David 2

Instructions for assembly

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Assembly tips and information

Please read all the text of these instructions completely. The pictures may seem clear enough to assemble the loom; however, the text also contains useful information about operating David 2.

Barrel nuts

To connect parts, barrel nuts are used. These cylinder shaped nuts have a slot on one of the flat sides. Always insert the barrel nut into the wooden part, so that the side with the slot is visible. The slot shows the direction of the threaded hole in the nut. With a flat screwdriver you can turn the barrel nut so that it is positioned properly to catch the bolt. If it is hard to catch the bolt, it usually helps to turn the barrel nut 180 degrees. If you inserted a barrel nut incorrectly into the wood, a magnet can be used to remove it.

Wood screws

Where wood screws are used, we have predrilled holes in the wood. The screw will cut its own thread into these holes. The screws are very sharp and will cut their own hole if you miss the predrilled hole during assembly. If this happens, you will find that after a couple of turns, the screw will be very difficult to turn. You may even shear the head off of the screw. Also, the parts will be assembled in the wrong location.

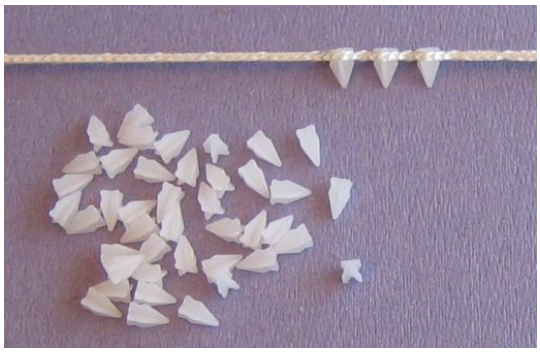
If you have to disassemble and assemble again, makes sure that the wood screw turns in the same thread again which was cut the first time. Otherwise, after assembling several times, the thread will be destroyed.
You can find the existing thread by turning the screw counter clock wise, while pushing it into the wood. When you feel the screw snaps into the thread, turn clock wise. When the screw turns easily, you know that you have found the thread.

The Texsolv system

Each shaft of the David 2 is provided with one hundred Texsolv heddles (28 cm long). The ties of these bundles are included and can be used to tie bundles again. A bundle of Texsolv heddles is a continuous line of 100 heddles folded into a zig zag. Each bundle is fastened in four places. This makes it easy to pass the shaft bars through the loops of the heddles. If you want to cut the heddles apart, use a sharp pair of scissors to cut the loops at the top and bottom of the shafts.

Before removing heddles from a shaft, tie them into a bundle. Do not remove the ties from the bundles, until the heddles have been slipped onto the shaft bars or the loops of the bundles are inserted by sticks, to protect the heddles from becoming entangled.

Practically, Texsolv cord consists of two cords, which are connected every 12 mm, forming loops between them. If needed, the cord should be cut between the two loops. To prevent unraveling, the ends should be singed with a match or lighter. When we talk about the first or last loop in these instructions, the loop we mean is the one beside the loop where the cord is cut. The loop that remains after cutting has no strength and should not be used.



The Texsolv cord is adjustable in length by 12 mm steps (ca.1/2”), according to the loops. For fine adjustment, plastic pegs are used, inserted into the loops of the cord. Each peg through the cord will shorten it about 1.5 mm (1/16”).

You will not need more than 7 pegs in a cord, because with 8 pegs the cord becomes one cord loop shorter and you can just as well shorten the cord one loop. In hardware bag 3 are 50 spare pegs.

Marks

The uprights of the middle part of the loom are marked (A and B) at the location where they should be connected to the corresponding marked sides of the top side rails. This is to prevent you from making the mistake of assembling the parts backwards or upside down.

Tools

All hardware parts of Louët products are metric. To facilitate assembly, we have included a metric wrench 10 mm and a Pozidrive 2 cross head screwdriver (not a Phillips head). A wrench 13 mm is included with the hardware of the beater.

Accessoires

The following accessories are available for the David 2:
- Bench – height 57 cm (22 3/8”)
- Second warp beam with back beam
- Sectional warping
- Friction brake device for the warp beam
- Flying Dutchman shuttle

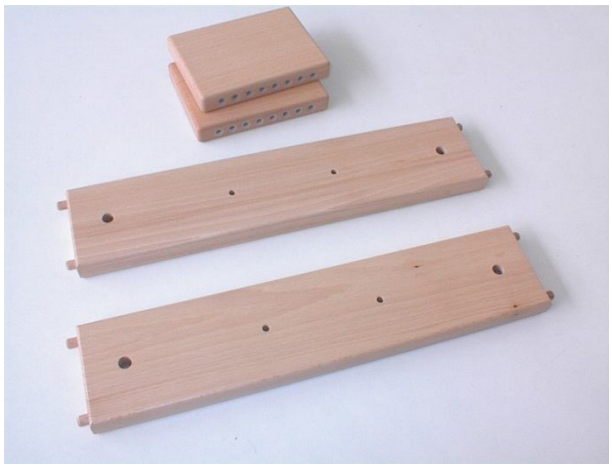
Instructions for assembly

We have assembled the castle section of the David loom in the factory.
Slide this assembly out of the box, after you removed the box containing all the parts listed on next page.

There is a small long box left. This box contains the beater that has to be mounted onto the David at the end of the assembling.

Parts you will find inside the box that came out first (the reed is packed on top of the box):

- foot rail
- back beam
- cloth beam and warp beam
- 2 upper side rails L+R
- 10 treadles
- 2 beater suspension bars L+R
- 2 front posts L=R
- 2 lower side rails L=R (for a David 90 they are different, see picture below)
- breast beam
- 2 lease sticks
- 2 apron bars
- 16 warp sticks
- shelf
- hardware bags 1, 2, 3 and extra
- ties for the heddles
- reed
- cross head screwdriver pz2



The picture above shows the parts of the David 70.

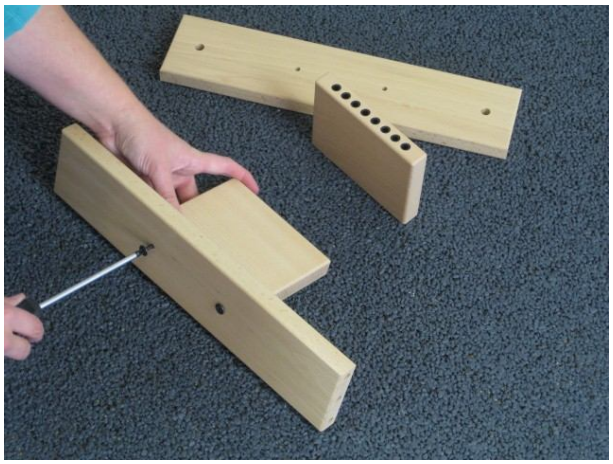
Into each of the lower side rails, eight nylon bearings for the lams are inserted.

The picture on the right shows the lower side rails of the David 90 and the additional lam squares in which the nylon bearings are inserted.

Open hardware bag 1

The hardware bag contains:

- 8 threaded ends m6 X 135 with barrel nut, washer and cap nut.
- 4 screws 5 X 50 mm (these screws you will need only for a David 90. Sometimes, for efficiency reasons, they are also included in the hardware bag of the David 70)
- wrench 10 mm



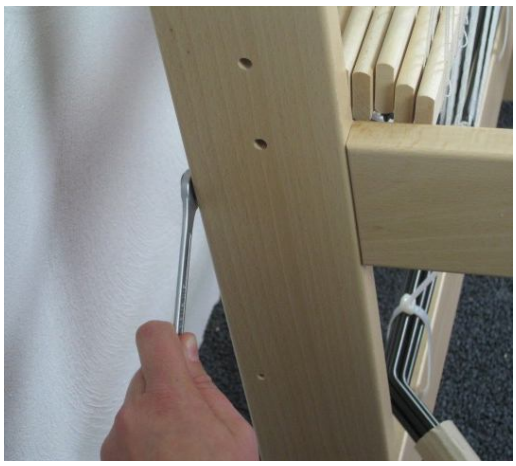
If your loom is a David 90, use the four 5x50 screws and attach the lam squares to the lower side rails at the same side where the holes for the barrel nuts are located.

Position the middle part of the loom with its back to the wall or a table.

The uprights of the middle part are marked **A** and **B** at the location where they should be connected to the corresponding marked sides of the top side rails.

Unscrew the barrel nuts from the eight threaded ends, but leave the cap nuts and washers.

Insert a barrel nut into the top side rail at the marked end. Remember what you read on the first page about barrel nuts.



Put a threaded end through the hole in the upright. Slide the rail onto the threaded end and push its wooden dowels into the holes of the upright. Turn the threaded end into the barrel nut, while positioning the barrel nut, if necessary, using a coin or a screwdriver.

The lower side rails should be mounted the same way, their nylon bearings facing the middle of the loom. After you mounted all four side rails to the castle section, position the front posts onto the dowels of the side rails.

Make the connections to the front posts in the same way you did the connection to the castle section.

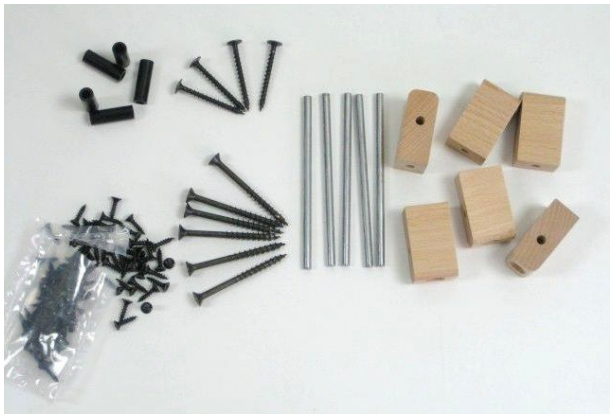
Fasten all eight cap nuts, using the wrench number 10.

Cut the ties that hold the lams to the back rail and remove the packing paper from the lams.

Insert the lams, one by one, with their ends into the nylon bearings, starting with the rear lam:

- Insert one end of the lam into the bearing, while holding the other end of the lam just underneath the side rail.
- Now bring that other end to its bearing by bending the lam slightly.
- Push the end into the bearing while you move the lam up and down.

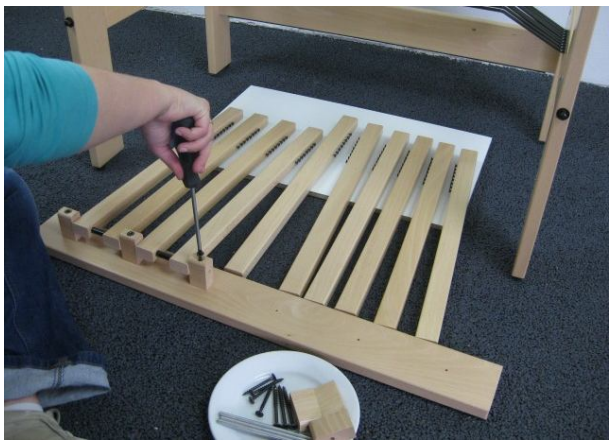
Open hardware bag 2



The hardware bag contains:

- 6 axle support blocks
- 6 screws 6 X 70 mm
- 5 axles ∅ 6 X 122 mm
- 5 nylon bushings ∅ 6-8 X 30 mm
- 4 screws 5 X 50 mm
- 80 screws 4 X 17 mm

Screw the small screws into the eight holes of each treadle, so far that the screw heads protrude approximately 5 mm (3/16”) from the wood. The thread of the screws should just disappear into the wood.



Assemble the treadles onto the foot rail. The screw heads on the treadles should point towards the middle so that the five treadles on the left side are opposite to the five treadles at the right side.

Slide two treadles with a nylon bushing in between on each axle. Use the axle suspension blocks and the big screws to assemble these pairs of treadles to the foot rail.

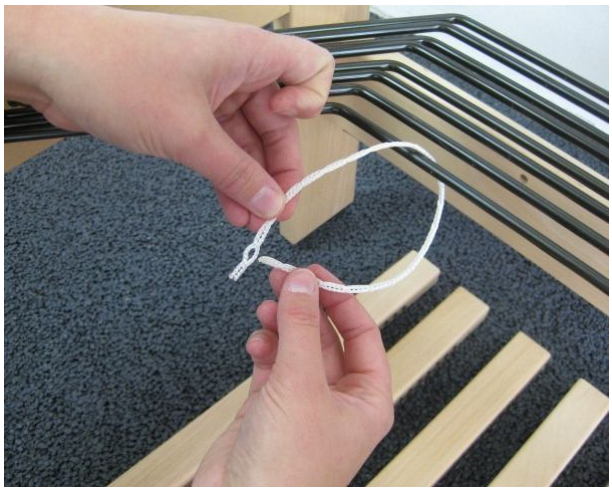
Put the foot rail with the treadles in between the front posts of the loom and connect these parts with the four remaining screws.

Check the position of the cords that connect the lams to the lower shaft bars. The location on the lams should be exactly in the middle. Replace the connection to the lams if necessary. Start with the ones in the front and the back, so the ones in between can be placed in line.

Open hardware bag 3

The hardware bag contains:

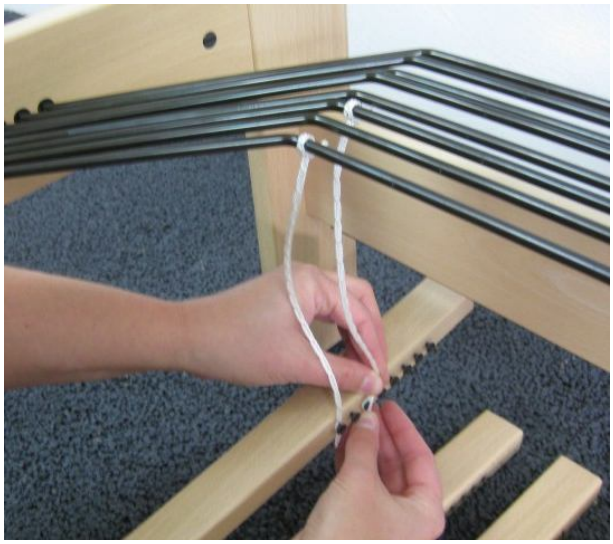
- 2 threaded ends ∅ 6 X 135 each with 2 washers and 2 wing nuts
- 4 screws 5 X 50
- 8 screws 4 X 15
- 2 ratchets
- 2 screws 4,5 X 17 (round head)
- 2 screw eyes ∅ 6
- 2 screws 3 X 20
- 2 beam handles with O-ring (If you are going to have a brake on the warp beam, you only need one)
- 60 tie-up cords for the treadles
- 6 beam cords
  50 spare pegs to shorten cords



The tie-up cords for the treadles have already been cut to the correct lengths.

Lead a cord around the lam and insert one end into the loop at the other end, the one next to the loop where the cord has been cut.

Pull the cord, so that the loop you made around the lam is tight.



Hook the other end of the cord to the corresponding screw head of the treadle.

Tie-up the treadles for the weaving project you planned, or tie at least each lam to a treadle.

A spring for each shaft is located at the top of the David. These springs pull up the shafts by cords that run over a wooden disc.

A locking pin blocks the moving action of springs, discs, shafts, lams and treadles. This locking pin is inserted into holes in the front and back rail and into holes in the wooden discs.

Remove the locking pin. It helps when you push the shafts a bit downwards.

The shafts are pulled upwards by the springs. Because the lams are connected to the shafts and the treadles are connected to the lams, treadles and lams are pulled up as well. The upward movement of the shafts is blocked by the treadles that hit the bottom rail.

So the level of the shafts is determined by the distance between treadles and shafts and not by the lengths of the disc cords from which the shafts hang. If necessary, the level of the shafts has to be adjusted by adjusting the lengths of the slanting cords that connect the shafts to the lams.

These cords are adjusted to the right length by the pegs inserted into the cord loops. If after some time readjustment is needed, use the peg from hardware bag 3.

Install the shelf, locating the hole at the right back side. Slide it into the groove at the back rail and let it rest on the dowels of the front rail. The hole in the shelf is meant to store the locking pin.

To assemble the back part of the David, use the warp beam supports, the back beam and the warp beam (one of the two round beams with a ratchet wheel).

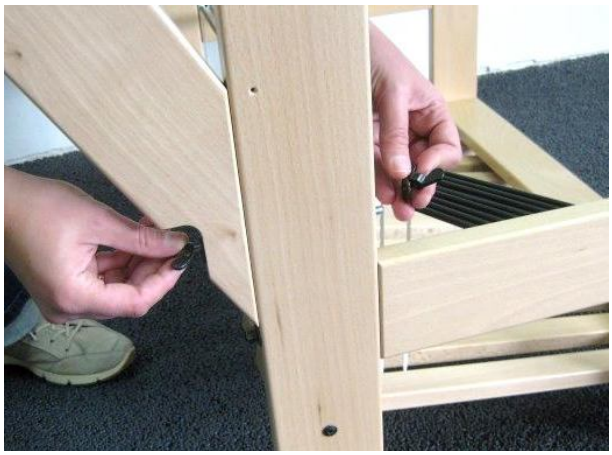
Connect these parts together, as shown in the picture, using the four screws 5x50 mm.

If you also purchased a brake for the warp beam, find the bracket in the contents of its hardware bag.

Attach the bracket onto the warp beam support with the same screws that join the support and the back beam at the side where the end of the warp beam protrudes.

Remove one wing nut and one washer from both threaded ends and put them on the shelf.

Place the back part in its location by inserting the polyurethane dowels into the holes at the rear of the loom.



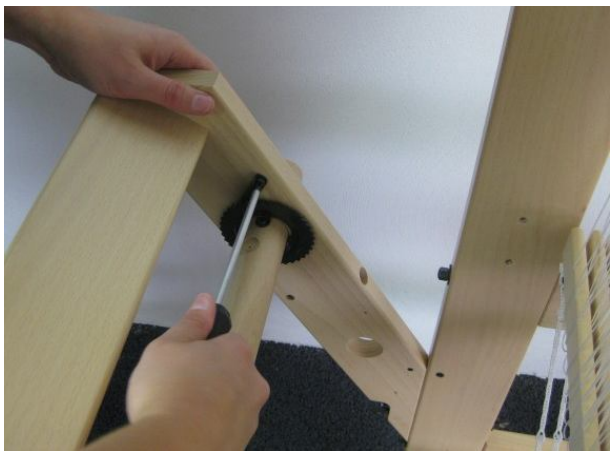
Insert the threaded ends into the holes through the uprights and warp beam supports, slide on the washers and fasten the wing nuts.

In both uprights at the back of the loom there is a hole in the location where the polyurethane dowels of the back part are inserted. With the two screws 3 X 20 (not the round head 4.5 X 17 ones) you will secure the polyurethane dowels.

These dowels make it possible to fold the back part of the David to save space when the loom is not in use. To do so, you first have to unscrew the wing nuts from the threaded ends. You will need a warp to keep the back part folded, or you have to tie the back part to the uprights.

Install the cloth beam in the loom. First insert the side with the ratchet wheel into the hole in the side rail, while you keep the other end of the beam just above the opposite side rail. Because of the beam is slanted in this position, the hole is tight and you have to turn the beam while pushing it through.

To slip the other end of the beam in place, you have to push the side of the loom slightly outwards.



Install a ratchet next to the ratchet wheels of both beams. Use the round head screws 4.5 X 17 mm. Tighten them and then unscrew them just far enough that they can turn freely.

Insert the beam handles through the holes in the beams and secure them by rolling the rubber O-ring into the groove around the handles. A spare O-ring is in the hardware bag extra.

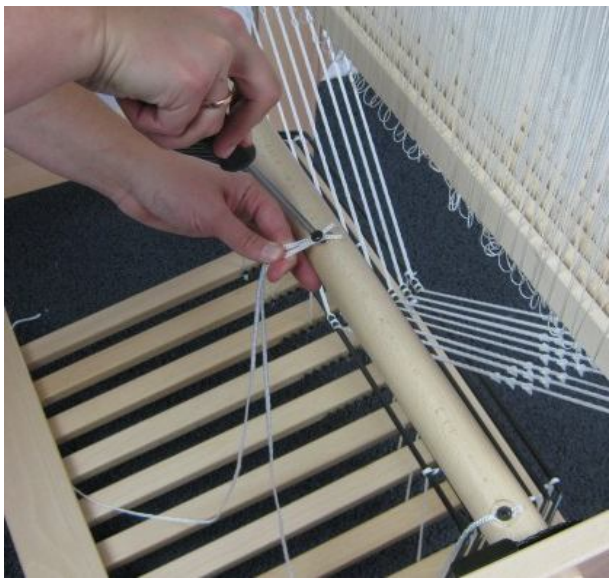
If you have to assemble a brake for the warp beam, don't install the handle in the warp beam.

Screw the little screw eyes into the warp beam supports. Use a screw or something similar to twist it easily.

The lease sticks can be attached to these screw eyes. If you want to keep the lease sticks in your warp during weaving, they should never pass the back beam. They would shorten the effective depth of your loom for shed building.

Some weavers remove the lease sticks entirely while they are weaving; this is a matter of personal preference.

Use a felt pen to mark the center of the beam cords.
An easy way to find the center is to insert the screwdriver into the loops at both ends of the cord.



Attach three cords each to the warp beam and the cloth beam with the remaining screws 4x15 mm. Start at one side of the beam with the end of a cord. The other end of that cord has to be fixed together with the end of the next cord in the second hole of the beam etc. Do mind that you fasten the cords in the direction that is locked by the ratchet wheel.

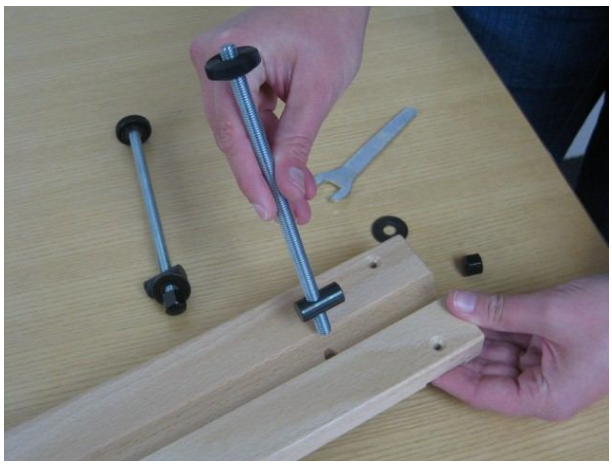
Open the box containing the beater

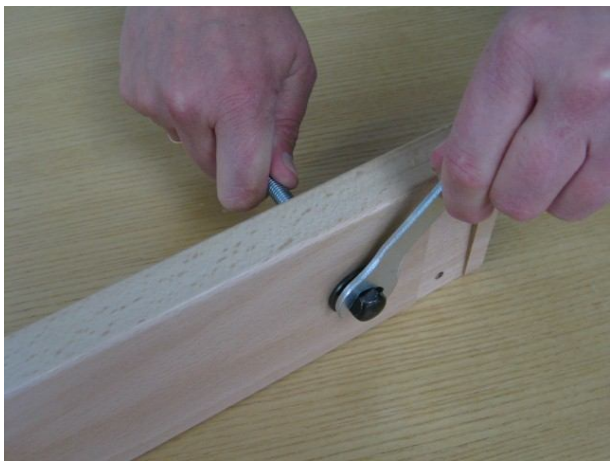
You will find:

- the lower and upper reed holder
- 2 stainless steel axles Ø 8 mm
- 2 bearing blocks
- 2x 2 support blocks for the axles
- 2 hardware bags

The hardware bags contain:

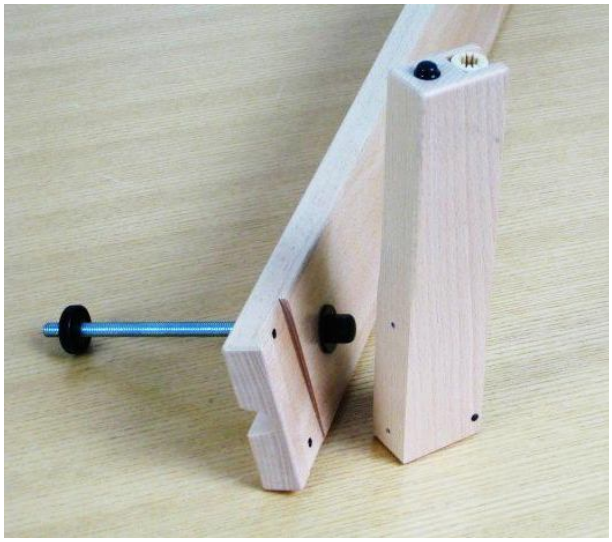
- 2 threaded ends M8 x 164 mm, each with a cap nut, a washer a barrel nut, a piece of nylon tube (not shown in pictures) and a knurled nut.
- 1 wrench 13 mm
- 4 carriage bolts M6 x 60 mm with washer and wing nut.
- 4 screws 4 x 40 mm
- 4 screws 5 x 50 mm



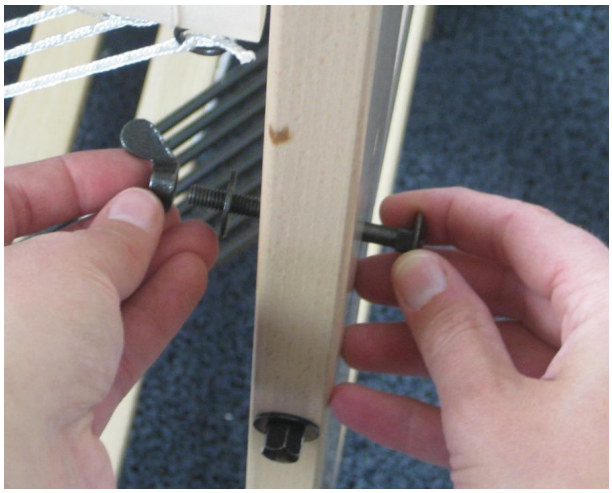


Remove the cap nut and the washer from the threaded end. Insert the threaded end through the hole in the groove of the lower reed holder. The barrel nut fits in the groove and the short end of it should be at the side where the reed will be.

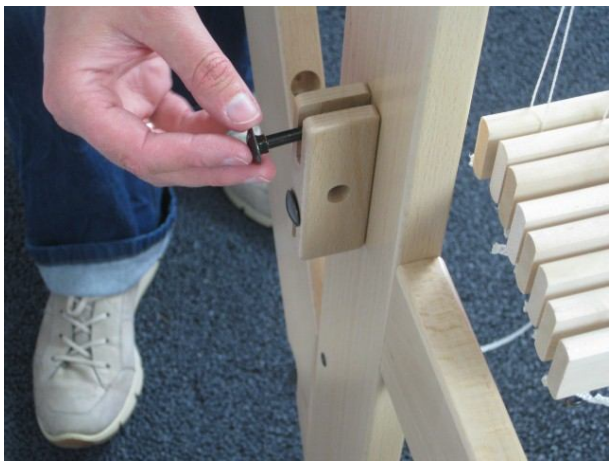
Fasten the cap nut with washer onto the thread that protrudes from the bottom side.



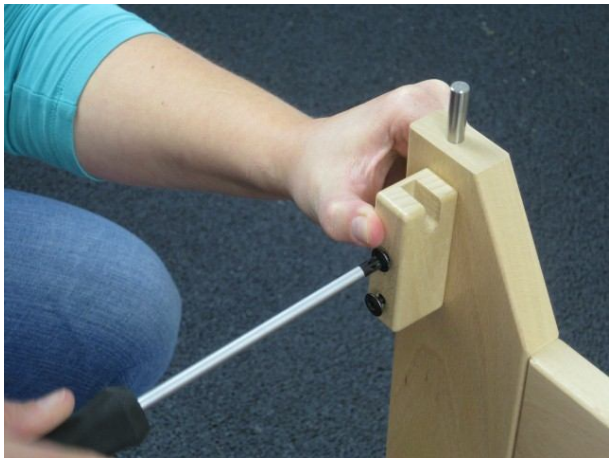
The picture at the left shows in what position the bearing blocks have to be connected to the reed holder. Note the direction of the slope of the notch. Assemble the blocks and the reed holder with the screws 4 x 40 mm.



Insert a carriage bolt through the lower hole in the side of the main post, place the washer on the end and screw on the wing nut a few turns.



Slide the block with the two slots on the carriage bolt. Note that the oval hole faces the front of the loom. The second carriage bolt has to be plugged into the other slot and the other hole. After you've fastened the bolts with washers and wing nuts, mount the second block onto the post at the other side of the loom.



Screw the other two support blocks, each with two screws 5 x 50 mm, on the outside of the front posts of the David. Note the direction of the slot.

Insert the axles through the bearing blocks at both sides of the reed holder and place the assembly onto the loom. Put the axles into the oval holes first and then at the front, place the ends of the axles into the slots.

Remove the knurled nut from the threaded ends.

Position the reed and the upper reed holder in between the threaded rods and fasten the assembly with the knurled nuts.

Install the breast beam. The metal dowels on the front posts will fit in the holes of the beam.

Removing or adding heddles

If you want to add heddles or to remove heddles from a shaft, you have to unhook cords from the shaft bars. This is easier after you have blocked the system by inserting the locking pen through the wooden discs. In this situation the springs give no tension on the system.

To get the holes of the discs in line with the holes in the front and back rail, you have to push the shafts down. Moving the shafts a bit will help in finding the holes with the tip of the pen.

It is handy to insert a knitting needle at the left side through all the cords that the upper shafts bars are connected to. Now when you unhook an upper shaft bar at that side, its cord will stay in place.

Use four ties to make a bundle of the heddles before you remove them from a shaft.

When unpacking the David you have found a bunch of ties that that were used for the eight bundles of hundred heddles that are now on the shafts. Those ties can be used for this purpose again.

Warrantee and contact

Louët products are known worldwide for their excellence in quality, design and workmanship. Many of our customers are happy to own more than one Louët product. We stand behind our products to the fullest extent possible and guarantee each product is free from manufacturing defects. We and our distributors will work with you, to the best of our abilities, to ensure that you are content with your purchase.

If you still have a question after reading this manual, please contact your dealer or Louët directly.

Louët BV
Kwinkweerd 139
7241 CW Lochem
The Netherlands
Phone: + 31 (0)573-252229
Fax: + 31 (0)573-253858
Email: info@louet.nl
Website: www.louet.nl