# TIPS & TRICKS WITH THE AVL WARPING WHEEL

## SECTIONAL WARPING: RULES, HINTS AND TRICKS

- All sections should be the same length and have the same number of ends to weave off well.
- The warp should be wound as tightly as possible.
- Bouts should be wound on the beam in flat layers that extend the full width of the section.
- Sections should be close to the same number of ends per unit as they will be sleyed; **they do not have to be exactly the same**. For example, a sett of 24 epi in the reed could be beamed at anything from 20 to 28 epi on the sectional beam.
- Bouts laid up in the mini-raddle must be at least as wide as the section; you can make a bout narrower but not wider. One to several ends can be placed in each mini-raddle dent to achieve this.
- Tension should be adjusted on the first bout and then remain the same for all additional bouts.
- When using a flyshuttle, narrow warps should be off-set on the beam and in the reed. (see "Narrow Warp Adjustment When Using a Flyshuttle" at the end of this handout)

## YARN MANAGEMENT

- Yarns should be in the same "put up" when winding more than one warp end at a time. (i.e., all on cones, in balls, in skeins, etc.)
- Use a cone caddie to keep cones upright while winding sections.
- Use gallon jars, plastic buckets or large pots to keep balls of yarn from rolling around and tangling.
- Install the second raddle (if you have one), or a small warping paddle in the mini-raddle holder out on the horizontal arm, put the warp threads in it and add the cap; wind on as usual. Your warp threads will be placed perfectly every time. Especially nice if you're winding on several ends at a time. (Find a second retaining pin at your local hardware store.)
- Rest your yarn holding hand on the horizontal arm as you wind; this helps you place the warp properly on the wheel.
- Use cheap, sticky masking tape to tape down the warp order. The fancy "blue stuff" doesn't hold the threads well enough – it is made to release easily!
- Use Velcro instead of tape to keep the threading order. Lay hook side of Velcro on warp section, place loop side under the bout and press together. Pull apart a bit at a time when threading.

COUNTING

- Mark both sides of the mini-raddle in increments of 10 to make counting easier.
- Use tape to mark off the number of dents that need to be filled for each section of a particular warp.
- If the counter isn't clicking and advancing with every revolution, check to be sure the peg on the back of the wheel is extended far enough to trip the counter lag as the wheel revolves.
- Add a drop of super glue to keep counter lag from loosening.

ADDING MORE TENSION ~ ADDING MORE STABILITY

- Add a second spring for extra tension. You may need to brace the wheel in some way to keep it from tipping, but it does make a tighter warp.
- For a really tight warp, use a stripped down tension box, run the warp through the tension bars and then onto the warp beam. Take the tension off of the Warping Wheel and wind on to the warp beam in the usual way.
- If you have the AVL Track & Mount system, clamp or strap the end of the horizontal arm to the track when winding on the bout.
- Place a heavy weight on the Warping Wheel base; a big bag of cat litter or sand works well.

PROBLEM PREVENTION & DAMAGE CONTROL

- Wrap the entire tail of the bout around and under the clip after cutting; wrap twice for very slippery yarns. (new model)
- Use tape, Velcro or a small clamp to secure the warp in the clip.(original model)
- If you are changing or adding warp ends mid section, wind the tails of both the old and new warps around and under the clip once or twice.
- Push the warp back away from you on the spools (pegged cross members on the original) after completing every few ends of the bout.
- Warp ends should be placed on the bare plastic (or wood) as they are wound on; not piled on top of each other.
- Transfer the mini-raddle to the winding on position and comb out the bout before tying the overhand knot.
- When using chenille take care to always wind from the same end of the yarn; it has a nap.
- Fold back the ends of a strip of masking tape, tape down the bout, take it off and make a ring. This assures easy opening of the tape when threading the heddles.
- If the warp section pops out of the mini-raddle, use a comb to get it back in place. Hold the bout tight, place a comb into the threads at about a 45 degree angle, straighten the comb so it is parallel to the mini-raddle and

set the threads down in the dents. Repeat if necessary to spread the bout.

- If a warp bout is not rolling on well for any reason, try pulling it most of the way off through the mini-raddle, (either chaining it off or using the kite stick method). Wind it back on the Warping Wheel through the mini-raddle, combing it a bit if necessary. It should now roll smoothly onto the sectional beam.
- Arrange pieces of bicycle inner tube (plastic tubing for wooden pegs) from hoop to hoop, around the beam to keep stray ends in the proper section when beaming. (You can cut 12, 6 inch pieces from one road bike tube)
- Check the spring steel brackets (hooks or springs on the original model) that hold the mini-raddle cap in place to be sure they are firmly in place. Wrap with a Velcro strap, tape or a small clamp for extra security.

## SPEED WARPING & OTHER FANCY TRICKS

- Try winding 2 sections at a time. Wind the amount needed for one section; leave a gap of one or two dents, (more if you have a sectional beam with wooden pegs) and then wind a second section. Try to space the two sections to mimic the spacing of the beam. Tie each section to its cord and wind them on in the usual way; tape each section individually. This takes some practice, but can really speed up the beaming process.
- Wind once; beam three times. Directions for beaming three, four yard sections from one warp bout: Measure an 8 yard length of ribbon; fold in half and mark the center. Tape the ribbon to spool number 1 (or slide it under the clip on the original style). Begin winding the bout including the ribbon.

  When you get to the 4 yard mark on the ribbon, put a little piece of tape on the warp end; at the end of the ribbon add another piece of tape; finish that end (12 yards). Complete the bout in the normal way.

  Begin beaming, when you get to the first tape marker, tape the warp order and cut the bout; tie a knot for the second section; repeat the process two more times.
- To take off a bout for painting (or ??): Wind the bout in the usual way; cut as usual and transfer the mini-raddle to the winding on position; instead of tying a knot, apply tape to the bout to maintain the warp order; chain off the bout through the mini-raddle adding choke ties if needed; tape the other end as well and remove from the Warping Wheel.
  To remounting the bout: Install the mini-raddle on the horizontal arm; lay in the bout and put on the cap; affix the end of the bout under the clip and wind the bout back onto the wheel. Remove the tape and beam as usual.

- Create "Warping Wheel Ikat" with variegated yarn. Place the color areas to coincide (more or less) by adjusting at the beginning of each warp end.

UPDATE YOUR ORIGINAL WARPING WHEEL

- Move the clip to the new position for easier "cut and tie" procedures. Remove the clip from its original position, (you can remove the wooden member that it was mounted on and dispose of it). Position the clip about half way down on the same arm with the open end of the clip facing down. Drill a small pilot hole and then screw the clip in place.

LONGEST WARP POSSIBLE?

- I put on 33 yards of 10/2 cotton, sett at 24 epi in 2" sections -- no problems. Today, I'm winding on 33 yards of 35/2 linen at 44 epi -- no problem. Having experienced success with 33 yards, I'm going to tackle an even longer warp. – C. in East Texas
- My longest warp so far is 45 yards, 24 epi fine wool. No problems. – L. M.
- When I first got my WW and sectional beam a few years ago I put on a 48 yard long ward using 10/2 cotton at 24 epi. I used one inch sections. It wove off beautifully. – B. Nelson

## AVL WARPING WHEEL CIRCUMFERENCE CHART:

Use the chart below to calculate a multiple that more closely matches your needs when the length of your warp must be something other that a multiple of 2 or 3. To maintain a good balance, place the arms or spools around the wheel in as even a pattern as possible.

| **Arms or Spools in outer position** | **Arms or Spools in inner position** | **Original Wheel Circumference** (+ or - 6 inches) | **Redesigned Wheel Circumference** (+ or - 6 inches) |
|---|---|---|---|
| 6 | 0 | 3 yards | 3 yards, 24 inches |
| 5 | 1 | 2 yards, 26 inches | 3 yards, 20 inches |
| 4 | 2 | 2 yards, 22 inches | 3 yards, 14 inches |
| 3 | 3 | 2 yards, 18 inches | 3 yards, 8 inches |
| 2 | 4 | 2 yards, 12 inches | 3 yards |
| 1 | 5 | 2 yards, 6 inches | 2 yards, 28 inches |
| 0 | 6 | 2 yards | * |

* On the redesigned model, only 5 spools can move to the inner position.