

Assembly and Adjustment of Counter-march Looms

The Counter-march advantage

The advantage of the counter-march loom is that you get perfect sheds. If you are familiar with a jack loom or a counterbalance loom, you will soon learn that the counter-march tie-up adds one extra simple tie-up.

Two sets of lamms

This extra tie up is done with an extra set of lamms. For more detailed instructions for the tie-up, ask for a copy of the book,

Tying up the Counter-march Loom.

Initial assembly of your loom

When you first assemble your counter-march loom, put a warp on. It will help you to tie up the loom correctly. If this is your first warp on your loom, choose a weave that you are familiar with and start with two or four shafts.

A place to begin

To learn some basic information about the counter-march loom, read the introductions on pages 1 to 9. Here you will read about used looms, handling heddles, assembling shafts and shaft holders, using Texsolv cord, pins and pegs. Also listed is the order of assembling and warping your loom the first time and for subsequent warps. All of the ties put on your loom above the treadle ties are done with this first warp and they do not need to be changed for your next warp.

Texsolv cord

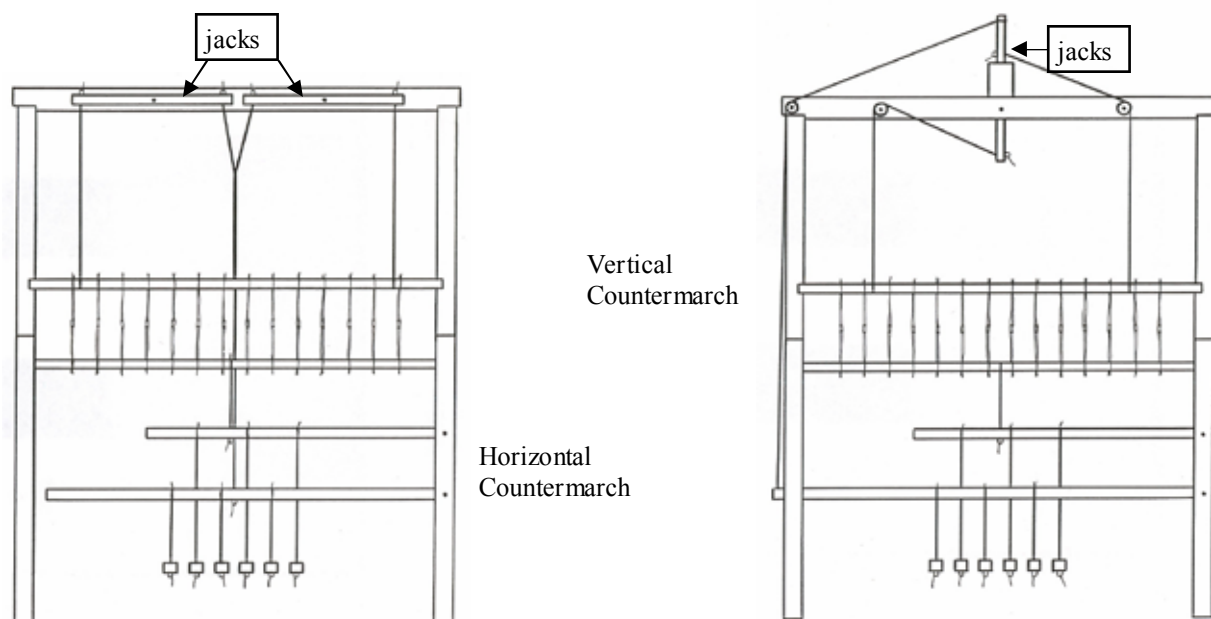
Used for tying up most counter-march looms, Texsolv tie-up kits are available for 4 shafts and 6 treadles and up to 16 shafts and treadles. The kits have all the cords and pins necessary and instructions for using them.

Horizontal and Vertical counter-march

Today there are two common types of counter-march tie-ups. The loom diagramed on the left has two sets of horizontal jacks and is called a horizontal jack counter-march. If your lower lamms are not as long as the lamms in this diagram, read page 17. The diagram, below right, has one set of vertical jacks in the center and is called a vertical counter-march. This is the type recommended when you want to add some types of drawlooms to your loom. It is possible to change from one type of counter-march to the other.

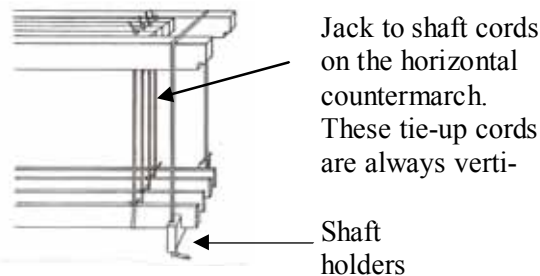
Locking pins

To stabilize the jacks for warping the loom, locking pins are used along with shaft holders during the tie-up and both are removed for weaving. Locking pins are metal rods put into the jacks and the counter-march frame. The horizontal counter-march has two locking pins and the vertical has one.



Horizontal counter-march ties, jacks to shafts.

Two cords are needed for tying up each of the shafts to the jacks, one for each side of the



Vertical counter-march ties, jacks to shafts

Place the cords to run over the pulleys as shown in the diagram on the previous page and in the book *Tying up the Counter-march Loom*.

Upper lamms See page 8.

Take your upper lamms to a table and number them. Put treadle cords in the lamm positions according to the treadle tie-up draft, using the squares which have a black mark or an X. If you have a draft with 0s or numbers, use the empty spaces. For comfort, use the center treadle holes for the center treadles on your loom.

Upper lamm tie-up

Take the lamms to the loom and attach them to the lamm rod on the side of the loom and then to the shafts. They can be set horizontally or they can slant upward slightly. You may need to adjust this height later. It may be necessary to slant these lamms upward above the horizontal line when you are making a warp for more than four shafts.

Lower Lamms

Tying up the Lower Lamms read page 17.

When a treadle pulls a lower lamm down, it's shaft will rise. The lower lamms are longer, thicker and sometimes taller than the upper lamms. Their weight must balance the weight of the shafts and upper lamms. The upper lamms and shafts need to be as light weight as possible.

Put the lower lamms on a table. Put the treadle cords into the treadle tie-up positions which are empty in your draft. Put the lamms on their lamm rod at the side of the loom and attach the lamms to the cords coming down the center of the loom on the horizontal counter-march or the cords coming down the outside of the loom on the vertical counter-march. The lower lamms on most looms should be approximately parallel to the floor. Each set of lamms needs room to move without touching the shafts or the treadles.

Lower lamms, horizontal counter-march

For the horizontal counter-march, there is a Y shaped tie up from the jacks to the lower lamms. A short cord makes the V shape and is attached to the ends of the counter-march jacks in the center of the loom. This V cord must be at least 16 inches long to give you a shed. The long cord of the Y cord goes straight down the center of the loom. Each of these Y cords runs behind it's shaft and upper lamm.

Lower Lamms, vertical counter-march

Long cords go over the pulleys at the side of the loom and down to the lamms. See the diagram on the previous page.



Heddle Size Read page 7

Measure the length of your heddles. If your loom has heddles longer than 11 inches, there will be less space for the lamms to move, making it difficult to make the tie-up. If your used loom came with longer heddles, you may get smaller sheds, even if you put the upper lamms higher and your treadles lower. You may need to replace them with the appropriate size heddles. You may read instructions elsewhere which show you to put the upper lamms up very high, close to the shafts. That is to compensate for the heddles being longer than 11 inches.

Placement of Upper Lamm treadle cords

Since the Y cord attaching the lower lamm is placed behind it's shaft and upper lamm, the treadle cords from the upper lamm must go in front of the lower lamm. With the vertical countermarch, you do not have this cord in the center of the loom. So, you just need to be consistent, putting the upper lamm treadle cords either in front of or behind the corresponding lower lamms.

Tying up the Treadles Read page 7

If you have a two shaft weave, there will be two treadle cords coming down from the lamms above each treadle. If you have an four shaft weave, there will be four cords for each treadle. It is most comfortable on large looms to sit inside the loom with your back to the warp beam. If you have a smaller loom, sit outside the loom where you can see the lamms. Lift the treadle on your left and put the treadle cords into the holes, filling the treadle holes which are closest to the front of the loom. There are sometimes extra holes for adding more shafts and sometimes an extra hole in case you want the cords further away from the cloth beam, as it fills up with woven items.

Treadle cord length Read page 8

There are two things to consider as you attach the treadles.

1. If your breast beam height is less than 36 inches from the floor, keep the treadles as low as possible.
2. The shafts in the back will need to move further than the shafts in the front when you are pressing on a treadle.

Attach the treadle cords

First attach the cord for the back shaft. The height of the treadle is determined by this tie-up cord. As you attach each cord, from the back to the front, give each cord a little slack. The second time you tie up your treadles, you will know how much slack to put into the cords. Adjustments can be made after you have woven a few inches.

The treadles do not have to be all the same height. In fact, a little difference in treadle height will help you to feel them as you weave. It helps to put a rubber band a treadle, as you can feel it with your foot and know that you have the correct treadle. Remember the treadling is so light that you do not need to be wearing shoes.

Short looms

If you have a short loom, about a 32 inch breast beam height, you have less height for the lamms to move. When you tie up more than 6 treadles, the treadles opposite the lamm attachment rod will sit a little higher, since they need to travel a longer distance to open the shed. The treadle nearest the lamm attachment rod travels a shorter distance to make a shed, so it can be set lower.

On a short loom, it is also good to have the treadles touch the floor when you press on the treadle.

Adjust the levels of the lamms

When you start to weave, you will need to look to see that there is enough space for each lamm to move without getting too close to a shaft or a treadle.



Eight treadles tied up

Remove the locking pins and weave

When the tie-up of the treadles is complete, remove the shaft holders and then slowly pull out the locking pins as you watch the level of the shafts. The shafts and every other moving part of the loom should stay in place as the countermarch jacks become free. This means that the lower lamms are heavy enough to balance your shafts. You can weave.

Falling shafts

If however, your shafts fall a little, or if you have more than four shafts and the front shaft sink more than 1/2 inch, you need to examine your loom. And you may notice that the falling shafts cause some treadles to rise. They will sometimes interfere with the lower lamms. So, a correction is needed.

Short lamms, a little history.

In Scandinavia, when weavers wanted to make a weave with more shafts, they would use counterbalance double pulleys or drall pulleys. But, the countermarch tie up has become more popular for unbalanced weaves. Early on, the horizontal countermarch lower lamms were the same length as the upper lamms. As weavers became more interested in weaving with more shafts, the lower lamms were not heavy enough to hold the shafts up. So, the lower lamms were made heavier by making them longer and thicker. If you have one of the older looms with the short lower lamms, it would be best to replace them with longer lamms.

Weaving with short lower lamms

If you need to weave with these shorter lower lamms, you can add weight to them. An easy way to do this is to tie up an extra treadle to the free end of the lamms. If you do not have an extra treadle, fashion a piece of wood to look like a treadle and tie it to the back of the loom. Tie a cord from each of the lower lamms to this treadle. Sometimes the weight of the treadle is all that is needed. If the treadle does not provide enough weight, tie more weight to it. You may need to add several pounds of weight to the treadle. You will know when you have enough weight when the shafts no longer fall. And the tops of the heddles don't get slack as you weave. Slack heddles usually happens with the first shafts. You may also need to adjust the lengths of the ties from the lamms.

Perfecting Countermarch Sheds

It is important to weave a few inches before you make any changes in the lengths of your treadle cords. If you need to adjust your sheds, it is only the treadle cords which you will change. If you just have one treadle which has a shaft out of sync with the others, simply reach down at the front of the loom and adjust the treadle cord for that shaft. If the shaft is not pulled down far enough, or if the shaft does not rise high enough, shorten the cord for that shaft one hole or about 1/2 inch. Lengthen the cord if the shaft is pulled too high or lowered too low.

If 2 or more sheds need adjusting

If however, you have more than one shed that you want to perfect, write notes for each treadle.

1. Press on one treadle and write down which shaft is not in line with the others and whether it needs to be higher or lower. Note whether the treadle touches the floor and if the shed is big enough, or too big. Do this with each treadle.
2. Set the locking pins back into the countermarch jacks. If the treadle does not touch the floor, it is best to not shorten any cords. If a cord needs to be shorter, choose instead to lengthen all the other cords. If the treadle touches the floor and the shed is not big enough, then you should shorten cords. Change the cord length only one hole or 1/2 inch. There should be a progression from tight cords in the back to looser cords in the front.

Remove the locking pins and check your sheds again. They will probably be just right.

Skeleton Tie-ups

If you do not have enough treadles for what you are weaving, it is possible to reduce the number of treadles needed by tying some treadles so that you use two feet to open a shed. It is important to make each treadle touch the floor when the shed is the correct size. Then it will be easier to line up the shafts from both treadles. You can usually tie some treadles to weave with just one foot to make the treadling easier to remember. Skeleton tie-ups are used only when there are not enough treadles and it does not make the treadling easier.

Weaving Resources

For answers to your weaving questions, go to www.glimakraUSA.com

See:

Weaving Frequently Asked Questions

with 50 warping and weaving questions answered.

Glossary of loom and weaving terms

Learning: Looms and weaving

Select a topic from the menu

Stainless steel reeds are available in 4 inch and 4 7/8 inch heights and dents from 5 to 30 per inch. Ask us how you measure your loom if you are not certain what the weaving width is. We cut reeds to the length you want.

Supplies and parts for your loom:

Parts for your Glimakra loom can be ordered, including shafts, lamms, treadles, heddles, Texsolv tie-up cord and kits and countermarches. You can also order attachments like sectional beams, double warp beams, raddles, warping frames that attach to the back of the loom and drawlooms. The Standard loom can have a fly shuttle added.

Accessories

You can also order shuttles, bobbin winders, swifts, ball winders, temples, warping equipment and a wide range of yarns and threads.

Weaving Kits

Ask about the weaving kits from Glimakra USA. They include all you need to get started. The warp is already wound, ready to be put on your loom. A great value, with the highest quality threads.



Julia Towel Kit

Four red and black striped cotton towels woven on 4 or 8 shafts with Egyptian 8/2 cotton from Sweden.

Incl instructions for twills and a two block broken twill \$65

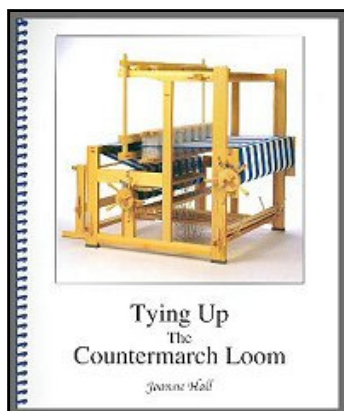
Anna Towel Kit, white, blue and yellow, \$65



Greta Towel Kit

Four elegant and practical towels woven in Swedish Cottolin, a blend of cotton and linen which makes very absorbant towels in twills and plain weave. \$79

Elin Towel Kit, white, blue and yellow, \$79



Ask about the book,
Tying up the Countermarch Loom
by Joanne Hall \$18.50
Contact Glimakra USA

If you have any questions or problems with your loom, contact us at:

Glimakra USA LLC

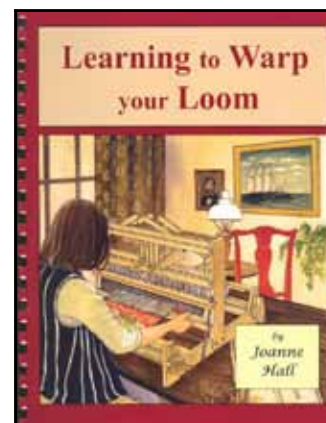
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For warping instructions, planning projects and loom information, this book, **Learning to Warp your Loom** will help you to learn to use your loom, \$20.