PARAFOIL RIGGING - P.SCARFE

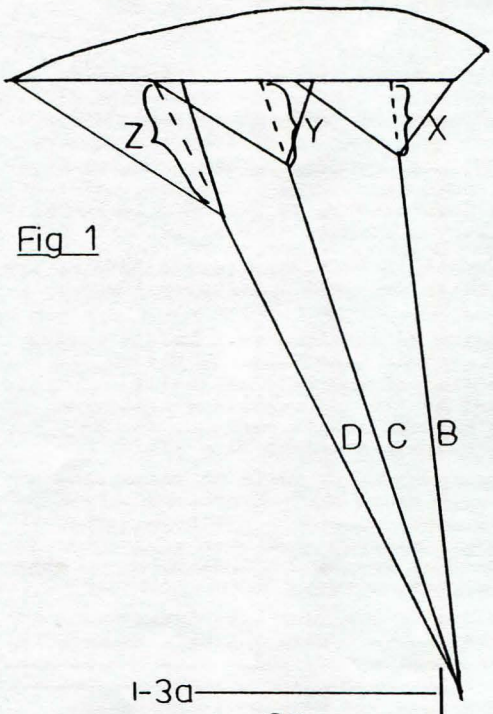

Fig 1

Firstly draw to scale plan (as Fig 1) to establish lengths X,Y & Z by extending shroud lines (mathematical geniuses can work these out by trig) and also centre shroud lengths B,C & D.

Now to establish individual shroud lengths (L)

1st) $L+X = \sqrt{(B+X)^2 + a^2}$

2nd) $L+X = \sqrt{(B+X)^2 + 2a^2}$

3rd) $L = B + 3a$

For remaining shrouds substitute Y or Z for X,C or D for B.

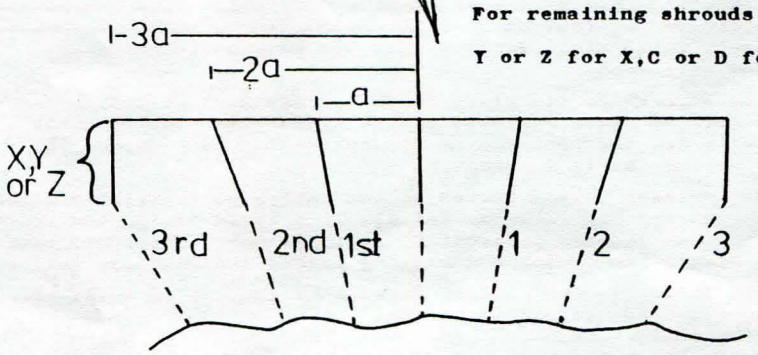

Fig 2

I think I've come up with a reasonable system for shrouding a parafoil,so there is a minimum of adjustment on first flights.After building two small parafoils and giving up in frustration after months of trimming to try to get them to fly reasonably,overhead as Pelham and Kitecraft say they should (also Tsutomi Hirio and every other kite book which carries the design) but nobody tells you how to bridle them,Pelham's the best but vague,Hirio has an excellent plan.Firstly it must be appreciated that whilst an aerofoil can be curved through its spar, the chord must be flat and the 'wing'should not be twisted for it to work efficiently.So if you can work out the shrouding mathematically and you are reasonably accurate in your kite making and measurement of shroud lines,you should be home and dry.All the photos in various books show the inner keel taut and outer keels flaring.So working on that premise I worked out the following system. I did cheat by putting small lead lines to each group of shrouds to facilitate adjustments to the angle of attack more easily.