Light color	
2-3-4	Dark color	
REPEAT		

This is useful for wool blankets, afghans, auto robes, baby blankets, reversible draperies, reversible bedspreads. The effect is good if a standard twill setting is used with a neutral warp and the two wefts of heavy material in strong colors. A very heavy fabric.

## B. Double-Width Cloth

This is also made on a twill set-up and produces a fabric twice the width of the loom. Both edges will have a selvedge. If unusual effects are desired, use extravagant, exciting materials in both the warp and the weft.

Treadle:

1-2-3	Left to right	TOP
1-2-4	Right to left	
2	Left to right	BOTTOM
1	Right to left	

This is open on the right hand selvedge. Be extremely careful with the weft tension on the folded edge—the left. Do not pull in.

## C. Double Faced Cloth

For weaving two, unjoined surfaces. This weave is not commonly used in the manner, but it is the basis for several of the other variations. Weave on a two-color warp with two shuttles carrying wefts the same as the warp. Be sure to sett close.

Treadle:

1-2-3	yellow	TOP
4	green	
2-3-4	yellow	BOTTOM
1	Green	

This produces a non-twill fabric, unlike the first treading given. It is two separate layers.

#### D. Double Cloth-Interchanged Surfaces

Make two color weft stripes interchanging the two surfaces. This interchange will tie the materials together across the warp. Be very careful not to lock the two colored wefts at the selvages in order to keep the edges open. The same as Double Faced Cloth.

Treadle:

1 yellow

2 yellow

1-2-3 green

1-2-4 green

For desired amount. Then:

1 green

2 green

1-2-3 yellow

1-2-4 yellow

#### E. Seamless Tubing

Most often referred to as pillow tubing and has many fun uses for small projects, eyeglass cases, sachet bags, set wider for pillows as the name implies. Be sure to set the warp twice as dense as for usual plain weave. All double weave follows this procedure. This treading produces a tube of material which may be closed on one end by weaving tabby before starting the tube. This may also be left open at both ends to produce a tube for wearing. e.g.: dress, skirt, etc.

Treadle:

1-3, 2-4 tabby

Weave clockwise across the top and back on the bottom.

2

1-2-4 In this you are really working with two separate sheds,

1 but with one weft thread, thus making a tube.

#### F. Double Quilted Cloth

This is set up with the light warp threads on harnesses 1 and 2, the dark threads on harnesses 3 and 4. The method for weaving two independent surfaces together, as in Double Faced Cloth, quilts the two surfaces together by interchanging them in spots. Use a pick-up stick which is a little longer than the width of the warp. A two-color warp that is set twice as close as for normal plain weave gives surfaces of two colors. The weaving may be done with two shuttles to give open sides or with one shuttle to give closed sides. Any pattern, simple or complex, may be followed. Work out the design on squared paper. Two warp ends and two weft shots make the usual quilting spot. Each square on the paper should represent two threads.

Treadle:

1,	2,	1-2-3,	1-2-4	Repeat as desired
3-4				Raise dark threads
				Pick up equally spaced pairs across warp (follow pattern)
1, weave,	2, weave			Remove stick; beat
1-2				Raise light threads
				Pick up areas which were just woven (background) splitting
				Pairs at each side of spots
3, weave	4, weave			Remove stick; beat
1,	2,	1-2-3	1-2-4	Repeat as desired
				Make second row of quilting following pattern
				Continue thus.

To weave the pick-up sheds, push the pick-up stick toward the reed and weave the shed under the stick. The first shot may be pushed into place by inserting a flat stick into the shed and pulling it forward against the weaving. This has lots of fun uses for baby blankets, bonnets, ski caps, blankets and afghans. Instead of spots, small patterns may be created the following Double Weave Pick-Up.

### G. Double Weave Pick-Up

Use Draft B. This is the method for weaving designs in double cloth produced by interchanging the two colored surfaces through the use of a pick-up stick. The method given is sometimes known as the Mexican Double Weave. The Finnweave is merely a different method for producing exactly the same effect. The warp must be set twice as closely as for normal tabby and the waving must be done in balanced tabby on both surfaces. Some of the sheds are very narrow, so it is advisable to use a slat stick-shuttle or the small Swedish shuttles. The stick-shuttle may be left in the shed and beaten against where the pick-up stick prevents the use of the beater. Any design which may be drawn on squared paper is suitable for reproducing in Double Weave Pick-Up. Cross stitch designs are excellent. Lily 10/3 sett at 40 epi. is a good warp.

### H. Padded Double Weave

The Double Weave patterns D, E, and F may be padded to produce a thick quilt-like fabric. Before closing a pocket, raise the top fabric and insert padding of some kind and then close the pocket by using a locking weft shot or two. Padding could be carded wool, wool roving, cotton batting, warp ends (thrums), etc. This is an interesting technique to use for pillows (no seams), hot dish pads, tea cozies, baby blankets, afghans, lap robes, and chair pads, etc.

### I. Box Hanging

This is adapted from Tubular Weave given at E.

Try making each of the four sections a different color. To shape the box, lay in stick on top right shed and bring out in the center of the web. Insert next stick from top left shed and bring out in the center. Proceed in the same manner for the bottom layer with the sticks extending through the bottom of the

bottom layer. Repeat as desired. Do not close the tube. Warp ends become the finishing on both the top and bottom. Hang.

## J. Double Weave Hanging – Crossed Weft

This is the four-sided hanging with the weft crossed in the center of the web. Use draft A or any of the others you might like to try. Use two shuttles. They can be the same or different in color and texture.

(A) Treadle:

- 1 from center weave to right top edge
  - 2 from edge weave back to center
  - 1-2-3 from center weave to left edge bottom
  - 1-2-4 from edge weave to center bottom
- Bring shuttle to the top of the web in the center.

With a second shuttle:

- 1 from center weave to left top edge
  - 2 from edge weave back to center
  - 1-2-3 from center weave to right edge bottom
  - 1-2-4 from edge weave to center bottom
- This completes two shots of weft. Repeat as desired.  
Lay in sticks to shape

(B) Treadle:

- 1 lay stick in right top half of web
  - 1-2-3 continue stick through web to left bottom half of web
  - 2 lay stick in left top half of web
  - 1-2-4 continue stick through web to right bottom half of web
- Sticks should extend at least 1-inch beyond the selvedge edges and  
Cross in the center or middle of the web.

Repeat (A) two complete weft shots for the desired length.

Repeat (B) once ore for the crossed sticks at the top.

Repeat (A) to balance the starting area.

Remove from the loom and knot the ends of each layer of fabric.

Unfold and hang.

## Important General Notes

Drafts used are:

4	0
3	/
2	0
1	/

(C)

4	/
3	/
2	0
1	0

(B)

4	/
3	/
2	/
1	/

(A)

Treadles, directly tied to the harnesses.

1 to 1  
2 to 2 etc.

Always remember to use twice as many warp ends as used for any of the dingle layer fabrics. Harnesses 1 and 2 form one layer of cloth. Harnesses 3 and 4 form one layer of cloth. Although there are many systems of interlocking these two layers they must be thought of as two separate fabrics.

Points to remember in weaving double weave pick-ups.

- Always make the pick-up the color which has just been woven.
- The rhythm is:
  - Pick up light and weave dark.
  - Pick up dark and weave light.
- Or
  - Pick up pattern and weave background.
  - Pick up background and weave pattern.
- In making pick-ups, the part of the warp which you do not wish to weave is picked up and held above the shed with the pick-up stick.
- Pick-up must be done very accurately.