

AS ILLUSTRATED ON THE FRONT COVER - RAISA AEROCHUTE STICKLESS KITE
(RAISA STANDS FOR RAM AIR INFLATED SCOOP AEROFOIL)

DESCRIPTION

This design came to mind after making a Jalbert Parafoil, some of the sewing was found to be rather awkward, due mostly to lack of skill. This was the first attempt at using a sewing machine. The Raisa Aerochute has only external sewing (no working inside pockets).

The Raisa consists of three basic elements:-1) LIFT CELL 2) PLAIN PANEL 3) DROGUE PANEL.

1) LIFT CELL

Is a triangular pocket which when inflated approximates to an aerofoil on the top surface. Various aerofoil sections have been tried, the most promising at present appears to be that based on the wing section of the Gossamer Albatross (man powered Channel flyer). The shape of the pocket sides are arrived at by laying over the vertical section, (45 degrees was chosen) and arranged so that the developed shape had a straight seam stitched along the chord. Attached to the inverted apex of the pocket is the keel panel, having 3 eyelets in it for tying bridle lines.

2) PLAIN PANEL

Is a piece of material between lift cells, and serves to increase the canopy span in a very simple way. This also provides an occasion for a change of colour.

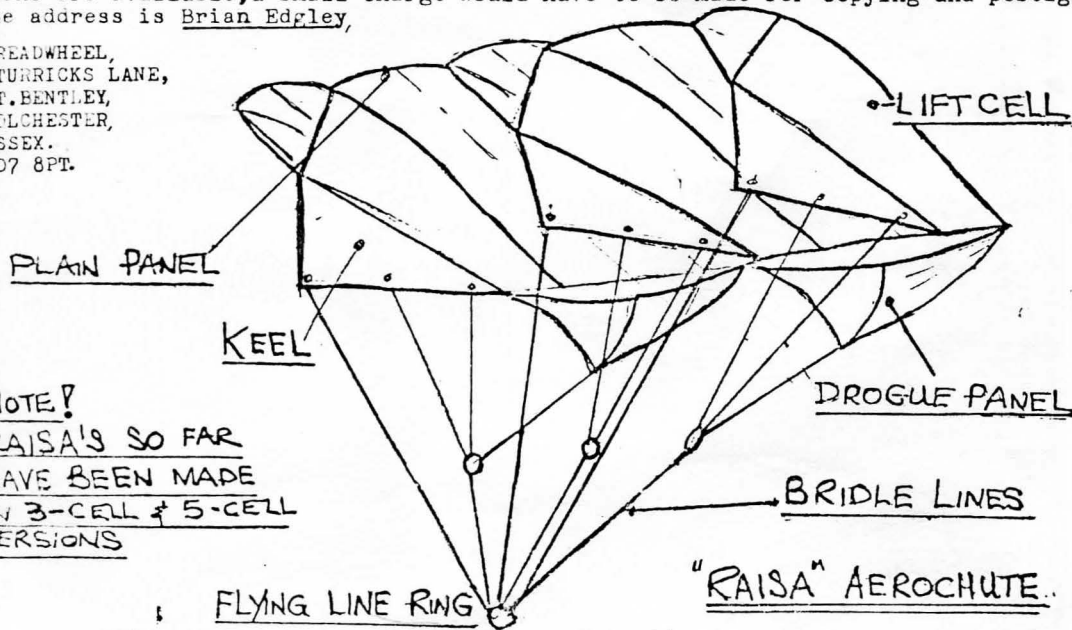
3) DROGUE PANEL

Can be likened to a small inverted Spinnaker. Attached at the two top corners to the trailing edge of the canopy, and at the bottom corner to an intermediate bridle. The purpose of this panel is to prevent the canopy from collapsing, which is what happened at every attempt to fly the canopy before they were devised and fitted. A slight in built vertical outward curve is put into each panel to encourage them to fill more readily. This also is a convenient point at which to change colour.

BRIDLES

The front bridles are one continuous nylon line each, from eyelet in keel, looped round flying ring at about 2-spans down from front eyelet, amount of line from flying ring to intermediate ring about 1-span. Allow something like 100mm extra line length for every fixing knot made in it. Flying ring is placed at a chord depth in front of the leading edge of canopy. Intermediate bridle are one continuous nylon line looped over ring and tied at middle and rear eyelets. Line length determined at assembly. The same applies to drogue panel line length. Plans are available, a small charge would have to be made for copying and postage. The address is Brian Edgley,

TREADWHEEL,
STURRICKS LANE,
GP. BENTLEY,
COLCHESTER,
ESSEX.
CO7 8PT.



NOTE!
RAISA'S SO FAR
HAVE BEEN MADE
IN 3-CELL & 5-CELL
VERSIONS

"RAISA" AEROCHUTE.

NOTE!

VIEW SHOWS HOW POCKET
SIDE TWISTS TO FORM AEROFOIL
SHAPE WHEN INFLATED

45° LAY OVER OF
VERTICAL SECTION
OCCURS @ MAX
SECTION DEPTH.

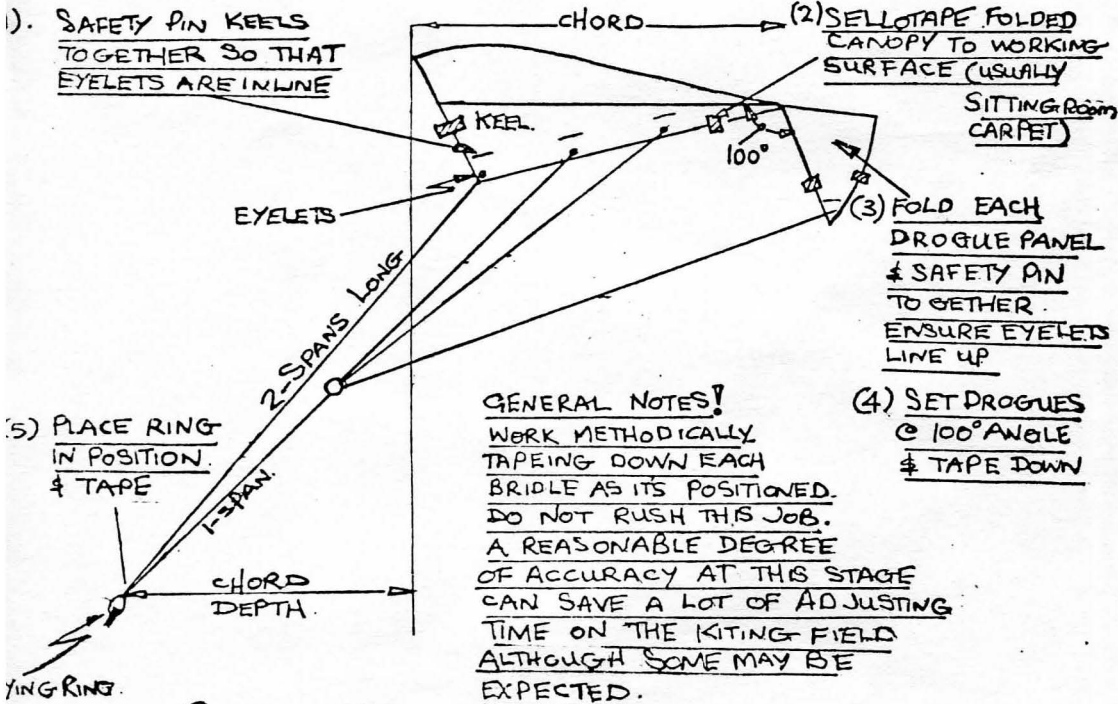
'IMAGINARY' CONSTRUCTION
LINES ON POCKET SIDE
WHEN LAID FLAT.

VERTICAL AERO
FOIL WING
SECTION.

POCKET SIDE DEVELOPMENT
FROM VERTICAL SECTION.

(1) SAFETY PIN KEELS
TOGETHER SO THAT
EYELETS ARE IN LINE

(5) PLACE RING
IN POSITION.
& TAPE



(2) SELLOTAPE FOLDED
CANOPY TO WORKING
SURFACE (USUALLY
SITTING ROOM
CARPET)

(3) FOLD EACH
DROGUE PANEL
& SAFETY PIN
TOGETHER.
ENSURE EYELETS
LINE UP

(4) SET DROGUES
@ 100° ANGLE
& TAPE DOWN

GENERAL NOTES!
WORK METHODICALLY
TAPEING DOWN EACH
BRIDLE AS ITS POSITIONED.
DO NOT RUSH THIS JOB.
A REASONABLE DEGREE
OF ACCURACY AT THIS STAGE
CAN SAVE A LOT OF ADJUSTING
TIME ON THE KITING FIELD
ALTHOUGH SOME MAY BE
EXPECTED.

BRIDLES -