

Beginning Tablet Weaving

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Tablet weaving is a simple technique to weave strong and decorative fibre strips that was used by many cultures. The tablet woven strips were used as belts, straps, harnesses, cloth edges and for purely decorative purposes. The purpose of this article is to try and provide a basic introduction to set-up and weave a simple threaded-in pattern.

Before you start weaving, you need to ask yourself several questions:

Do you want a loom?

The purpose of a loom is to hold your band in place under tension, something that can also be accomplished by tying one end of the band to yourself and the other end to a fixed object like a pole or tree. A loom makes it easy to stop and restart weaving, but it isn't really necessary until you attempt more difficult techniques such as brocading. The simplest "loom" is to use two C-clamps with your thread stretched out between the two threaded ends.

How do I make the tablets?

Most tablet weaving is done with four-holed cards, although triangular cards and hexagonal cards were also used historically. Tablets can be made from leather, bone or wood, but most beginning tablet weavers start with tablets made from boxboard (cereal boxes) or playing cards. Cards that are 2.5 inches square are a comfortable size for most people's hands. Holes are then punched into each of the corners, set back slightly from the edges. Consistent cards will make your life easier once you start weaving.

What type of fibre do you want to use?

Wools, linens and silks were most commonly used in the past. For the beginning weaver, I recommend a fibre that is at least 2-ply and tightly spun. Fewer plies reduce the tensile strength (causing breaks in your warp) while "fuzzy" yarns bind to each other, making the weaving process more difficult. Mercerized cotton is an excellent fibre to use for most purposes.

What length will you need?

As a result of the weaving method, you will be losing a foot or two at both ends of the band of thread that can't be woven. In addition, since you are twisting the threads together, the final band will be about 10% shorter than the original thread. In general, it never hurts to have a little extra length to your band.

How wide do you want the band to be?

The width of the band is affected by the number of tablets used and the thickness of the thread. A finer thread will allow for more detail, but it will also increase the time needed to finish the band. A rough way to judge the final width of the band is to wrap your thread loosely around a ruler, with each wrap representing one tablet.

What pattern do you want to appear on the band?

This is a much more difficult question, since the number of possibilities is almost endless. However there are a large number of patterns that can be generated by using only two colours. If the cards have 2 holes threaded in one colour, and 2 holes in another colour, then there are a lot of possibilities once the cards have been warped up. I usually place a border on each side of the band that is a solid colour in order to make my pattern stand out better. If the weft thread is the same colour as this border, then it will blend into the border.

Threading up your warp

You will be placing one warp thread through each hole of each tablet. While you can measure out the threads one by one and then thread each card individually, this can take a long time. You also have to be very careful that you always thread the cards from the same side of the card.

For most bands, it is possible to warp it up in ten minutes.

Step 1: Place all of your tablets (if they are to be threaded with the same colours) together in a pack with the holes lined up together.

Step 2: Using four spools of thread (one for each hole), put the end of the spool through one corner of your pack. A tapestry needle will often make it easier to thread the spool through the entire pack. For the purposes of this article, the two spools of each colour should be threaded through the holes beside each other. (If you want a solid coloured border, these cards can be threaded separately using four spools of the same colour.)

Step 3: Tie the ends of the four threads together. The cards should be free to slide along the threads.

Step 4: Find something that you can wrap the thread around that has the same circumference as your desired length. (Upside down coffee tables work quite nicely for many purposes.)

Step 5: Fix the ends of the spools to a starting point (e.g. one of the table legs) and start wrapping the thread around the circumference, sliding the tablets along as you go. For each loop around, drop off one of the tablets from the pack.

Step 6: Cut through all of the threads at one section of the loop and the tablets will be individually warped. A stitch holder (giant safety pin used by knitters) placed through one hole of each of the cards will reduce the chance of the threads becoming tangled.

Step 7: Tie a knot at one end of the threads – since this involves a lot of threads, it can be easily undone if necessary.

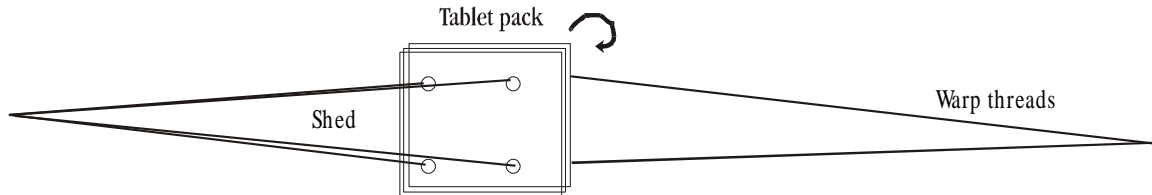
Step 8: Attach the knotted end to a fixed object and pull on the threads of the unknotted end to remove any loose sections. This does not need to be perfect as the weaving process will take care of minor variations in tension. Once you have consistent tension in the threads, a second knot or a hitch can be used to secure the end (depending on the form of loom or body tensioning that you are using).



The Weaving Process

The weaving process is quite simple

1. Place your weft thread through the shed.
2. Rotate the pack of cards in a forward direction (as indicated by the arrow).
3. Using the beater, push the twisted threads away from the tablet pack to the end of the shed.
4. Pull the weft thread tight against the edge of the band. (On the first pass or when starting a new weft thread, leave a length of thread hanging out of the shed to be sewn in later, and be careful not to pull the weft thread out of the shed when tightening the width.)



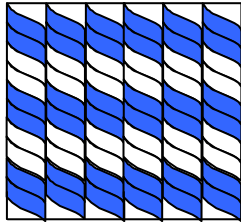
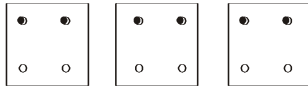
Complications:

1. The threads on the far side of the tablets from your working shed will also become twisted. Eventually you need to turn the cards the opposite direction in order to undo this twist. These reversals are usually how we can recognize a band as being tablet woven.
2. You need to keep the tension on your band as even as possible to give your band a consistent look.
3. If you pull on the weft thread too hard, you will pull the band inwards, resulting in an inconsistent width to your band.
4. If all of your cards are threaded in the same direction, the finished band will have a slight twist and won't lie flat. This can be minimized by having the border cards threaded the opposite direction (S ↔ Z).

Weaving Patterns

Horizontal Stripes

Arrange all of the cards so that they are either S threaded or Z threaded (see diagram in glossary).
Line up each of the cards so that the coloured threads are all on the top two holes of the pack.
However, because of the way the threads twist, the horizontal lines will have a jagged quality to them.

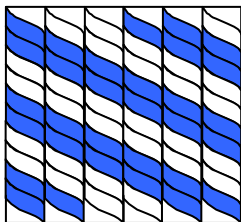
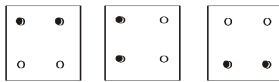


Diagonal Lines

Keep the tablets so that they are either S or Z threaded.

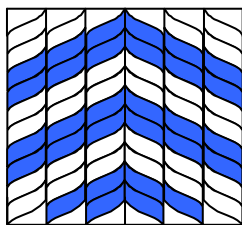
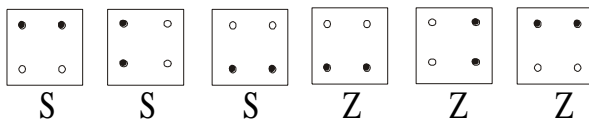
Arrange the tablets so that the coloured threads are a quarter turn off from each other as you go across the pack. (i.e. coloured threads on top, then in the front, then on the bottom, etc.)

If your diagonal lines appear jagged, look on the bottom of the band. It just means that you need to have the rotation of the colours to be in the other direction. The mnemonic to help with this is to have an anti-clockwise rotation for S threaded cards and clockwise rotation for Z threaded cards (S-anti clo-Z).



Chevrons and Diamonds

Set up half of the cards S threaded in the way you would a diagonal line. Then set up the other cards Z threaded such that the rotation of the colours mirrors that of the first half.



By reversing the direction that you are turning the cards, the chevron will turn into a diamond.

Finishing the Weaving

The following are ways of finishing the ends of a tablet woven band.

1. Cut ends. Often the fibres of the weave will bind together well enough that no finishing is necessary. This is especially true of "hairy" yarns (do not attempt with silk). Fringe of any length desired.
2. Sewn ends. Take ordinary sewing thread of a suitable colour, and run it through the woven fibres a few times to bind them together. Fringe of any length desired.
3. Sewn, hemmed ends. Turn the end under and sew it to itself, as in hemming. No fringe. Good for attaching belt buckles or other hardware, and for sewn on straps.
4. Knotted ends. This can be as simple as one large knot, or as complex as a macramé piece at the end.
5. Braided ends. This can be a simple three-strand braid of all the yarn ends, or you can get more complex. Five and seven stranded braiding can be lovely for this. Complex braids with thick and thin strands can also be done. Four stranded round braids work very well. One appealing style to consider is to regroup the yarn strands into solid colour blocks, which are different from, yet complement, the pattern of the belt.
6. Twisted ends. These are accomplished by twisting small groups of ends together and then allowing several of these groups to twist back on themselves. Makes a nice fringe.
7. Wrapped ends. This can be done all at once or in parts. Yarn is wrapped tightly around the base yarn (from the warp) similar to hair wraps.
8. Sew the sides together at the end of the band, invert and press. This will give a triangular end to the band.
9. Woven ends. The cards on the edge can be cut one by one and fed into the shed for one pass. This causes the band to become a little thicker, but it will create a woven triangular end to the band. The ends of the warp can be left as a fringe or trimmed off.

In all of these cases, the weft thread can be sewn back into band with a dull needle (e.g. tapestry needles) to prevent the weft thread from being pulled loose.

If you are really worried about it unravelling, you can also put a little bit of glue on the end to seal in the weft thread.

Beads, bells, and other ornaments can also be added to any of the above techniques.

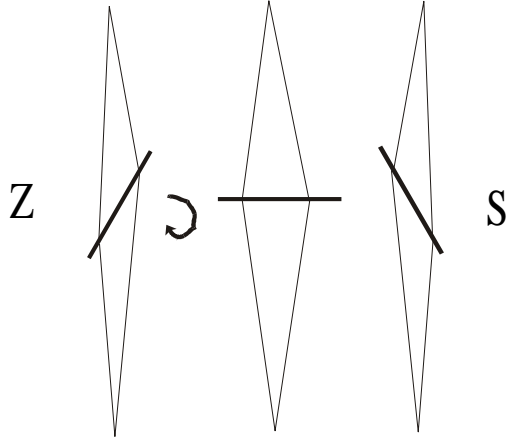
Glossary

beater - either wood or metal, used to compact the threads between turns – a wooden ruler or dull knife is fine

comb - device resembling a hair comb used to keep the threads separate – while not necessary, this device can make turning the cards much easier, especially with fuzzier fibres

pack - all of the tablets

s-threaded and z-threaded - the two manners in which the warp is threaded through the tablets – flipping the cards allows you to change between S and Z threading.



shed - the opening in the warp threads created by the tablets

tablets - the cards (usually square with four holes) through which the warp is threaded

warp - the threads that run lengthwise along the loom

weft - the thread on the shuttle that is fed back and forth through the warp

Bibliography

(1) Collingwood, Peter: The Techniques of Tablet Weaving
Watson-Guptil Publications, 1982
ISBN #0-8230-5255-9

This is the most comprehensive book on tablet weaving. While a little daunting for some, Collingwood covers all of the different techniques, and has numerous photographs of artifacts as well as patterns for reproducing some of these pieces.

(2) Crockett, Candace: Card Weaving
Interweave Press, 1973
ISBN #0-934026-61-0

This is a good book for beginners. Her explanations are quite straightforward and cover the basic techniques. However the cards that come with the book are too large to weave with comfortably.

(3) Hanson, Egon: Tablet Weaving
Hovdland Publishers, 1990
ISBN #87-7739-047-4

Hanson has a number of nice reproductions, but the patterns provided in the back of the book tend to give you a headache.

(4) Spies, Nancy: Ecclesiastical Pomp & Aristocratic Circumstance
Arelate Studios, 2000
ISBN #0-615-11681-7

Nancy contacted all of the museums around the world to try and create a comprehensive book of brocaded tablet woven bands. While this is a complex technique, I've included this book here so people can see the possibilities that exist for the more experienced weaver.

(5) Spies, Nancy: Anna Neuper's Modelbuch
Arelate Studios, 2003
ISBN #0-9718960-1-1

This is a pattern book for brocaded tablet woven bands handwritten in 1517. The notation used by Sister Anna Neuper was then translated into graphical patterns by Nancy Spies. A small inexpensive book, it is still interesting to see genuine period patterns.

(6) Staudigal, Otfried: Tablet Weaving Magic
Libri Books, 2000
ISBN # 3-8311-1313-0

A new book on tablet weaving, it contains instructions and patterns for a number of different bands in both German and English.