**Introduction to Cross Wrap Designs by B.D. Ehler**

**Cross Wrap 9**

Now it is time to discuss the layout threads, which are the first threads spiraled up and down the rod, on which the design is built. The equipment needs are:

Layout tool – two boards connected at 90 degrees to each other. The bottom board has a V groove routed into it parallel to the back board. A plastic or metal rectangle piece reaches from the back to the center of the groove. This tool is used to draw a straight line down the rod. (see photo)

A circle template – used to slide over the rod to mark top and bottom (and sides if double pattern is used). The circle template can be used as a ruler with both standard and metric measurements on it.

A metal, pointed tool for scratching marks on the rod.

Compass or calipers for measuring the spacing between design centers



Layout tool



circle template



scribe and dividers

**Lay out process:**

If the rod has the guides on it, then the circle template cannot be used. So the 0 and 180 degree axis can be found with tape or a piece of paper. Wrap the tape around the rod and make a mark on the tape where it passes over itself. This is the circumference of the rod. Remove the tape and fold the end of the tape back on itself to the mark made above. The crease at the fold is the halfway distance around the rod. Rewrap the tape around the rod with the starting end on the spine of the rod and mark the rod at the beginning and the halfway mark. This gives you the 0 and 180 degree locations on the rod.

Place the rod in the layout tool and use the plastic/metal guide to draw or scratch a line down the rod at 0 and180 degrees. The crossover points where the threads will cross each other on the lines can now be determined.

The spacing between these crossovers can be square, compressed or elongated. Once the spacing is determined then use your compass or calipers to measure the spacing of the crossovers at 0 degrees. On the back (180 degree) side the marks will be equal distance between the marks on the top side. Make the first mark on the back side 1/2 the distance between crossovers on the top, then the other marks will be the full distance from that first mark.

Space the layout points to give a pleasing design. Some designs, like the box wrap, require a square spacing, which can be obtained by using the circumference measurement for your spacing. If you are just starting cross wraps, you would be wise to use a wooden dowel which is level. Also use a larger diameter thread, like C, D or E until you gain more experience. Remember to consider the size

or diameter of the rod when choosing the type of design being wrapped.



This photo shows the 0 degree line with the spacing marks scratched lightly on it.

For more information on layout techniques and spacing see:

Custom Rod Thread Art, by Dale P. Clemens

Decorative Butt Wraps, by Billy Vivona in the Guild library on this website

RodCrafters Journal, Vol 21, J-A, 1995 Taper Offset Spacing

RodCrafters Journal, Vol 24, A-J, 1998 Taper Offset Spacing

RodCrafters Journal, Vol 29, A-J, 2003 Turbo Taper Offsett Spacing by Clay Johnson VisualWrap Software, by David Boyle

Take home lesson: For starters, do not worry about Taper Offset Spacing (TOS) right now. First learn how to do the designs on flat rods or dowels, later when proficient enough then you can learn TOS and how to use it on closed design wraps on rod blanks with tapers.