



The LO-DO

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LO-DO - (LO-w aspect ratio e-DO)

Materials Required

Sail - 65cm x 310cm Ripstop Nylon or Polyester

Pockets and Patches - Scraps of ripstop

About 8m of 70lb to 100lb bridle line

15 x 15cm (approx) pieces of 70lb line

5 x 1m (approx) pieces of 70lb bowstring line

Spars - All Glass fibre

6.35mm x 310cm (approx) - Spine

5 x 4mm x 62cm (approx) - Cross spars

4 x 3mm x 60cm - corner tensioning spars

Electricians PVC adhesive tape preferable the same colour as spar material

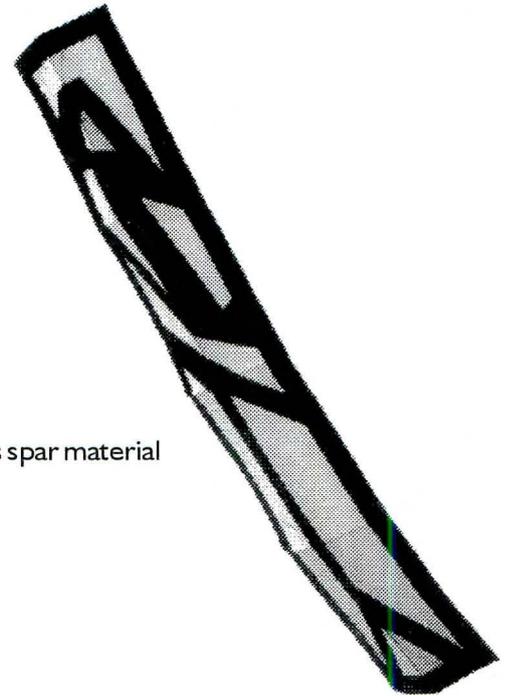
2 x 6.35 Internal diameter ferrules

5 x aluminium bow string adjusters

10 x 4mm endcaps

2 x 6.35mm endcaps

4 x 3mm endcaps



Instructions

Read through these instructions before you begin

Cut ripstop sail to dimensions indicated. This includes the seam allowance. It may be more economical to make the sail out of two pieces if you have a broad piece of ripstop. This is OK and makes no difference to performance. Hem all around the sail using a doubled over hem of about 7.5mm. This should reduce overall width of the sail by 1.5cm on each side so the final sail will be around 62cm wide. If you want to appliqué or paint your sail do it now before further construction.

Once you have finished your decoration you can continue.

Making the pockets and patches. To make perfect pockets and patches follow these instructions and you should always have nice neat pockets.

Cut as accurately as possible a rectangle of ripstop 20cm deep by about 40cm wide fold the piece lengthways so that it is 10cm X 40cm fold it again so it is 5cm x 40cm fold this once more but this time not quite in half but so that it is about 2.25cm on one side and 2.75cm on the other what you now have looks like one very wide shallow pocket, on a glass surface using a straight edged piece of glass as a rule cut off pockets from this strip try to make them all the same width about 2cm wide each cut off ten or more of these pockets.

These pockets can be stored if you have spare for later use.

You make the other pockets in a similar way only start with piece of ripstop about 25cm deep and make the final fold so that a longer flap extends from the pocket as in the diagram.

The patches are even simpler just fold up some ripstop so you get 6 or 8 thicknesses and cut on all four sides into 2.5cm squares

To attach the pockets to the kite sew around three sides only as indicated in the diagram by the dotted lines for extra strength double sew over the overlapping edges.

Attach one of the 10 similar pockets to each corner of the kite the opening pointing across the width of the kite, fold the sail in half and mark exactly the centre on both sides attach two further pockets here, find the midpoint between the pockets again and again add the final four small pockets.

Your sail should now have five pairs of pockets which will later take the bowing cross spars

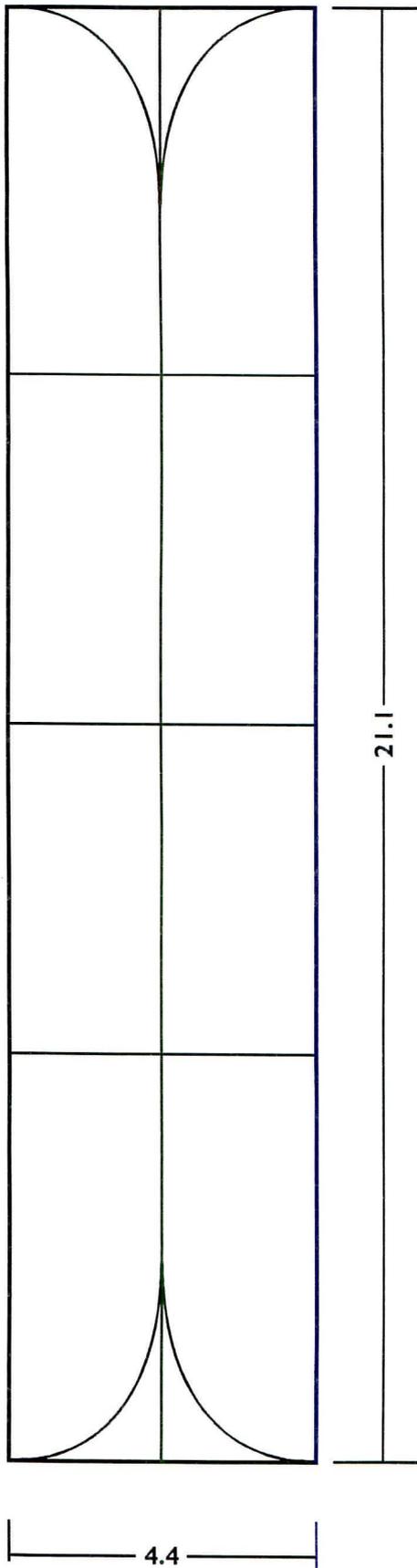
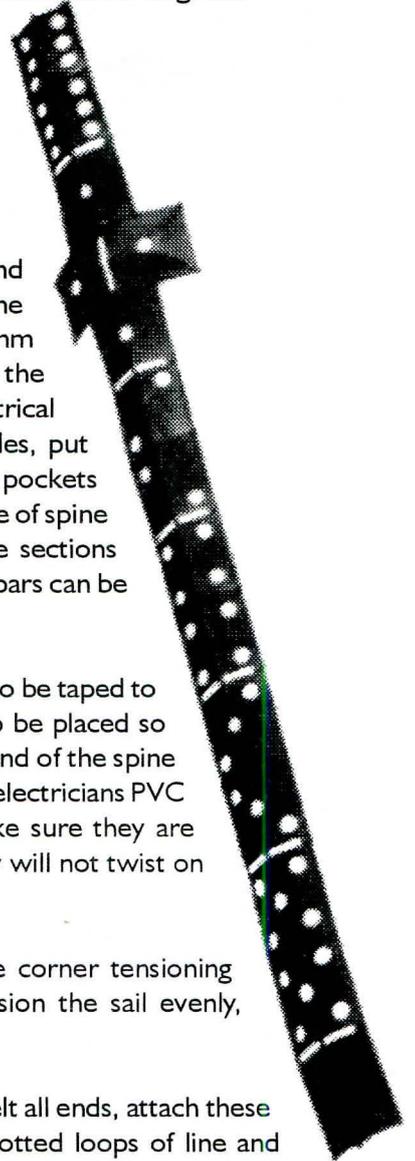
Attach the two longer pockets so that the main body of the pocket is NOT on the sail but extends beyond the sail sew an extra line of stitching as in the diagram to secure the flap adequately to the sail.

Now sew the 3 patches to the sail where the 3 middle cross spars cross the mid line of the sail, rotate the squares through 45 degrees so that the points point across and up and down the sail.



With a fine pointed soldering iron melt holes through all the pockets and patches as indicated in the diagram.

Take the 15cm lengths of 70lb line and melt all the ends with a cigarette lighter or similar to prevent fraying from the front of the sail pass the lines through the holes in the pockets and patches and tie in overhand knots at the back, where these are in the mid line of the kite all spars must be UNDER these ties.



Fitting the spars

Cut all 5 of the 4mm cross spars to fit and place with the end caps on into the into the pockets. Cut 2 x 1 m lengths of the 6.35mm spine and put one end cap onto each on the other end of each tape, using some electrical tape the 6.35mm internal diameter ferrules, put these spars into the end pockets caps into pockets ferrules to the middle and cut the final piece of spine to fit not too tightly. Remove the 3 spine sections completely so that the corner tensioning spars can be added.

These 3mm corner tensioning spars need to be taped to the end spine pieces in pairs they need to be placed so that they extend beyond the end capped end of the spine by 14cm, tape them at the other end using electricians PVC tape for about 10cm of their length. Make sure they are secure so that when they are in place they will not twist on the spine.

Reassemble the spine and check that the corner tensioning spars reach the corner pockets and tension the sail evenly, adjust if necessary.

Take the 5 x 1 m lengths of bowline and melt all ends, attach these across the sail between the overhand knotted loops of line and using the bow adjusters bow the kite to about 10cm at each cross spar.

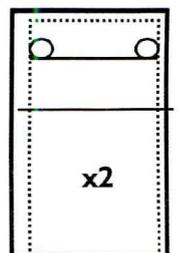
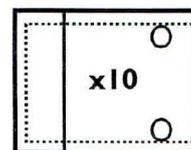
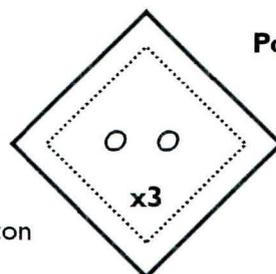
Bridling

Cut the 8m of bridle line slightly unevenly into two perhaps 4.2m and 3.8m take the short length and tie one end to the middle spar loop, take the other end and tie it to the next loop above, take the longer length and tie one end to the second cross spar up tie the other end very loosely to the top spar loop. pull all the line together and tie an over hand loop so that the towing point is approximately half way between the top cross spar and the second cross spar down, now tighten the knot on the top bridle line where it attaches to the spar loop.

This may need some adjustment depending on wind conditions.

Now go fly your LO-DO.

Pockets and Patches



Charlie Charlton

