



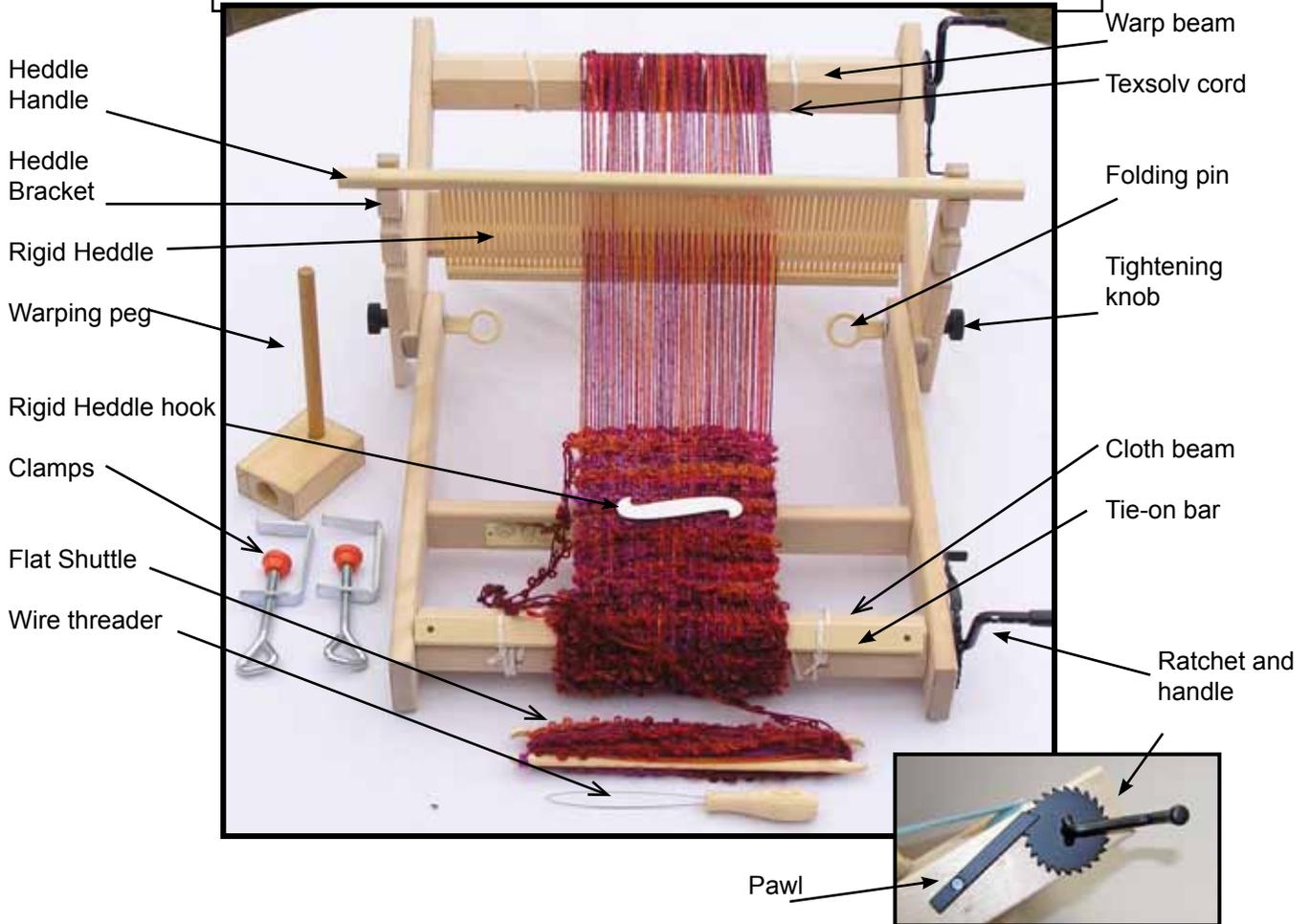
# *Emilia*

*The Folding Rigid Heddle Loom*



*Learning to weave on your Emilia loom*  
*by Joanne Hall*

## The Emilia Loom and Accessories

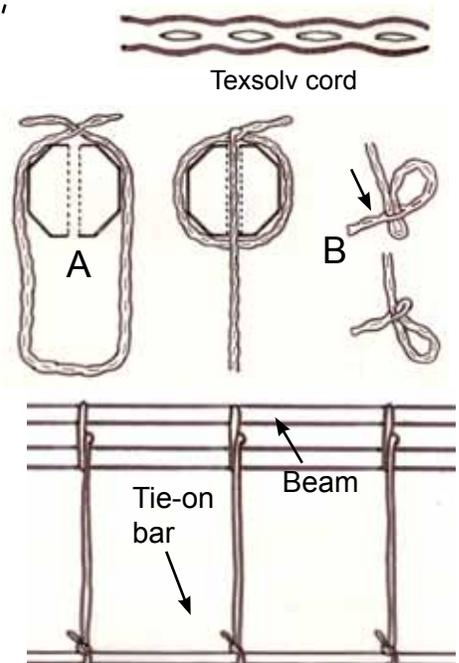


## Attaching the Texsolv Beam Cords

Texsolv cord is a cord made of linked loops. Follow the diagrams to attach the tie-on bars to the warp and cloth beams. There are holes drilled in your beams for these cords.

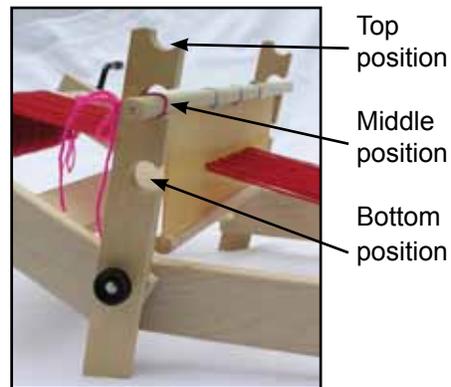
There is a cord for each beam hole, approximately 14 inches long. See diagram A. Thread one end of the cord through the last hole in the other end of the cord. Pull the loop securely around the beam and thread the long end through the hole in the beam. Use the wire threader if necessary. Pull through and tighten snugly on the beam. Put all the cords on your beams.

To attach the tie-on bar to these cords, see diagram B. Make a small loop in the end of each of the cords and put the tie-on bar through the loops. Be sure your tie-on bar is parallel to the beam. To adjust the cord length, use a different hole in the end of the cord.



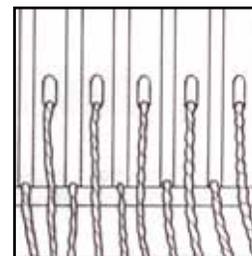
## How the Rigid Heddle Works

The rigid heddle has a row of holes, each making a heddle alternated with a slot. The heddle is supported by a bracket on each side of the loom. The top bracket position holds the heddle up and makes one shed, or opening for weaving. The bottom position holds the heddle down to make the other shed. The middle position is used for threading the yarns through the holes. These instructions show you how to use an 8/inch (30/10cm) or a 10/ inch (40/10cm) heddle. Use a tape measure and count both the holes and slots to determine which heddle you have.



### Choosing a yarn to use as warp

The warp yarn you choose needs to fit through the hole in the heddle. It should be strong and not too fuzzy. To test the yarn, put it through the hole to see if it will move freely. You will need at least 100 meters or yards of yarn to use as warp yarn on your loom. It is easiest to start with one color of yarn for your first warp.



## Some words to know

- Ends** are individual warp yarns in a warp.
- EPI** ends per inch, or the number of warp yarns per inch. Also called sett.
- Ply** is the number of strands twisted together to make one yarn.
- Selvage** is the woven edge of the scarf. Selvage warp yarns are the last yarns at the edge
- Shed** is the space where the shuttle goes when weaving

- Sleying** is putting yarns through slots in a heddle
- Slots** are long, narrow spaces in the heddle where the yarns pass.
- Warp yarns** are those which are wound onto the warp beam of your loom.
- Warping** is the process of putting yarn on your loom.
- Umbrella swift** is used for unwinding skeins of yarn.

## Equipment You Need

### Rigid Heddle hook

This hook, also called a sley hook, is used to pull the loops of yarn through the slots in the heddle. This is called sleying the heddle.



Rigid heddle hook

### Wire Threader

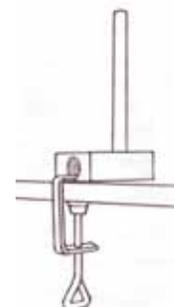
A wire threader is used to pull the yarns through the holes in the heddle. It has a wire loop securely fixed into a wooden handle. The wire is pointed and fits through the heddle holes.



Wire Threader

### Warping peg

The warping peg is clamped to a table or a flat surface and is used to hold your scarf yarn as you wind it onto your loom.

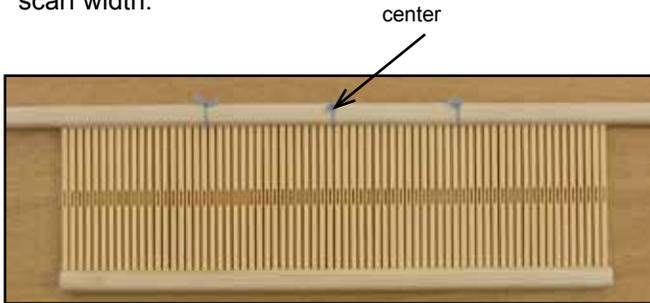


Warping peg

## Beginning

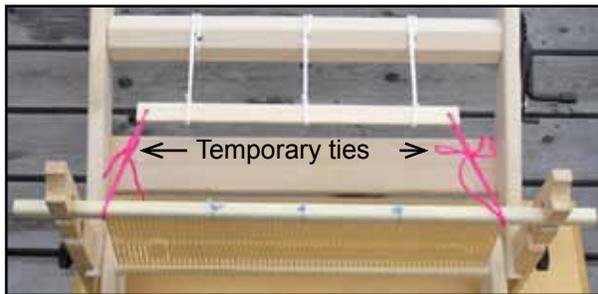
### Measure your heddle to center your warp

Your warp yarns must be centered in your rigid heddle. Measure to find the center of your heddle. Put your rigid heddle hook into the slot to mark the center. Tie a string around the top of your heddle at this place. Measure half of your scarf width from the center to the right. Tie a string to mark this spot. Do the same to mark the left side of your scarf width.



### Tie your tie-on bar in place

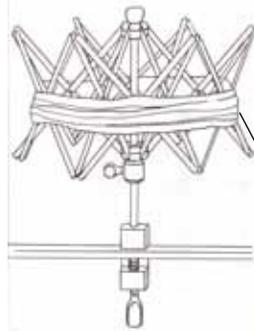
Place the rigid heddle in the middle position of the heddle holder. Put the pawl into the warp beam ratchet to keep the beam from turning. Tie a string around the heddle handle and then through the hole in the end of the tie-on bar. Use a bow and tie the other side. Center the tie-on bar. These ties will hold the tie-on bar for easier winding of your warp. You will take these ties off when you start to wind the yarn onto your warp beam.



**Place** your loom on a table and use the clamp to secure it in place.

**The umbrella swift** holds a skein of yarn so that you can wind it into a ball. Attach the swift with the wooden screw. Unwrap your skein of yarn and put your hands inside. Stretch the yarn out to straighten it. Make sure it is not twisted. Place it on the swift. Tighten the yarn on the swift, by tightening the wooden screw.

Don't stretch the yarn too tightly. Untie the yarn ends and make sure the skein unwinds easily.



**The ball winder** winds yarn into a nice tight ball. Attach the yarn as shown and wind one large ball.

Lift the ball off the winder and take the yarn from the outside of the ball.



### Clamp your warping peg into place

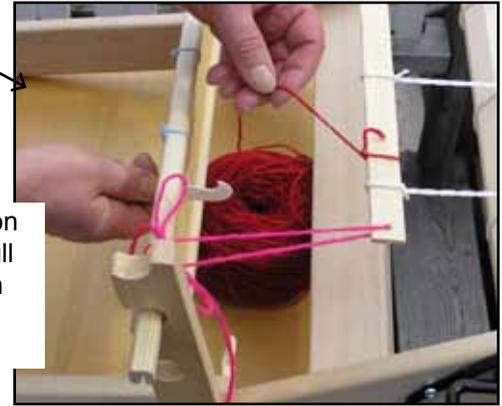
It can be on any surface which will be about the same height as the loom. The distance between the warping peg and the tie-on bar should be about a foot longer than your scarf.



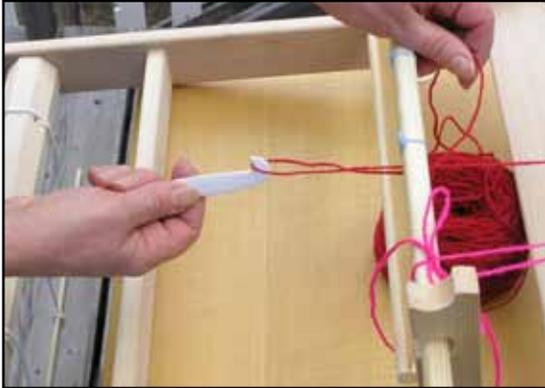
## Winding your warp

### Begin by tying the yarn to the tie-on bar.

Tie the end of your warp yarn to the warp beam tie-on bar where you will start winding your yarn. Line it up with the tie on the top of your rigid heddle. Place the ball of yarn at the back of the loom. Put the heddle hook into the slot where you marked your heddle to start



Place the yarn on the hook and pull the loop through the slot.



Bring the loop over to the warping peg, pulling yarn from the ball as needed. Transfer this loop of yarn to the warping peg. You now have two yarns in place in your loom. Pull a second loop. Be sure that the yarn goes around the tie-on bar.

### Encountering knots

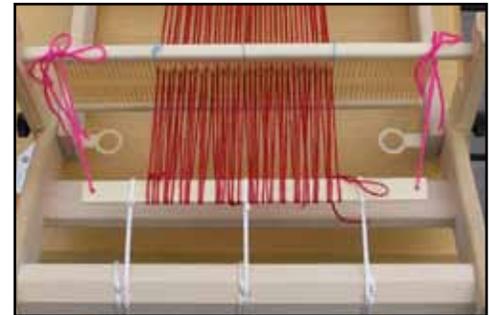
If you encounter a knot, cut the yarn at the knot. Go back to the warping peg or the tie-on bar, cut the yarn there and discard the yarn with the knot. Tie the yarn back together and continue winding.

### If you make a mistake

Remove the yarn which is not correct and wind it back onto the ball. Then, continue winding.

### Continue to wind your warp

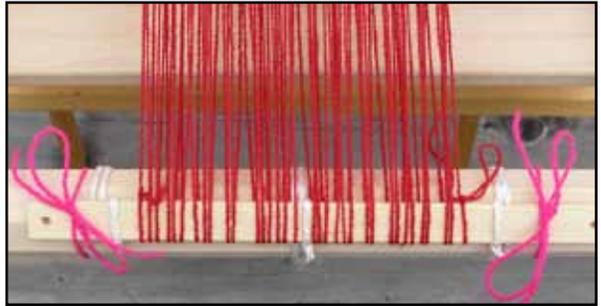
Continue to pull the loops through the slots and over to the warping peg. This gives you two yarns in each slot for the width of your scarf. Look to be sure that every yarn goes around the tie-on bar. When you are finished, cut the yarn and tie the end to the tie-on bar. With more experience, you can make a warp with more than one color, by tying on new colors at the tie-on bar.



## Getting ready to Wind your Warp onto your Loom

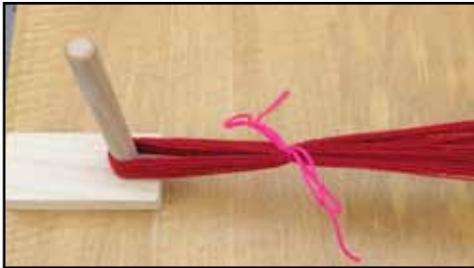
### Tie your heddle in place

Tie a string around the heddle handle and then around the heddle bracket. Tie with a bow.



### Tie your warp

Tie a string around the warp loops at the warping peg. This tie is called a choke tie because it is tied tightly.



### Getting ready to beam your warp

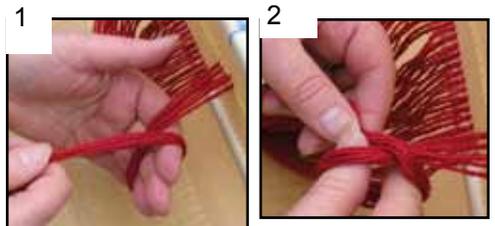
Take the temporary ties off the tie-on bar. Lift the warp loops off the warping peg. Turn the warp beam clockwise until the tie-on bar is on the beam. Keep the pawl in the ratchet. Take two strings and tie around the warp beam on each side. This will hold the tie-on bar in place during beaming.

## Wind your Warp onto your Loom

Hold the warp tightly as you wind it onto your warp beam. When winding warp for one scarf, there is no need to wind a sheet of paper with it, as the beam is large. When you come to the end, leave about a foot of yarn in front of the heddle.



### Tying a slip knot



### Cut your warp ends

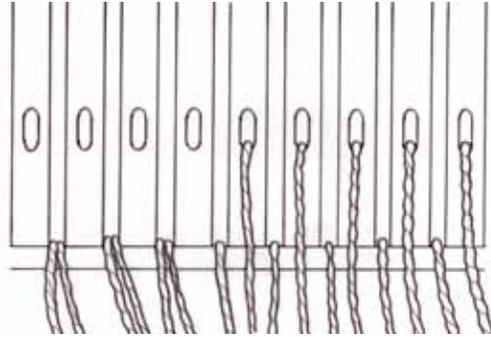
Leave the yarns in your heddle. Cut the loops of yarns, untie your choke tie and tie the ends into slip knots.



## Threading your Rigid Heddle

### Threading the heddle

Your yarn pairs are in the slots in your heddle. Now you need to thread one of each pair into the holes in the heddle. Pull the first yarn out of the slot, leaving its partner remaining in the slot. Put the wire threader through the heddle hole and put the yarn through the wire loop. Pull the yarn through the hole. When a number of yarns are drawn through the heddle holes, tie them together. Continue threading and tying the rest of the yarns.



Wire threader which comes with your loom. Use with the size 8 and 10 heddles.

Threader for the size 12 heddle (a 3 inch nylon loop for dental flossing you can find at a drug store)



Some threads can simply be poked through the hole.

## Tying Your Warp

### Prepare for tying

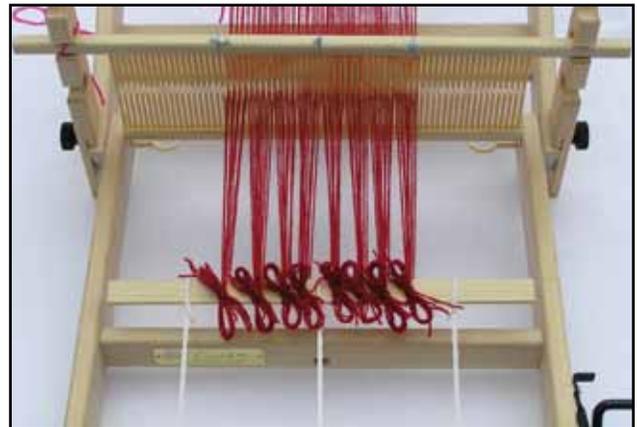
Leave the heddle in the middle position. Unwind the tie-on bar from the cloth beam. Check to be sure that it is straight and centered in the loom. Put the pawls into the ratchets.

### Start in the center of the heddle.

Select 6 or 8 yarns and stroke them to straighten them. Divide them in the middle into two parts, half on the right and half on the left. Put half on top of the bar and the other half under it. Tie the bow the same way you tie your shoes. You can use smaller bundles at the selvages.

### Keep the tension even as you tie

It is not necessary to pull the yarns tight as you tie them. Feel the warp bundles one at a time to check their tension. After all the yarns are tied, use one finger to feel each bundle to find those which are loose or too tight.



### Equalize the tension on the yarns

Untie and re-tie those bundles which are too tight. Absolute perfection is not necessary, as the weaving will even out the tension after the first inch or two is woven.

## Weaving your Scarf

### Words to know

**Advancing the warp** moving the weaving along by releasing some warp yarn from the warp beam and winding up the scarf

**Balanced weave** has the same number of wefts per inch as warps per inch.

**Plain weave** is the basic weave made by weaving over one yarn and under one yarn.

**Selvage** is the woven edge of a fabric.

**Weft** is the yarn which is woven crosswise to the warp to form the woven web.

#### Position the warp

When you are ready to weave, position the beginning of your scarf about half way between the cloth beam and the heddle. Tighten your warp, but not too tight.



#### Use the heddle to put the yarn in place

Using both hands, take the heddle off the top position, lower it to close the shed and pull the heddle to the weft. This will make the yarn straight across the scarf. Do not press it against the tie-on bar, instead this first weft should be about one inch from the bar. Place the heddle into the bottom position.

#### Wind your weft yarn onto your shuttle

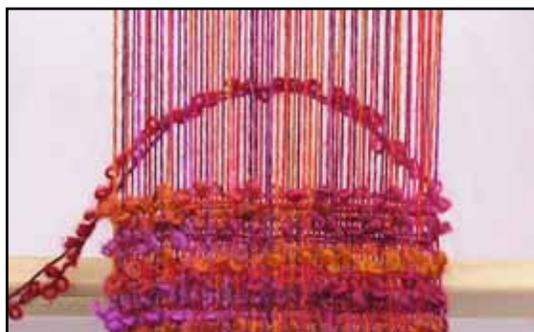
Wind only until the yarn on the shuttle is about one inch thick. If you wind it thicker than this, it will be hard to get the shuttle through the shed.

#### Weave the other shed

Put the 2 inch tail into this second shed. Pass your shuttle through this shed and weave the next weft with an upward curve as before. Lift the heddle and press the weft in

#### Make a shed and weave

To make a shed for weaving, lift the heddle and place it on the top position on the brackets. Pass the shuttle through the shed. Set the shuttle down. Curve the yarn up in the middle and then back down, to make a rounded shape. Leave a 2 inch tail. This curved shape is necessary to give the weft enough length so that it will weave across the scarf without getting stretched.



## Checking your Weaving

#### Counting for a balanced weave

Weave one inch. These two sheds are weaving plain weave. Use your tape measure and count the wefts in one inch, to check your beat. You should aim for a balanced weave, which means that you will have 10 wefts per inch with a 10 dent heddle. Continue to measure and count periodically to achieve a balanced weave.

#### Measure your weaving width

Now and then measure the width of your scarf. It should be nearly the same width (approx. ¼ inch less) as the warp yarns in the heddle.

#### Help, my scarf is getting too narrow!

To solve this problem, curve your weft upward more when you weave. See photo above. To fix this, return the heddle to the previous position, loosen the weft yarn, curving it higher towards the heddle.

#### Advancing your warp

When your woven scarf gets close to the heddle, release the pawl from the warp beam ratchet and unwind some warp yarn. Wind your scarf on to the cloth beam and tighten the warp.

## Finishing your Scarf

### If you run out of yarn

Fill your shuttle again. Overlap the new yarn end 1 inch over the end of the last yarn.

### When you finish your scarf

You will soon see the ends of the warp yarns. When you weave the last weft, leave a two inch tail at the selvage and then weave this tail in.

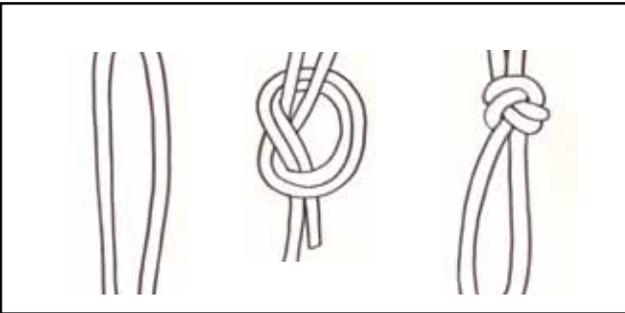
### Cutting your scarf from your loom

You will need about 6-8 inches of fringe left on your scarf, so cut the warp yarns back by the tie-on bar. Pull this fringe out of your heddle and unwind your scarf from the cloth beam. Untie the bows you tied at the beginning of your scarf.

## Tying your Fringe

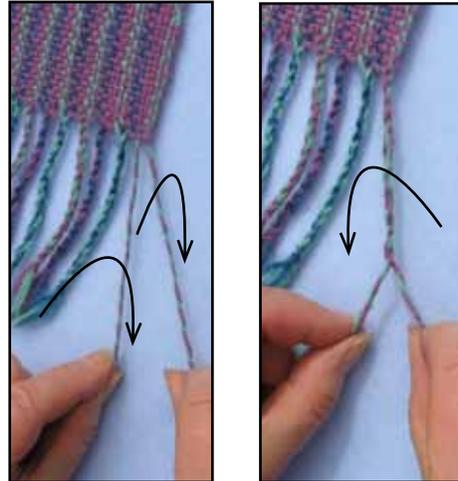
### Overhand knot

Place your scarf on a table and trim your fringe even and both ends the same length. If you are not going to twist the fringe, tie groups of four or six yarns into an overhand knot, pushing the knot up to the last weft yarn.



### Twisting your fringe

If you want to twist your fringe, take four or six yarns and divide them into two parts. Twist both parts in the same direction. Place the two parts together and tie a knot at the end.



The two parts will twist back on themselves to make a plied fringe.

## Finishing choices for your Scarf

### Wash and press your scarf

Your scarf will soften when washed. Place it in a basin of lukewarm water with a very small amount of hand dish washing soap. Rubbing gently on the twisted fringe will make the yarns cling to each other, making a stable fringe. Gently wash and rinse in lukewarm water. Squeeze the water out, but do not wring. Use a fabric softener, vinegar or hair rinse if you like. Hang to dry. If you don't want to wash it, wrap it in a damp towel and leave it for an hour.

### Wool scarves can be pressed

Wool can be softened by pressing with an iron. When nearly dry, cover the scarf with a thin, damp cloth and press lightly.

### Brush your scarf to make it soft

Brushing makes a fluffier, softer scarf. Wool scarves are easy to brush using a hair brush or a hand card, used for carding wool. Place your scarf flat on an ironing board or on a table. It is best if wool is still a little damp for brushing. Hold the scarf with one hand and brush with the other. You will very quickly see and feel the difference it makes.





Accessories for your *Emilia* Rigid Heddle loom



Emilia Heddles come in three sizes  
8/inch (30/10)  
10/inch (40/10)  
12/inch (50/10)

Emilia Second Heddle Kit  
This kit makes it possible to weave with two heddles at the same time, to weave patterns or to weave with finer threads.



Glimakra's **Susanna** rigid heddle loom weaves 27 inches wide. available for weaving wider widths.



**Julia**  
2, 4, 6 or 8 shafts  
Counterbalance or countermark.

26 inch weaving width. Footprint is about 32 inches by 32 inches.

For other Glimakra weaving supplies ask at the shop where you purchased your Emilia loom. To find a shop near you, go to:

[www.gavglimakra.se](http://www.gavglimakra.se)  
or  
[www.glimakraUSA.com](http://www.glimakraUSA.com)

These instructions written by Joanne Hall  
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406 442 0354 toll free **866 890 7314**

Your weaving shop

