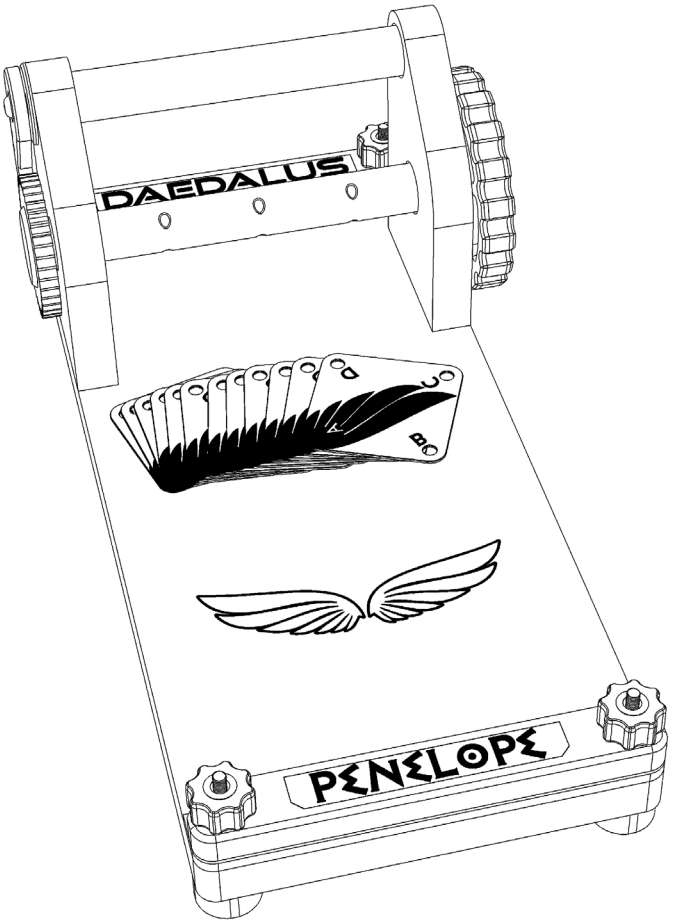
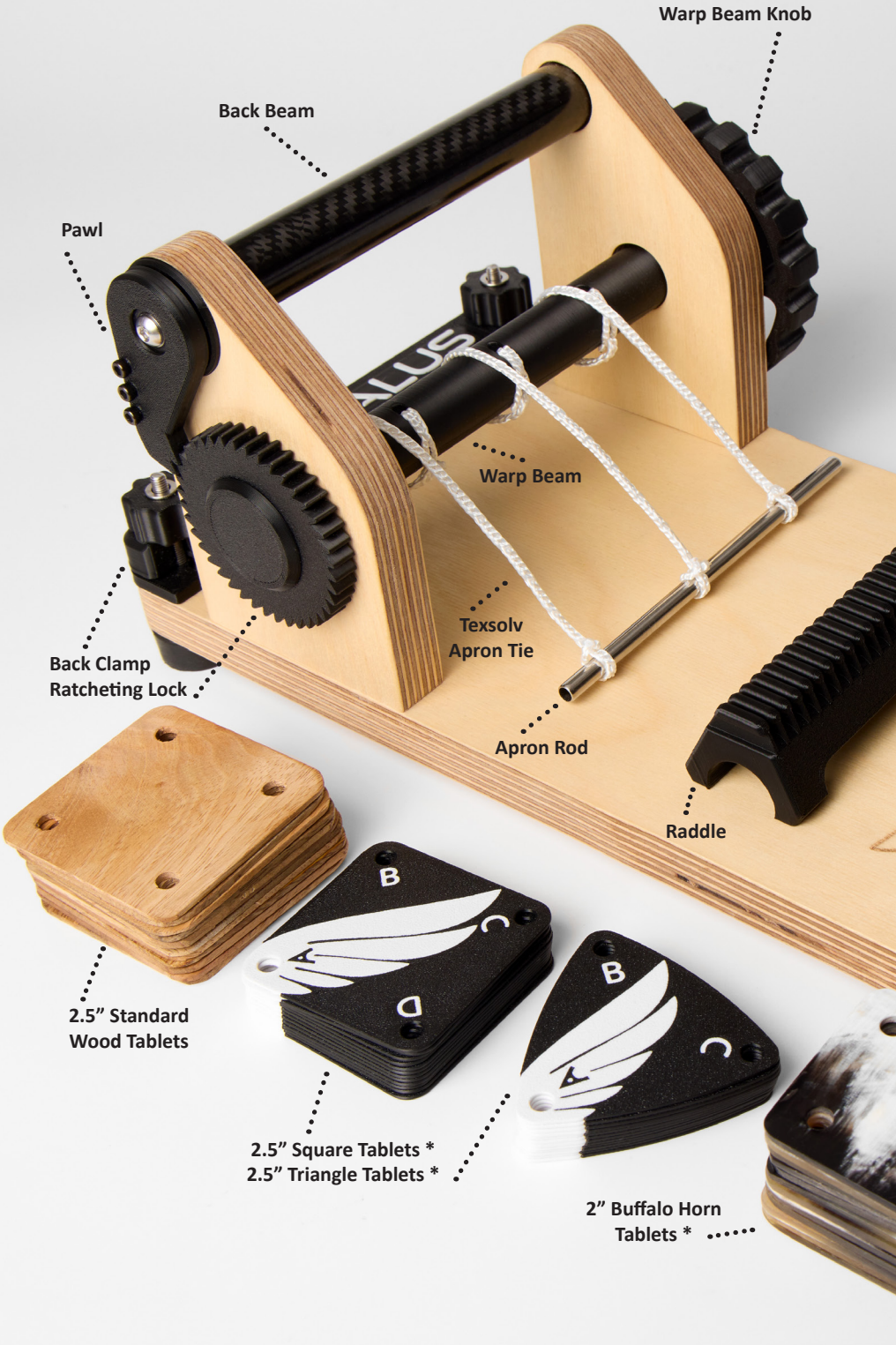
DAEDALUS

SPINNING WHEELS



PENELOPE


Warp Beam Knob
Back Beam
Pawl
Warp Beam
Texsolv
Apron Tie
Back Clamp
Ratcheting Lock
Apron Rod
Raddle
2.5” Standard
Wood Tablets
2.5” Square Tablets *
2.5” Triangle Tablets *
2” Buffalo Horn
Tablets *

WELCOME TO THE FLOCK!

Thank you for purchasing our Band Loom, the Daedalus Penelope.

Penelope was designed to be as versatile as possible. For instance, it has both a ratcheting warp beam as well as a rear clamp. The warp beam can hold around 5 yards of warp and separator, but using the rear clamp instead will allow an infinite length of warp draped off the back. So far, we've enjoyed testing it using tablets as well as a laser-cut wooden heddle (or two)! It can be firmly planted on a table because of its generously sized rubber feet, but it is still just the right size when it needs to be in your lap. Just like our line of spinning wheels, Penelope was designed to operate with the same smooth precision and have the reliability to last a lifetime.

Should you need any assistance with your loom in the future, please do not hesitate to contact us at support@daedalusspinningwheels.com.

* Item purchased separately

RECOMMENDED MAX

Warp Length: 5 yard with thin warp separator on Warp Beam, infinite with Back Clamp
Warp Width: 5 in (12.7cm)
Maximum Heddle Yarn Weight: DK (#3) Thin Heddle; Worsted/Aran (#4/ #5) Thick Heddle
Maximum Tablet Yarn Weight: Worsted/Aran (#4/5)

THREADS TO USE

Choosing Weft Yarn: Unless otherwise specified by a pattern, weft yarn can be the same yarn as is used in the warp. For visually clean selvedges, use the same color for weft as is used for the outermost edges of the warp.

Choosing Warp Yarn: Band weaving beginners should start with a fingering or lace weight cotton yarn, like a heavy crochet cotton, 5/2, 8/2, or 8/4 cotton which are tightly spun and lack texture. More experienced band weavers might expand into silk, linen, or worsted spun wool yarns. Multi-colored warp yarns should be high contrast. You can use a black and white camera filter to see if the yarns are high contrast.

WHAT'S INCLUDED

- Penelope
- Apron Rod
- Raddle
- Shuttle
- 12 2.5” Wood Square Weaving Tablets
- 3 Texsolv Apron Ties

Additional accessories can be found on the Daedalus Shop.


Center Mark of Raddle
Fine Gauge Heddle *
Raddle
63 Thread
Serial Number
Warp Beam Knob
31 Thread
* Item purchased separately
Large Gauge Heddle *

HOW TO USE YOUR PENELOPE BAND LOOM

There are many ways to weave with your Penelope, and they are not limited to the following information, which is a general baseline to get you started on your journey into band weaving. We have included numerous resources at the back of this manual including videos, pattern software, websites, and books to aid in your weaving journey.

MAKING A WARP

There are several methods for creating a warp. Two of the most common are winding a warp on a **Warping Board/ Mill** or **Direct Warping**.

WARP PATH

Warping on the Warp Beam: Apron Rod, over the Back Beam, and through the Front Clamp

Warping via the Rear Clamp: Warp secured through the Rear Clamp, over the Back Beam, and through Front Clamp

INSTALLING APRON ROD

Fold the end of the Texsolv tie.

Insert the folded end into the last loop.

Insert the **Apron Rod** through the folded loop and pull snug.

Ensure all three ties are snug for even tension.

PENELOPE

BEAMING A PRE-WOUND WARP

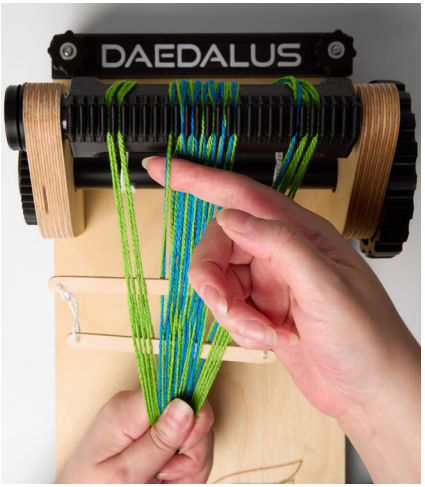
Thread the **Apron Rod** through the loop at the end of the warp.

Thread on **Texsolv Apron Ties** where needed (one in the middle and one on each end).

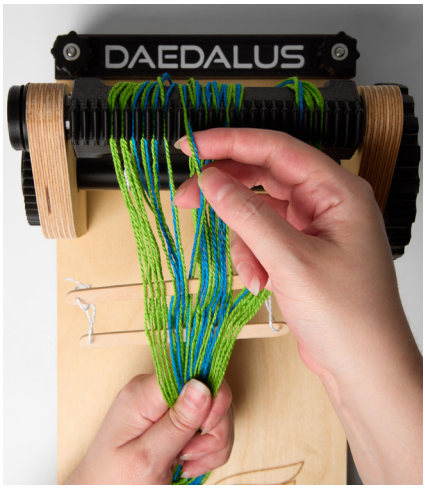
Place warp and **Apron Rod** behind the loom. Install the 3D printed **Raddle** onto the **Carbon Fiber Tube**. Once secured, slide to center the Raddle.

Rest the warp over the **Raddle**.

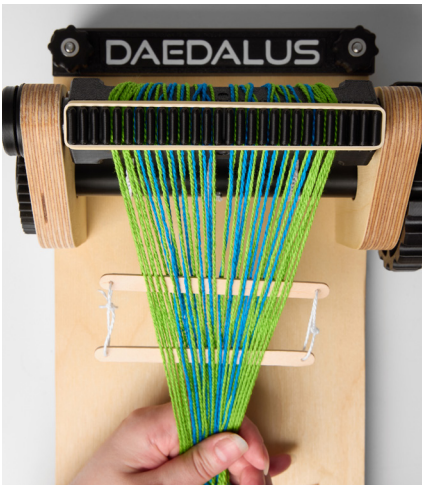
Secure threading **Cross** with **Warp Sticks** (we recommend popsicle sticks).



Using the **Cross** to aid you with thread order, spread the warp out evenly in the **Raddle**.



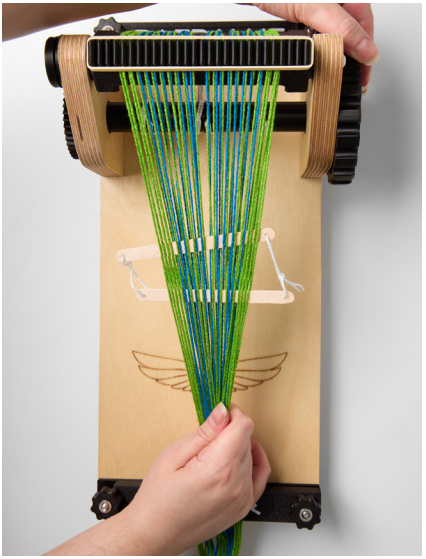
Adjust the tension of the warp as needed while arranging the warp in the **Raddle**.



Once the warp is evenly distributed in the **Raddle**, place a rubber band onto the Raddle to secure the warp.

BEAMING A PRE-WOUND WARP - CONT

Lightly secure the warp under the **Front Clamp**. This can help prevent the warp from being raised high enough to be released from the raddle and assist with tensioning while beaming your warp.



While maintaining consistent hand tension on the warp, turn the **Warp Beam Knob** to wind the warp onto the **Warp Beam**.

After the first full turn, install a **Warp Separator**.

Work any loose threads towards the end of the warp as you wind on.

You may need to loosen and swing the clamp out to tame the warp.

Continue winding on until you have 12-15 in. of warp left. Then insert scissors into the loop end of the warp, hold warp taut, and cut the end of the warp.

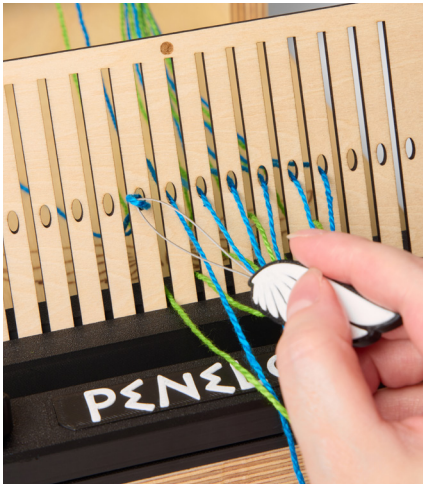
Trim warp ends even.

Woven by Evanita W. Montalvo with 8/2 cotton using Square Tablets.

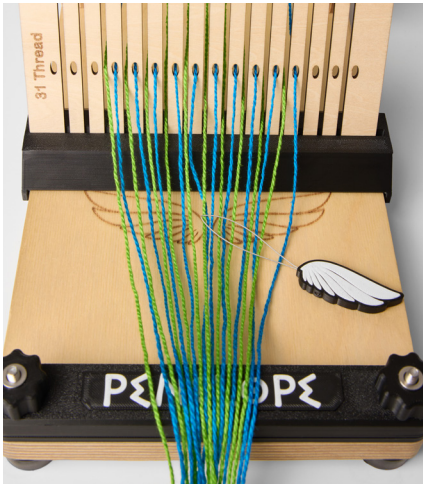
THREADING HEDDLES AND WEAVING TABLETS

Penelope can be warped with **Heddles** or **Weaving Tablets** to be used for a variety of weaving techniques. When using the Heddles, you can use any techniques that you could use with a Rigid Heddle Loom. Weaving Tablets are typically used for bands. When threading your warp, we recommend threading from right to left. This allows you to secure threaded yarn underneath the front clamp as you work.

HEDDLE

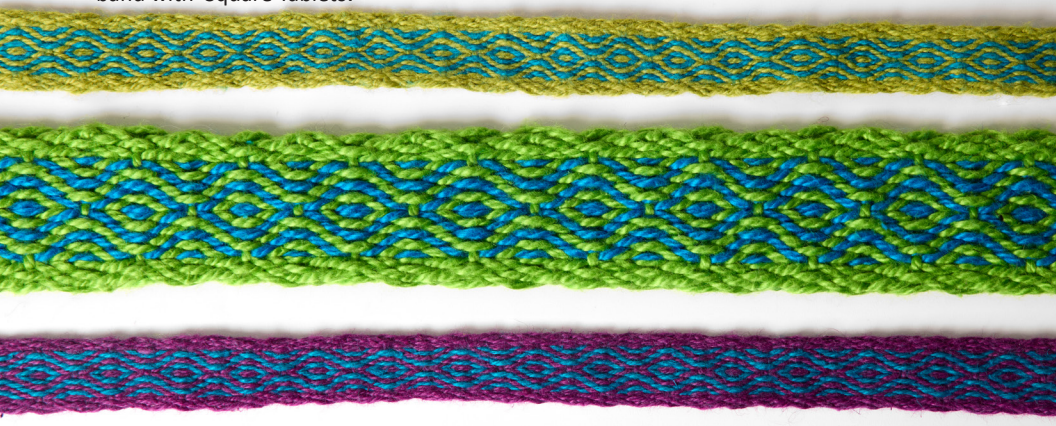


Using the H**eddle Threading Holder**, thread the **Heddle** according to your pattern.



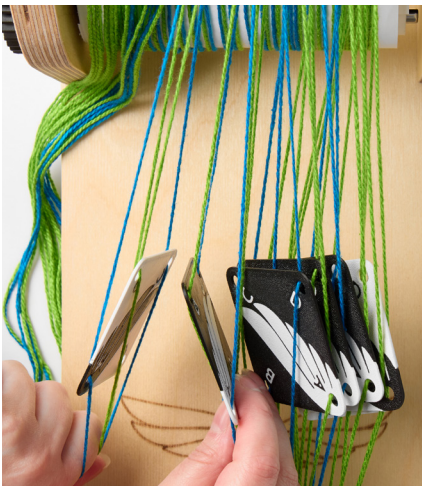
There should be one thread through each slot and one thread through each hole.

Woven by Evanita W. Montalvo with 8/2 Cottolin for small bands and 5/2 cotton for wide band with Square Tablets.



WEAVING TABLETS

Thread one thread through each hole in each **Weaving Tablet** according to your pattern, making sure to pay attention to the direction of threading into the tablet for your pattern.

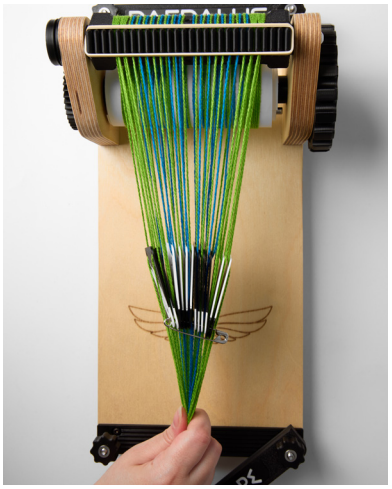


Weaving Tablets are threaded either **S** or **Z Direction**. To aid in telling the two directions apart the white tablets are threaded Z and the black tablets are threaded S.

Check to ensure no threads are caught on other tablets and that everything is threaded correctly.

Using a safety pin can help keep them in the correct order while you are threading your tablets.

CLAMPING DOWN THE WARP



Once threading is completed swing the **Front Clamp** out and pull the warp taut.

Remove warp from **Raddle** and remove **Raddle** from the **Back Beam**.

Pull warp back to the front. Pull warp taut and with even tension. Tie an overhand knot. Swing top of **Front Clamp** back into place. Tighten **Clamp Knobs** evenly.

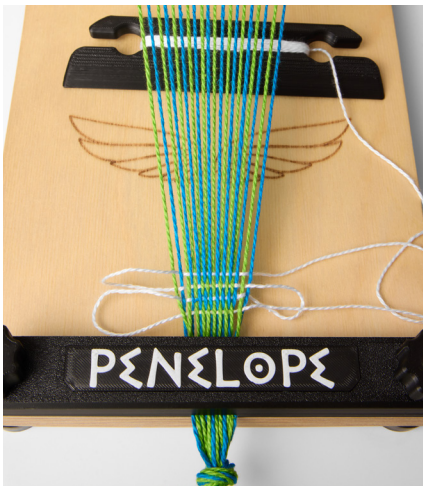
If you are experiencing tension issues related to uneven density in the way the warp is laying you may find that advancing the warp a bit, pulling the warp taut, and cranking the warp back onto the beam may help.

HEADERS AND SPACERS

Headers and Spacers are very similar but have different purposes. Weaving a header uses scrap yarn to provide stabilization and an even foundation for the beginning of your project. It can also be used at the end of your project. Once your project is complete and off the loom, the header is removed.

Spacers work similarly to headers, except they are used to separate projects within the same warp. They can be made of scrap yarn or slats of wood, such as popsicle sticks or toothpicks. Alternately, the spacer could remain unwoven.

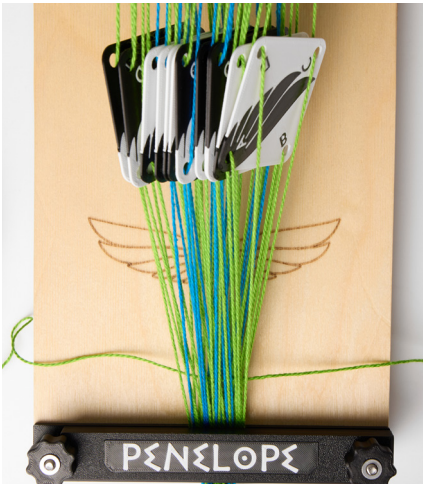
- Insert your header or spacer material through the shed of your warp.
- Change your shed and insert your header or spacer material through the shed.
- Repeat these steps as needed.
- If you are tablet weaving, you will want to place the header/spacer over the course of a full tablet rotation so that your tablets are back in the starting position for your project.



Woven by Blake DeRosett with Linen using Square Tablets.

STARTING A NARROW BAND WARP

The following technique is useful for starting a narrow band instead of using the header technique.



With the Tablets in the starting position pass your weft through the shed leaving a long tail.

Turn the Tablets forward one turn. Pass Shuttle through the shed leaving a loop.

Place the tail through the same shed leaving a loop.

Turn the Tablets forward one turn. Use your hand to gently beat the weft threads.

Pass the Shuttle leaving a loop. Rotate the tablets forward one. Gently beat, pass the Shuttle, rotate the tablets one forward.

Continue these steps until your tablets have reached the starting position. Gently beat.

Grab the loose tail and your weft and pull evenly.

Continue pulling until loops disappear. To resolve the twist built up you can go backward 4 picks and then start your Pattern Draft.

ADVANCING THE WARP

When you have filled your working area with woven fabric and do not have enough space for your shed, it is time to advance the warp to continue your project.

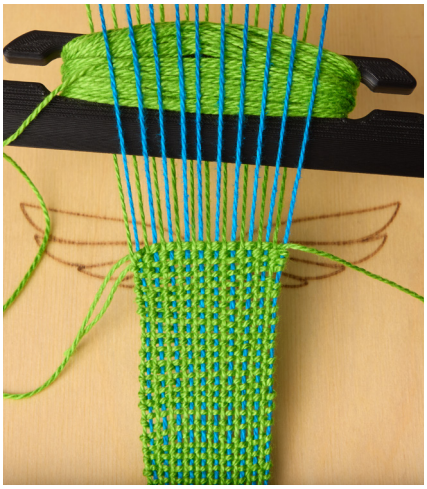
Loosen **Clamp Knobs**. Lift the **Pawl** off the **Ratcheting Lock** and slowly advance the warp by pulling on the end of the project inside the **Front Clamp**.

Once you are done advancing, ensure **Pawl** is secured on the **Ratcheting Lock**.

Pull your project taut at the front and secure the **Clamp Knobs** evenly.

JOINING A NEW WEFT

The following is a very basic way to join a new weft. Different techniques may work better for different types of weaving.



Overlap the new weft with the old through two sheds.

Trim the ends after a few picks when you do not have to worry about the end slipping out.

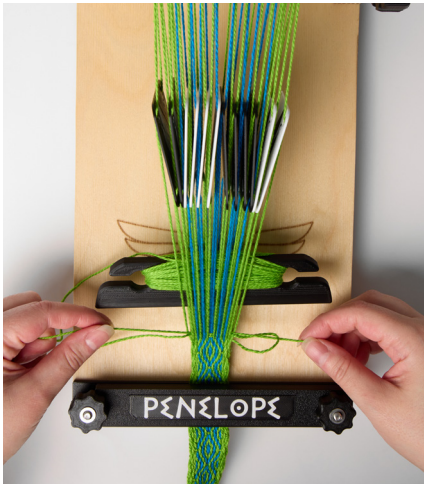
Turned Krokbragd style sheep woven with Triangle Tablets in 8/2 Cotton woven by Evanita W. Montalvo. Draft and tips are available on our blog.

JOINING A NEW WEFT - METHOD 2

The following method works well for narrow band weaving.

Pass end of weft through the shed leaving a loop. Pass new weft through the opposite way threading a tail through the loop.

Change the shed (in this case by rotating the tablets to continue the pattern) and beat with the shuttle.

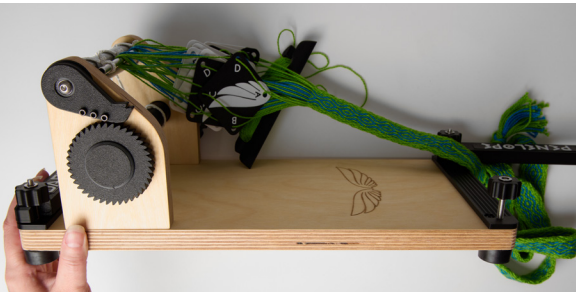


While holding the new weft taut pull the old weft so the loops snugs up and traps the new weft.

Continue weaving as per normal and use the loops to trap the excess tails on either side for a few picks before trimming.

TAKING PROJECT OFF THE LOOM

Loosen **Front Clamp Knobs**, and swing the top of the clamp out.



Flip the **Pawl** over to the other side of the **Ratcheting Lock**. Pull on the project to completely unwind the rest of the warp.

Pull the **Apron Rod** out of the warp.

Cut the ends of the warp to free the tablets or heddles.

TIPS & TRICKS

Centering Warp

When winding on your warp to the warp beam please make sure it is centered so that tension against the back beam is evenly distributed.

Wide Warps

When weaving with wide warps ensure that warp is distributed across nearly the full width of the warp beam. This will ensure that tension agains tthe back beam is evenly distributed.

Perfecting Tension After Advancing Warp

We recommend after tightening down your front clamp that you gently try to rotate the Warp Beam Knob. While doing this, observe to see if the warp moves. If it moves, then the front clamp is not tightened down enough.

Need More than 5 Yards

Penelope is not limited to a 5-yard warp. If you wish to have a longer warp, you can bypass the Back Beam by securing your warp with the Back Clamp and hanging the warp off the back.

Tablet Weaving - Not Twist Neutral

If you have a Tablet Weaving project that is not twist-neutral, warping through the Back Clamp instead of the Back Beam can allow you to manage the excess twist.

Tablet Weaving - Unlabeled Cards

For using unlabeled tablets, separating your weaving cards for each pick forward and backward can be helpful. Pushing the tablets that are turning forward towards the back beam, and pulling the tablets that are turning backwards towards the front clamp.

Tablet Weaving - Not Twist Neutral

If you have a Tablet Weaving project that is not twist-neutral, warping through the Back Clamp instead of the Back Beam can allow you to manage the excess twist.

Tablet Weaving Patterns

Note that not all Tablet Weaving Patterns are drafted the same way, which can result in your band not appearing as you would expect. Pay extra attention to how cards are labeled in the draft as well as threading directions.

Direct Warping

Penelope can be warped directly if you have a clamp peg that can be placed the warp's distance away from the loom.

Warp Separator Material

For your Warp Separator, you will want something thin, like paper or screen mesh.

Using the Back Clamp

Warping via the Back Clamp can allow you to have a longer warp, as well as allow for easier twist management for tablet weaving that is not twist-neutral. Warp management will vary based on your weaving style.

You'll need to ensure that your warp is secured to prevent tangling. If twist management is not a concern, you can make a warp chain. For managing tablet weaving twist, you should manage threads for each card separately. Kumihimo bobbins and sewing thread spools are quite helpful for this type of yarn management.

With Chained Warp

- When setting up a chained warp through the Back Clamp, secure front of warp under Front Clamp.
- Drape warp over the Raddle on Back Beam, under the Back Clamp, and then loosely secure clamp.
- Using the Cross to aid you with thread order, spread the warp out evenly in the Raddle. Secure with rubberband.

With Warp Bundles

- Ensure that each card has its yarn in a single bundle.
- Remove the top of the Back Clamp and place Raddle on Back Beam.
- Spread the yarn evenly across the Raddle, keeping bundled yarn together.
- Once the warp is evenly distributed in the Raddle, place a rubber band onto the Raddle to secure the warp.
- Secure Back Clamp

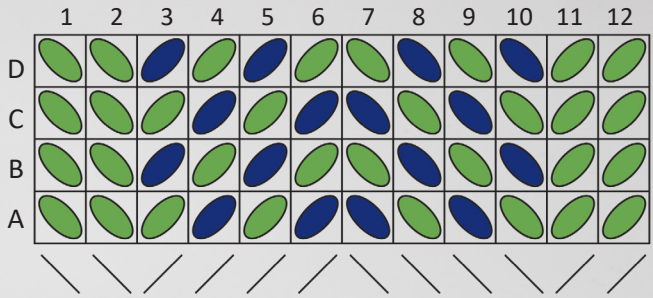
Threading and Securing the Warp through Back Clamp

- Loosen the Front Clamp, remove warp from under the clamp, and ensure all threads are free (cut loops as needed).
- Thread cards or heddle according to the pattern draft.
- After threading is complete, check the back of the warp to ensure tension is even across the warp. With chained warp, make sure the warp is even across the width and pull taut at the font before securing the back clamp. With Warp Bundles you'll want to reduce any slack on each bundle to ensure the front of the warp is even before securing the front of the warp. Gather the front of warp and secure using an overhand knot.
- Place warp under the Front Clamp, adjust tension, and tighten clamp.

FIRST TABLET PROJECT

The following is a basic projects to get you started. The examples in the photo were made with 8/2 Cottolin (smaller band) and 3/2 cotton (larger band).

Tablets - 12 Square Tablets
Colors - 2
Warp Length - 2 yards
Warp - 16 blue threads and 32 green threads for a total of 48 threads
Threading Chart



Slants depicted under chart is for the threading orientation of the tablets.

Weaving Instructions - Forward four picks and then backward four picks

This weaving draft can also be found on the Twisted Threads website here: https://twistedthreads.org/pattern/Xhz58qTFoSSWRgAXi or scan the QR Code below.

GLOSSARY & RESOURCES

Beat - To pack the most recent row of weft using a shuttle.

Cross/Lease - The crossing of warp threads that occurs when winding a warp on a Warping Board/Reel that helps keep the yarn in order while winding and threading the warp.

Header - Weft yarn that is woven at the beginning of a project, which is removed when the project is finished.

Heddle - A device with slots and holes that controls which threads are raised and lowered.

Pattern Draft - A visual description showing the warp threading and the arrangement of colors used for the desired pattern.

Pick/Shot - A single pass of weft through the shed.

Pick-up Stick/Weaving Sword - A thin stick that is used for picking up warp threads for creating patterns.

Raddle - A tool used to evenly space warp threads when winding them onto the back beam.

Shed - The opening created in the warp by the heddle through which the shuttle passes between.

Spacer - Creates a defined space, that may or may be woven, between projects on the same warp.

Shuttle - A tool used for passing the thread of the weft between the threads of the warp.

Twist-Neutral - A descriptor indicating a pattern draft has the same number of forward and backward turns so that all twist added in the forward turns is removed by the backward turns.

Warp - A series of yarns extended lengthwise on a loom and woven by the weft

Warp Beam - The loom cylinder beam onto which the warp is wound before the weaving process.

Warp Separator - A thin material, such as paper, used when winding warp onto the warp beam to keep the layers separate to aid with tension consistency.

Weaving Tablet/Card - Provide a way to raise and lower a set of warp threads for creating patterns.

Weft - The yarn woven perpendicular through the warp.

Videos

How to Use a Warping Board
https://youtu.be/S1zEWje27wk?si=zkTtBOG-nwRXynzv

Tablet Weaving for the Absolute Beginner
https://youtu.be/ooNOYUtc2ek?si=U3yTsWBD-iwC0Q3I

Pattern Software

http://twistedthreads.org/
https://www.carolingianrealm.info/PatternGenerator.php

Websites

http://malarkycrafts.com/
http://tabletweavers.org/
https://jumaka.com/2019/02/card-weaving/
https://littlelooms.com/
http://www.lindahendrickson.com/

Books

Card Weaving by Candace Crockett https://amzn.to/4klNRCd

Inventive Weaving on a Little Loom by Syne Mitchell
https://amzn.to/43qmTn4

A Tablet Weaver's Pattern Book by John Mullarkey
https://amzn.to/3ZmzdT2

Tablet Woven Accents for Designer Fabrics by Inge Dam

The Techniques of Tablet Weaving by Peter Collingwood
https://amzn.to/458V4Rv

The Weaver's Idea Book: Creative Cloth on a Rigid Heddle Loom by Jane Patrick
https://amzn.to/3GTwZo0

The Weaver's Inkle Pattern Directory: 400 Warp-Faced Weaves by Anne Dixon https://amzn.to/4meOJdA

Scan QR Code for quick link to Amazon Books & Supplies

FINISHING

How you finish your work will depend on the type of project and materials. Here are basic recommendations.

Finishing the Ends - There are a variety of ways to finish the end of your bands including, but not limited to, braiding, twisting, gathering knot, and sewing. You can also find hardware, such as for belts and keychains, as a way of finishing your band.

Cotton/Linen - Soak in warm or hot water for 15-20 minutes. Squeeze out water and lay flat to dry. While still damp, you can iron your band until dry with the appropriate heat setting. Ironing is recommended when using linen threads to straighten the band and make the linen shine!

Wool/Silk - Soak in warm water with wool wash for 15-20 minutes, longer if using silk. Squeeze out water and lay flat or hang to dry. Iron with appropriate heat setting.

CARE & MAINTENANCE

If you need any assistance with your loom, please do not hesitate to reach out to support@daedalusspinningwheels.com.

The wood of Penelope is treated with 2 coats of lacquer on the flat surfaces and the end grain.

If you need to clean your Penelope, we recommend brushing dust off with a lint-free towel, which you can dampen if needed.

If needed wood can be treated with wax like Wood Food from Spanish Peacock.

JOIN THE FLOCK ONLINE

Facebook Group
https://www.facebook.com/groups/239274393420200

Discord Group
https://discord.gg/Y2uUfDsZhQ

YouTube & Instagram - @DaedalusSpinningWheels

Hashtags
#DaedalusSpinningWheels #DaedalusPenelopeLoom
#WeavewithDaedalus #MadeWithDaedalus #TeamDaedalus

CONTACT DAEDALUS

Website - https://www.daedalusspinningwheels.com/
FAQ - https://www.daedalusspinningwheels.com/faq
Shop - https://shop.daedalusspinningwheels.com/
Email - Support@DaedalusSpinningWheels.com

Rainbow heart shoelaces woven with square tablets using size 80 Lisbeth thread woven by Evanita Montalvo. Draft and tips are available on our blog.

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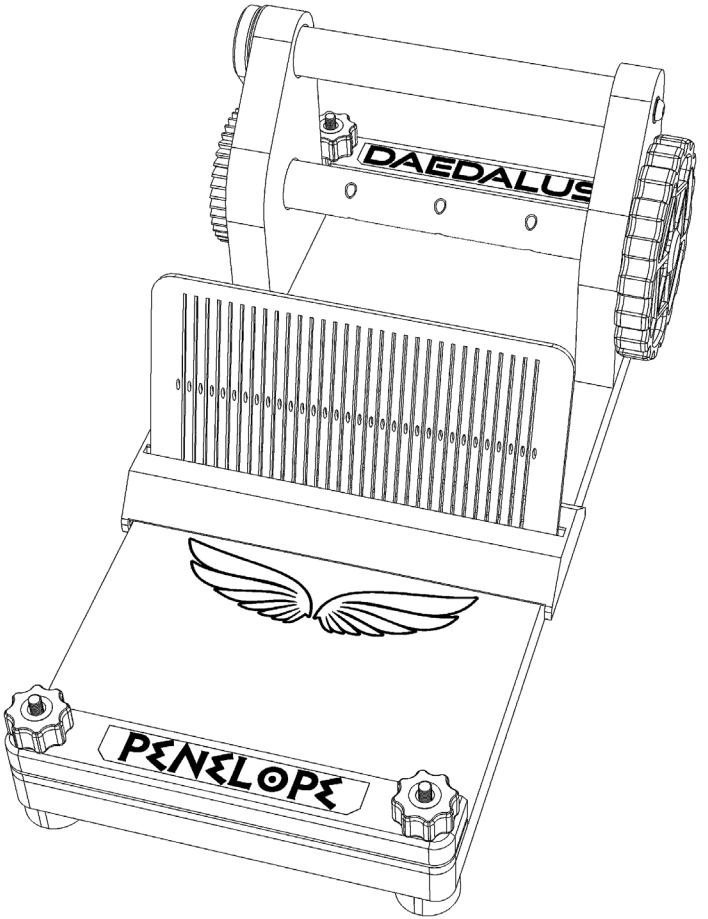

PENELOPE