

1.2 Metre Rokkaku

This plan has been written especially for the Artistic Kite Group Gallery Project. and accompanies the diagrammatic figures 1 to 4.

Materials

Depending on your budget, patience, attention to detail you will require

- ◆ 1.5 metres of ripstop (less if you use the wide kind)
- ◆ 2 x 1 metre lengths of 6mm dowel or 5.5mm carbon fibre tube (for the cross spars)
- ◆ 1 x 1.2 metre length of 6mm dowel or 5.5mm carbon fibre tube (for the spine)
- ◆ 2 x aluminium bow string adjusters
- ◆ 3 x aluminium O rings
- ◆ 15 metres (approx.) 50lb - nylon / polyester cord for bridles and bow lines
- ◆ 4 metres ribbon or edge binding tape (optional)

Instructions

This is a simple kite to make, it can be made in many different ways. please feel free to use your own methods of construction if you prefer them to the suggested ones. Remember there is no right or wrong way to do things only different ways.

The Sail

The sail can be made of either one single piece of fabric or five separate pieces, the easiest is of course to use only one piece, to do this mark out the shape onto the ripstop nylon ensuring the grain runs straight down the sail and leaving an additional 1.5cm all around to allow for a double folded hem. alternatively you can cut out the sail as five panels leaving about 7mm hems between the panels, the four corner panels should be arranged so that the grain runs parallel to the outside edges. the advantage of this method is that it minimises sail distortion and stretch. If you wish you can sew narrow ribbon or edge binding tape to the back, front or even inside the hems to prevent any stretching along the edges.

The Pockets

Make six pockets out of strips of ripstop as shown in fig 2 these strips should be about 27cm long and folded in half twice to produce the pocket, hot cutting strips from a pre-folded wider piece of fabric which is still 27cm long, produces nice tidy pockets which do not unfold whilst being sewn to the sail. sew on the pockets for the cross spars at points B, C, E, and F. Try to keep your sewing to a minimum as in fig 2, obviously the pockets should all point horizontally across the sail. Next sew the pockets at A and D ensuring that the openings point directly at the opposite pocket.

The Bridle attachment points

You will need to attach the bridle at the six points indicated in fig 1 you can either use about 30cm x 2.5cm long strips of ripstop folded

and sewn into tabs, this method is preferable if you use the 5 panel sail technique since they can be added when the panels are assembled, the front portion of the tab can protrude about 1cm from the face of the kite and the remainder can hang from the back surface and be used as ties to hold the spars in place, or else alternatively you can make small patches of several layers of ripstop as in fig 4 and sew these to the sail as shown, next take a fine pointed soldering iron and pierce two holes right through the patch and the sail as shown. this produces a very neat finish and negates the need for ties on the back of the sail.

The Spars

Cut the spars to fit, if you are using dowel, file a couple of notches in the ends of the cross spars as in fig 3, if you use carbon then you will need to add arrow nocks to the spar ends to take the bow lines.

Bowing

Cut lengths of 1.6m of cord for each bow line, tie a small overhand loop in one end and put it over one of the notches, the other end can now be fed through the aluminium adjuster continue around the other notch, when the line returns to the adjuster tie it securely. The cross spar can now be bowed, repeat this for the other spar. with all spars in place decide which end you wish to be the top and bow the bow line so that it is 12 cm from line to spar, on the bottom make this distance 15cm. with a pen mark the cord so that you can find the bowing points again.

Bridling

First fit a top central bridle line of around 1.2m, next fit the other top lines as a single piece of line approx. 2.5m long, lying the kite flat on its back (but still bowed), draw the three lines to a point and tie an overhand loop directly above the top spar. Repeat for the lower spar, except use 1.4m in the middle and about 2.9m for the sides. attach aluminium rings to the loops via larks head hitches, next join the two rings with a piece of cord approx. 1m long attach the final aluminium ring at a point on this final line which when all lines are taught causes the front cross spars of the kite to lift about 15cm from the floor.

Flying

Your 1.2m Rokkaku kite should now be ready to fly, adjust the position of the towing point forwards slightly if the kite will not rise and move it back slightly if the kite is unstable.

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1.2metre Rokkaku

fig1

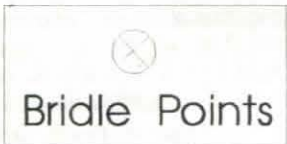
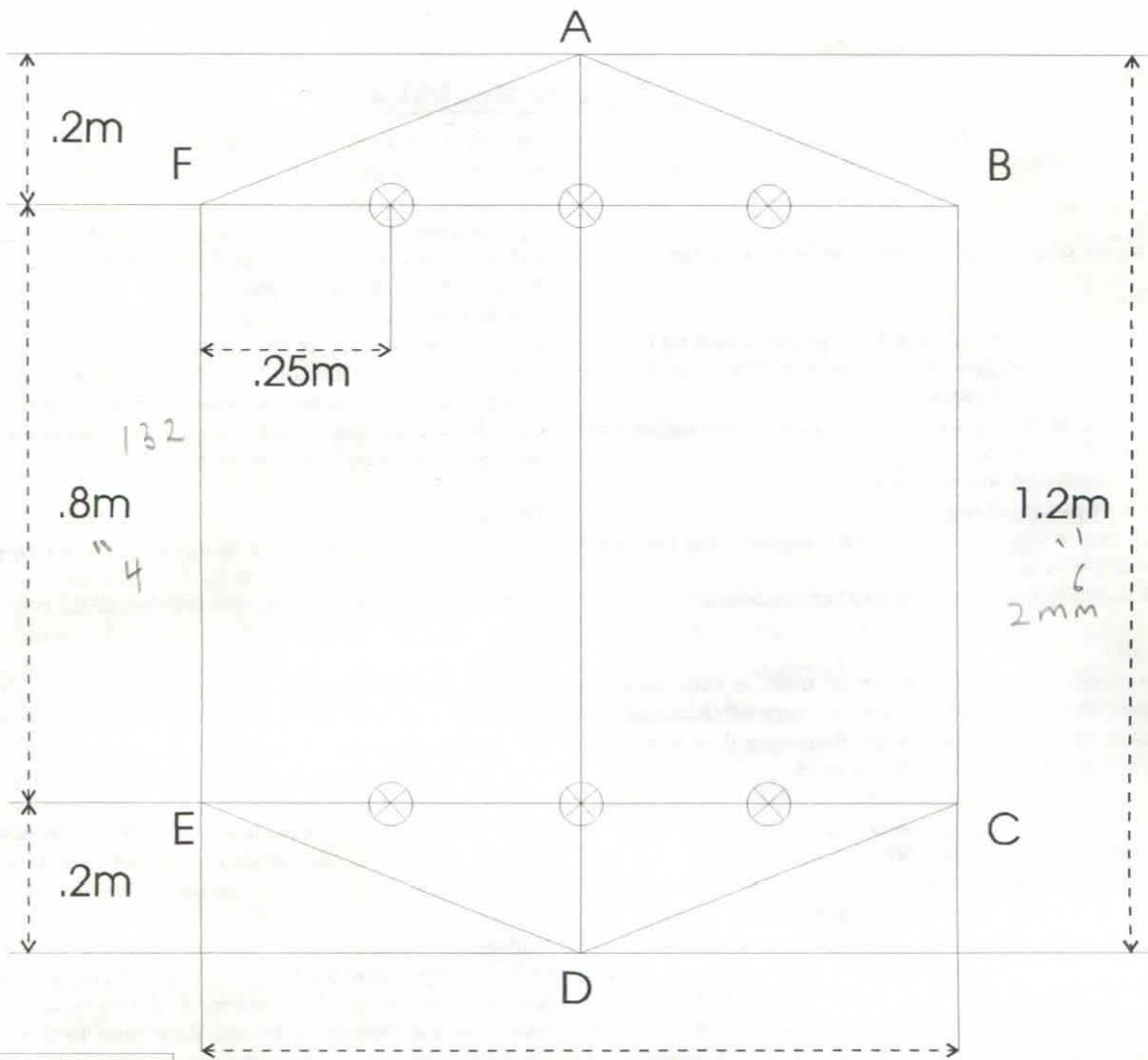
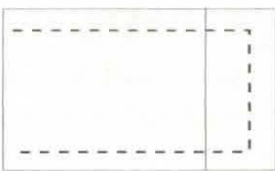


Diagram exactly 1/10th scale

fig2



Pocket Actual size

fig3



Cross spar end

fig4

