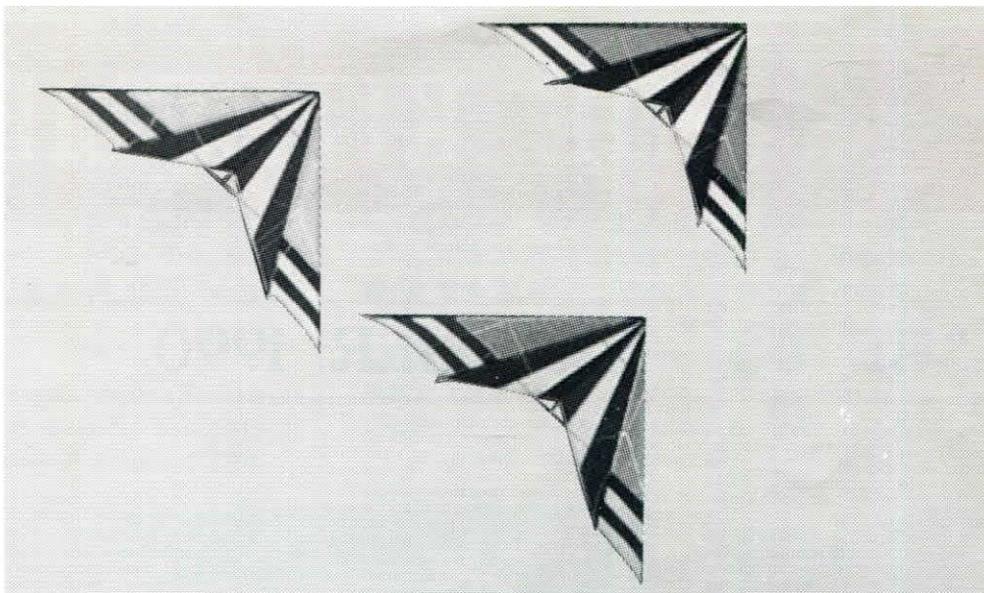
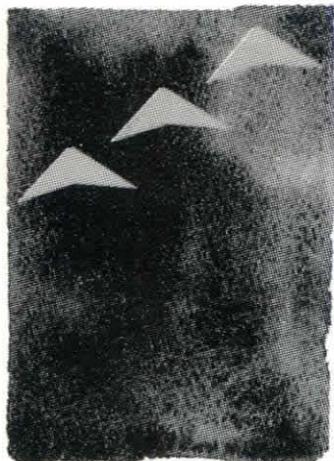


THE KITEFLIER

ISSUE 45 - OCTOBER 1990 - PRICE £1.00



NEWSLETTER
OF
THE KITE SOCIETY OF GREAT BRITAIN



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The Kite and Balloon Co.
London
081 946 5962

Kite Corner
Mill Hill
081 959 0619

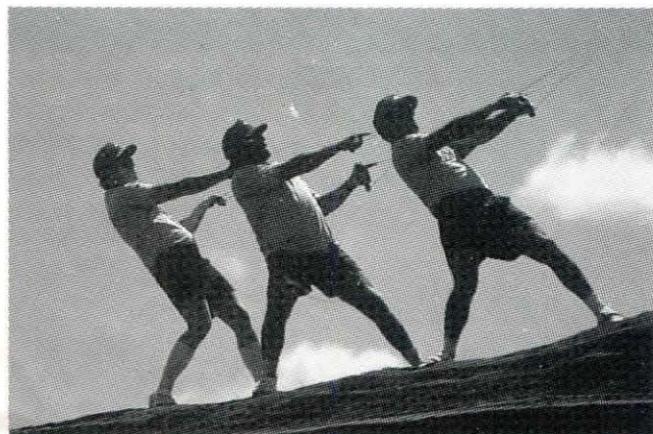
Malvern Kites
Great Malvern
0684 560100

Sports Kite Centre
Sandgate
0303 330855

Flying Colours
Camberly
0252 836241

Tradewind Kites
Reading
0734 568848

The Kite Site
Polzeath
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The photo on the front cover is the "Superfly", a 45' long and 20' wingspan kite built and flown by Peter Rieleit. Reproduced with permission of Chris Tofalos.

EDITORIAL

THE KITE SOCIETY OF GREAT BRITAIN, 31 GRANGE ROAD, ILFORD, ESSEX, IG1 1EU

Dear Reader,

The season is finally over and looking back it has been a good year despite some of the interesting weather conditions. Let us all hope that 1991 will be as good.

First of all we would like to let you know that we raised 183.00 during the auction at Bristol as a donation to the British Heart Foundation in memory of Patrick O'Driscoll. Our thanks to all who contributed.

The convention for 1991 will not be held at Birmingham as originally thought. There are a number of reasons for this and details can be found in the magazine. The convention will be held at Weymouth (if all goes to plan) on May 4th, together with an International Kite Festival on May 5th and 6th. This event looks like being the BIG event of 1991 so book the date in your diary now!

1991 National Single Line Competitions will be held at the Birmingham during the kite festival in June next year. Full details will be printed in the next issue of the Kiteflier.

Oh! By the way - we are always looking for articles, items of interest and kite designs to put in the magazine. Send us your bits NOW!

Gill and Jon Bloom

LETTERS

From Jim Rowlands

Unlike many other clubs and societies the Kite Society does not welcome each new member with a heavyweight tome of rules and regulations. For that at least we should be thankful. But because the rules are not based on the deliberations of wise kiteflying elders, carved in stone and set into the pillars of the sky doesn't mean there are no rules at all: far from it.

The rules which do exist are no different to those which govern the behaviour of any social group, common sense almost. The pity is however, that there is a small minority of kitefliers who are lacking in this simple social attribute.

Common sense, and respect for other people's property would suggest that you should not fly a kite from the middle of a crowded car park. Yet how many times do you see fliers repeatedly doing so. In particular who was the person at Bristol who insisted in flying their kite from the car park, making it dive in and out between the cars. Maybe he was quite expert, but what if a newcomer decided to copy his stupidity?

Bristol also provided even more examples of kitefliers lack of social conscience.

A good percentage of the money required to present a kite festival is derived from fees paid by traders. Yes traders - you know the people who spent days stocking up and preparing for the event; start their day at six in the morning, and work their socks off for fourteen hours to provide food, drinks, kites and accessories. Admittedly they do this for profit more than fun. But without a good selection of trade stands and the income they generate few British kite Festivals would ever take place, and there can be little doubt that kite festivals need traders far more than they need festivals.

Why then do so many kite fliers insist in threatening the very existence of a festival by trading from their cars in the car park?

If you wish to trade at a festival you should do so openly, in competition with other traders and you should acknowledge the work of the organisers and the trading opportunity which the festival provides by paying the appropriate fees. Only in this way, with trading open and fair, can the future support of traders be assured. Those who trade from the car park are doing nobody any favours - least of all other kitefliers.

Andy King made a very simple threat to cut the lines of those found flying from the car park. My disappointment was that he never carried it out, especially in the case of this one persistent offender.

At last the use of Kevlar and glass coated line, both major threats to safety, are now prohibited at major British festivals. Those who fly from the middle of crowded car parks are also finding that their foolishness can prove expensive in lost kites or damage claims. If the future of kite

LETTERS

festivals in Britain is to be assured, we must also curb illicit trading. If we, or perhaps YOU don't, there may not be any more festivals for anyone to trade at.

From Pat and Ron Dell.

Once again the mists of autumn drift across your favourite flying field - and such poetic drivel.

Well that is another fine festival season over, lots of good flying and good companionship, as the kiting travelling circus packs its tents for another year.

1990 has had all our old favourites and a few new first time festivals - fair winds, clear skies - with just a few duff days.

Ron Ogden (N.K.G.) was a good formula for rainy days - just announce 'The festival is cancelled' the rain will stop and out will come the sun. Nice one Ron - or was it the Decorators rain dance?

On behalf of all who attended the festivals a big thankyou to all involved with organising and running such events.

Finally we would like to wish all our friends a very happy christmas, bright skies and fair winds in the new year. We look forward to seeing you all again.

WINNERS 1990

Throughout 1990 the Rokkaku Challenge has been held at a number of festivals around Britain with the final heat being held in Bristol. The winners of the 1990 Challenge are:-

Team - Hello Jim led by Doug Jones
Individual - Paul Morgan
Team Spirit - The Decorators

We would like to thank Ron and Pat Dell of KITEABILITY for their donations of a winners tankard for each of the Individual heats of the 1990 Challenge.

For the 1991 venues see the events list.

The result of the Kite Society National Single Line Championships were:

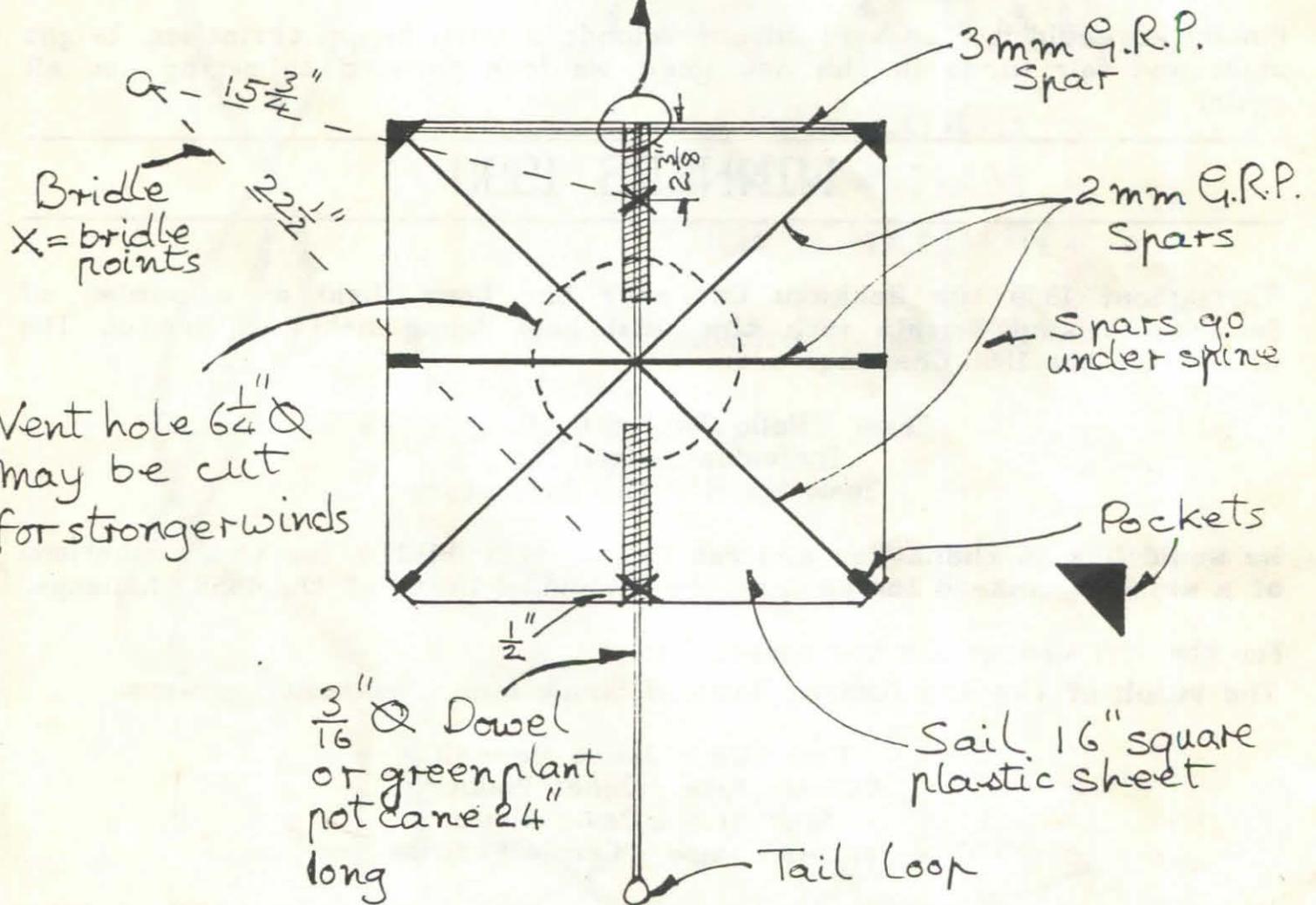
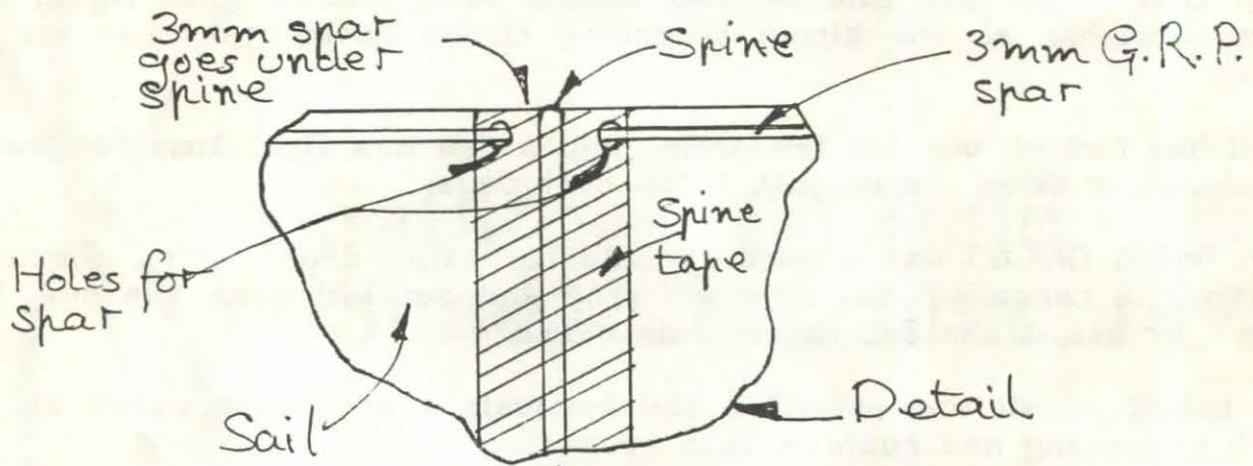
Flat Kite - James Mannall
Cellular Kite - Janet Podbury
Soft Kite - David Bloom
Peoples Choice - Carole Peacock

The 1991 championships will be held during the Birmingham Festival of Kites which is taking place in June 1991.

Hamamatsu Variant

a plastic kite for flying in moderate to fresh winds, can be scaled up and down

(Real Hamamatsu's can be up to 14' square for light winds).



John Skinner

CURRENT TRENDS by PETER LYNN

Current Trends in the Kite World (and some tips on making soft kites).

The 1980's saw more changes in the kite world than any previous decade. I predict during the 1990's the pace of change will accelerate further.

Widespread availability of lightweight strong u.v. resistant ripstop nylon in an extensive colour range and at affordable prices has revolutionised the shapes, size, graphics and designs of kites during the last 15 years, but textiles manufacturers have not suddenly stopped innovating. During the last few weeks I have been testing a new Japanese ripstop which, while two thirds the weight of Bainbridge 3/4oz (which is actually .91oz) has 2.4 times its tear strength!

Kites made of this will fly in lighter winds and will be capable of taking stronger winds or can be used to make kites with larger panel sizes without failing. Produced by a major textiles company, (Teijin) as, I think, their patriotic response to Japans twin America's Cup challenges. It is but one of a range of technically superior fabrics woven from new nylon and other exotic fibres which will come into the market place during the next few years and will have applications in kite making.

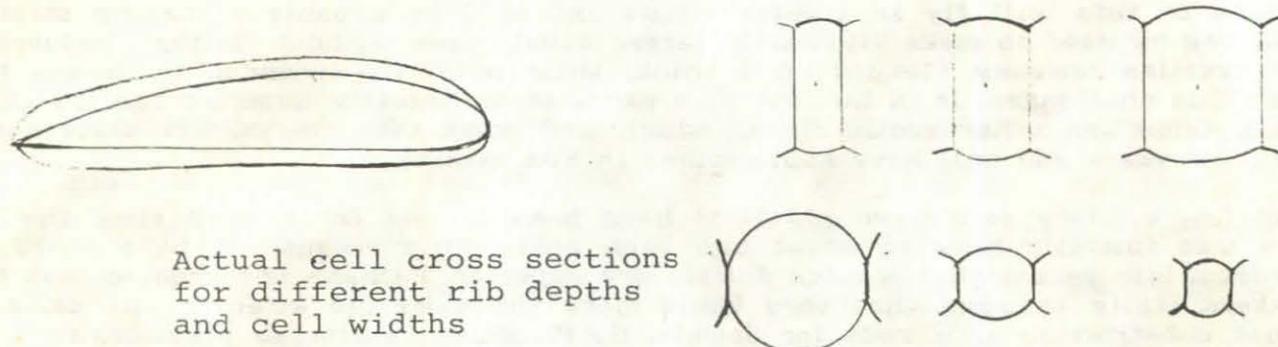
Although f.r.p.'s (fibre reinforced plastics) have been around for a long time the kite industry was initially slow to adapt and even until quite recently I have heard the opinion from kite people that wooden dowels are superior. Perhaps the problem was that kite makers lazily assumed that they could make the same old kites in the same old ways just substituting g.r.p. rods for dowels. G.R.P. (glass reinforced plastics) rods are stronger, more resilient, more consistent, heavier and less rigid than dowels of the same diameter. A totally different approach to kite design is needed when using g.r.p. rods but when the techniques have been mastered kites can be produced that are light and incredibly robust. These kites don't immediately break in untutored hands thereby losing potential converts to the kite world as too frequently happened in the bad old days of wooden framed kites.

For lightweight kites and for larger kites (weight for constant strength has a power of two relationship to area), tubes are a must. They are more expensive, but our buying public is obviously quite willing to pay the extra for superior performance. With higher strength carbon fibres becoming available at reasonable prices and better tube forming systems constantly being developed we can expect continual improvements in rod and tube specifications throughout the next decade. It is also likely that by, relative measures, prices will drop as manufacturing techniques automate and volumes climb (I heard of one kite accessories wholesaler who is now handling 10,000 tube lengths per month.) A clear and irrefutable example of the superior specific strength offered by g.r.p. tube (and not even carbon at that) is that a standard 430gm 2.5m wingspan stunter will reliably lift an 80kg flier without breaking or distorting - a "g" loading of 160! Tell this to aircraft designers who can usually only manage 8 to 10 "g"'s. Another interesting development in f.r.p.'s is in resins; the matrix. Until now low resin temperature degradation points did not permit anything but mild (very mild) permanent curves to be applied to fibreglass structures. The combination of mild stress and mild temperature is fatal. At less than 100 degrees C, a temperature often attained by kite structures when left in the sun, either while in plastic bags or under the windscreen of cars, fibreglass rod will exhibit buckling failure on the compression side at absurdly low stresses. Just now available high temperature pultrusion resins can eliminate this problem at a cost premium of less than 10%.

The other huge change in kite design is the advent of inflatable and composite (inflatable plus rigid structure) kites of which England's Martin Lester is such an admirable pioneer exemplar. I say that we have, as yet, barely begun to explore the enormous opportunities for new and innovative designs afford by Jalbert's ram air structure principle. I would also point out that for ram air to work some simple rules must be followed. One is that it is essential to bleed pressure in at the highest pressure point, and only at the highest pressure point. This is usually just a little back from the leading edge for single line and kites attaining modest lift to drag ratios (kites that habitually fly stalled such as my inflatable octopus and rays) or right at the lower leading edge for kites that attain attached flow (e.g. flexifoil, our orange peels, some parafoils etc, and kites that use the leading edges of flares as inflating points.)

CURRENT TRENDS by PETER LYNN

In these days of relatively impermeable fabric, excessive inflation area is the major noticeable design fault. Inflating areas of more than 5% (with some exceptions) of the kite area are unnecessary and may well be detrimental to internal pressure as larger gauze or open areas will inevitably result in some of this gauze etc. being in a lower than optimum pressure area which will allow egress of internal air hence reducing inflation. Also because of wing vortexes inflation bleeds will not work well if positioned near wing tips or on sweptback wings. Another simple but common mistake is to assume that the rib profile will be the average airfoil section for the kite. This is not so. As the diagrams reveal cell centre profiles will be very different (but related) to rib profile.



Cell centre profiles are related to rib profiles by a strong function of rib spacing (cell width). Obviously if it is felt that the attainment of a particular airfoil is important (especially if it is a conventional thin trailing edge section) then the only answer is to use a very large number of close spaced ribs. Not every one will need to be bridled. And not all will need to run to the leading edge, but terminating ribs other than against another rib or at the kite perimeter imposes high fabric stress unless extensive reinforcing is added. A simple bridling rule of thumb is that in the area of greatest external pressure (the front half of the lower surface) bridles should not generally be spaced to more than 110% of the maximum rib depth, longitudinally or to more than 150% transversely. For lower pressure areas (the rear half of the lifting surface) spacings can go out to 150% of maximum rib depth longitudinally and 150% laterally.

Bridles do not need to be attached to flares, they can be fitted through the lower skin and attached directly to the ribs as for modern sky diving canopies. In this case ribs are best cut on the fabric bias to spread the bridle loads.

Fuelled by, or fuelling, these advances has been the phenomenal expansion in kite retail shops. Us kite manufacturers now have more than 500 specialist kite shops we can sell through. The best thing about these stores is that they provide knowledgeable advice to kite buyers and a back up service the upshot of which is that kite ownership is now a pleasant and fulfilling state. The consequence of this is the possibility of seemingly never ending growth in our potential market. But here is a word of warning. The late 20th century buying public have many choices, they are exhibiting a tendency to less and less activity loyalty, they are titillated by newness, bored and turned off by sameness. As a kite designer I take this implied challenge very seriously. If I and my ilk do not come up with a never ending succession of new and exciting designs our industry will die. Fortunately there are no shortages of new ideas waiting for development.

What are the likely future trends?

1. The controllable (two, three and four line) kite field is not a fad. These kites will at least hold at, say, 40% of total kite sales.

2. The spectator public (as opposed to the participant kite flier) are demanding even larger and more spectacular kite shows. Festival organisers are responding to this demand by seeking to provide more spectacle with the result that the amateur (small Kite) festival participant is increasingly being shunted to the back field, offered a lower

CURRENT TRENDS by PETER LYNN

level of subsidy and in the limit may be relegated to the "Kite fliers" festivals such as Fano, Long Beach etc, (which are the most fun anyway).

3. In large single line "Show" kites the trend is towards kites that exhibit movement mimicking that of the creature etc they represent. Size, colour and movement are the Keys!

4. Large kite festivals are increasingly being professionally organised as event marketing vehicles for their venues.

5. The noticeable recent tendency at single line competitions to judge on complexity and perfection of stitching to the exclusion of innovation and flight performance must be resisted as it is a great turn off for the viewing public.

6. Similarly, intensive 2 line competitions are proving to be boring viewing even for some kite people. We must find ways to make stunt kite competitions more dramatic and visually exciting. Stunt kite skills levels are reaching incredible heights but these skills are largely wasted on spectators who often can't appreciate the finer points.

7. There is a noticeable trend towards kites being specifically developed to perform specific tasks. examples are bird scaring kites, camera lifting, fishing, kite water skiing. Advertising kites and etc. I can assure you we "ain't seen nothing yet". This decade will see kites performing useful functions in many nontraditional areas, for example my stunt buggy; an exciting new kite based sport with potential to rival land yachts and wheeled windsurfers on circuit racing, beaches and cross country courses.

ADVERTISING RATES

We have often been asked about our advertising rates and we therefore take this opportunity to give a comprehensive list of the rates which will apply for all issues of The Kiteflier during 1991.

We currently (as at 30th September 1990) have over 1500 copies of the magazine printed - this represents a readership of well over 2000 people all of whom are going to be interested in your products or services. Can you afford not to advertise?

RATES FOR 1991

Single Insert - Full Page	50.00	(A discount of 25% is
- Half Page	30.00	available for four
- Quarter Page	20.00	consecutive adverts).

Insertion of leaflets for distribution with an issue of The Kiteflier - 30.00
(Leaflets to be supplied by the advertiser -
the number required by us MUST be confirmed).

Payment for all advertising or leaflet insertion must be in advance and camera ready artwork and payment must be received by the 15th of the month prior to publication e.g. 15th December for January issue.

Available to shops and retailers - bulk purchase of issues of The Kiteflier. 10 copies or more 85p per copy plus postage. Write and let us have the required numbers.

THE SHROP-POP-TAHEDRON LINE MARKER.

Draw out the main shape accurately on medium card and include extra margins for glueing where shaded.

Use an increase factor if you like, but all angles must be as shown.

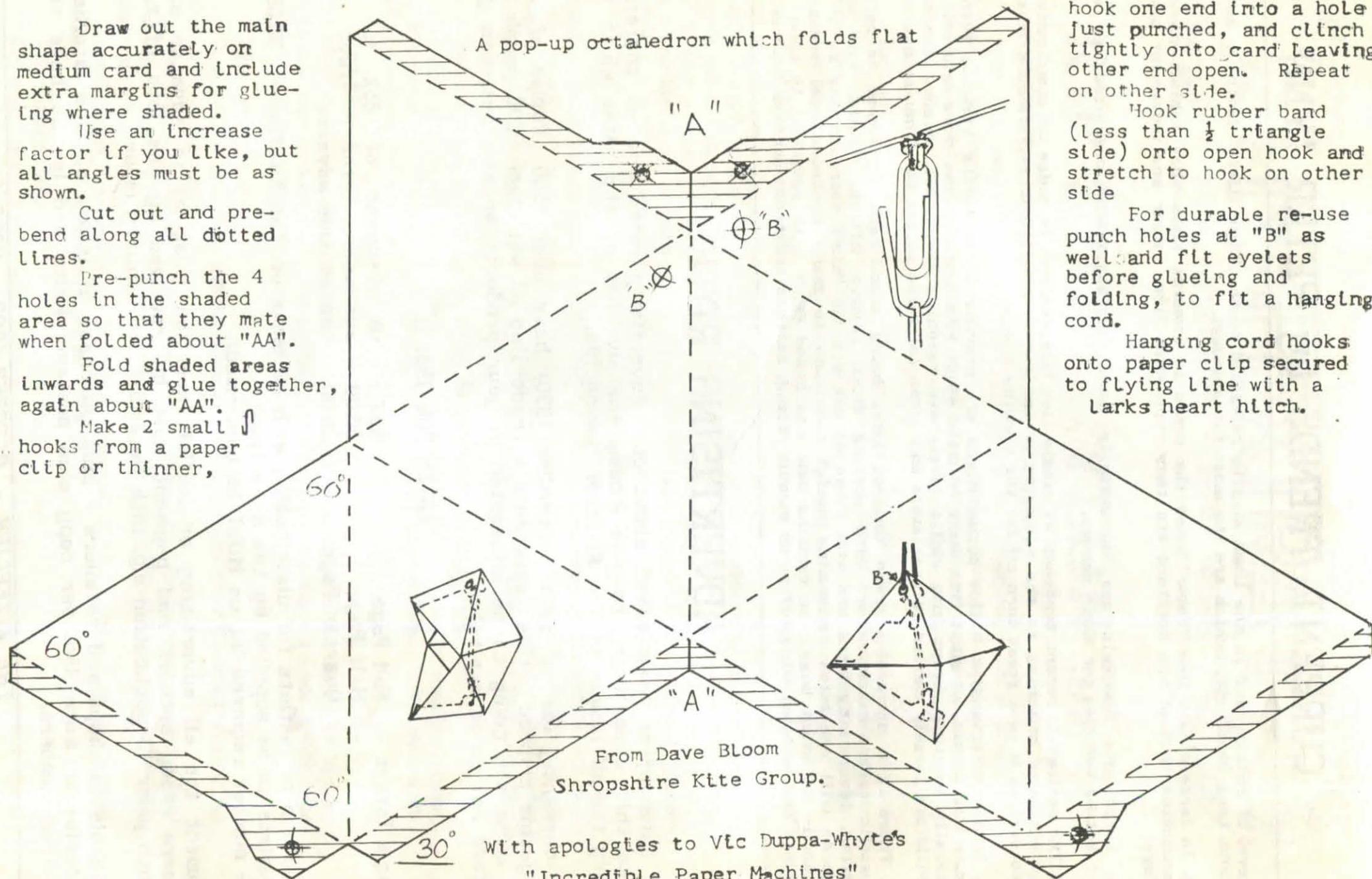
Cut out and pre-bend along all dotted lines.

Pre-punch the 4 holes in the shaded area so that they mate when folded about "AA".

Fold shaded areas inwards and glue together, again about "AA".

Make 2 small hooks from a paper clip or thinner,

A pop-up octahedron which folds flat



hook one end into a hole just punched, and clinch tightly onto card leaving other end open. Repeat on other side.

Hook rubber band (less than $\frac{1}{2}$ triangle side) onto open hook and stretch to hook on other side

For durable re-use punch holes at "B" as well and fit eyelets before glueing and folding, to fit a hanging cord.

Hanging cord hooks onto paper clip secured to flying line with a Larks heart hitch.

From Dave Bloom
Shropshire Kite Group.

With apologies to Vic Duppa-Whyte's
"Incredible Paper Machines"

BUYERS GUIDE

On the following pages you will find a comprehensive list of shops and retailers in the U.K. If you own or know of a shop or manufacturer which is not on this list then let us know - we don't think we have missed anyone.

Where a mail order catalogue is available you should write requesting this and enclose a stamped, self addressed envelope.

Finally the discount shown is available to members only upon production of a valid membership card. Contact the shop if you want mail order to confirm any discount. Note also that the discount is generally only available for cash and cheque purchases - but do check first.

Highflyers. The Kite Site, Polzeath, Nr Wadebridge, Cornwall PL27 6TE. Tel. 0280886 2567.

Monday to Saturday 9am to 5pm.

Full range of kites, stunt and single line, including range of Phantom stunt kites, plus range of stunt kites from Highly Strung (Australia), accessories and DIY materials, books, magazines, T shirts and sweatshirts. New shop opening end of November. Mail order catalogue available. 5% discount.

Look - International Sport Kites Centre. 35 - 37 Sandgate High Street, Folkestone, Kent CT20 3AH. Tel. 0303 220855.

Monday to Saturday 9am to 6pm. Friday 9am to 7pm.

Usual range of sports kites i.e. stunt kites plus single line kites, accessories etc. Mail order. 10% discount.

Kite Corner (formally Kites of Radlett). 657 Watford Way, Mill Hill, NW7 3JR. Tel. 081 959 0619.

Monday to Saturday 10am to 6pm. Sunday 11am to 2pm (but phone first to confirm).

A full range of kites including hand made kites from specialist manufacturers plus full range of kite making materials and line. Mail order. 10% discount.

Kites of Exmouth. 6 Little Ham Road, Exmouth, Devon EX8 2QG. Tel. 0395 277917.

Monday & Wednesday 8am to 1pm. Tuesday, Thursday and Friday 8am to 5pm. Saturday 8am to 3pm. Sunday open on request phone first.

This shop must be unique! a combined butchers and kite shop, they do however have a good selection of single and sports kites including lite flights and phantoms, also accessories. Mail order. 10% discount (kites only we presume!).

Malvern Kites. The Warehouse, St Ann's Road, Great Malvern, Worcs WR14 4PZ. Tel. 0684 560100.

Monday to Saturday 10am to 5pm. A good range of kites including the full Wycombe kites range, plus kite accessories and materials. Mail order catalogue. 5% discount.

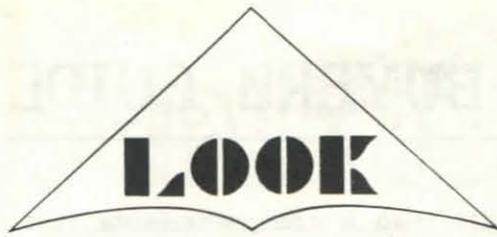
The Bristol Kite Store. 39 Cotham Hill, Bristol BS6 6JY. Tel. 0272 745010.

Monday to Saturday 10am to 6pm.

Single line kites and a full range of stunt kites, plus speciality kites, boomerangs, frisbees and a good range of spares and accessories. Mail Order. 5% discount.

The Kite and Balloon Company. 613 Garratt Lane, London SW18 4SU. Tel. 081 946 5962.

Monday to Saturday 9am to 5.30pm. Sunday 10am to 3pm.



INTERNATIONAL SPORT KITES CENTRE

WE SELL

SPORTS KITES
BOXES
QUADS
FLEXIES
STACKS
TWINS
SINGLES
STUNTERS
LINE
SPARS
HANDLES ETC.,
ETC., ETC.,

FLYING

We are in the process of forming a Kite Club with regular meetings and events in the S.E. Kent area. We welcome all new members and would like to hear from other Kite groups in the South East.

TEST SESSIONS.

We invite customers to 'TRY BEFORE YOU BUY' at our regular test sessions.

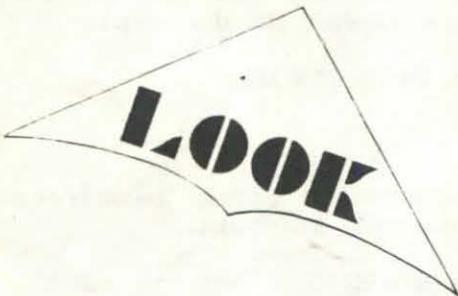
MAIL ORDER

Mail order will be available shortly.
please send s.a.e. for list.



TRADE

In our aim to stock the widest range of equipment possible, we wish to hear from Manufacturers and suppliers of Kites, equipment and accessories.



BUYERS GUIDE

Full range of kites, kite accessories, books and magazines. Complete range of Vertical Visuals Kites. Mail order catalogue available. 5% discount.

The Kite Loft. 4 School Close, St Columb Minor, Newquay. Tel. 0637 873962.

10am to 6pm seven days a week.

Wide range of sports kites plus a few power kites such as parafoils.

The Kite Store. 48 Neal Street, London WC2H 9PA. Tel. 071 836 1666

Monday to Friday 10am to 6pm. Saturday 10am to 5pm.

A fully comprehensive range of single and two line kites, accessories, kite books and magazines plus DIY materials. Mail order catalogue available. Trade catalogue. 10% discount.

Tradewinds Kites. 6 Harris Arcade, Reading, Berkshire RG1 1DN. Tel. 0734 568848.

Monday to Friday 9.30am to 12, 12.30pm to 5.30pm. Saturday 9.30am to 5.30pm.

Full range of sport kites plus DIY bits for kite makers. Mail order. 10% discount.

Windthings. 11 Cowgatehead, Grass Market, Edinburgh EH1 1JY. Tel. 031 220 6336.

Monday to Saturday 10am to 5pm.

Scotlands only kite shop with a good range of kites and accessories including the parachuting teddy Dare Bears and a selection of Balinese and other asian kites, also a very good selection of frisbees. Mail order catalogue. 10% discount.

With Flying Colours. 9 Wharf Road, Frimley Green, Camberley, Surrey. Tel. 0252 836241.

Monday to Friday 9am to 6pm (closed for lunch 2pm to 3pm). Saturday 9am to 5pm.

Range of sports kites and single line kites, plus kite accessories, plus DIY materials. 10% discount.

RETAILERS

A and K Kites. 20 Durham Place, Birtley, Tyne and Wear.

Range of kites including some Japanese designs and applique models, also accessories and DIY materials available. Mail order catalogue available.

Ace Kites. 35 Birley Grove, Downend, Bristol, BS16 5QB. Tel. 0272 571089.

Makers and distributors of the ACE stunt kites.

Apex Kites. P.O. Box 188, Crawley, Sussex RH10 1JF. Tel. 081 650 7404 or 0293 32137.

Selection of sports kites. Mail order. 10% discount.

Benson Kites. 8 Moorland Avenue, Baildon, Shipley, West Yorkshire BD17 6RW.

Produces top quality single line and stunt kites. Mail order.

Cornish Kites. Tremain, Meaver, Mullion, Cornwall TR12 7DN. Tel. 0326 240144.

Range of classic kite designs. Mail order.

Dunford Kites. Fairspear House, Leafield OX8 5NY. Tel. 099387 641.

Trade - the range of Dunford kites - Dunford Flying Machine, stunt kites, plus promotional items.

KITEABILITY

HANDMADE KITES AND KITE MATERIALS

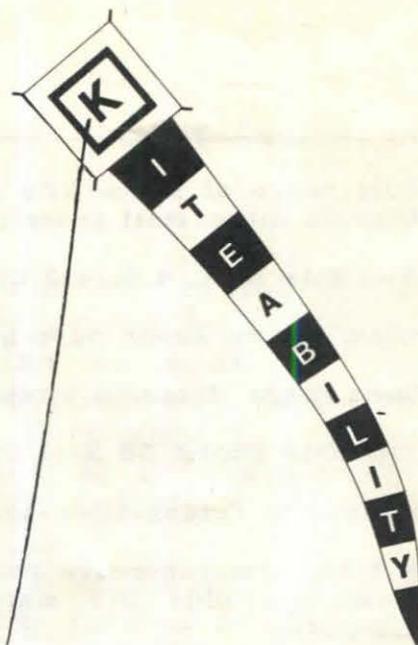
Winter is a coming
The nights are drawing in
Now is the time to put away
Your beloved kites and string

To stop you dying of boredom
With thoughts of a breezy spring
For your delight and pleasure
These goodies to you we bring

WE HAVE

Ripstop by the metre
String by the mile
For you to make your own kites
In your own distinctive style

So set yourself a stitching
A sculpture for the sky
' Kiteability ' have the goodies
So come and buy - then fly



2, Garfield Road, Enfield, Middlesex EN3 4RP Tel: 081-804 9080

Proprietor : Mrs. P. Dell

BUYERS GUIDE

Greens Kites . 246-250 Lowerhouse Lane, Burnley BB12 6NG. Tel. 0282 39650.

Mainly wholesale , will do mail order but prefer to deal through agents (phone for details). Comprehensive range of kites including large boxes and stratoscoops, specialists in promotional items. Mail order catalogue available.

Flexifoil International Ltd. 39 King Edward VII Road, Newmarket, Suffolk, CB8 0ET. Tel. 0638 668422.

I C Kites. 12 Willow Close, Spratton, Northampton NN6 8JH. Tel. 0604 843374.

Suppliers of a large variety of kites, from small starter kites to stunt kites. Mail order catalogue available. 10% discount.

Kiteability. 2 Garfield Road, Enfield, Middlesex EN3 4RP. Tel. 081 804 9080.

Ideal for D.I.Y. kitemakers carries all materials, ripstop, fibreglass, rings, lines etc, also a small range of kites. Mail order catalogue available. 5% discount.

Kite Work. Unit 2, Woodgate Park, Whiteland Industrial Park, Morecombe, Lancs LA3 3PS. Tel. 0524 844808.

Based in a warehouse, but buyers are welcome on site. Full range of Sports kites plus a motley collection of single line kites, and a small stock of kite making material. Mail order catalogue available. 10% discount.

Leeds Kites. 22 Eden Crescent, Leeds LS4 2TW. Tel. 0532 789727.

Range of Leeds Kite Brand kites - basic collection also a number of kite store kites. Also small range of kite accessories and DIY materials, can supply many other kites, phone to enquire. Mail order.

Mail Order Kite Company. P.O. Box 88, Cosham, Portsmouth PO6 4PR. Tel. 0705 374801.

As the name suggests mail order only, send for Xmas Catalogue. They claim to be able to obtain most types of kites for customers and have in stock a good range of sport and single kites.

Morgan Kites. 7 Sunnyfields, Bell Lane, Shrewsbury SY2 SEW. Tel. 0743³68516.

Wide range of kites - wholesale and retail, specialists in one off kites. Range of accessories stocked. Mail order catalogue available. 5% discount.

Over the Moon Kites. Unit 53, The Business Centre, Bedford Street, Shelton, Stoke on Trent ST1 4PZ. Tel. 0782 273289.

Range of basic kite designs including deltas, boxes, Indian fighters, also small range of DIY accessories. Trade orders welcome. Mail order catalogue available.

Peacock Kites. Varazze, 61 Windmill Avenue, St Albans, Herts AL4 9SJ. Tel. 0727 62971.

Produces a small range of basic kite designs plus specials.

Peter Powell P.O.Box 90, Cheltenham, Gloucester, GL52 2AR. Tel. 0242 862650.

Manufacturers of the Peter Powell range of Stunt kites.

P Waldron AWOL Ltd. Unit 5, Lax Lane Craft Centre, Bewdley, Worcs. Tel. 0299 402468.

Makers of the Waldof Box kites and other Prof Waldof kites.

Rare Air Kites. Hendra Farm, Steeple Lane, St Ives, Cornwall TR16 2AY. Tel. 0736 798550.

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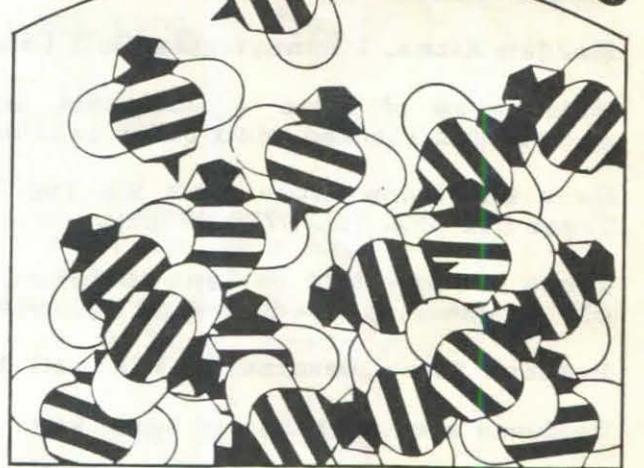
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BUYERS GUIDE

Range of well made fighter kites.

The Kite Company. 12 Dalston Road, Southville, Bristol BS2 1QQ. Tel 0272 535448.

Dealers for Top of The Line Europe (both wholesale and retail). The retail section is open tuesday, wednesday and thursday 12 to 8pm but ring first to confirm. They are specialists in sports kites and carry a full range of accessories, spares and lines for these kites. Also offered are stunt kite training sessions ring for further details. 5% discount.

The Kite Gallery. 53 Norman Road, Tunbridge Wells, Kent TW1 2RP. Tel. 0892 21042.

Personal callers are welcome at the Kite Gallery but please ring first. Carries a good range of sports kites and single line kites Mail order available.

The Leading Edge Kite Supply Company. 14 Rose Farm Rise, Altofts, Normanton, West Yorkshire WF6 2PL. Tel. 0924 897950.

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Windy Kites Hillend Farm, Tyttenhanger Green, St. Albans, Herts, AL4 0RN. Tel. 0727 68914.

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The kite line holds the rotor steady against the wind, the wind turns the rotor from "A" to "B" producing an air speed of at least "C" (wind speed) at "A" and less than "C" at "B", resulting in less pressure at "A" than at "B" causing the rotor to tend to move upwards in the direction "D".

DAVID BLOOM
(SHROPSHIRE KITE GROUP)

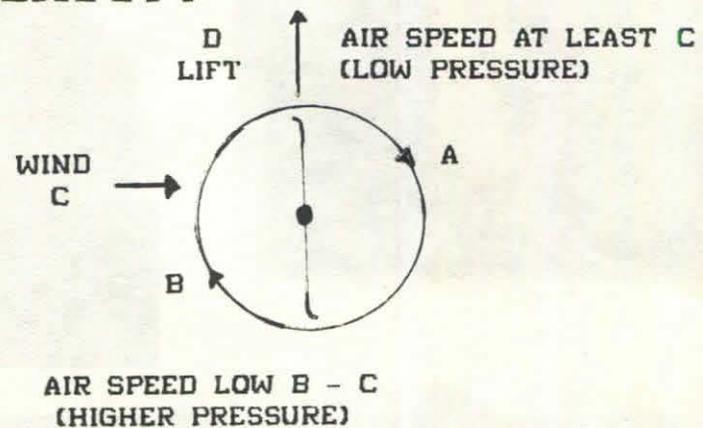


PHOTO CREDITS

You may have been expecting to see a colour supplement to this issue but due to various events, the main one being that the person doing the spread did not like the fact that the photographs we sent him were not from the current year and therefore he did not want to go ahead with it, we have not been able to do the spread. But to compensate we have included on the next two pages B&W copies of some of the pictures that would have appeared. For those people who did send us pictures, of which there were not that many, our thanks and we will return your shots when we get them back.

The photos are:-

1. Man or Lady? Kite by Beth Matthews. Photo courtesy of Australia Kite Fliers.
2. Peter Lynn with 'TAKO TAKO' kite. Photo Masato Horikiri.
3. Michel Cresier Aerial Sculptures. Photo Gill Bloom.
4. Large Japanese Bird Kite. Photo Masato Horikiri.
5. Jan Pieter Kuil Locomotive Train Kite. Photo Ron Moulton.
6. Another of Andre Cassagnes Kites. Photo Gill Bloom.
7. An Adrian Conn design kite. Photo Ron Moulton.
8. Appliqued Rokkaku by David Baillie. Photo David Baillie.
9. Decorated Wau Bulan Kite. Photo Ron Moulton.
10. Tim Benson Centipede Kite. Photo Tim Benson.

CONVENTION 1990 & 1991

We would like to thank all our members who attended the Kite Society convention at Bristol this year, the day was very well attended with, we estimate, 250 to 300 people attending during the day and evening. All the lectures were well attended and much praise was given to our guest speaker from New Zealand - Peter Lynn, who by all accounts, gave an excellent talk. Of course we must not forget all the other lecturers who gave so generously of their time, and we feel sure that everyone who attended the event would like to pass on a big thank you to Tony Slater, John Barker, Jim Rowlands, Joel Scholz, Paul Jobin, Jilly Pelham, Adam Sutherland and Bill Farrington (who stepped in at the last moment to help).

We would be delighted to hear from any one who would be interested in putting on a talk or workshop for next year (some expenses are provided) and we are always looking for feedback from our members who attended this year, so hopefully next years event can be even better. So please do write, even if it is to complain, we cannot correct problems unless people tell us.

We would also like to give our own personal thanks to Martin Lester, who we have found such a great pleasure to work with over the last two years. He has always been keen to help us, often at a considerable loss of his time and money. We understand that next year the Bristol Kite Festival will be organised by Avril and Martin Baker from The Bristol Kite Store with Martin Lester standing down and only acting in an advisory position, We feel sure that we speak for anyone who has attended the Bristol event over the years, when we say Thank You Martin for some great festivals.

The Meal and Auction on the Saturday night seemed to go off fairly well with only a few problems - the main one being that due to the generosity of our members and traders, there was just too many items for the auctions - both loud and silent. However, there was some superb kites on offer. Perhaps the two kites that stuck in our minds were the Joel Scholz Spitfire Kite (which went to an Italian?) and the brilliant cartoon of Andy King on a Phantom kite made by Tim Benson and donated by Steve Walton of Highfliers. Of course we won't go into Martin Lester donning silk stockings!

We feel that, once again, most of the items went for too much money, and one of the things that we intend having at next years convention is a stall at the dinner where small items will be on sale for a fixed price - a sort of White Elephant stall. We also intend to increase the number of items in the silent auction and to leave the main auction for large items only. Whilst on the subject of the auction we must of course thank all our helpers, - spotters and assistants, for doing such a splendid job throughout the evening and last but not least Corey Jenson and our sartorially elegant Master of Ceremonies - Andy King for all the hard work they did throughout the evening. We couldn't have done it without you guys!

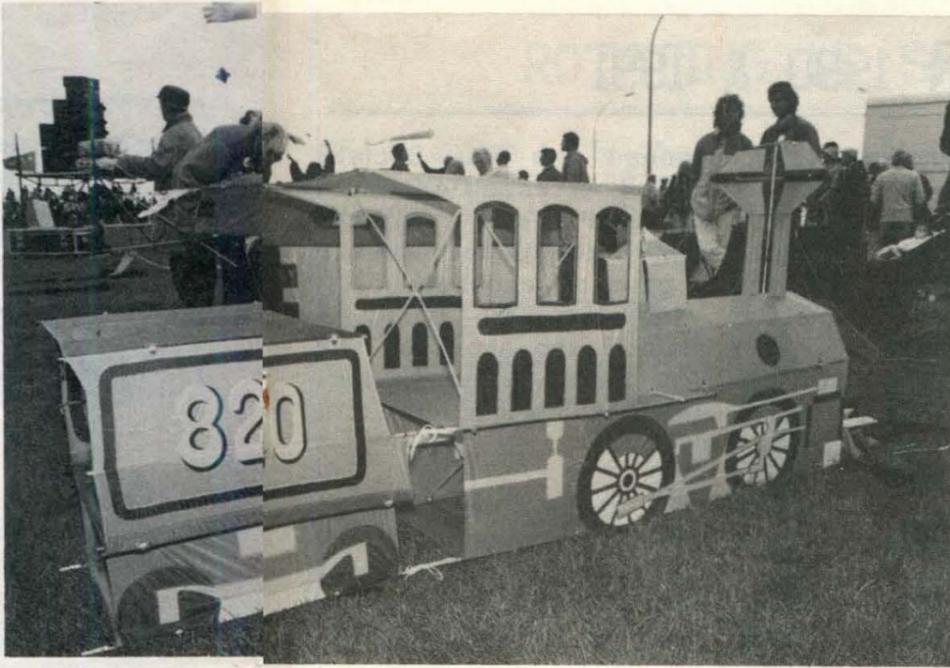
We would also like to thank Andy King and Mark Cottrell of The Kite Store for subsidising both the early registrants to the meal and paying for the overseas attendees meals and, of course, use of their credit card facilities.



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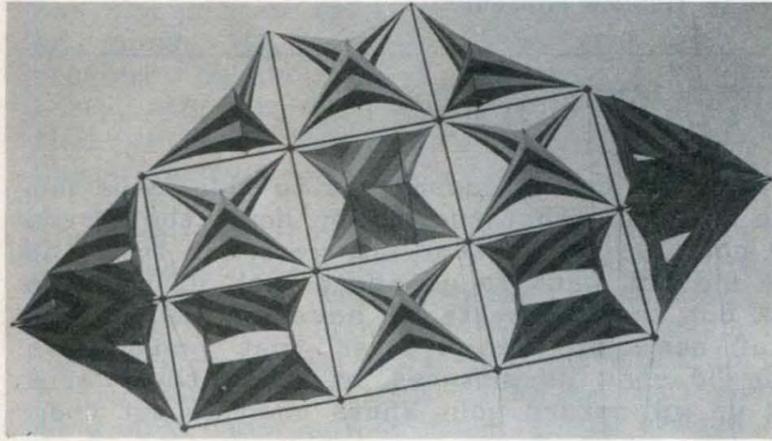
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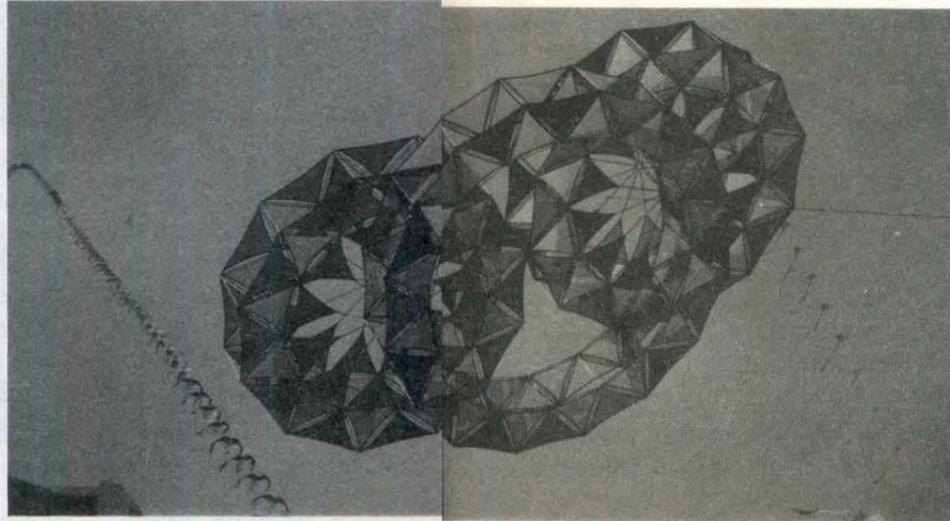
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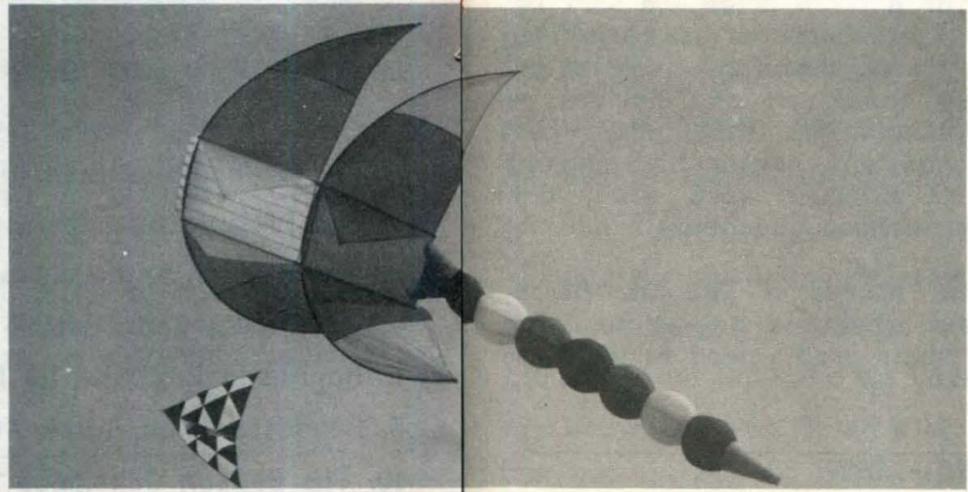
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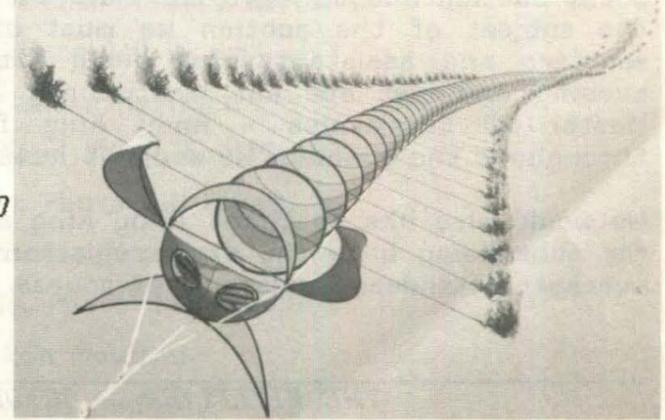
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CONVENTION 1990 & 1991

For next years event we are currently in the preliminarily stage of organising both a international kite festival and convention to be held in Weymouth, Dorset. The event is to be held over the Mayday Bank Holiday with the Convention being held on the Saturday (May 4th) and the Kite festival on Sunday and Monday (May 5th and 6th). One reason we have decided to organise a kite festival in addition to the convention is to overcome the apparent dominance of stunt kites in major events where these events have been manipulated by people with a vested interest in stunt kites and not single line kites. Full details will appear in the January Magazine.

Perhaps we should say that the reason we decided not to hold the event at Birmingham with the Midland Kite fliers was that it took to long for the date of the event to be finalised and that all the hotels which were in the correct location were fully booked, leaving the options of either splitting the event or having to have people travel long distances. Weymouth is an ideal site in the fact that the Convention can be held in the Pavilion , literally a few seconds away from the festival flying site.

For 1992, with the very kind help of Jim Rowlands (who is acting as liaison officer), we are looking into the possibility of organising an international kite festival and convention at Harrogate. With the Kite Festival on the Stray and the convention at the assembly rooms. The dates are likely to be mid to late July.

And if there is anyone out there who can come up with a good site for 1993 let us know now.

CONVENTION 1990 ACCOUNTS

INCOME

Raised at Auction	3634.50	Unicorn Hotel - Room Hire	500.00
Meal Ticket Sales	1521.00	- A/V Hire	187.50
Kite Store Subsidies/ Overseas Meals	1086.00	- Coffee	198.00
TOTAL INCOME	6241.50	Watershed - Room Hire	250.00
Less OUTGOINGS	5803.27	- Meals inc. Wine	3174.50
Surplus	438.23	Helpers Drinks/ Tips etc.	40.00
Balance From 1989	2743.75	Lecturers Expenses	1150.00
Carried Forward to 1991	3181.98	Photocopying/Postage	57.40
		Stationery/Sundries	63.87
		5% Donation to British Heart Foundation	182.00
		TOTAL OUTGOINGS	5803.27

CONVENTION 1990

From Martin Lester

Dear Kitefliers

Many thanks to you all for helping make the Bristol Kite festival such a huge success, and I mean that literally, as we had some 75,000 - 80,000 people visit the festival (parks dept figures). Once again the wind was not as kind as it could have been, but at least the sun shone which made running with the kites a little more pleasant.

Like last year, I didn't actually have time to attend any of the convention talks and workshops but everything seemed to go smoothly and was very well attended. A big thanks must go to Jon and Gill for all the work that went into organising the convention.

During the three days, I became aware of a small undercurrent of bad feeling - I was told that some people hadn't come because of the camping charges, that others were questioning the money that was raised at the auction and who benefited from it. Nothing direct was said, so hopefully I misinterpreted things, but if you do have any questions or complaints do contact the relevant person, otherwise nothing can be done to sort things.

So I feel that I must point out that while the Kite Society Convention has been run at the Bristol Kite festival last year and this year, the two events are quite separate. Obviously there is some overlap in organisation, but the finances are kept apart. All the monies raised at the Auction is to cover the costs and expenses of the Convention - ie booking rooms and equipment; and to help cover the cost of the invited lecturers. None of this money goes towards the kite festival. The money raised by charging for camping was necessary, it covered the cost of getting keys cut, so that everyone had easy access to the park at all times (unlike previous years). The very small profit went towards covering some of the cost of providing overnight security - which wouldn't be needed if there was no camping at all.

Basically, nobody makes a profit from either event, any money raised is immediately put back into covering costs of the particular event that raised it, and nobody gets paid to do it.

And now an apology to you all for the campsite and parking problems. A couple of weeks before the festival, the Parks Dept of the council informed me that we would have to use a different area for parking and camping - the area that was the public carpark this year, over a quarter of a mile away. I managed to get them to relent a little, and they let us use the area lower down by the trees, which while as not as convenient as previous years, was better than the alternative. I did not help matter I'm afraid, because I underestimated how much space all the tents and cars would take up. Once again - apologies for any inconvenience caused.

EVENTS LIST

MAJOR KITE FESTIVALS

March 31st/ April 1st	Blackheath Easter Kite Festival. <u>Contact</u> Tony Cartwright.
May 4th	Kite Society of Great Britain Annual Convention Weymouth. (Provisional). <u>Contact</u> The Kite Society.
May 5th, 6th	Weymouth International Kite Festival. <u>Contact</u> The Kite Society.
June 1st, 2nd	Birmingham International Kite Festival, Cofton Park, Birmingham. <u>Contact</u> Derek Kuhn.
July 6th, 7th	Washington Festival of the Air, Tyne & Wear. <u>Contact</u> Malcolm Goodman.
July 6th, 7th	Shrewsbury Kite Festival, Shrewsbury. <u>Contact</u> Tony Slater.
August 3rd, 4th	Glasgow Kite Festival, Glasgow. <u>Contact</u> The Kite Store.
August 31st/ September 1st	Bristol International Kite Festival, Ashton Court, Bristol. <u>Contact</u> Avril Baker.
or September 7th, 8th	Bristol International Kite Festival, Ashton Court, Bristol. <u>Contact</u> Avril Baker.

LOCAL EVENTS

The White House Kite Fliers have fly-ins on the second Sunday of every month. These are held at Barbury Castle Country Park, Near Wroughton, Swindon. Contact Ron Gunther.

The Great Ouse Kitefliers have a meeting on the following dates:-

December 9th Priory Park, Bedford. Contact Bob Piron.

The Chiltern Kite Group have decided to meet on the third Sunday of each month at Alternative flying sites. Maidensgrove, near Henley on Thames - 18th November. Pinkneys Green, near Maidenhead. Contact George Reed.

The Blackheath Kite Association meet on the second Sunday of each month at Blackheath, London. Contact Tony Cartwright.

The Essex Kite Group have meetings throughout the winter months.

Contact Kathleen Pike.

The Nomansland Kite Fliers meet on the fourth Sunday of each month at Nomansland Common, Wheathampstead. Contact Carole Peacock.

The Alcester Kite Fliers meet at the Alcester Rugby Ground on the third Sunday of each month.

Contact Fred Taplin.

Kite North meet on the 1st Sunday of each month at locations around the North of England. Contact Adam Sutherland for location.

EVENTS LIST

The Devon Kitefliers have meetings at Pork Hill, Mid Devon on dates throughout the winter.

Contact Les Symons.

The Midland Kitefliers have fly-ins on the first Sunday of each month at Sutton Park.

Contact Derek Kuhn.

The Brighton Kite Flyers fly once or twice a month at various sites in the Brighton area.

4th November	Highdown	18th November	Beachy Head
2nd December	Telscombe Tye	16th December	Woodingdean
30th December	Ditchling Beacon		

Contact Greg Locke.

1991 Rokkaku Challenge Events

Heats for the 1991 Rokkaku challenge will take place at the following festivals:

Easter Blackheath	Summer Blackheath	Shrewbury
Washington	Glasgow	Bristol
Weymouth		

MAJOR INTERNATIONAL FESTIVALS

April 27th, 28th	Le Touquet, France. <u>Contact</u> Vincent Glon.
July 13th, 14th	Ostende Kite Festival.
August 9th - 11th	Stolln, near Rhinow, Germany.
September 21st, 22nd	Berlin International Kite Festival.

CONTACT DETAILS

Tony Cartwright, 78 Dongola Road, London N17 6EE. 081 808 1280.
Greg Locke, 53 New Road, Shoreham by Sea, Sussex.
Avril Baker, 39 Cotham Hill, Bristol, BS6 6JY. 0272 745010.
Les Symons, 'Ju Les Gla', East Waytown, Goodleigh Road, Snapper, Barnstaple, North Devon.
Ron Gunther, 0793 770784
Malcolm Goodman, 134 Thames Road, Billingham, Cleveland TS22 5EX.
George Reed, 7 Bellwood Rise, High Wycombe, Bucks. HP11 1QH.
Kathleen Pike, 34 Mortimer Road, Rayleigh, Essex.
Fred Taplin, 20 Henley Street, Alcester, Warwickshire.
Tony Slater, 128 Meadow Farm Drive, Harlescote, Shrewsbury. SY1 4JY.
The Kite Store, 48 Neal Street, London. 071 836 1666.
Derek Kuhn, 29 Bradbury Road, Solihull, West Midlands, B92 8AE.
Ron Dell, 2 Garfield Road, Enfield, Middlesex 081 804 9080.
Carole Peacock, 61 Windmill Avenue, St Albans, Herts AL4 9SJ.

ONE SKY ONE WORLD

This years One Sky One World event was held on October 14th. If you participated by flying your kite - either at an organised event or on your own, could you please fill in the form below, so that Britains participation figures can be correlated and sent to the worldwide organisers. Thank you Please return all forms by 15th of November.

NAME _____

ADDRESS _____

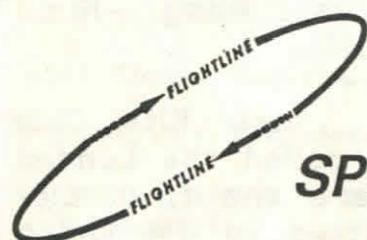
FLYING VENUE _____

NUMBER OF KITES _____

NUMBER OF KITEFLIERS _____

NUMBER OF SPECTATORS _____

YOU SHOULD FORWARD COPIES OF ANY PUBLICITY RECEIVED.



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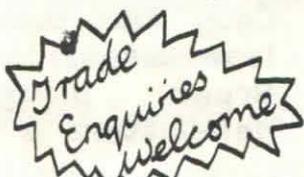
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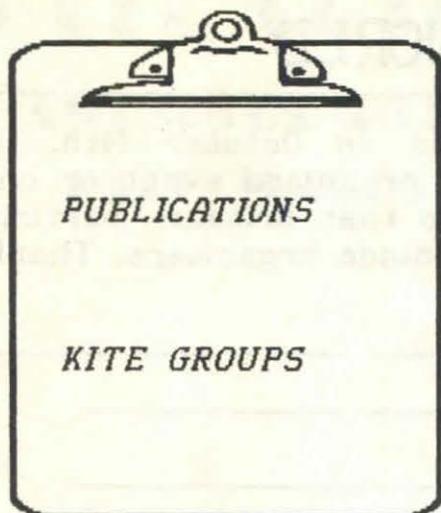
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world-record long distance



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Arthur Newton, 1, Nelson Court,
Watton, Norfolk IP25 6EL. 0953-882448



PUBLICATIONS

KITE GROUPS

Publications

One of our members Bill Longley passed on this snippet.

The latest issue (no 130) of the German design magazine Form contains a coloured front cover illustration and two articles on kites.

The first article outlines Japanese kite history, materials and regional variations, with illustrations of a few of the kites made for the exhibition 'Pictures for the Sky' in Osaka organised by Paul Eubel. 140 kites, painted by noted artists from 20 countries and built by Japanese makers, are on show, and the exhibition will move over the next two years to several cities in Europe and to New York, before the kites are auctioned for U.N. relief funds.

The second article concentrates on modern designs and materials for kites, with some splendid coloured photographs.

In the last issue we mentioned that a new kite book - Kiteworks by Max Eden - had been published in America. We have since learned that the book is being published in the U.K. by Cassell Ltd, the publishing date is 18th October and the price will be £14.95. For further details

contact Jonathan King at Cassell on 071 839 4900.

New Groups

A new kite group is starting up in Northampton. Organised by Catherine Brett, they plan to meet on the first Sunday of each month at the Racecourse, Northampton 11am onwards. For further details contact Catherine on 0604 843374.

We have heard from Kevin Appleton who has recently formed a new kite club, based in the Norwich area. They call themselves the Thrope Kite Flyers and have around 30 members. For further details contact Kevin at 37 Eastern Avenue, Thorpe - St Andrew, Norwich NR7 0UQ tel no 0603 31964.

Another new group - The Poole Kitefliers based around Poole, Dorset, the secretary is Andy Nunn telephone 0202 721150.

There is also a new Kite Club based in London - called the London Skite Club, they are the first kite club totally committed to developing stunt kite flying using two string precision kites. Based in London and the home counties the club will meet regularly at a London Location and fly stunt kites in teams and individual events. Membership fee is £10.00 for which you receive a discount at the Kite Store and a regular newsletter. For further information contact the club secretary Simon Lewin, The London Skite Club, 5 Southgate Grove, London N1 5BT.

Further information about the S.F. Cody Kite Society mentioned in the last magazine. The president Rick Brown plans to have four newsletters a year with supplements



stunt kite tokens from the special peperami 5 packs so look for the special packs!

If you want some bamboo, then the people to contact are Bamboo People, Godmanstone, Dorchester, Dorset, DT2 AF. Tel. 0300 341393. Ideal for fighter kites, examples are £8.50 for 4.5" diameter 12 to 15 ft. Personal callers only.

in between them if needed.

Membership is \$7.00 and apparently there are both patches and enamel badges available. For further details contact Rick at 1082 Bethesda Street. Eugene. Oregon 97402 USA.

Kite Things

Following a small item that appeared in KiteLines we have managed to track down the English (and in fact the main) distributors of a gold coin showing a child flying a Chinese swallow kite. Spinks have produced a series of coins to commemorate the 70th anniversary of The Save the Children Fund with a donation being made to the charity for each coin sold. The coins are usually only available in a limited edition (3000) collectors set, but the Chinese Government decreed that 2000 extra Gold coins would be made available to the public. These proof coins are available from Spinks Modern Collections on 081 689 5131 the price is around £260.00.

There are quite a few free kite offers appearing on various foods but the best we have come across is the peperami Stunt kite offer (peperami are a salami sausage snack). The kite is in the shape of a piranha and comes with a fibreglass frame and tail. All you need is 6



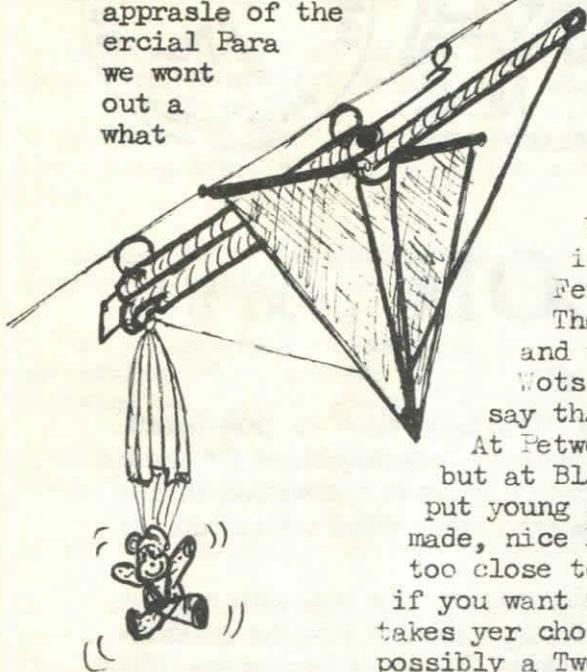
PETWORTH KITE FESTIVAL
8 July '90

THANK YOU to all the demonstrators and enthusiasts who came to Petworth Park, West Sussex. You helped to make it a wonderful day. The wind was strong, and there were moments when bouncy castles and tents looked as though they were going to join the kites in the sky! Special thanks to Greg Locke for the commentary. We made £1,140 profit which has gone to Driving for the Disabled and the National Trust. No date yet for next year. Will let you know.

Joanna Mersey

Greens of Burnley Complete

As you may have read for the Kit to arrive apprasle of the ercial Para we wont out a what



Parachuting Teddy Bear Kit.....

in the last Issue of R.C. we had a Twelve week wait it did eventually, and here we hope to give a brief Kit. We did say that it was the worlds first Comm-Bear Outfit, but Paul Carline disputes this, and so even mention the Geezer, Nudge, Nudge, who knocked Batch of Parabear Kits back in 1982. First, Second. do you get for your Dough. The Ferry is in F/glass and Ripstop and is very simmlar to the Ferry in Kites (Ron Moulton) p57 top. The dimensions are 50cm by 63cm. The attachment of the Ferry to the Kiteline is by two largish Keyrings, which means ideally the Ferry should be attached before the Kite is launched. The Parachute is a Four Gore Eight Shroud Job in Ripstop and the Bear is a nice Jointed one some 25cm tall. Wots it go like Bruv? Quite well actually, though we must say that it does require a stiff wind to hoist the the Ted. At Petworth it did the Biz quite well with the Bear supplied, but at Blackheath it wouldnt cut the Mustard, not even when we put young Slangevar (6oz allup) on it. Plus Points, quite well made, nice Bear, C.K. in stiff Wind. Negative Points, Keyrings are too close together, Very Basic Chute, no Chute Pack. BMISS verdict if you want instant Para Fauna action, then you pays yer dosh and takes yer choice. Greens Para Bear Kit £28-35 plus 10% P.P. and possibly a Twelve Weeks delivery time, who knows.....

If you want to start Parachuting Fauna and fancy making everything yourself, then the BIG BOOK OF PARACHUTING TEDDY BEARS by Hugh Andrew and some other Schmuck is what you definitely need, This Book tells it like it is from Scratch, and when we say Scratch we mean the Starting Line. Fully BMISS approved, the A3 Format Book Features Hughs How To's from Kon, Various Chute Plans, a Delta Plan and Detailed lofting and Launching Tips, in fact all you need to Parachute succesfully is in this softback Book. Price £2.50 inc P&P.

If you also require a Bear to do the Bizzo with Chutewise, Hugh also has some good Bears for Sale at very reasonable cost. I.E. Small Ted approx 10" Tall at £2.75. inc of P & P. and a larger Ted approx 13" Tall at £3.95. inc p & p. both the Bears are Jointed. Contact Hugh at Glendower Mews, Clifton Park Road, Clifton, Bristol. BS8.3BP.

At the Bristol Carparking whoops Kite Festival a serious attempt was made on the BMISS Most Dropped Record (Classic Catagory) Dropnik Clements Sky Squad made a valiant effort with a Strat 7 which was only Thwarted by lack of Wind. The B.O.F. was right under the Strat in Official Observer Mode and thought that the present record was going to be broken, alas it was not to be. We wont say how many Fauna Dropnik Dave was going to launch, suffice it to say that the current record of 39 Fauna presently held by Greg Locke wuld have been well and truly shattered. Watch out Greg, its only a matter of time before Dave has the Record.

Whilst we are on about potential Record Breaking, we'd like to lay a bet that young Slangevar, who is now residing with the BMISS H.Q. Mob, currently holds the Downwind Drift Record at an estimated half a mile, Despite having lots of holes cut in his Chute Canopy, the little Bleeder still takes ages to hit the ground. If you fancy a High Plains Drifter of your very own, then contact Dare Bears c/o Paul Carline on 031.220 6336 in Edinburgh, Bonny Scotland.

In the next issue of R.C. we hope to publish details of Fat Bonneaus (see Pat we did finally learn to spell it correctly) Stunt Kite Para Bear Launch System. This can only be described as Bloody Amazing, with vast potential for Knackering the Stunters when they are doin what they do best Sky Hogging. Gee Whiz thats torn it, better get ready for a deluge of letters from irate Stunters. To which of course we shall reply in very polite terms probably along thelines of "GIT STUFFED ASSOLE, or we'll declare Holy War on Ya". (Oh Gawd, just when I thought we'd finally got an issue of R.C. where the you know what would'nt hit the Fan, Fred goes and blows it. The B.O.F.)

Your News, Views and pro Stunter Letters to the Teddytorial. 48. Laurel Lane, West Drayton, Middx. UB7. 7TY, U.K. Right we'll now Barricade the Doors and Break out the Tin Helmets and Flak Jackets, Gordon Bennett, its atough life being a Boring Old Fart.



MFEXTRA

MIDLANDS KITE FLIERS NEWS
29 BRADBURY ROAD, SOLIHULL, WEST MIDLANDS, B92 8AE.



RIP STOP NYLON (PART 2)

SELECTING FABRIC FOR KITEMAKING

Although woven fabrics have many advantages over laminates, such as polythenes, Melinex, Mylar, there is one great disadvantage. Whereas laminates generally show the same strength in all directions, woven fabrics are only strong in the direction of the weave, that is along the warp and weft. Diagonally across the weave fabrics are usually much weaker due to the tendency of the yarns to slide across each other.

Such differences in strength of course have great implications for the way sails are cut from the fabric and fitted together and the importance of cutting sails such that the grain on either half of the kite is balanced are well known to kitemakers. But such factors are also important when choosing a rip stop especially when checking seconds fabrics for faults.

BUYING AND USING RIP STOP

Rip stop nylon fabric can be purchased direct from the manufacturer or textile broker usually as whole rolls of a nominal 100 metre length. Some manufacturers may be willing to supply half or quarter rolls, but only at premium prices, possibly as much as + 50%. Most kitemakers however prefer to buy fabric in much smaller quantities, one or two metres at a time and kite stores in particular can usually offer have a good range of colours, though rarely a selection of different weights. The markup on rip stop bought in such small quantities is often however in excess of 100% above factory prices.

Almost all the rip stop available for kitemaking in Britain is 'seconds' quality, that is it contains a defect which makes it unsuitable for normal sale. Some of the defects will have been cut out by the manufacturer, broker or by the retailer, but many minor faults will remain. If you are going to make use of the fabric most efficiently and produce high quality results it pays therefore to be aware of the different types of faults and how they may affect the performance of your kite.

There are five types of defects which the kitemaker should be aware of:-

Dying faults Where the dye has not taken on the fabric there may be smears of colour, or different shades of colour along the roll but unless they are particularly severe such faults can generally be ignored.

Oil Marks

Occasionally you will come across oil or solvent stains on the fabric caused perhaps by a machine malfunction or an inept mechanic. Fortunately these stains are not usually large and the sail pattern can be fitted to avoid them.

Mis-weaves

Perhaps only rarely, you will find parts of the fabric where there is a small break in the weave, resembling a tear.

This fault is caused by a minor malfunction during the weaving process causing local weaknesses. Again try to fit the sail pattern to avoid this defect and the area immediately surrounding it.

Luckily most mis weaves are identified during the quality control stage and will be marked by a coloured thread sewn into the selvedge.

Off Grain Effects

Off grain effects are the most common defects in seconds quality rip stop, but equally



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the most difficult for the untrained eye to spot.

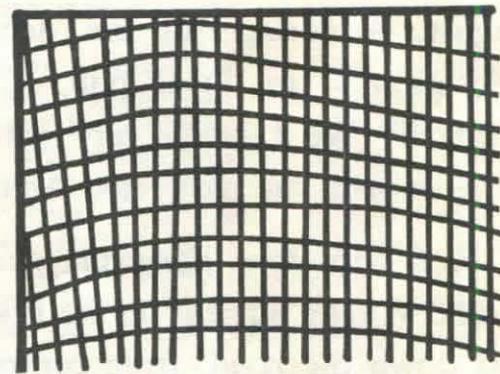
Normally, in an ideal fabric, the yarns in the warp and weft are parallel and interlace at 90 degrees, producing a regular pattern of squares. However, during the finishing processes, dyeing, calendering and coating the fabric may stretch and buckle causing the weave pattern to twist such that the yarns are no longer parallel. Such twists are described as 'off grain' effects illustrated in Fig 1.

As discussed above, rip stop is stronger in the warp and weave directions, but such twists can cause local weakness and the puckering of the fabric when under tension. Kites made from fabric sections containing these faults are therefore likely to suffer from a instability, increasing the more the kite is flown.

Unfortunately off grain effects are rarely localised, and if they occur in one part of the roll they are usually also present throughout its length. To find a roll of seconds rip stop which is not off grain is however quite rare and when buying fabric you are almost always faced with decision of what degree of fault you are willing to accept.

fig. 1

Example of a box pattern on an "off grain" piece of rip stop nylon



Coating Problems

As discussed in part 1, the type of coating on rip stop nylon varies dependent on the final application. Spinnaker rip stop has a harder coating giving the fabric a crisp feel, with very little stretching whereas clothing grades have very soft coatings, allowing much greater stretch.

If you buy seconds rip stop taken from the ends of rolls you might find parts where the coating is patchy or does not extend to the full width of the roll. Several pieces I have bought recently have had this fault. Because there can often be a wide variation in permeability between coated and uncoated fabrics, it is better that the two should not be mixed on a kite. Use either wholly coated or uncoated parts in the construction of the kite sail.

Occasionally fabrics are given the wrong type of coating and you will find clothing grades with a spinnaker finish and or very stretchy lightweight grades. The best advice is perhaps to avoid both, especially the latter.

Another fault which is also quite common is when the coating dries too hard and has a tendency to crack in the folds and creases in a criss cross pattern. Because of their resistance to stretching these fabrics can make quite acceptable kites, particularly framed designs, but they are very difficult to handle. Generally they will not accept adhesives, and because of the large amount of static electricity generated fabric layers have a tendency to slip and slide when being sewn. Also whatever size of needle you use it will always 'pop'!

In part 3 : Cutting and Sewing Techniques.

Adapted from 'Kites and Windsocks' by Jim Rowlands to be published by Batsford Press late 1991.

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MIDLANDS KITE FLIERS EVENT REPORT

29 BRADBURY ROAD, SOLHULL, WEST MIDLANDS, B92 8AE



MIDDLE WALLOP FLY-IN

Sunday, 5th August, 1990

Holiday time for the Eccleston tribe was due to start on Friday the 4th August. A cottage in the deepest wilds of Dorsetshire - the nearest civilisation - the local pub, a mile and a half away (within staggering distance!) "We'll have a very restful time dear, none of all that running about we've done in the past", said Anne.

Ron Moulton, however, decided differently. He arranged a fly-in at Middle Wallop airfield on the first Sunday of our vacation, and as Wiltshire is "just down the road" from central Dorsetshire (!), how could I not attend? Especially after Tony Slater had told me about all the rotary winged exhibits in the museum there.

So off we set to investigate this replacement for the Wroughton venue. All the signs augured well - the sun was shining, lots of blue sky, very warm. All this and wind magic! When we arrived it was almost unbelievable, all that flat(ish) open space, very nearly too good to be true. No need to worry about crossed lines here, the only ones who remotely used a chunk of this space were John Barker's parachuting teddies - especially when thermalling! well done, J.B.

Middle Wallop, with its size and situation must come very close to being the perfect kite flying site. I feel I am almost certainly speaking for all the kite fliers who were there when I say to Ron Moulton :

"Thanks, Ron, for a great day out at a SUPERB flying site - how soon can I go back again?"

Don Eccleston

Chairman, Midlands Kite Fliers

September, 1990



MIDLANDS KITE FLIERS EVENT REPORT

29 BRADBURY ROAD, SOLIHULL, WEST MIDLANDS, B92 8AE



NORTHAMPTON BALLOON FESTIVAL

Saturday & Sunday, 18th & 19th August, 1990

If you've never been to a balloon meeting, as I hadn't, go at the very next opportunity. The sight of fifty balloons all taking off together and floating away over the rooftops of Northampton was breathtaking.

We arrived on Friday night and set up in the compound, a rather congested area with no apparent ground plan. Given the small area, marked pitches would have been a good idea. However, this did not deter us although the obsession with locking the toilets at dusk nearly did!

The weather on Saturday morning did not look hopeful but by mid-morning conditions had improved and to our delight a number of balloons took off in a "hare and hounds" race. This left the field clear for a spot of Kite Flying, except by this time the wind had become hopelessly unpredictable. (I wonder how the balloonists were managing?) The rest of the day passed with various balloons tethered and even the unusual sight of a radio controlled balloon.

In the evening the balloons set off on another hare and hounds race and on their return put on the most spectacular display of the whole weekend. In the pitch dark, they inflated and tethered the balloons in a long line and then, at a signal from the commentator, they all opened their burners at the same time. Thirty illuminated balloons against a night sky was a stupendous sight - I hope the photos come out, but I don't think they will convey the unearthly beauty.

Sunday dawned grey, windy and wet. The meteorological report on the blackboard outside the control centre was concise : "Awful" Ballooning was officially called off for the day, which left this enormous open space just waiting to be filled with kites, which is exactly what we did.

We eventually trekked off home on Sunday evening after a superb days' flying in some very pleasant company. Ballooning and Kite Flying are compatible, and we will be able to organise things more efficiently knowing the general plan of the day. For example, once the balloons have gone, they don't come back for about two hours. We look forward to being invited back next year and if you didn't come this year (and most of you didn't!), make it a date. See you there!

Chrissie Kuhn

Treasurer, Midlands Kite Fliers

September, 1990



Midlands Kite Fliers
**International
Festival of Kites
1991**

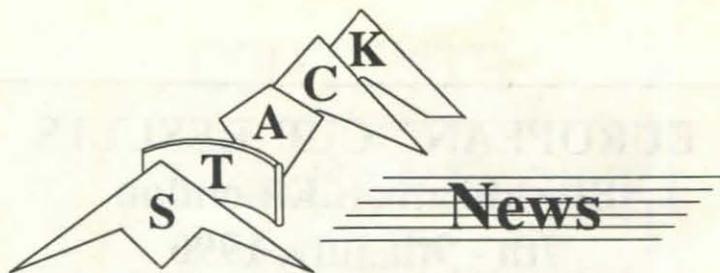
**Saturday, 1st June, 1991
Sunday, 2nd June, 1991**

COFTON PARK

**LONGBRIDGE
BIRMINGHAM
GREAT BRITAIN**

Information available from January 1991:

The Secretary,
Midlands Kite Fliers,
29, Bradbury Road,
Solihull,
West Midlands,
B92 8AE,
Great Britain.



World Cup 1991

The venue for the 1991 World Cup has now been decided as Bristol. It will be held at the weekend after the Bristol Kite festival. The provisional date is the 7th & 8th September, 1991 in Aston Court.

The plan at this early stage is that we put together a sponsorship proposal to seek a commercial sponsor. This would enable us to put on the years premier stunt

kite event. The need and structure for commercial sponsorship will be discussed at the AGM.

The intention on the competition side is to hold competition for not just teams, as with this years World Cup, but also for individuals. The winners of Nationally recognised competitions will be eligible to compete.

A.G.M.

The second A.G.M. will be held in London, on the 14th November. Nominations for the elected posts must be received by the start of the meeting. All members will receive election forms soon after the AGM. The constitution will also be finished and ready

for approval by those present at the AGM.

The posts up for election are:

President
Chairman
Treasurer
Secretary
Event Co-Ordinator

TEAM Register

Team flying is starting to gain momentum.

Last year there were but a handful of teams.

This year we have consistently seen more teams appearing on the sidelines of most

of this years team competitions. Last year Up against the Wall watched at

Bristol, this year they have won Open team competitions. STACK

wants to do everything it can to help teams form and give them a chance to compete both locally and

Nationally. To this end we have started a register of Teams, not just in Europe by

Worldwide. This register will allow us to ensure that all teams get event information, demonstration oppor-

tunities, Notification of Master Classes and expert advice and support. Please send in information about

your team to Paul Jobin at STACK and

we will publish a list of all known teams in the next issue. One objective of the

register is to start the formulation of team rankings to allow for the best and fairest

selection for the 1991 World Cup. So if you are part of team send in your contact details

and we will list your teams name in the register.

Raoul Fossett & Belguin: An Apology

There is one member that has done a great deal to help the sport and unfortunately he has a bitter taste in his mouth at the moment. The STACK committee would like to apologise to Raoul Fossett, National Director of Belgium for not ensuring that the result of one of the years most enjoyable weekends, Oeustdunkirk, was not available to him. We apologise for the embarrassment this has caused you. Please give us one more chance Raoul and continue your fine job of coordinating the Sport in Belgium.

EUROPEAN CUP RESULTS

Blackheath, S.E.London

7th - 9th July, 1990

Experienced Individual Precision

1.	Simo Sulanne	61.9
2.	Simon Nosworthy	55.4
3.	Alex Moresby	54.3
4.	Martin Kirby	54.0
5.	David Kirby	52.3
6.	Yogi Simpson	52.0

Experienced Individual Ballet

1.	Simo Salanne	63.9
2.	Alex Moresby	60.5
3.	Marcus Moresby	60.4
4.	Martin Kirby	56.8
5.	Yogi Simpson	55.0
6.	Simon Nosworthy	49.9

Experienced Team Precision

1.	Wrecking Crew	50.87
2.	Organised Chaos	38.7

Experienced Team Ballet

1.	Organised Chaos	76.6
2.	The Flying Kebab Family	60.2
3.	The Wreckers	53.7

Open Individual Precision (Final)

1.	Thomas Erfurth	79.8
2.	Paul Jobin	79.6
3.	Tim Paget	74.5
4.	Kerin Charte	72.3
5.	Nop Velthusen	71.8
6.	Romney Johnstone	69.1
7.	David Clements	55.1

Open Individual Ballet (Final)

1.	Maxime Fellion	87.7
2.	Paul Jobin	83.1
3.	Tony Cartwright	77.8
4.	Thomas Erfurth	77.2
5.	Julian Wolfe-Patrick	71.8
6.	Dennis Pierrot	69.9
7.	Mike Ward	64.6
8.	Kerry Adams	56.2

Open Team Precision

1.	Flashback	78.6
2.	The Decorators	75.9
3.	Up Against the Wall	64.8
4.	The Blitz	61.3
5.	Wicked Allsorts	59

Open Team Ballet

1.	The Blitz	83.6
2.	Up Against the Wall	77.8
3.	The Decorators	75.1
4.	Flashback	69.8
5.	Wicked Allsorts	67.4

Individual Innovation

1.	Mark Cottrell	87.6
2.	Maxime Fellion	71.7
3.	Tim Paget	65.3
4.	Steve Cronan	50.7

Team Innovation

1.	The Blitz	75.2
2.	The Decorators	69.9
3.	The Ballet Tutus	57.2
4.	STACK Logo Team	41.5

British Nationals Individual Overall

Paul Jobin

Junior British Nationals Individual Overall

Alex Moresby

British National Team Overall

The Decorators

European Cup Open Individual Overall

Paul Jobin

European Cup Open Team Overall

The Decorators

Lenzerheide - Valbella 1990 Swiss Stunt Kite Championships

This year the event was held on August 16th/17th at Lenzerheide - Valbella, a beautiful village setting in the Swiss Alps. It was organised by Rene Kung with the help of members of the Drachenclub Regio Basel and Rivella, a local Swiss drinks manufacturer.

The saturday saw individual precision events with individual ballet on the sunday. Sadly, there were no team events, only demonstrations due to lack of numbers in the different categories.

An International judges panel was present, including, Karin Zander (BDR), Viv Walters (GB) and Susi Banfield (USA) with the help of local fliers.

A well organised event with some very promising Swiss fliers which looks well for the future events. Congratulations to Reudi Weisskopf on becoming the 1990 Swiss Stunt Kite Champion.

Novice Individual Precision

1.	Lukas Wachker	76.3
2.	Gerhard Schroff	75.7
3.	Peter Furst	70.6
4.	Ruedi Baumann	69.7

Experienced Individual Precision

1.	Thomas Abholte	68.8
2.	Susanne Zimmermann	68.5
3.	Ivan Kartschmaroff	67.2
4.	Gerhard Dutschke	66.4

Open Individual Precision

1.	Maxime Fellion	84.3
2.	Julian Wolfe-Patrick	81.8
3.	Larry Neumann	75.2
4.	Stefan Schonberg	72.7

Experienced Individual Ballet

1.	Thorsten Warmbold	74.5
2.	Thomas Abholte	73.4
3.	Christian Schmid	70.5
4.	Christian von Appen	70.3

Open Individual Ballet

1.	Maxime Fellion	82.9
	Dennis Pierrot	82.9
3.	Rudolf Weisskopf	82.3
4.	Julian Wolfe-Patrick	81.7

No Team events

BERLIN

22nd & 23rd September, 1990

Open Team Precision

1.	Top of the Line (USA)	82.80
2.	Decorators (GB)	77.2
3.	Flashback (F)	76.6
4.	Up Against the Wall (D)	68.6

Open Team Ballet

1.	Top of the Line (USA)	93.0
2.	Flashback (F)	84.0
3.	Decorators (GB)	83.0
4.	Spiro Jet (C)	77.4
5.	Up Against the Wall (D)	74.4

Experienced Team Ballet

1.	Go Shred a Kite (D)	76.1
2.	Rainbow Gliders (NL)	72.1
3.	Team Wolkensturmer (D)	68.9
4.	Flying Chaos (D)	42.8

BRISTOL KITE FESTIVAL RESULTS

Open Team Precision

1.	Top of the Line (USA)	90.73
2.	Flashback (F)	75.17
3.	Blitz (GB)	71.68
4.	Decorators (GB)	70.15
5.	Wicked Allsorts (GB)	56.8

Open Team Ballet

1.	Top of the Line (USA)	90.1
2.	Blitz (GB)	80.17
3.	Flashback (F)	77.47
4.	Decorators (GB)	73.73
5.	Wicked Allsorts (GB)	61.33

The HARK Project

Ten years have passed and now the story can be told of the HARK project and the so-called superkites associated with this commercially secret enterprise.

HARK was simply the acronym for High Altitude Research Kite and the aim of the project was to produce a kite lifting system capable of removing a 10kg package higher than any kite had ever flown before. And the aim of the project was very high- forget the classical record of 31,000 ft, HARK went higher, much higher. Indeed the composite Mk8 kites touched the fringes of Space.

There were problems, severe problems. Example- what do you use for line? At 74,000ft altitude you would typically have 210,000ft of flying line out. No problem you would think, however, say you were using piano wire for flying line. Unfortunately this would not do- it has a free length breaking point of 21 miles (say 105,000ft), titanium wire was better, nearly 36 miles (180,000ft). Kevlar had just become accessible and with a free length of 60 miles (whoopee, 300,000ft) looked suitable. Guess what, at altitudes above 50,000ft it started playing up- strength would disappear in a matter of hours. We twigged eventually- ultraviolet intensity was such that the line shrivelled and perished in no time. Sigh....not kevlar then. Well, not quite. We did use Kevlar, but in a sheath (behave yourself at the back of the class, it's just a word). Not a nylon or polyester sheath like you see nowadays, but a fluorescently doped glass fibre sheath which converted the incoming UV to a nice harmless glow and added practically nothing to line diameter or weight.

And then the kites- they went ever so high and were based on rather radical departures from standard kite design. The two major HARK kites were designated as Mk3's and Mk8's- the Mk3's being the primary low altitude lifters (rated to 40,000ft) whilst the

composite Mk8's had a design ceiling of 110,000 ft (we never quite got there). As to type the Mk3's (Angels-Angies) were of uni-cell swept wing box form with lifting surfaces formed in a similar manner to a parafoil and were usually of 3-5m wingspan. The Mk8 (Gabriel-Gabbies) was a unique beast and in a word, Huge, the smallest was of 10m wingspan and rated to stand a kinetic velocity/density product of 650 (as Atmospheric density decreases it is not uncommon for the velocity to increase drastically- conventional aerodynamics has no convenient system to rationalise such variations, so we used a velocity/density number). And why the designation composite, simply because the Mk8's contained gas cells to effectively reduce the flying weight and increase lift- hence the large size- you need a lot of cell space to provide usable lift at 75,000+ft.

Flying these little monsters was fun. At take-off in 10mph of wind a small Mk8 would produce around 85kg of vertical lift (60kg gas lift and 25kg dynamic lift). As altitude increased dynamic lift used to increase with a vengeance and gas lift drop off (the kite vented gas as it climbed). Since a train would consist of a pair of Mk8's and up to four Mk3's line tension could reach up to the 1300kg mark. But no-one ever touched the line- it would ring like a bell and was unbelievably abrasive (the occasional person did- they didn't do it again).

Well, they got there. The highest a HARK train ever went was 96,240 ft at which point the transponder on Angel leader didn't transpond and so we will never know just how high Gabriel was.

I never found out what the commissioning Company did with the technology. I got paid- they went on being Multi-National. I suppose someone. somewhere is flying high, measuring, watching.....????

Baby "Angels" currently known as Swept Wing Boxes

The Kite Store Ltd, 48 Neal Street, London, WC2H 9PA

Tel;071 836 1666 Fax;071 836 2510