

Delta Delirium - Barbara Meyer

Barbara Meyer was one of the invited American kitefliers who came to Portsmouth last year. She specialises in patchwork. This is one of the kites she uses in her workshops. Email: ajm01@mn.mediaone.net

MAKING A DELTA SLED

- 1) A delta sled is a wonderful light wind flyer. Unlike a genki, it won't ride the thermals and come crashing down. It does not need tails, but looks wonderful with them. .
- 2) I use the Tony Cyphert delta formulas as laid out in Margaret Greger's book, "Kites for Everyone". Then I modify as suggested by Neil Thorburn in his "SuperKites"
- 3) First draw your wing and keel full size on paper.

- 4) The length of the bottom edge is the same as the vertical spar, in our case 48". A long ruler is extremely helpful. Just place one end at the center edge, and then move up the desired amount from the horizontal.
- 5) Typically I will move the bottom edge up 8" from horizontal. This shortens the leading edge, shortens the wing spar, but keeps the area the same.

- 6) Now add a 1/4" seam allowance to the center line; 1/2" hem to the bottom; and 1.5" to the leading edge for the tunnel. (leading edge pocket) To the keel dimensions add 1/2" hems to the 2 outside edges, and 1/4" to the seam that joins the keel to the kite.

ASSUMPTIONS

- 1) Consistency is very im-

portant, the wings need to be the same size.

- 2) Use 1/4" seams.
- 3) Use 1/2" hems.
- 4) Backstitch when the first sewing line will not be

crossed by another sewn line.

- 5) I put the leading edge of the wing on the straight of grain. The vertical (AB) of the keel should

also be on the straight of grain.

- 6) This kite is sparrred for light to medium winds.

MATERIALS

- 2 wings
- 2 keels
- 1 center panel, 16.5" x 50" (will trim to fit)
- 1" x 20" strip of ripstop for tabs
- 2" x 5" piece of ripstop for spreader bar tunnel
- 4 pockets 1" x 3" Dacron
- 2 split rings #8 (.484" OD)

- (for spreader bar attachment)
- 1 split ring #7 (.43"OD) (tow point)
- 2 arrow nocks
- 2 spars, wood 5/16" (8mm) x 48"
- 2 spars, wood 5/16" x 44"
- 1 spar, epoxy G50 (.317" OD x .266" ID) filament wound

- epoxy x 56" with ferrules as needed (fibre glass or carbon)
- 8 end caps 5/16"
- 12' bridle line, 100#
- 4' line for tail loops, 50#

CONSTRUCTION

Tabs for Keels and Pockets

- 1) Get a 1" wide strip in the colour(s) of your choice.

Strips need to total 20".

- 2) Fold in half, open then fold edges to center, and finally refold down the center.
- 3) You will have a strip 1/4" wide, 4 layers thick.
- 4) Stitch down the length of the strip. Start in about 1" from the end. Hold both thread tails while starting.
- 5) Cut 2 - 3" pieces for the bridle attachment points on the keel.
- 6) Cut 2 - 6" pieces for the spreader attachment points on the wings.

- 7) Or, you can substitute 1/4" grosgrain ribbon.

Keel

- 1) Hem 2 outside edges with 1/2" hem. Fold under 1/4", then fold again. Stitch around. I use a 2.5 x 2.5 zigzag.
- 2) Trim points after double checking that the correct 2 edges were hemmed.
- 3) Take 1 - 1/4" x 3" tab piece, fold in half. Position at upper point of keel so that fold extends about 1/2" beyond point, stitch down securely.

Wings

- 1) Check wings against pattern make sure they are the same size.
- 2) Mark the hem, the center, and the outside edge. Make sure you have a left and a right wing.
- 3) Mark 1/4" and 1.5" in from the outside wing edge. (leading edge)
- 4) Fold on 1.5" line and crease well. Starting in the middle pin about halfway between fold and edge.
- 5) Use plenty of pins. This

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- need to lay flat, and tends to creep as you sew it.
- 6) Do not sew the last 3" at the top. This is where you insert the wing spars.
 - 7) Sew on the 1/4" line.
 - 8) Make sure you have a right and a left wing. Check to see they are still the same size.
 - 9) Hem the bottom edge with a 1/2" hem. Include the tail attachment loop at the outer point. This is a 12" piece of 50# line tied into a loop. Check to see they are still the same size.
 - 10) Mark position of spreader. Lay your wing over the pattern or measure up 27.5" on the center, mark, then extend line to wing outer edge. I use chalk.
 - 11) Fold the 1/4" x 6" tab piece in half, place on chalk line so the fold just extends past the sail.
 - 12) Stitch along the wing edge through both layers of the tab. Remember you have to put a split ring into this loop. Be sure to backstitch.
 - 13) Sew over tab along previous stitching line.
 - 14) Put #8 split ring into loop.

- 15) Cut 2 more 12" pieces of 50# line. Tie each into a loop. Place one at the hemline of each wing in the center seam area.
- 16) Measure the center seam so you can trim your center panel.

Centre Panel

- 1) Panel is 16.5" x 50". Hem one 16.5" end with a 1/2" hem.
- 2) Check length of panel against wing.
- 3) Remember to allow for a 1/2" hem, trim as needed.
- 4) Decide which end is the bottom of kite.
- 5) Measure 27.5" up and mark with chalk. Also find the center of the panel and mark. This is where the spreader bar will cross
- 6) Position the 2" x 5" piece over your chalk marks to make a tunnel. Use the 1/4" double stick tape to hold down one edge while you sew it

Joining Together

- 1) Baste keels to center panel. Place one on each side, positioned so the narrow point is at the very bottom of the panel.
- 2) Sew wings to the panel/keel assembly. First

straight stitch using a 1/4" seam. Push seam allowance towards panel, zigzag down, be careful not to sew over keel.

- 3) Fold the 4 pieces of Dacron to form the pockets. Sew at the top and bottom corners of the center panel. Make sure the opening faces the center of the kite.

Final Assembly

- 1) Put end caps on each end of the 44" wood spars. Slide these into the outside wings. Push to the bottom.
- 2) Fit the 48" spars into the center panel pockets. You may have to trim a little. Put end caps on each end.
- 3) Glue an arrow nock into one end of the G50 epoxy spar. Trim the other end to fit. I fly this kite almost flat, not with a pronounced dihedral.
- 4) Tie the 12' bridle line to the keels. Find the center point and larkshead a split ring on. You may have to slightly adjust after flight.
- 5) GO FLY A KITE!!!

