

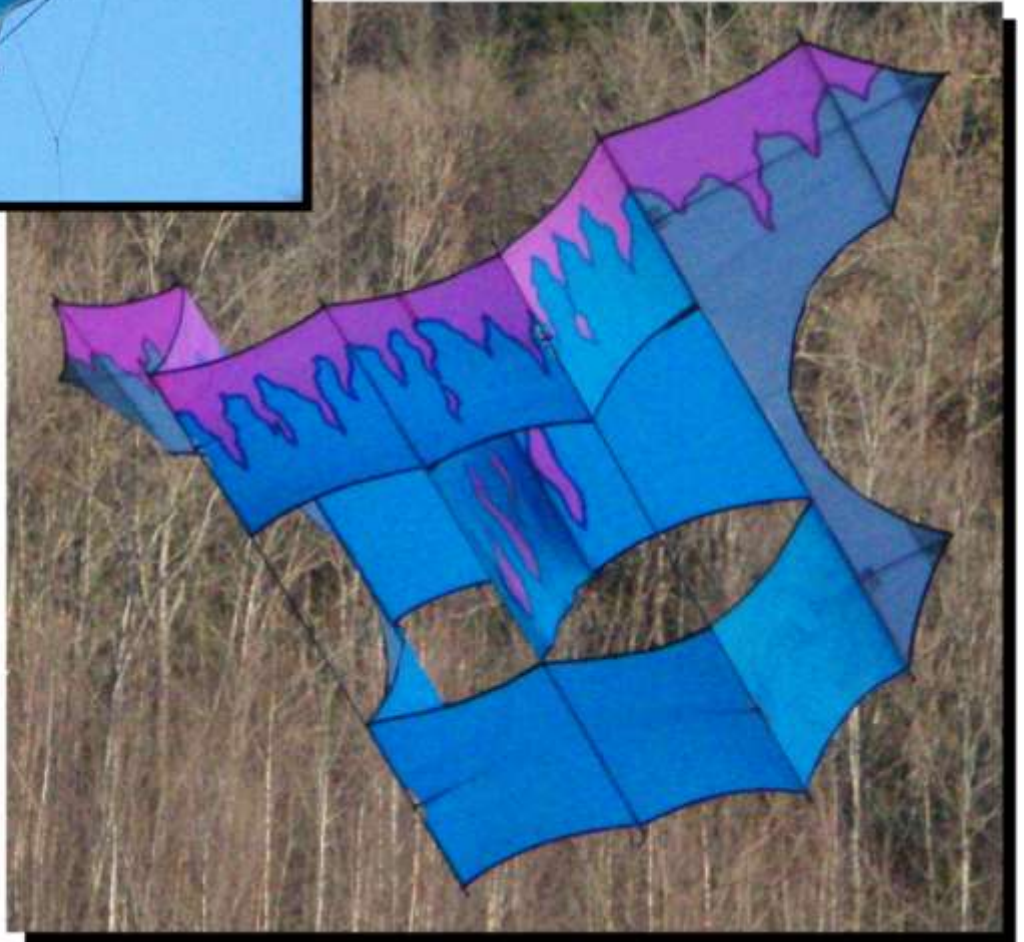
5 Foot One Piece Cody Workshop New York Kite Enthusiasts



Instructions and Scaled Up by
Jon Hosford
jon@nyke.org

Original Kite Design by
Ton Vinken

Original Pattern drawing by
Bill Wilson



<http://www.nyke.org>

New York Kite Enthusiasts - One Piece Cody Workshop.
11/28/2009
Lead by and instructions by Jon Hosford

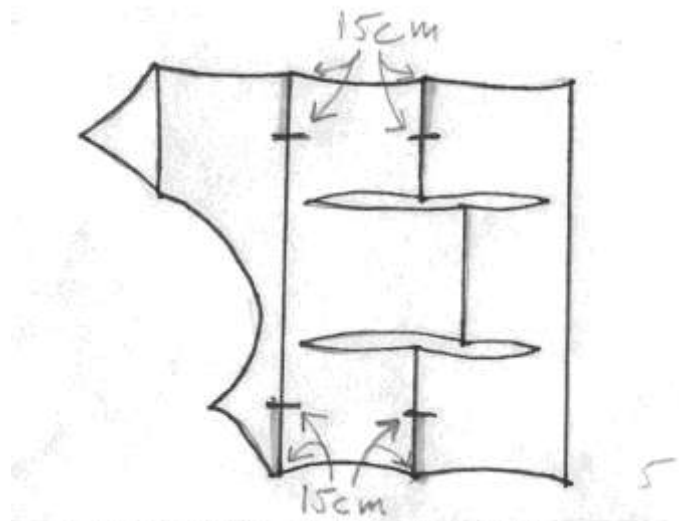
Material List

2.5 yds Fabric. 54" width is fine
9.3 (10) 4mm carbon tubes, 48"
22 4mm end caps
Dacron for pockets
Line for bridle and construction
Edge Binding (optional) approximately 45 ft

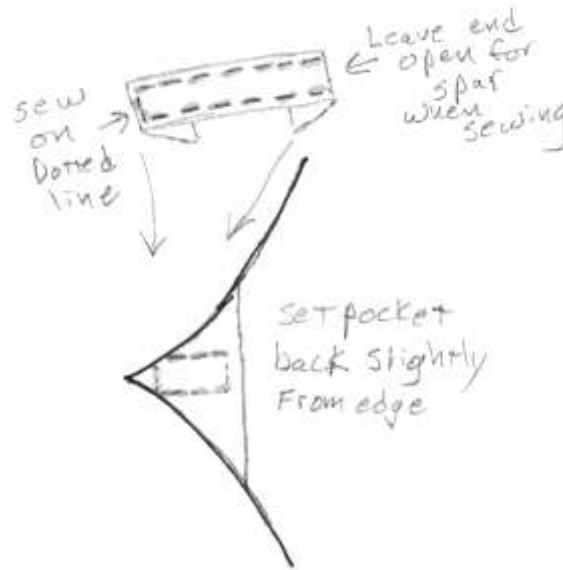
Plans are at rear of booklet. Symmetry is very important for this kite to fly correctly. The 5 body spars must be parallel. Take care to make sure they are. This plan is for a One Piece Cody with a wingspan of approximately 5 feet.

Instructions:

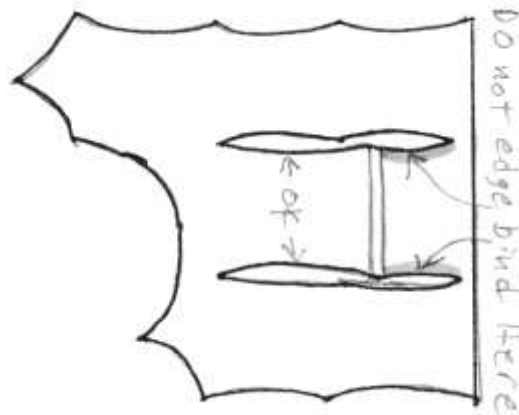
1. Fold fabric in half in the direction you would roll it. You will then have roughly 48" x 58"
2. Lay full size pattern on fabric with the only straight edge lined up with the fold. The only straight edge of the pattern is the center of the kite, and the fold will also be the center of the kite.
3. Trace around the pattern. Mark all 3 lines on each of the ends of all spar tubes.
4. Remove the pattern and draw straight lines to mark the spar tubes. I find it easiest to also mark the center of the tube for a mark to fold on. Thus you will have 3 lines for each spar tube. You can also take a minute to verify your tubes are parallel to each other.
5. As indicated on the pattern, measure 15cm from both ends of the full length spar closest to the wing and place a mark. This is where the wing spar will cross and later we will add a support.



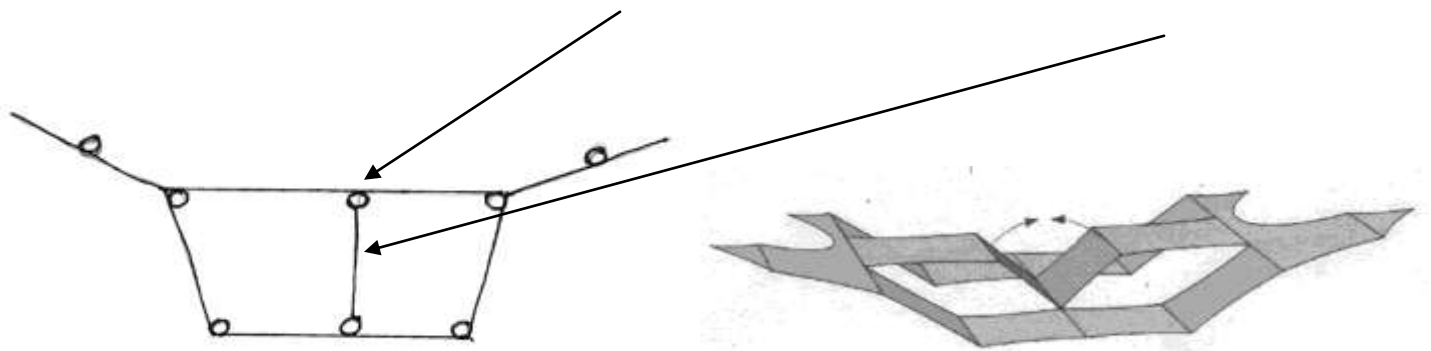
- Replace the pattern and hot cut through both layers of fabric. Make sure the pattern does not move. Duh.
- Using the wing tip as a guide, make a triangle out of Dacron that extends from the tip down about 6cm that follows the shape of the wing tip. Do this for all 4 wing tips. Sew it to the top of the kite.



- Make 4 small 2cm x 8cm pieces for the spar pocket. Fold both ends over and sew it to the Dacron from the previous step. Obviously leaving the end towards the kite open to receive the spar.
- If you are edge binding, do that now. At very least, sew in binding across the ends of spar tubes. Do not edge bind what will be the vertical part in the center. You will want to sew both layers of material together with the edge binding, so that comes later.



- Tests show it really doesn't matter if your spar tubes go inside or outside the kite. Just make sure you do it the same way for the opposite side spar tube. Using the diagram, begin to fold spar tubes on the centerline and sew it into a tube along either of the outside lines. This is the tricky part. Make sure you fold the center correctly before you sew! Do not sew individual tubes into the top-center marks. A tube will be formed when you bring the two sides of the vertical center section together. Also, sew the center vertical pieces together so that they do not separate when flying.



11. On the marks you made 15cm from the end of the long spar that forms the edge of the wing, punch a small hole. Tie a piece of line around the body spar. Leave the loop big enough that the wing spar can also fit through it. This will hold the wing spar against the body spar to strengthen the kite.
12. Hot cut the hole for the T connection 2 places on each bottom outside spar tunnel. The center is 15cm from the end of the spar tunnel.
13. If you are edge binding, go ahead and bind the vertical section so that both layers of material are together as one.
14. Poke holes across the end of 4 end caps. This will be the T connector for the wind spars to meet the body spar. The spar will run through the hole you just poked and the wing spar will slip into the endcap like normal.
15. Cut 5 spars to 90cm + 2 end cap length (~1cm each). (I would insert a spar and verify the length!)
16. Insert spars in the body. On the two spars that go in the bottom outside tunnels, be sure to insert the vinyl tubing that will attach the wing spar as you go.
17. Place (glue) end caps on spars.
18. Measure the distance between top outside spars at the middle section. It should be somewhere near 75cm. Remember that measurement.



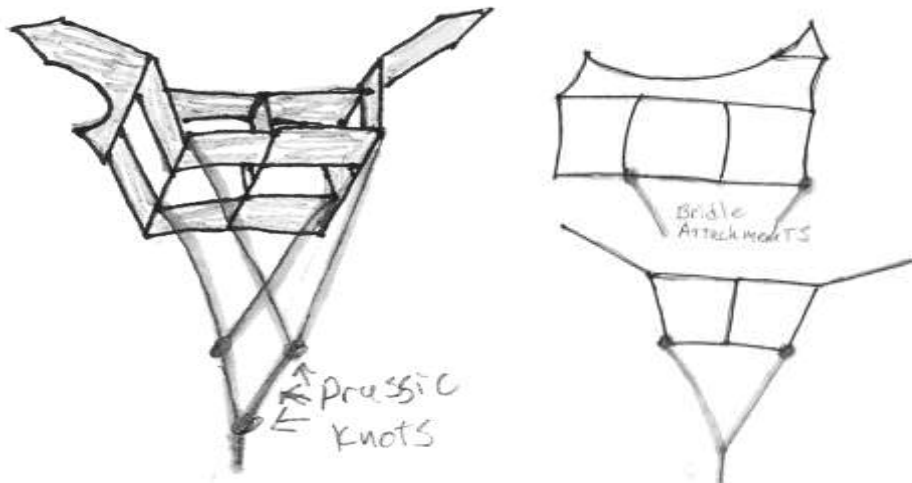
19. Cut 2 pieces of line slightly longer than the length measured above. You want enough extra to tie knots in each end easily.

20. Using the two top outside spar ends, tie the line between them (left to right) making sure the finished distance matches the distance measured above. Do this for the front and rear of the kite.

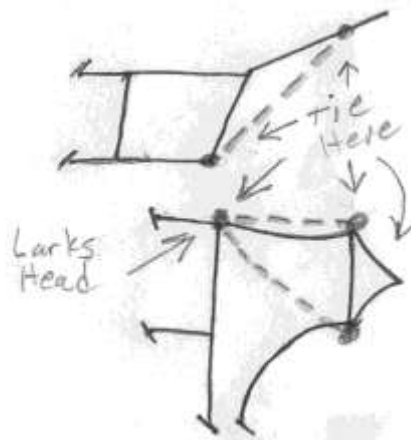


21. Insert the two front wing spars into the vinyl tubing and through the small loop of line and hold both up to the wing tips. Slide the tip up or down the spar until the kite is properly tensioned and the lengths of both spars are equal. An easy way I've found is to use blue tape to mark the wing tip ends on both spars. Then place the spars together. They probably won't be even. Halfway between the tape marks is the correct length for both. Move the tape and refit to verify.
22. Do the same for the rear wing spars.
23. Cut the wing spars to length.
24. Use the short pieces left over from the rear spars for the short wing spars. Slide them into spar tubes in the front wings and cut to length allowing for end caps. Place end caps on both ends of short wing spars.
25. Use a short left-over spar piece for the top center spar tube and insert it.
26. Assemble the kite, place it on its rear end.

27. I used a 4 point Rok bridle which worked perfectly. Using a piece of line roughly 6 – 8ft long, tie the ends to the front bottom outside spars. Using a piece of line the same length, tie the ends between the bottom outside spars directly in front of the rear sail. Now, use a slightly shorter piece of line and tie it between those two lines attaching with a prussic knot. Add a tow point loop to the center line again with a prussic knot.



28. This step may well be optional. I had good luck not flying with wing guys, but they will probably be needed in stronger winds. Tie a single piece of line from the front of the short wing spar down to the front of the lower outside spar (where the bridle attached) and back up to the rear of the short wing spar. You'll need to make sure it doesn't force the wing to bend or torque. I tied to the spar with half hitches and used a larks head around the body spar. That way I can slide line through the larks head to adjust front and rear lengths evenly.



29. Make a bag. Roughly 48" long and 14" diameter (7 inches flat).

30. Go fly your kite!

