KITEFLIERS OCCASIONAL NEWSLETTER

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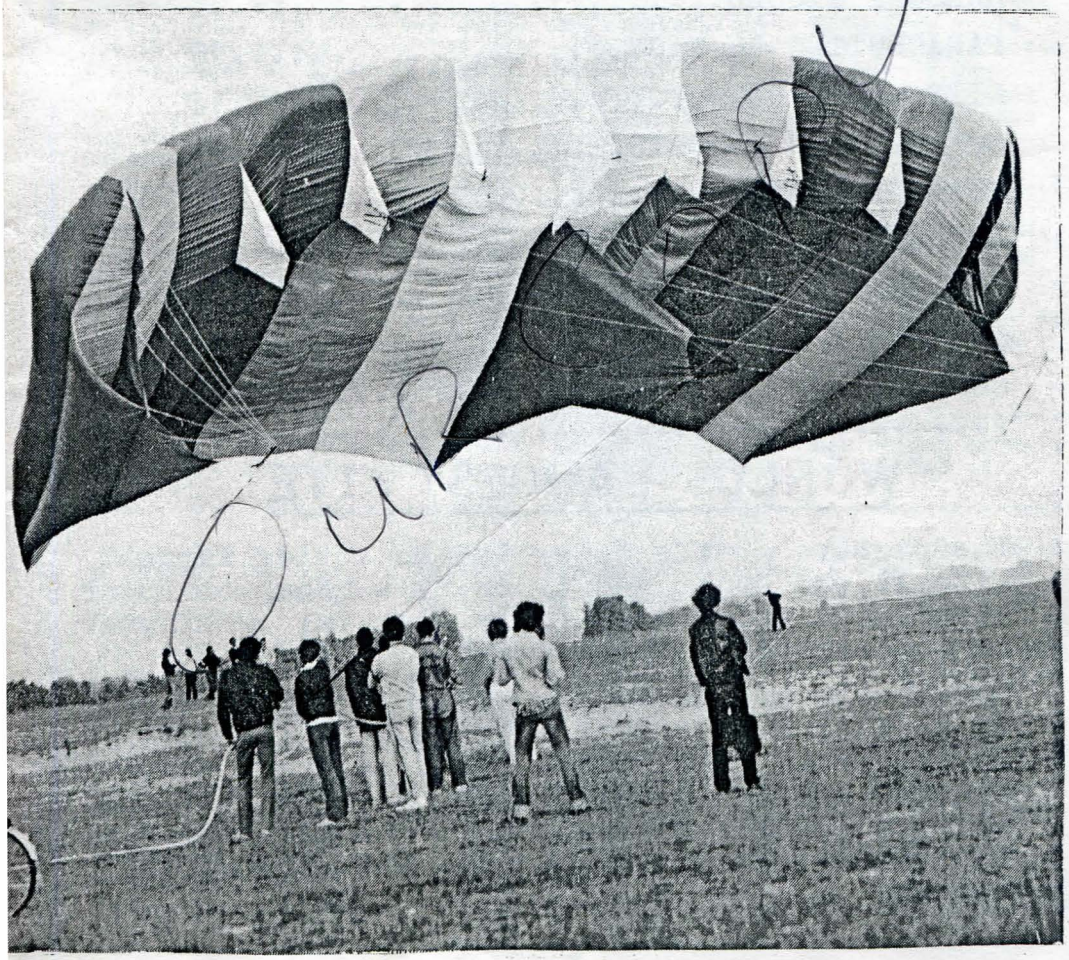

ISSUE 9 OCTOBER 1981

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WORLDS LARGEST KITE

The picture on the cover is the worlds largest kite.It was built and flown by a group of Dutch kitefliers and successfully flew for 37 minutes on its record breaking flight.

Some facts are:Surface area 550 square metres: It used 2500 metres of ripstop nylon:It took 70 people to help launch it:It is a new aerofoil design that was developed for minimum lift and minimum bridles.The record was broken at Scheveningen beach during the second week in August.

EDITORIAL

Dear Readers,

This issue is the second anniversary issue of K.O.N., if someone had told us two years ago that K.O.N. could have got as far as it has we would never had believed them;but we have somehow managed to produce nine issues in two years.

Despite what many people seem to think we have not got a second home,somewhere in Florida,off the profits.In fact the complete opposite is true.Each K.O.N. issue costs approximately £150 to produce,this excludes such things as postage,envelopes,sundries etc. Since the subscription was set at two pounds,costs have risen by around twenty five per cent,and we have personally put £342.59 of our own money keeping K.O.N. alive.(Don't worry we don't want more money yet,thats in the next issue.).As we said in K.O.N. 2,"We are quite prepared to spend our money if it means that kiting can then have a regular National newsletter."

Many of you may be wondering why we have included Ron Moultons letter in this issue.The reason for this is that like the problem that occured in K.O.N. 2 and 3 we are giving the "Victim" a chance to show his side of the "Political argument" that has arisen.

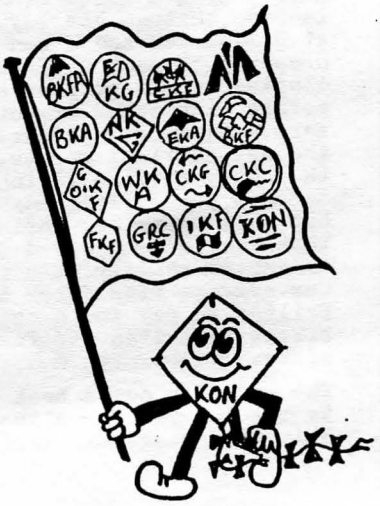
(We,as Editors,feel unsure what exactly the "Political argument"is.We can assure you that K.O.N. is totally non-political, and as such would welcome an explanation on what the "argument" is all about.)

Many readers especially those who were in from the beginning would have seen us grow and develop .Talking of developing, perhaps the observant among our readers will notice that this issue carries photographs.Admitedly only two but this was due to lack of suitable pictures.We feel sure that many K.O.N. readers have good pictures of kites (colour or black and white),so how about sending them to us,and if you could send us some details of the kite with the photo it would be even better.Naturally it is not only photos that we want.We always want kite designs,kite articles,tips,ideas etc.,etc.

To those B.U.R.K.S. followers we would like to make the following announcement.The B.U.R.K.S. are on holiday somewhere on the European coast,but will be back in the next issue.

Happy but cold flying through the winter.

Jon Bloom G A Bloom



FOR ALL CORRESPONDENCE WRITE TO:

K.O.N.
31 GRANGE ROAD
ILFORD
ESSEX
IG1 1EU

LETTERS

FROM RON MOULTON:-

Reading KON/8 editorial I wonder if I've lost my power of recollection! It was not me who asked if you would combine talents.It was Blackheath, through Terry Shea,who called the meeting;Brighton,through Geoff Locke, who suggested amalgamation,and Midlands,through Bill Souten,who said "Talk it over" or words to that effect.In that discussion Pat Lloyd and myself outlined how BKFA would be able to play its part in the newsletter production.We agreed you would be Editors and would have control over printing.Then,on reflection,you declined,saying that "nothing would be achieved" and that the "Whole character of K.O.N. would be lost".

Fair enough,but what do I read now?"We would be the ones who would be doing all the giving".Why NOT,- what are you doing anyway? Aren't you, like me,giving? My phone bill,postbag,negotiations with authorities, answers,and other efforts to encourage kite flying wouldn't have ceased. Nor would my efforts to secure news and prepare it for printing.

530 BKFA members need a newsletter Editor.Unless the person is prepared to give then the job won't be done properly!

You say that I couldn't offer "a great deal".Does an addressing system with 530 convinced flyers,payment of all costs (except labour) and posting count for "not a great deal"?.Pat Lloyd offered his skilled artwork - is that a nothing?.

I get the impression that BKFA is regarded as a remote establishment without substance,not to be trusted while KON is a faultless campaigner of service to all kite fliers.

Neither,we each know,is correct,but two phone calls arising from your editorial confirmed this interpretation quite spontaneously.The imputation extends in correspondence from Paul Chapman who defends me for some reason that is quite irrelevant.Why should we bring up one of my other activities to whitewash kiting and BKFA?.Only because some derogatory impression has been given.

K.O.N. has set out to be critical.If,at times,the comments are based on false assumption,the victim has to accept the position.What must be watched is that kite flying itself is not injured.It's poor service to destroy by creating a political argument that has no justification.

When K.O.N. started I understood it was to stir action in newsletter production.It didn't.There isn't anyone outside myself to put a BKFA newsletter together as you know and despite appeal,and your barbs there hasn't been a flood of volunteers to help.On the contrary,when I learned,through hearsay,that a meeting was held after a BKFA festival at Old Warden and I had been deliberately by-passed,I was quite prepared to pack up BKFA and refund all dues.Splinter groups rarely display honest purpose and never have permanence.I'd seen it all before with other organisations I serve.Unlike model aircraft,boats, cars,wargaming,engineering,plastic models,railways,amateur movies or the aeronautical sports,each of which have responsible governing bodies, the hobby of kite flying is followed by a considerably less committed sort of person.They may well be "beautiful people" in their own eyes but as a type,they shrink from responsibility,for the simple reason that they have adopted the kite as a symbol expressing their desire to escape reality.With few exceptions they aren't given to volunteering. Our average kite flier is a taker,not a giver (even to the extent of failing to pay for a copy of my book).So BKFA has to accept some brickbats and as its founder,I've taken them,including the financial risks.

The question comes back to who is going to unite British Kite Flying to the future?.The situation will eventually arise where I won't be able to arrange Old Warden meetings or give office time to a personal

interest such as kites.Like anyone else I have a living to make and have to ensure others around me stay secure in employment.Each of these other pusuits I've mentioned have priority in my life and demand increasing attention.They involve a thousand times more people than there are in active kite flying,so it is obvious that the present situation cannot last for ever.At least,from nothing 7 years ago we have now ten established Kite Groups in the U.K.,which is a start towards the unity which I think Tony Shea had in mind when calling that meeting in May at Old Warden.Hopefully an inspired writer/photographer/artist/organiser will emerge,but meanwhile Pat and I are still progressing slowly to the long promised next edition,in which your first explanation will appear;along with an appeal for loyalty to kite flying and the Association which was established to support it on a National basis.

* *

FROM JOHN SPENDLOVE:-

This is in response to your earlier request for material.Sorry if its a bit rambling or bitty, - I'm scaping the bottom of the barrel,not that its very deep in my case.

1) I don't know how many KONnoissieurs get "European Kiteflier" when Nick does get round to publishing it,but those who do will recall Helen Bushells "Flute 153" sled.For those who haven't seen the design, the sail is circular or elliptical,and the lift panel is double-surfaced,bearing on its underside "flutes":heavily vented soft cells, open both ends,intended to reduce inefficiency caused by turbulence.

Now with my kites,inefficiency results not from turbulence but from incompetence in cutting and sewing,so I thought I'd try a simpler version from tissue and plastic straws, and do without the flutes.This did fly,but only at around 30 degrees,not very stable,and flapping open and shut like a sick fish.Obviously,modification was called for.

I added a third,central longeron,as on the original Allison sled,and tapered the lift panel (again as on Allison's kite) by shifting the other two longerons.The kite languished at home for nine months,but I finally got round to trying it out last week,and I'm pleased to say it flew o.k. For most of the time angle was still only around 45 to 50 degrees,but this was the result of very light airs and too-heavy (30 lb) line, - when I was reeling in,the kite reached 70 degrees plus, especially when I got down to the legal limit!(Maybe it says something about me that I'd rather lose a kite I'd only spent a few pence on than the line used to tether it).

As I say,I used tissue and drinking straws.I have my doubts whether ripstop and dowel would have been light enough for the conditions the other day - not more than force 1 at ground,probably a little more on high.

The sail is elliptical,the span of the sail when flat is 1400 mm and its height is 970 mm.The distance between the two outer longerons is around 290 mm at the top and 190 mm at the bottom.I must say that the keels seem very deep for the width of the lift panel;but flight is fine as I've mentioned.

The name "Flute 153" derives partly from the flutes partly from the calculation H.B. suggests for finding the bridle points.The angle formed by lines from these to the center of the sail is 153 degrees. On my kite this is roughly equivalent to bridling from a point ¼ of the way down the spine.

Because of the depth of the keels,their trailing edges curl back noticeably.Battens might be inserted to reduce this,though I suppose this could lead to lower stability.

LETTERS (cont)

In K.O.N. 8 ,Dennis Hawkes suggests that bamboo window blinds are an excellent source of fine split bamboo.I'm not so sure-the blind I bought has the split pieces too weak and too uneven in curvature for such as fighters.Certainly it takes practise to split bamboo finely without waste-I waste more than I can use-but if you want to make traditional oriental designs,building from scratch may well be the best way.

Richard Hewitt made me a Flexikite in 1977,I managed to snap the fibre-glass rod about twelvemonth since,having rolled it too tightly.I've found that its possible to use 5x1m lengths of GRP joined with aluminium sleeves;this detracts only marginally from ideal performance at least at the lighter end of the windspeed range.

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FROM GEOFF ADAMS:-

Whilst browsing through Issue 8,trying to work out how to effectively join the wings to the body of my Cody, I read Norman Bragger's article and realised my trials with the Cody were what my hobby means to me.

He asks is it an art form? undoubtedly when you see some fine crafted kites you must say yes.As to whether its an science?,well science in the dictionary definition it certainly is-i.e truth ascertained by observation,experiment etc.So yes it is a science,but not pure in the sense that many of us use principal of physics without understanding them fully.

A gateway to a metaphysical experience?-well back to the dictionary again!! Look it up and see what you think!A technical exercise?-covered by the broad sense of science I think.Fun?-definitely when the weather and gods shine on you and you are with like minded people.A sum of all these things?-yes again,but I'm still not sure about the metaphysical experiece!-What I am trying to say is,the trials and tribulations of building a new kite,failures and mistakes,then eventually the right wind and settings and away the kite goes and all the things mentioned by Norman Bragger come together to crown all your days and nights of hard work and mental exercise.To me the sense of achievement is immense. Maybe this is the metaphysical experience!

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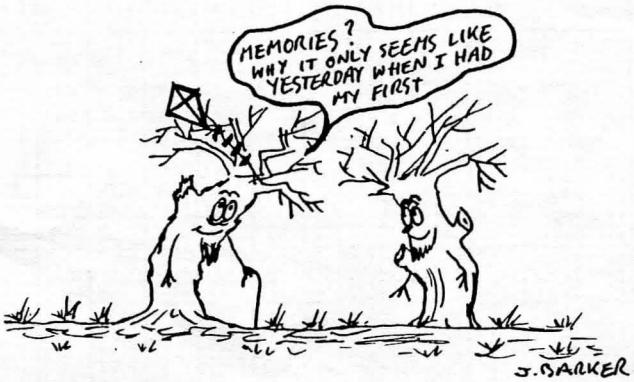
FROM A.J PRINS:-

(Mr Prins is one of our overseas readers-he lives in Delft,Holland)

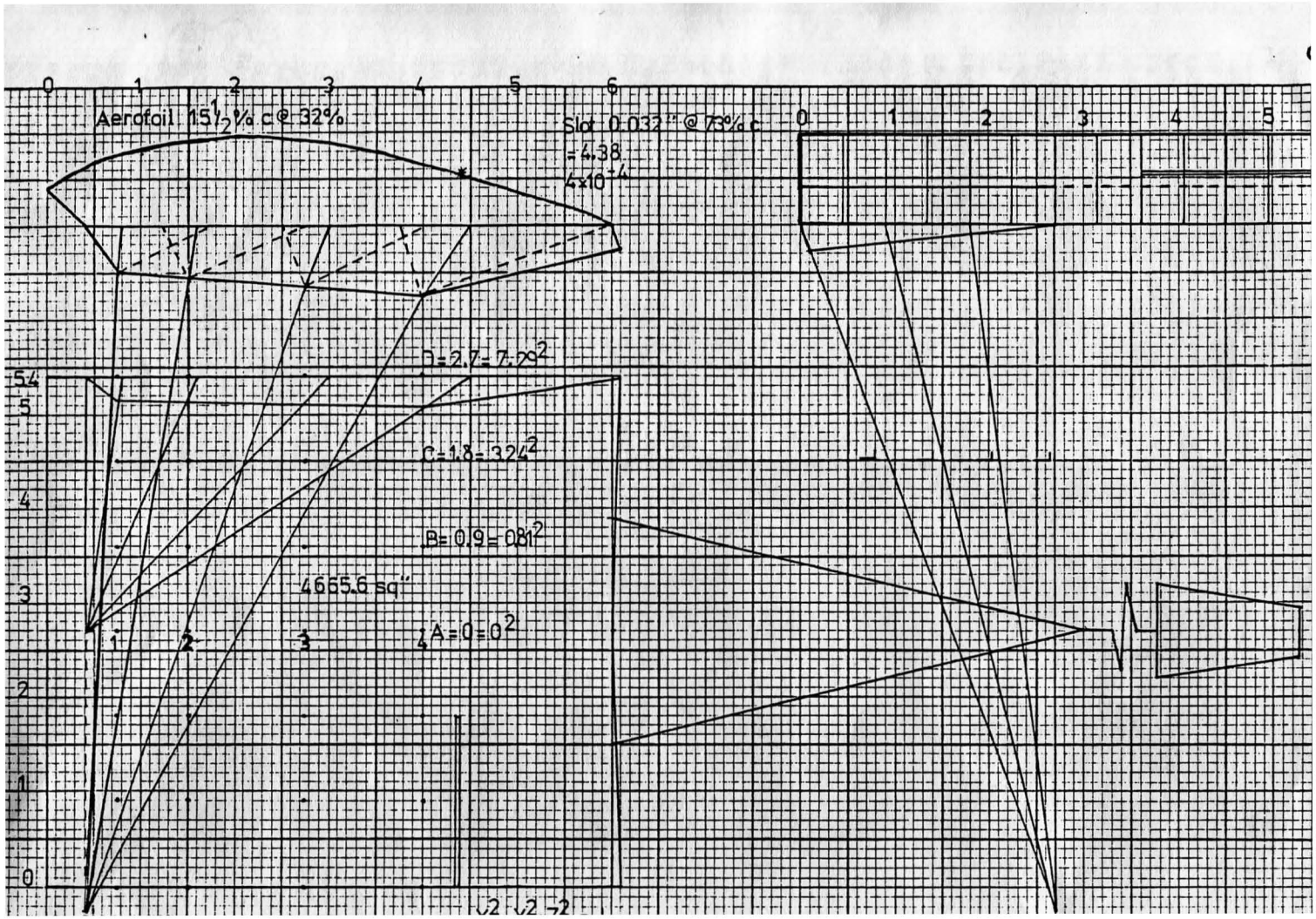
Some time ago you asked me about kites and what I am doing.Well as a twelve year old boy there was no nylon and fibre glass spars so I built my kites from paper and bamboo.My kites were the classic types like Hexagon-Envelope-Windmill and a woman.After my studies in 1956 I started to work in the store of my parents.There were several departments selling such things as typewriters,desks,chairs,drawing machines,toys and trains Several years ago I saw the kites made of nylon and fibres.Time to build them by myselves was not possible because the store takes too much time On the weekend I like to be on the land and fly kites.So I started to collect them by buying.My friends saw my collection and asked me to buy them for their collection.That was the begining of my kite corner in the store.So my hobby is now a small part of my job.To do so is very nice.Now I can promote kiteflying and advise everyone about kiteflying.I can now sell the right kite to the right person.I have found that only a small group build their own kites.Therefore I am still looking for new kites and reels that I can buy from the builders,so that I can sell them in my kite corner.

(If any kite makers are interested Mr Prins address is Brasserskade 138 2612CH Delft, Nederland)

CARTOONS



OOER I FEEL ILL.
NOT SURPRISING THE KITES YOU'VE HAD.


Aerofoil 15½% c @ 32%
Slot 0.032" @ 73% c
= 4.38
4×10⁻⁴
D = 2.7 = 7.29²
C = 1.8 = 3.24²
B = 0.9 = 0.81²
4655.6 sq"
A = 0 = 0²
1
2
3

THERMALIST FOUR B 2

The diagram shows the latest developement in a line of soft wing machines which have been built and flown over the last few years. THERMALIST FOUR B 2 is,like its predecessors based on a total projected plan surface area of 32 square feet.This area has been maintained with each THERMALIST produced as one is then in a far better position to judge whether or not the modifications made to each model are improving the performance of the marque.

Should any fellow K.O.N. reader wish to build a THERMALIST from the plan then the following points covering its construction should be of help,bearing in mind that it took a fully skilled seamstress over twenty hours of high speed machining to sew it up,together with an additional eight hours of work for rigging the shrouds and for finishing it off satisfactorily.

1) Begin construction by carefully marking out onto paper using the dimensions shown in the plan (which are in feet) the vertical rise - (rib) making certain that its maximum height is 15½ % of the total chord length (six feet) and that this dimension is positioned on the vertical axis 32% along from the leading edge.The two dimensions are critical to acheiving good low wind speed performance and have been arrived at via THERMALIST One,Two and Three and many hours of research in aeronautical journals,and field trials.To emphasise the point,number Three had a chord thickness of 17% and flew like a lead lined barn door.

2) Once the rib outline has been plotted and drawn onto good quality paper (try paper from Telex machines) add a ⅛" margin all round the original rib outline and cut out the paper pattern to this second line.

3) Next draw up paper patterns for the vertical fins of which there are four sizes,each size consisting of five fins.The dotted lines in the sketch show the position of each ventral along the lower (underside) of the wing chord.It should be noted that as there are twenty fins in all,they are only sewn directly beneath ribs 3,5,7,9,11.Again allow a ⅛" margin all round the four separate paper patterns and cut out to this line.

4) Mark out the side skirts,shown by the solid lines enclosing the dotted ventral fins beneath the vertical rib onto paper,again adding a ⅛" margin all round.Cut out the paper patterns.

5) There should now be six different paper patterns.One for the vertical ribs.One each for the four sizes of vertical fin and finally one for the side skirt.

6) Arrange the patterns onto 1½ oz per square yard ripstop nylon and very carefully cut out 13 ribs,5 each of the four sizes of vertical fin (20 in total) and 2 side skirts.

7) Set up your sewing machine with a new size 90 needle (which should be changed at the first sign of bluntness) threading it with cotton thread.Do not use nylon thread.Sew all the ⅛" wide margins into a rolled hem ¼" wide with the remaining ⅛" being folded under this ¼" wide hem so that no cut edges can be seen.The outer edge of the hem finish on the dimension lines shown in the plan.These hems must be made at this stage on all the raw cut edges except those on the upper curved section (camber) of the vertical ribs.

8) Cut two six foot long lengths of 36" wide material which will form the lower surface of the wing and sew them together using a rolled hem so that a sheet of material 6 ft long by 6 ft wide approximately is formed.It is a good idea to trim the two edges of the material forming the central rolled hem straight prior to sewing.This is due to some ripstop displaying a definite curve over such a length.

9) A very good straight edge can be obtained by using a sixteenth inch thick aluminimum strip 3" wide by 6 feet long cut on a guillotine by a local sheet metal manufacturing company.

10) Using tailors chalk mark an edge at right angles to the central seam at one edge of the panel,trim up square and sew a rolled hem which will form the leading lower edge of each vertical cell.Square up the two sides running parallel to the central rolled hem cutting to the plan width plus ⅜" either side.Hem up these two edges as before. NOTE.When marking out the width dimension take one side of the ¼" wide central hem as the centre line of the lowre panel.This will enable the central rib to be sewn dead in the centre of the panel with the ribs own ¼" wide hem sitting exactly on top of the lower panels hem and not overlapping it by ⅛".

11) Do nothing at this stage to the lower panels trailing edge as this will be formed into a rolled hem along with the top surface of the wing on completion of all the sewing operations,bar one.

12) Lay the lower panel onto a flat surface and smooth out all the wrinkles.With the straight edge mark out in chalk on the panels surface eleven parallel lines running from the leading to trailing edge,these marking the positions of the vertical ribs 2 to 12.Starting from one side of the panel sew into position each vertical rib using two lines of stiches down the ¼" wide hem.Each line of stiches should be three sixteenths of an inch apart down the centre line of the hem.Each rib should have its lower hem pointing towards the rolled hem on the centre of the panel.When the central rib is in position directly over the central hem change the direction in which the hems of the remaining ribs are sewn so that these,too,will point towards the centre.Continue sewing in ribs finishing with 13.

13) Turn the lower panel over and place on a flat surface taking care that all the ribs point away from the panels centre whilst underneath and smooth flat.With the straight edge square a chalk line onto the panel from one side of the trailing edge to the other.This line must be at right angles to the panels sides and will need to be adjusted for position so that all the vertical ribs trailing points,where they finish on the rear of the lower panel,are covered by the chalk line.Whilst some rib points will extend beyond this line due to slight sewing variances as long as all the points meet or extend beyond the chalk line toward the trailing edge the line is in the correct position.

14) Cut into 2½" lengths thirty three pieces of ⅛" wide cotton tape and fold each one in half.Onto each tape fit one aluminimum ⅛" wide throat "D" ring.Take twenty of these assemblies and pin one onto each of the points of the ventral fins making sure that the fin lies between the folded tape.Fold the ends of the tape over so that the cut edges of each end of the tape are hidden,finally checking to see that the tape points directly in line with its respective bridle line as shown on the sketch.Sew each tape with the "D" ring into position on the twenty fins.

15) Starting from the trailing edge begin to sew into position the rear ventral fins directly under vertical rib 3,with the hem of this fin pointing toward the central line of the panel.Before reaching the front of the fin with the stiches lay the rear point of the next smaller fin onto the front of the rear fin in the position shown by the dotted lines.Repeat this procedure with the next smallest fin and then finish off this line of ventral fins by positioning the front of the last fin exactly on the lower panels leading edge.Repeat this operation for the fins under ribs 5 and 7 and then changing hem direction 9 and 11.By working from the trailing edge to the leading edge when sewing the fins into position all the hems will point toward the centre line of the panel ans secondly the overlap between each

fin will be held tight by the bridle lines.Turn the whole panel around 180 degrees returning down each line of stitches securing the fins; three sixteenths of an inch from the first line finishing off at the trailing edge.

16) Pin into position on each of the two side skirts four tape and "D" ring assemblies in the positions shown by the bridle lines and sew on as before with the ventral fins.Stitch an additional tape with "D" ring onto the pointed end at the rear of each side skirt.

17) Sew the first side skirt directly underneath vertical rib 1, remembering once again to point the hem toward the panel centre.Sew the second skirt underneath rib 13 again remembering the hem direction.

18) Cut two 36" wide of ripstop material into two seven foot lengths. Prepare a second panel and sew up in the same way as the lower panel having hemmed sides and leading edge leaving triling edge raw.Remember to make the central rolled hem offset and make sure that this is biased to the same side as the lower panel when it is finally sewn onto the vertical ribs.

19) Take this upper panel and lay it out smooth onto a flat surface and chalk onto its top surface eleven parallel lines as before with the lower panel.Place panel to one side.

20) Lay the lower panel onto a flat surface with the vertical ribs upper most and smooth flat.Carefully take the top panel and pin its leading edge to the upper leading point of rib 1 only,taking into account that $\frac{1}{8}$" of the ribs upper curved raw edge will eventually become a hem.Continue pinning the upper surface panel onto rib 1 finishing at its trailing edge.Measure 73% along a line running parallel to the lower surface beginning from the top panels leading edge and chalk mark this position on the edge of the top panels surface. This point is shown in the sketch by a star on the vertical ribs upper curved surface.Remove all the pins.

21) Take the top panel and place it onto a flat surface.Measure $\frac{1}{2}$" beyond the chalk mark toward the trailing edge and then draw a chalk line at right angles to the central hem and cut along this line.Set the two sections aside.

22) Cut 16 plastic strips,one sixtyfourth thick $\frac{1}{4}$" wide with a length equal to the distance between each vertical rib less $\frac{1}{4}$".Round ends off.

23) Take the front half of the upper panel and sew its trailing edge up into a rolled hem so that each plastic strip will fit snugly into the centre of the hem.Repeat this operation with the leading edge of the rear half of the upper panels.

24) Make 24 one thirtysecond inch thich,$\frac{1}{4}$" diameter plastic discs and drill four holes into each one so that they look like flat buttons. NOTE.The one thirtysecond inch dimension is important.(On Four B 2 transistor spacers were used after trimming off the excess with a sharp knife).

25) Insert four plastic strips into each side of the hem made in the top surfaces trailing edge and also into each side of the top surfaces leading edge of the rear panel.The tips of the first plastic strips inserted into either side of the hems should be positioned so that theyare $\frac{1}{8}$" short of the chalk line where the upper curved edge of vertical ribs 5 and 9 respectively will be stitched to the top panel. Position the second set of strips so they are $\frac{1}{8}$" short of ribs 4 and 10.Position the third set $\frac{1}{8}$" short of ribs 3 and 11.Finish off with the last set of strips inserted $\frac{1}{8}$" short of ribs 2 and 12.

26) Without disturbing the positions of the strips in the hems gently place the rear section of the upper panel onto a flat surface with the top uppermost (chalk lines showing).Carefully lift the front section of the upper surface and position its trailing edge so that its hem,with the strips,is directly over rear panels hem with the strips in it.There should now be ¼" overlap by the front sections rear edge over the rear sections front edge.Use the chalk lines marking where the vertical ribs are to be stitched to the top panels to ensure parallel.Pin together the upper front and upper rear panels at cells 5,6,7 and 8.

27) Place one of the ¼" diameter discs between the upper and lower strips of cell 4 halfway from either end of the strips.Using a Toolmakers pin vice with a 0.020" diameter drill pierce a hole through the upper hems fabric,strip and fabric underneath to align with one of the holes in the disc.Without moving the hem on the panel underneath check for alignment of the lower strip and drill through this hems material,strip and out the other side.Remove the drill and place a needle into the holes made in both strips.Repeat the operation to make further holes which will pass through the remaining holes in the disc.

28) Sew the top surface strips to the lower strips with the disc inbetween.Repeat the same operation for the centre discs of cells 3,2 and 1,checking the alignment of the chalk lines with each successive cell stitched together.

29) Sew into position a disc ⅛" from either end of each plastic strip for cells 4,3,2 and 1.One side of the upper surface is now complete.

30) Repeat the whole operation for the other side of the top surface assembly starting with the centre disc in cell 9 then 10,11,12.

31) Sew a double line of stitches between ribs 5 and 9 and the top surface is now finished.

32) The top surface assembly can now be stitched to the vertical ribs which are already sewn to the lower panel.Starting with the top surfaces leading edge start sewing it to the vertical rib 1,remembering to point the ribs hem towards the centre line.On reaching the trailing edge with the stitches return back up the hem to achieve a double line of stitches which should be three sixteenths inch apart.

33) Repeat this operation for vertical ribs 2,3,4,5,6 and 7 remembering hem direction and then changing hem direction stitch ribs 8,9,10,11 12 and 13.

34) As the cells hem of rib 13 cannot be sewn internally,begin by stitching the rib to the top surface with ⅛" of the ribs curved edge protruding outwards.From the trailing edge begin to return stitch up the seam by folding the ⅛" margin into a ¼" wide rolled hem flat onto the top surface panel.Because this second line of stitches are being sewn internally from the trailing edge of the cells rear aperture the sewing machine will only allow the stitching to go so far before the excess of material around the machine sewing foot will bring the line of stitches to a halt.Cut the threads and as before restart sewing from the leading edge continuing until the line of stitches started from the cells rear are reached and passed by with approximately 1" of stitches.

35) Pin the top surface to the lower panel on the chalk line left on this panels trailing edge.Leaving a ½" wide strip,cut off the excess material from the upper and lower panels raw trailing edges.Remove the pins.

36) Fold and fold again the two raw trailing edges so that a rolled hem is formed on the underside of the lower panel.The front edge of this fold should extend ⅛" beyond the trailing edge chalk line previously

made,towards the front of the wing.Sew a line of stitches on the hem directly over where the chalk line is hidden from view.Repeat with a second line,¼" behind the first line of stitches which now finishes off the trailing edge with a firm rolled hem of material.

37) Sew into position one tape assembly with "D" ring directly onto the trailing edge at the central rolled hem position of the panels.

38) Again onto the trailing edge sew a tape with "D" ring 15" from the centrally positioned ring.Repeat for the tape assembly on the opposite side.

39) The sewing operations for the construction of the wing are now completed and all that remains is for the shrouds (bridle lines), droque lines and side skirt trailing edge lines to be fitted.

40) Suspend a plumb bob from a ceiling lamp rose (or similar) so that its pointed tip is ¼" off the floor.

41) Place the wing onto its back and gently smooth it out ensuring that the upper panels vertical ribs seams are directly over those of the corresponding lower panel seams.Move the whole wing gently towards the plumb bob and position it so that the point where rib 7 meets the lower panels leading edge is directly underneath the bobs point.

42) Place two lengths of heavy timber each six feet long either side and almost touching the ventral fins of rib 7.

43) Take a length of light nylon line and secure one end onto the same point from where the plumb bob is suspended.At a vertical distance from the floor tie an 1½" diameter split steel key ring onto this second line with its centre to floor distance being at 7'3".

44) Cut four 8' lengths of 40 pound breaking strain line and by taking them all together tie a single half hitch onto the suspended 1½" diameter steel ring,ensuring that there is approximately 4" of excess line remaining beyond the hitch.Pull tight.Repeat the half hitch with the excess line again and again pulling tight up against the previous hitch with each one made until there is over 1½" in length of half hitches running down the long length of the four line group.Seal all the hitches with nail varnish and trim off the remaining excess short lengths of line.

45) Take the first long line on the steel ring and pass it through the "D" ring on the front central vertical fin.Pull gently on the line until this fin is standing upright with no sag in the fins material

46) Tie the line onto the "D" ring with a "Perfect Knot" ensuring that the line and ventral tension is maintained whilst it is tied. (See Knots & Splices by Cyrus Day Granada Publishing for a description of this knot).Trim off the excess line.Take the second line on the ring and in the same manner tie it to the second ventral fin from the leading edge held between the two timbers.Repeat the same operation on ventrals three and four.Do not forget to seal all knots with nail varnish.

47) Cut another four lengths of line slightly longer than the original four and tie them as before onto the steel ring.Carefully insert a second set of timbers either side of the ventrals above vertical rib 5 ensuring that the panels are still flat and that that the plumb bob is in its original position over the leading edge of vertical rib 7. Take the nearest line on this second group which is next to the first group of lines on the steel ring and with a "Perfect Knot",as before tension up,and tie up the front ventral fin of rib 5.Repeat with line 2 of this second group to ventral 2 and so on to line four and ventral 4.

48) Mount onto the steel ring another group of four lines (similar in

length to the second group),adjacent to the group of lines supporting the ventrals of rib 7.

49) Remove the two timbers from ventrals 5 and gently place either side of the ventrals above rib 9 ensuring that the panels are still flat and have no wrinkles.Tie up this group of four ventrals as for those of ventrals on rib 5 ensuring that each line is of the same length as those for the four lines supporting rib 5 ventrals by using a steel tape measure to compare line lengths.

50) Repeat all the relevant steps above for ventrals 3 and then 11 finally finishing off the rigging of the shrouds by securing the side skirts to their respective lines.The timbers on this occasion should be positioned next to the skirt face which is facing the central rolled hem of the panels.The rigging of the shrouds is now complete but DO NOT remove the 1½" diameter steel ring from its suspension line.

51) Cut two lengths of shroud line each 3½' long and tie them to the "D" ring mounted at the center of the trailing edge.Maintaining the same degree of skirt angle which is supported by the shroud line running up to the steel ring attach one of the lines onto the "D" ring mounted on the very tip of the skirts trailing end.Repeat for the other side skirt.The ring can now be released from the suspension line.

52) Cut an 11' length of lightweight three strand model aircraft control line wire and slide onto one end a ½" length of one sixtyfourth inch bore brass tubing.Thread the end of the wire,but not the tube, through one of the two remaining "D" ring assemblies on the trailing edge of the wing.Sliding the brass tube up towards the "D" ring pass the free end of the wire back down the tube so that the wire is secured to the "D" ring by a loop.Adjust the loop to a neat size and then crimp the brass tube in several places with wire cutters to secure the loop fast.

53) Take a similar piece of tube and slide it onto the free end of the wire for a distance of spproximately 5½'.Hold the tube in this position and with the free end of the wire pass it back up the tube until only a small loop is showing.

54) Mount the free end of the wire onto the opposite "D" ring using a tube as before and crimp the loop secure.

55) Adjust the position of the center brass tube containing the two wires until they are of equal length about the tube.Leave a small loop showing and then crimp the tube to secure.Add a ¼" diameter split ring to this loop together with a small lightweight swivel.

56) Cut 18' of wire and mount a ¼" ring onto each end using a tube as before.Carefully roll up onto a wooden storage reel securing the free end.Place to one side.

57) From ripstop nylon build a drogue to the size shown by making a paper pattern first.As a drogue when opened up will form a segment of an annulus mark a 3' and 1½' radii onto the pattern.The arc of each radii being πD of the two diameters shown on the plan.Sew up the drogue into a cone with a rolled hem at either end.Equi-spaced around the largest diameter opening sew on three "D" ring assemblies with tapes.Tie three 1½' long lengths of shroud line onto a ¼" diameter split ring and secure the knot with varnish.Tie and varnish each line onto its respective "D" ring on the drogue.

58) The THERMALIST is complete and ready for flight.

59) As the wing has been specifically designed for very low wind speeds test flying should only be carried out in a 1 to 4 mph wind speed.

60) The flying line should be 150 pound breaking strain braided

nylon line with a large swivel mounted on the end.DO NOT tie the line to the swivel as almost any knot will reduce the line breaking strain by at least half.Use a small thimble obtained from a boat chandlers for all flying line terminations.Pass the line round the groove on the pear shaped thimble lashing the short end back onto the main body of the line with Racking Seizing for at least four inches.Trim of the excess line and varnish the whole Racking.To secure the finished line to the swivel use a miniature shackle again obtainable from the chandler.A similar shackle should be used to secure the swivel to the $1\frac{1}{2}$" diameter ring on which the shrouds are mounted.

61) Under ideal conditions it will be possible to fly the wing without a drogue but as the wind speed increases one should be fitted using the 18' long steel drogue wire.Do not use the drogue without this line as it will impare the optimum performance of the wing.

62) The very best flying can be obtained on warm sunny days when the wind speed is almost zero at ground level.Pay out 150' of line and with the assistance of someone holding the wing open by the leading top edge run into the winds direction.The wing will rapidly climb to over 100' when it will be lifted by the higher wind speeds found at this height.By moving around the flying field one should soon find a thermal which will enable the THERMALIST to come into its own and where a flying line angle of nearly 90 degress to the horizontal will be achieved.

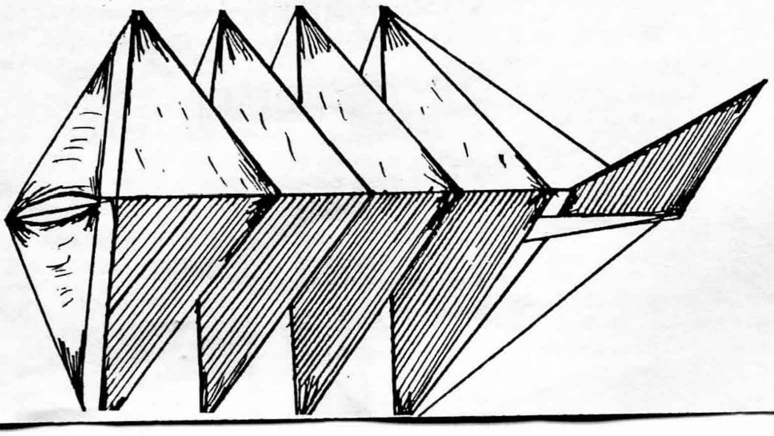
63) As you are now the possesor of one of the finest soft wing machines currently around treat it with great care especially when folding it up as the platic strips which form the upper panels slots can easily be damaged but are difficult to replace.

* * *

MARCONI RIGGED?

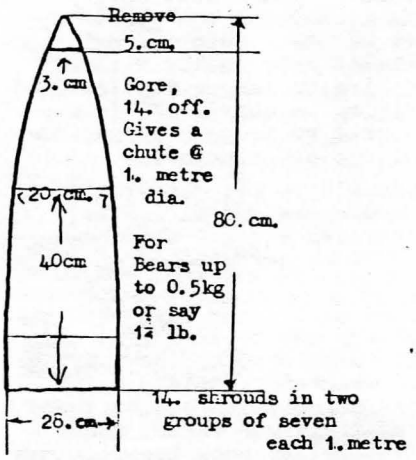
Dick Faulkner writes "In the August issue of K.O.N. there is a letter from Mr P.Chapman re a strange Triplane kite,in which he is interested and thinking of making.Mr.Chapman says it looks good - Yes it does! All the same it is a fraud,I fear.The Marconi Rig Kite did not appear (in flying form) until about 1944.From 1897 - 1910 there was a glut of people designing very exotic looking kites - eye catchers,but dud flyers.You can be quite sure that if any of these strange kites had been any good their design would have been in use today.I am not in anyway throwing cold water on a study of old kite designs.There are about 300 books and magazines in which reference to strange kites can be found (I myself discovered The German Roller from such a study).It is the best kite I have ever flown! and I have flown so many.Hoping the above will be of interest to Mr Chapman."

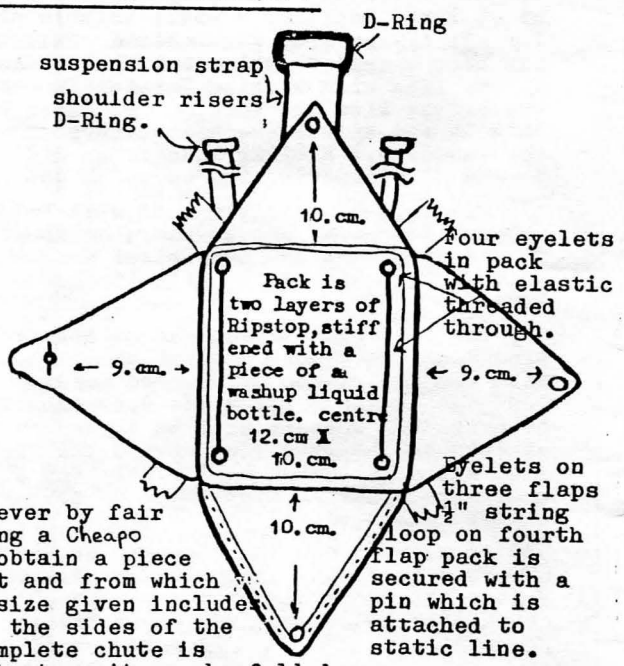
Steve Gooding writes to say that in "Kitecraft" by Lee and Jay Newman there is a very similar kite built and flown by Art Kurle in America.



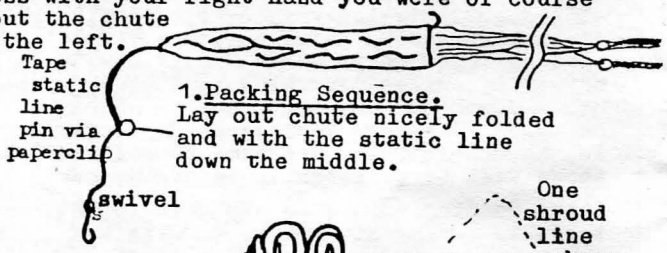
Sketch of the Art Kurle four masted schooner as mentioned by Steve Gooding.

PARACHUTING IS EASY

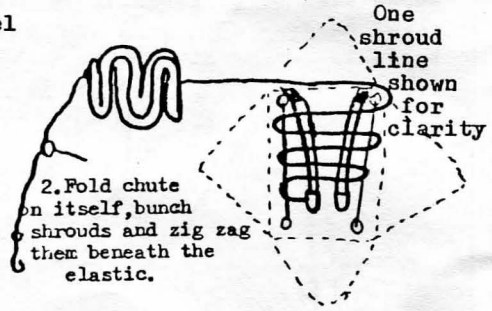




First procure your Bear or whatever by fair means or foul and for Parachuting a Cheapo version is an advantage. Second obtain a piece of card large enough to mark out and from which you can cut the Chute gore. The size given includes 1cm overlap. It is essential that the sides of the template are curved else the complete chute is distorted. Unproofed ripstop is best as it can be folded small. The harness can be made from webbing or proofed ripstop, and is in two straps which go from the hip over the opposite shoulder over the hip through the legs and back up to the hip. The harness with the addition of a waist belt is pinned on the Bear and the crossover point on the back is carefully marked, this is where the pack is sewn on. Whilst you were doing the harness with your right hand you were of course cutting out the chute gores with the left.

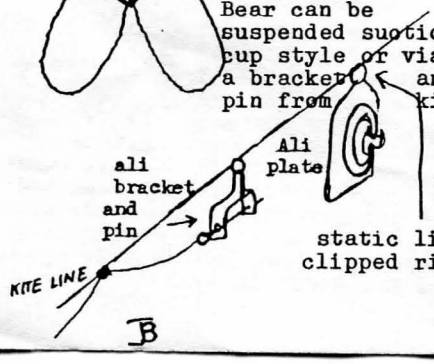


1. Packing Sequence.
Lay out chute nicely folded and with the static line down the middle.

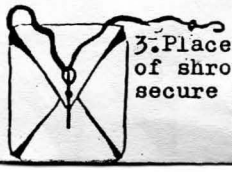


2. Fold chute on itself, bunch shrouds and zig zag them beneath the elastic.

Bear can be suspended suction cup style or via a bracket and pin from kiteline.



static line is clipped ringwise.



3. Place chute on top of shrouds and secure pack with pin.

JB

WASHINGTON KITEFLIERS ASSOCIATION

In their latest magazine David Checkley writes about the occasion when the Japan Kite Association met with the Peoples Republic of China Kite Institute for the first time.

He says "This year my planned two week Kite Festival tour of Japan turned into a seven week trip.Soon after we arrived in Tokyo,Hiroi invited me to join the JKA tour to China at the end of May.

May 20,1981 was the historic occasion when 16 kitefliers from the Japan Kite Association and I were received by a like number of Chinese at the Peking Kite Institute.It is headquartered at the National Art Gallery and staffed with several men and women.An exchange of kites occured;JKA presented their patches and hats;a Hiroi designed medal was given.Tables were covered with cookies,cakes, candied fruits and orange pop (the usual non-alcoholic beverage of China).Members of both groups were introduced;the Chinese association like ours runs the full gamut of ages and occupations;from young men and girls to senior citizens.

The next day we met the Chinese kitefliers at the Temple of Heaven in Ten Dan Park for a big kite fly.Both groups demonstrated their most exotic creations-hundred disc centipede with a papier mache dragon head long trains of hand painted silk bird kites,crabs,shrimp,traditional kites and a unique kite made of the crossed Chinese and Japanese flags. This last was presented to the J.K.A. group as a symbol of friendship.

The highest flying event came on the following day at the Great Wall of China where we also met the Peking Kite Institute fliers.After an exhausting climb to the top of the wall (it seemed like a mile horizontal and a half-mile vertical) we launched a variety of Chinese, Japanese and American kites.

One of the most popular kites was a Snow Goose kite.Made by Joseph and Alice Lee.It was brought to China by Masaaki Modegi.Pat Gilgallon presented it to him at a banquet climaxing our Kite Festival Tour of Japan the week before.

We then took a mini-bus to Tientsin to visit the Tientsin Kite Art Co.,where most of the export kites are produced.The factory is located in what looks like an old three-story building.Some sixty employees about half of whom were young women were making split bamboo frames,papier mache heads,were hand painting silk coverings and assembling the kites,each a real work of art.This factory trains apprentices for the silk-screening plant nearby under guidance of master kitemakers.At the factory store these hand made kites were sold for 11 dollars to 91 dollars,real bargains.

Because of high population density,trees etc.,kiteflying is forbidden in Shanghai so we bussed out to the countryside.The site was a paved area the size of an airport runway,used for threshing by hand.Farmers and children from the surrounding communes came to watch and help.

I had brought a supply of McDonalds plastic baggie kites,scissors and scotch tape.The kids quickly figured out how to assemble and fly them.The star performer of the day was Hiroi with his Flexifoils one of the few times we had the wind to fly them.

On returning to Japan with the Japanese tour group,I visited the Shirone Kite Festival.Many fellows there send greetings to their friends in Seattle,having been there for the Orient Expressed Festival in October 1979."

KITE GROUP NEWS(cont)

CERF-VOLANT CLUB DE FRANCE

We recently received several of their magazines,which are very good indeed.In them is a series of articles concerning what looks very much like a German Roller-which is called a Biplane"Roloplan".There is also a concise plan for this kite and a Triplane"Roloplan".These plan are both very well drawn.

Also sent with the magazines was a kite portfolio,in this there are some good kite plans which are mainly based on the Conyne with various wings,and double Conynes,there is also a plan for what can best be described as an inverted stacked delta,all in all very interesting and this kite folio(or Fascicule no1)appears to cost only three francs if anyone is interested in this we suggest that you write to;-Cerf-Volant Club De France at 17,Rue La Charriere,75011,Paris,

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AMERICAN KITEFLIERS ASSOCIATION

Their June 81 issue recently arrived and it contained for the first time adverts,there are only a few but it must certainly help finances along.The main item in the newsletter is the report on the National Kite Week which took place at the begining of May,the week was mainly celebrated by various kite festivals around the country.At one of these Scott Spencer attempted a World Record-the longest kite tail,he flew a Chinese Dragon with a thousand foot tail(unfortunately a small kite sawed hundred foot off the kite whilst in flight).Another world record was attempted in June by Carl Brewer when he managed to fly his indoor kite to an altitude of 245 feet in Seattles Kingdome.As usual the newsletter is full of photos but one that caught our eye was the one of Scott Spencers Scrapflake,this is a very small(hand size) version of Stephen Robinson's Snowflake,as the name suggests this version was made for scraps,the only thing that we were wondering-does it fly?.

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PINEY MOUNTAIN AIR FORCE

We have recently received some of the PMAF Data Letters which are excellent in their production and interesting in their content. The following is from the introduction to the Air Force.

On the 10th of November,1979 Piney Mountain Air Force commenced its first scheduled flight operation at a rural flightpad in Central Virginia.Three stalwarts braved that chilly day.(Other fliers had intended to participate,but foul weather and a tight petrol supply daunted some of the normally dauntless.)Since then,on most Saturdays that happen on even numbered dates,notable persons involved in kitery,aviation,and aerospace have stomped our soil and embellished our skies.Participants have ranged from interested neighbors to faculty and students from the University of Virginia;from Connecticut to Florida,from France,Israel,to Bali,Hong Kong and India.(Here we could drop names;but that may come later,as name-owners and space permit.)Piney Mountain Air Force is a round-table group;membership informal,open ended.Presently our flight-date facilities limit our active participants to no more than ten,invited mature fliers:folk who are pleased to fly super-light aircraft and kites in safe and enjoyable ways;responsible individuals whose primary goal is to seek and practice technical improvements in the state of light-flight art. Our spirited letter-writing lightens and circumvents the restrictions of limited flightday accomodations.

The name,why our name? Our name honours a distinctive topographic feature that exists about fourteen airline miles north of Mr.Jeffersons Monticello,near Charlottesville.Piney Mountain is a small mountain whose eastern flank is crossed by U.S. Route 29;its precincts abound in black vultures,turkey vultures,fickle air currents,curious happenings,near palpable magic and a vibrant sense of history.

KITE GROUP NEWS(cont)

Kites and other aircraft that consistently fly well in the Piney Mountain environs are obliged to be competently handled masterworks. Some interesting kite legends - not all lies - await the telling; Piney Mountain shall be heard from.

Our backlog of tips,treasures and lore grows;PMAF Data Letter intends to air some of it.Backlogs too may fly.Through this medium,we hope to transmit ideas and designs to individuals and to other publications interested in seeing aerovane research findings available in the public domain.As our own ideas and designs emerge from these pages,we hope we shall stimulate other folk - the really creative ones - to share their thoughts with us for publication and for well deserved recognition Many of us already have taken the expensive,frustrative,unremunerative letters patent path in hopes of documenting our creations;most of us would be happy to avoid the dismal patent procedure if we could see our talents identified and honoured in print - even in a modest vehicle.If anyone within our modest coterie of readers desires to comment on this philosophy please let us hear from you.We want the Data Letter to be your own philosophical forum and clearing house.

On the sheet entitled "Some Horn Blowing" it says "Data Letter is an unprofitable piece of madness;a two-digit monthly deficit is our way of life (Ed comment - for those readers who are interested KON runs under a three figure deficit.)But we treasure the goodwill the friendships and the fine contributions from famous kitefliers.

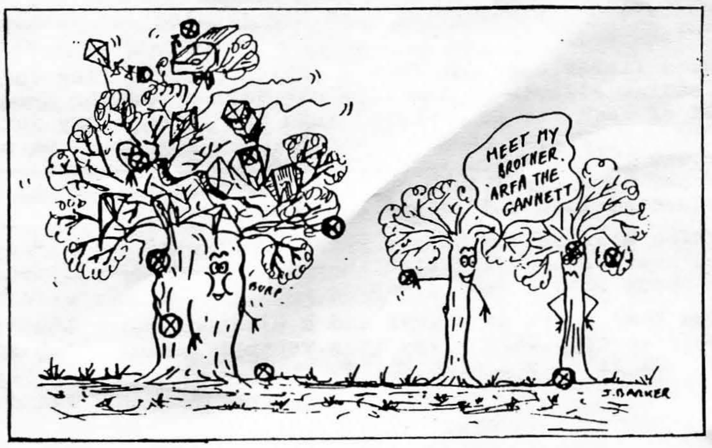
Twelve issues of Data Letter - a full year of kite plans,layout geometry,kite news and popular aerodynamics discussions - may be received by air mail for 10.00 dollars per year or 1.00 dollars per issue.(All drafts must be in U.S. Dollars through a United States bank or the Post Office.)Send to GUY D.AYDLETT,c/o PINEY MOUNTAIN AIR FORCE,BOX 7304,CHARLOTTESVILLE,VA 22906,USA.

COMPETITION RESULTS

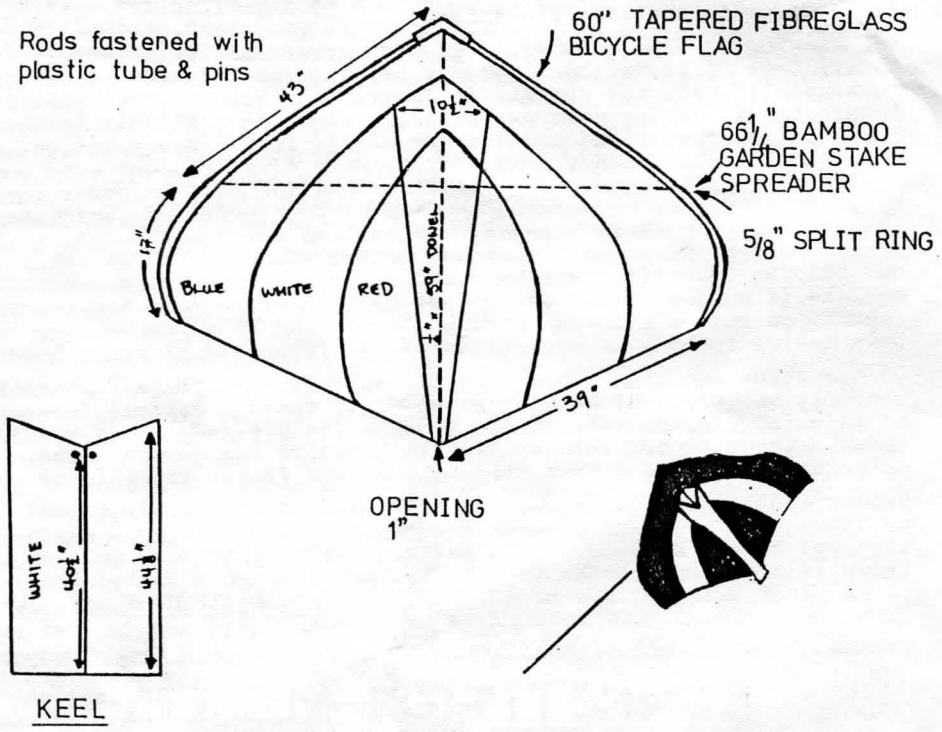
WE HAD A GOOD RESPONSE TO THE LAST COMPETITION AND THE RESULTS WERE BEAK PICKED BY NODDY BLOOM.

1st W.J.BRADSHAW WHO WINS FIVE YARDS OF RIPSTOP.
2nd LEN PATTEN WHO WINS THREE YARDS RIPSTOP.
3rd GEOFF ADAMS WHO WINS TWO YARDS OF RIPSTOP.

THE ANSWER WAS:-



VOLVO DELTA



Les Varley's Volvo appears in the latest issue of the BCKA newsletter, Les writes;-

There are several reasons to call this kite a delta with a difference and they all work to contribute to it's excellent flight characteristics.

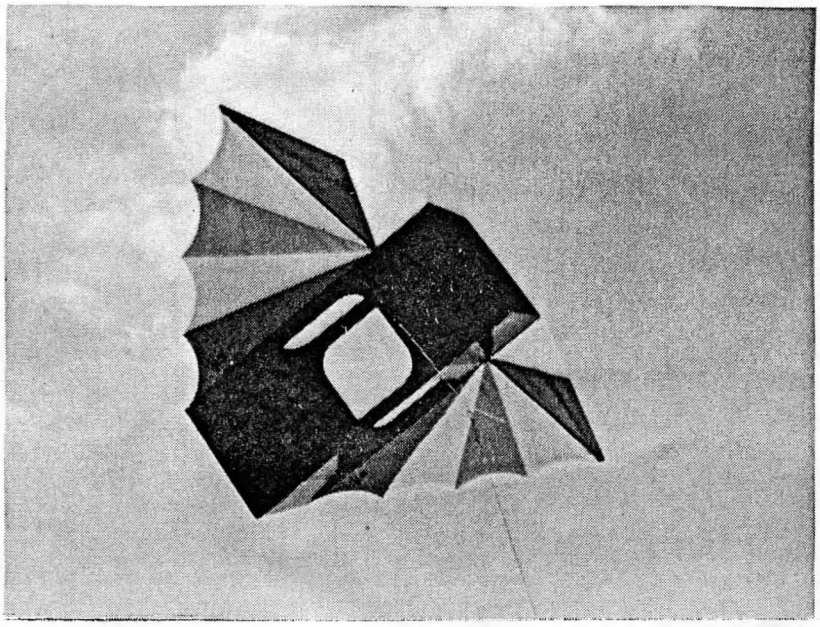
In construction,the first step is to make a cardboard pattern.A lot of the shape is done freehand but follow the dimensions carefully. Using the lightest ripstop nylon burn around the pattern with a hot knife or small sharp soldering iron.Hem leading and trailing edges of the celled keel.

The tapered fibreglass rods from a childs bicycle flag forms the curve of the leading edge in a bias tape sleeve sewn to the nylon sail.The thick end of each rod is inserted into a 3" long heavy duty plastic tube of an appropriate inside diameter.Make the joint permanent with pins through the tube and rod.Glove leather is sewn around the joint and attached to the rod,tube and sail.For portability the whole kite can be squeezed into a 3" diameter tube.

By inserting a sharpened bamboo spreader tightly into ⅝" split rings which are sewn through the bias tape and around the fibreglass rod the kite opens into a very pleasing shape.

The celled keel works as a keel and a windsock.Being sewn to the sail with both ends open.This gives it a venturi action which stabilises and lifts the kite to a high angle.

REVIEW

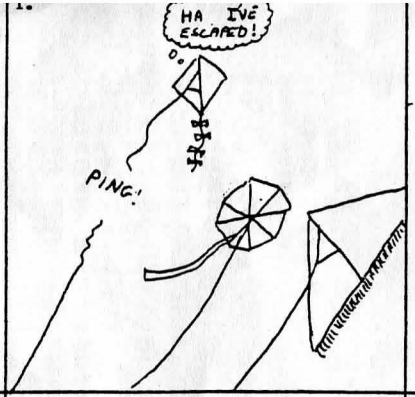


A kite by the makers of the well known ferry this is one of their new range which includes a serpent kite.
This kite is a winged box approx 90 x 140 cms with a very attractive colour design to enhance the shape.Basically the box section is red and the wings are a selection of blue,yellow,and green, attractively scalloped along the edge (See pic.).
Although made of plastic the materials are of a superior type and the plastic joints and the square section wood up to the usual German standard.
In flight the kite is very striking but needs a strong wind like all winged boxes.Once the wind is sufficient the kite has a healthy pull and is very stable.
Gunther has produced yet another excellent product which is good value (£4.65 June 81).Only at Hamleys of Regent Street at present but we feel sure it won't be long before it is stocked elsewhere.

The High Life by S.Robert Speer

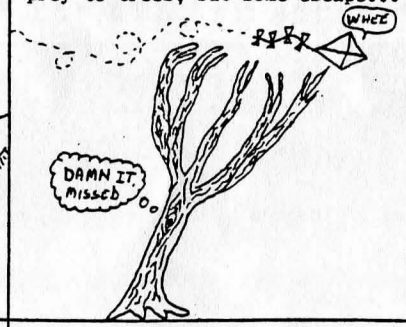
When we think of a kite, we imagine a light object on the end of a string, moving according to the owner's whims. Yet what happens to all the kites which fly off, with broken strings, never to be seen again? It's obvious. They go wild .....

1.



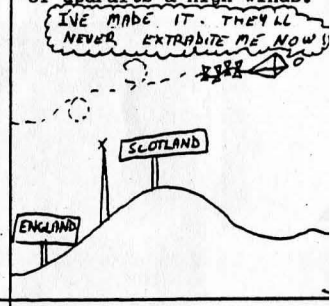
2.

Many fall to the ground, or are caught whilst resting, or fall prey to trees, but some escape...

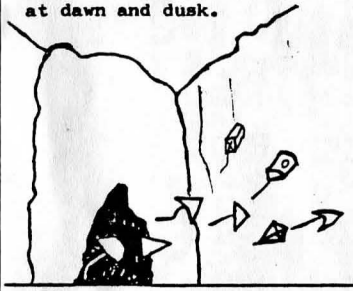


3.

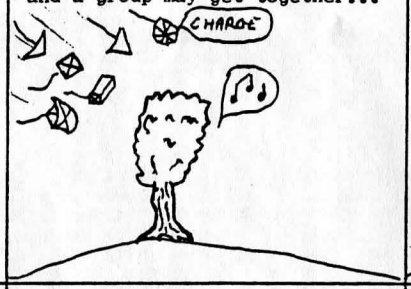
These escapists generally head for Scotland, where they can take advantage of updrafts & high winds.



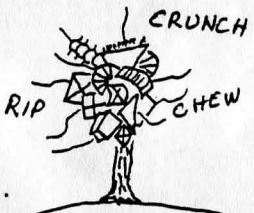
4. Here they collect in bands, roosting in caves by day, coming out to hunt at dawn and dusk.



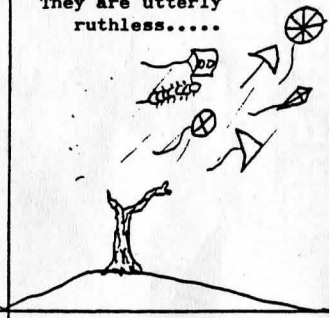
5. They are sworn enemies of trees and a group may get together...



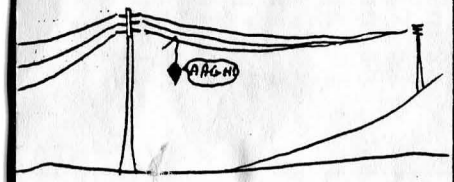
6. and attack!



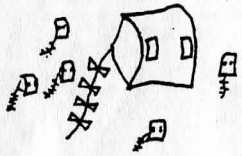
7. They are utterly ruthless.....



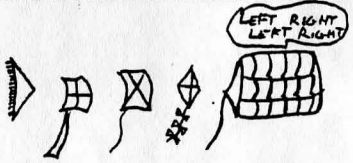
8. Their life is harsh; trees, hurricanes, telegraph wires, all take their toll.



9. This mother Kite will have a a hard time to rear up all 5 of her kitens...

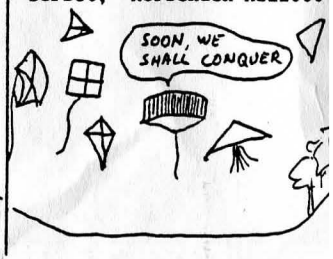


10. But all of the free kites plan for revolution - to free their tame cousins from mankind.



They train constantly for war.

11. They meet up with other groups, from North Wales, Dorset, Horsenden Hill...



GENERAL INTEREST

From Arthur C.Clarke Report On Planet Three:-

Somewhere north of Oxford Street I came across a group of people staring at the sky.Following their gaze,I was surprised to see two tiny black dots or disks,very close together,at a great but quite unguessable height above the city.Balloons? I asked myself.No-they don't travel in pairs.And these dots were motionless,despite the fact that a strong wind was blowing.I looked at them for a long time without being able to resolve the mystery;then,having nothing better to do,I started to walk in the general direction of the zoo,above which the objects were floating.

The twin disks floating high above London turned out to be not two objects,but one - a box kite at an altitude of at least a mile.It was so high that its shape was quite unrecognisable;the framework could not be seen at all,while the silk covered ends had lost all squareness and appeared as disks or spheres.Never before or since have I seen a kite at such an altitude;the elderly gentleman who was controlling it from Regents Park was operating a reel like a big-game fishermans and when he finally brought the thing to earth it looked like a half-scale model of the Wright biplane.

****

Seen at Ragley Hall two extremely beautiful Chinese silk Butterflies. They were tied onto a bamboo stick which was then tied to the flying line at its centre balance point.This gave the effect of the two butterflies dancing round each other and very lifelike it looked. The person flying them told us that he had bought them in China(for £5) whilst on holiday there and that in the evenings there were a great many people flying kites in the main square of Peking.One of the kites being flown was a 200 foot Centipede.

****

John White sent us a post card on which he claims a new height record. He and his son flew one of his new Soff-Tee-Kites from the top of Ben Nevis.

****

Seen in the Kite and Balloon Company shop.A new selection of kite reels by Ferrari the maker of the Ram Kite.The reels cover a wide range of prices and designs and the Kite and Balloon should be contacted for more details.

Also seen in the Kite and Balloon were some very pretty Carp Windsocks. These were made in Ripstop nylon and each had the scales individually sewn on.They come in various sizes and prices and again contact the Kite and Balloon for more details.

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A new newsletter has appeared on the scene.It is called Roman Candle and is the newsletter of the Bearly Made It Skydive Squad.It is aimed at those people among us who are into Parachuting Bears.If you want further details write to John Barker,26 Lowdell Close,Yiewsley,West Drayton Middlesex.

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COMPETITION

ALL YOU HAVE TO DO IN THIS COMPETITION IS TO SPOT THE 12 DIFFERENCES BETWEEN THE TWO CARTOONS ABOVE. MARK THEM WITH A CROSS USING A BALL POINT PEN. FILL IN YOUR NAME AND ADDRESS AND SEND TO K.O.N. 31 GRANGE ROAD,ILFORD,ESSEX IG1 1EU BY 31st OCTOBER 1981.