

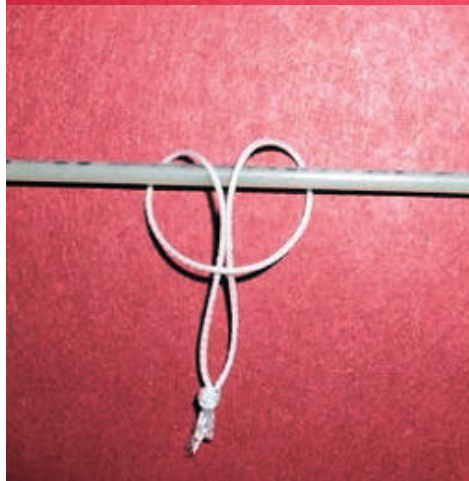
MANNY ALVES' 1 BEAD ADJUSTABLE SPINE TENSIONING LINE

Manny Alves is quite inventive and is always on a quest to make a portion of a fighter kite better or easier to work with. This spine tensioning method is a good example of his innovation!

The following photos show how Manny makes a simple and very effective spine tensioning line.



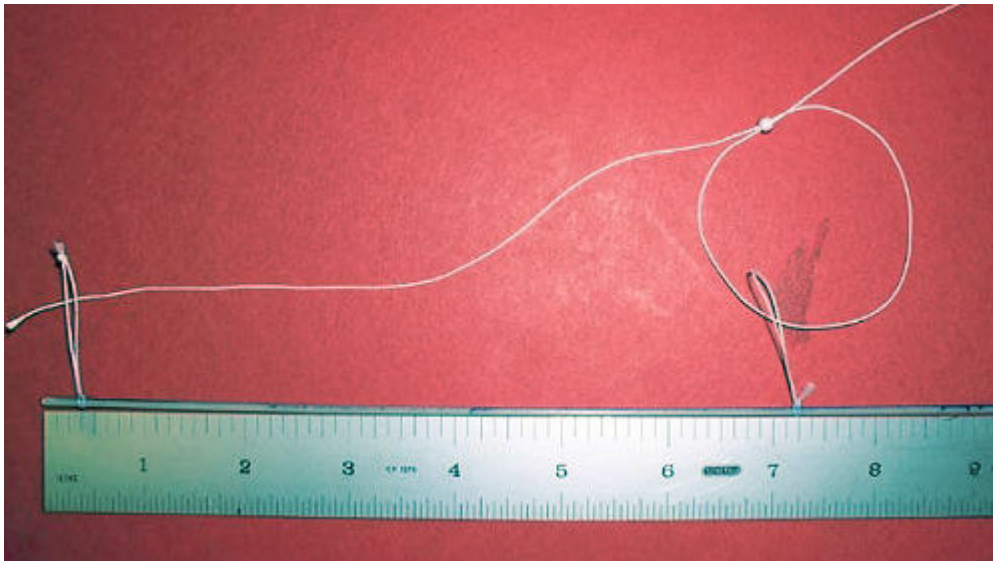
Start by making two loops of 15# to 20# test dacron fishing line. The loops are about 3" long when finished.



Larkshead one of the loops around the spine near the nose, the other is located at or slightly toward the tail from the wingtip line of the kite. After attaching the loops, make sure they are pointing upward from the 'natural bend' of the spine; then put a drop of CA glue on the loops to secure them to the spine.

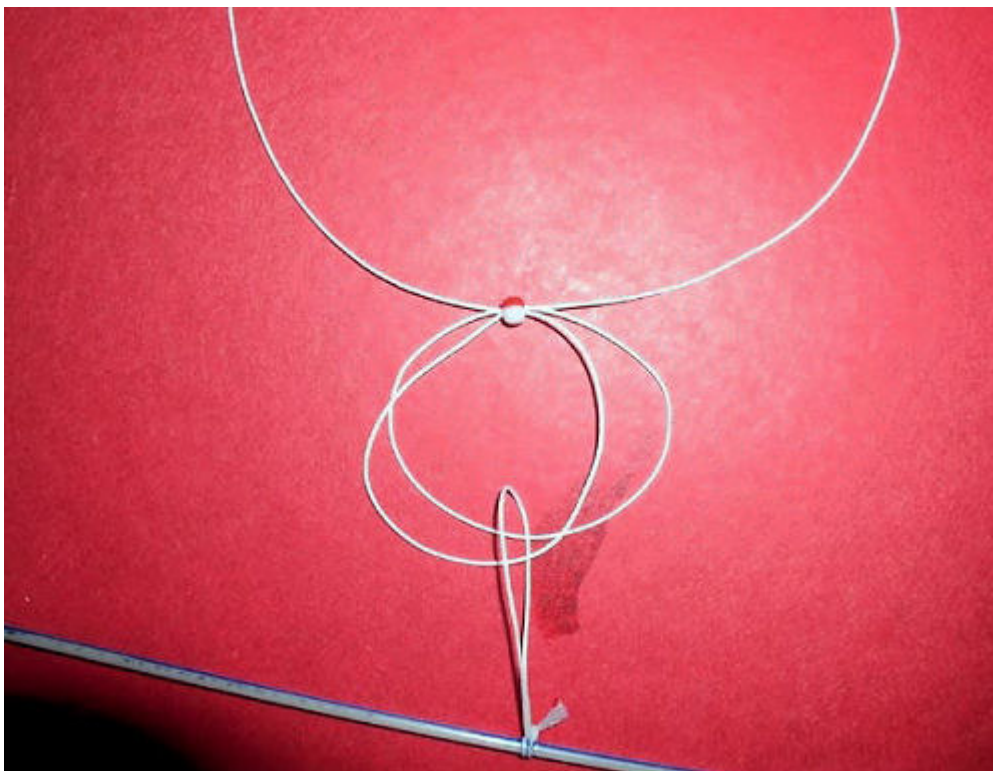


Tie an overhand knot about in the middle of the nose loop only. This creates a second or 'extra' loop that will be used to secure the tension line to the nose of the spine later in the creation of the 1 bead adjustable tension line.



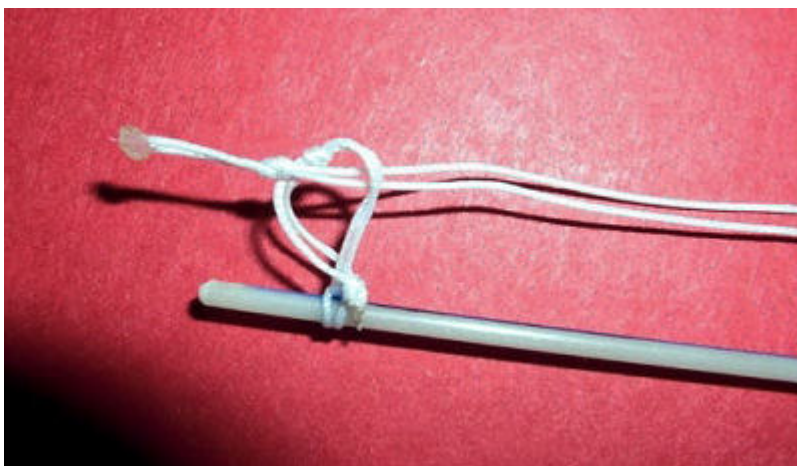
To make the tension line you'll need a glass bead and some 15-20# test dacron fishing line.

The photo shows how to thread the line: the tension line is threaded through the loop nearest to the tail of the spine and through the center hole in the bead. The end of the tension line at the nose of the spine is left for the moment.



Next, loop the line through both the bead and the lower loop on the spine a second time.

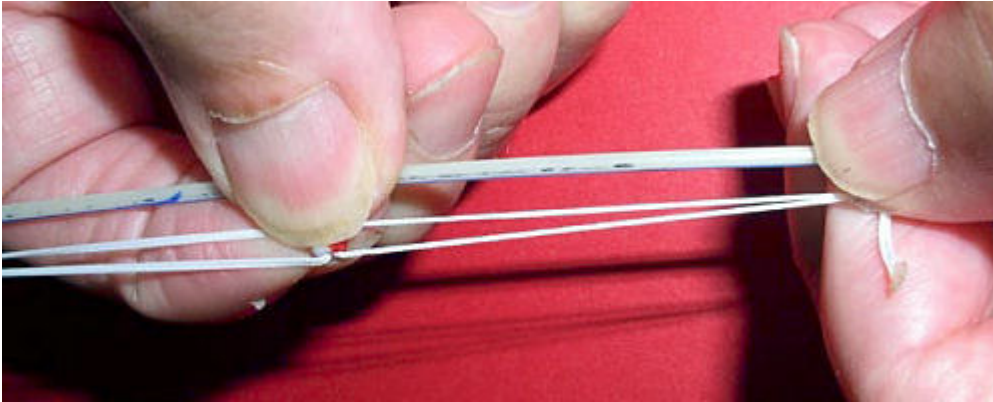
After completing this part, snug the loose ends of the tension line so it will just reach the nose loop and tie the ends together with an overhand or figure 8 knot.



Using the nose loop's upper 'extra' loop, larkshead the knotted ends of the tension line to secure it and complete the tension line.



This is the finished tension line attached to the spine



To adjust the tension line, firmly hold one loop and slide the bead to either lengthen the tension line which will lessen the bend, or move it the other direction to shorten the tension line which will increase the amount of bend in the spine.

Many thanks Manny for sharing this wonderfully simple and very effective adjustable spine tensioning method!

As a side note, I've used this on bamboo spines, carbon rod and flat carbon spines.....it works on all of them equally well!

If you use a slipperier line than braided dacron, such as spectra, you may have to loop the line through the bead and lower loop 3 or 4 times in order to achieve sufficient friction to have the tension line hold for extended periods.

Manny supplied the photos and I created the text from phone conversations with Manny about making this tensioning line.

Biggrins, Bruce