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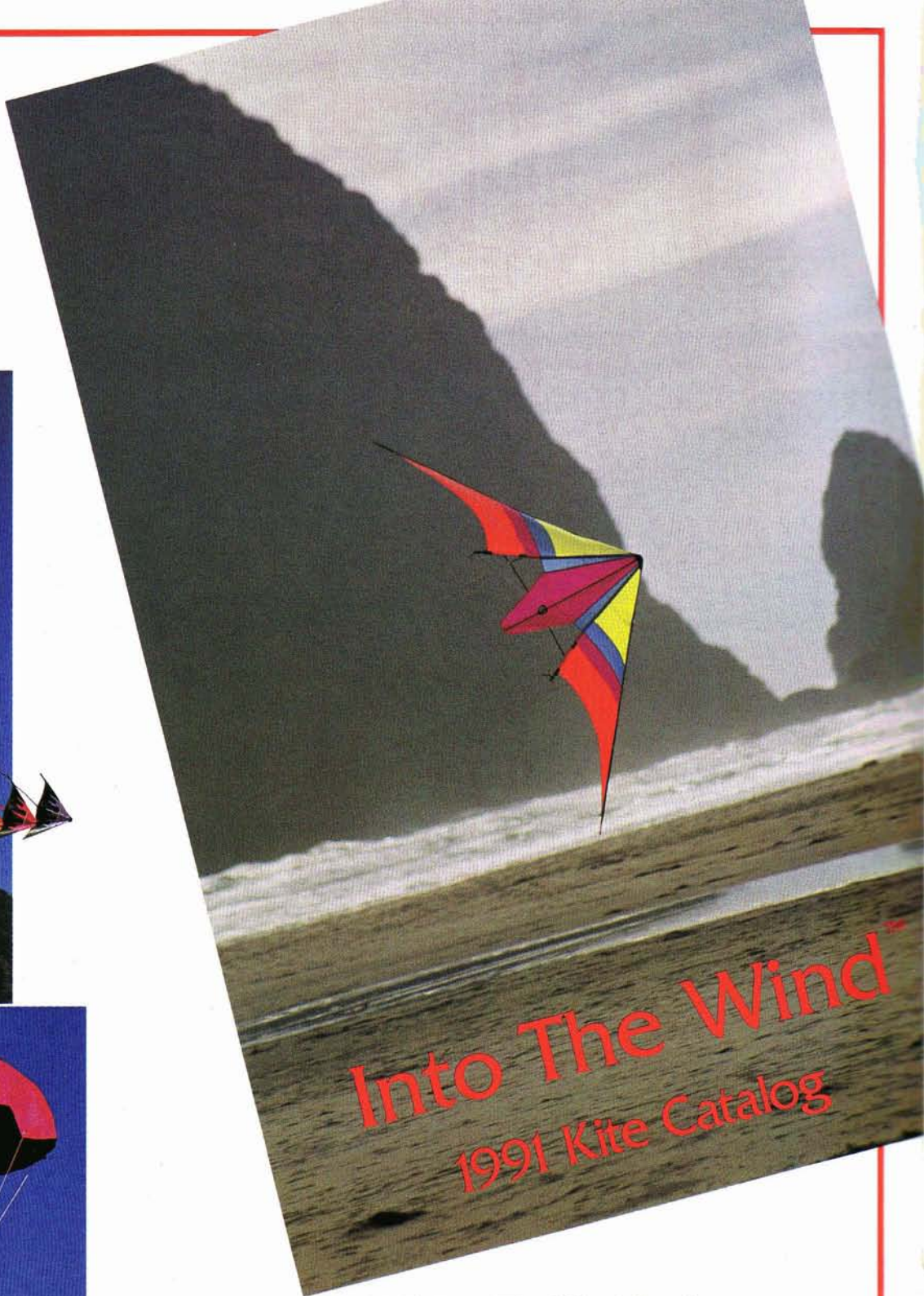
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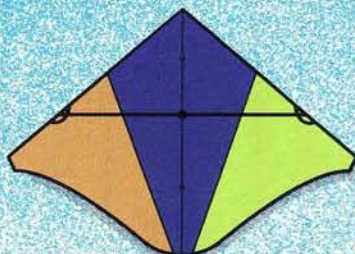
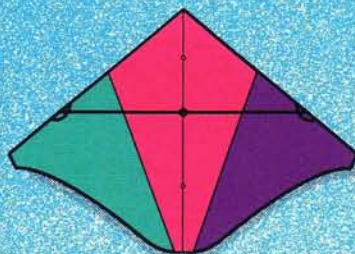
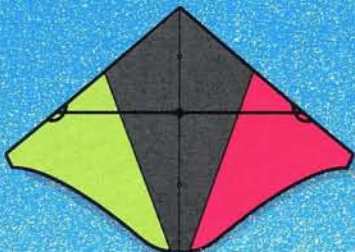
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KiteLines

ISSN 0192-3439

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Associate Editor: Leonard M. Conover

Production Director: Kari Cress

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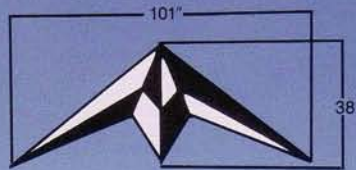
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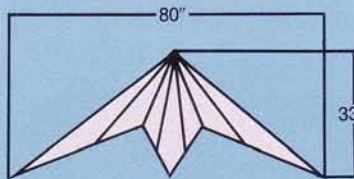
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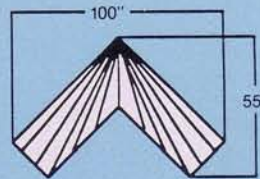
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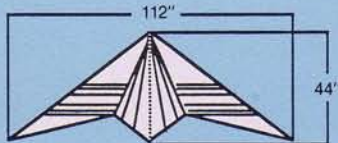


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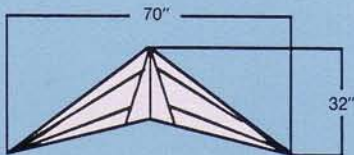
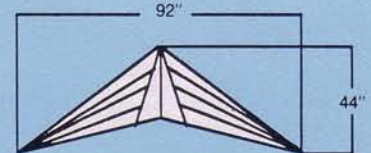
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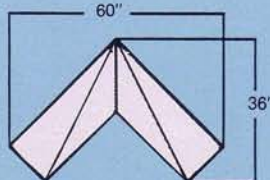
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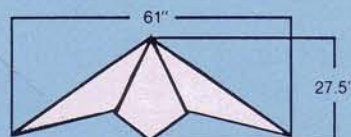
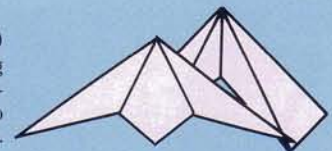


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KiteLines

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Silvio Maccherozzi of Parma, Italy, sets aloft his kite, named #1200 *senza orli* (excluding hems). The name refers to the number of internal seams, not counting the sewn hems! Photographed by Franco Piccoli at the summer palace of Maria Luigia at Colorno, near Parma. (See story on page 57.)



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Kites and the Environment Revisited



Way back in 1980 when the fuel scare was at its peak, I wrote a letter to you in which I praised kiting for its environmental acceptability:

"It doesn't take fossil fuels to fly a kite," I said rather smugly. But I did go on to acknowledge that limited open spaces in most urban areas require us to *drive* to a flying site. There's the rub.

That problem is still with us today. If we think about saving petroleum and cutting back on "non-essential" driving, we're forced to decide if kiteflying is essential or not. Well . . .

My suggestion at the time was: "Decorate the sky that's over you." Nice.

But more and more it is not an answer. According to our recent reader survey, we are traveling *more often* to kite events than ever. So the petroleum problem hangs on even after 10 years.

And what about kitemaking materials and waste? Here's a subject little talked

about. Pick any type of kite skin or bones and you're talking about felling trees (for paper or for wood sticks) or creating noxious pollutants (for plastics or synthetics). These are simply for raw materials, not counting the waste in kite product manufacture (all those scraps and all those below-quality rejects). And finally there's the litter created by kiteflying itself: think of all the trees festooned with plastic, sometimes for years after the flying.

Here at *Kite Lines* we have our own type of guilt. Every time we publish an issue of the magazine, approximately 14 trees are cut down. (I can't believe it either.) In order to bring you pictures that are sharp and colorful, we must use a glossy-finish paper that is less biodegradable than, for example, newsprint. Finally, because protecting your copy is so important, we polybag it before putting it in the mail. Polyethylene is not very biodegradable, though its mass is smaller and its

manufacture less polluting than paper's. (Always the trade-offs make waste problems non-simple.)

We do agonize over our sins, but we try to console ourselves that at least they are proportionately small. For example, it would take us 300 years to equal the wastepaper produced by *one* Sunday edition of the *New York Times*!

Still, our bit is our bit and it adds to the whole. So we have made a change that reflects our environmental awareness: our Pocket Kite Calendar is now printed on recycled paper. We hope you find it just as useful in its new, plainer dress.

You can recycle too. If you don't keep your copies of *Kite Lines*, please pass them on to a library, school or kite club where they can be read and made use of again and again.

Valerie

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A Renegade Kite!

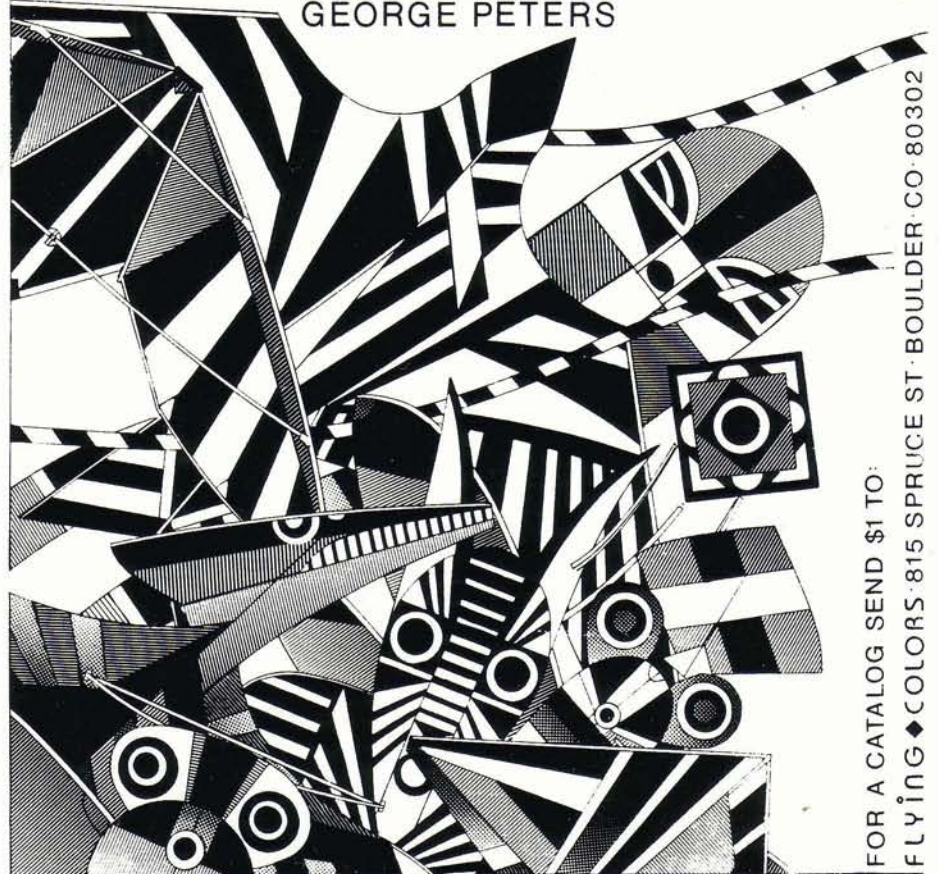
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Years carried Kite Lines: 14
Owners: Bill and Mary Ochse.
Ages: 53 and 38
Favorite food: Porterhouse steaks.

Last book read: Mary: *The Russia House* by John Le Carré. Bill: *Cruising the Turquoise Coast of Turkey*.

Last kite book read: Bill: *The Stunt Kite Book* by Alison Fujino and Benjamin Ruhe. Mary: "What, are you kidding?"

Favorite flying spot: The beaches of Ocean City.

Speciality of the store: Promotional flying of giant animal windsocks.

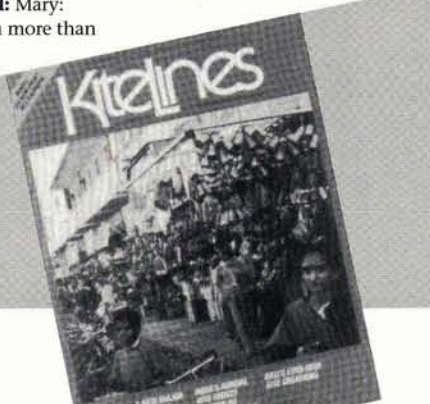
Most important advice I ever received: Mary: "Never take on more than you have the

capacity to worry about." Bill: "Take care of the business and it will take care of you."

Nicest sale I ever made: 100 "King of the Wind" deltas to a convention group.

Best fringe benefit of the store: Cruising the Bahamas every other winter aboard the "Sea Rogue."

Favorite issue of Kite Lines: Summer 1989, with that great story on the Kite Capitals of the World, awarding Ocean City the Most Elegant Entry Award.



Doesn't your store carry *Kite Lines*? To learn all the benefits of doing it, write for retailers information package to: *Kite Lines*, P.O. Box 466, Randallstown, MD 21133. Or telephone us at 301/922-1212. Or fax us at 301/922-4262.

Letters

Russia!

From Russia with Love

Thank you very much for your surprise—*Kite Lines*. It is marvelously fine!!!

Your journal gives a large joy for people of all the planet... Hearty thanks!

Sorry that we must read wonderful and beautiful kite articles first. Kites in the USSR are the far and unknown stars of the galaxy. So we do not know much things and have not fiberglass and ripstop nylon. (By the way, what is this?)

We have bamboo and are interested in splitting and working with bamboo. What is this Tyvek? Will you help us please.

I am a doctor and think that kites are healthy for people.

I am very proud of you, *Kite Lines*, and of the people of the USA who create wonderful kites, and I participate in people's joy. —Leonid Novikov, Elisabet and children Karaganda, USSR

Kite Lines has answered Dr. Novikov's irresistible letter in enthusiastic, if broken, Russian. We would be delighted to forward any letters or information our readers wish to send.

Statistically Improbable

I was prompted to write after reading the letter from Elizabeth Shirah (*Summer, 1990*). I'd like to point out a very interesting fact:

Statistically there is a 50% chance of people putting the bridle on the correct side of a commercially bought simple Eddy kite. However, I have found that 90% of the people put the bridle on the wrong side of the kite and then wonder why it does not fly.

It seems that Murphy is also into kites.

—Or Shavit
Jerusalem, ISRAEL

Heads Up

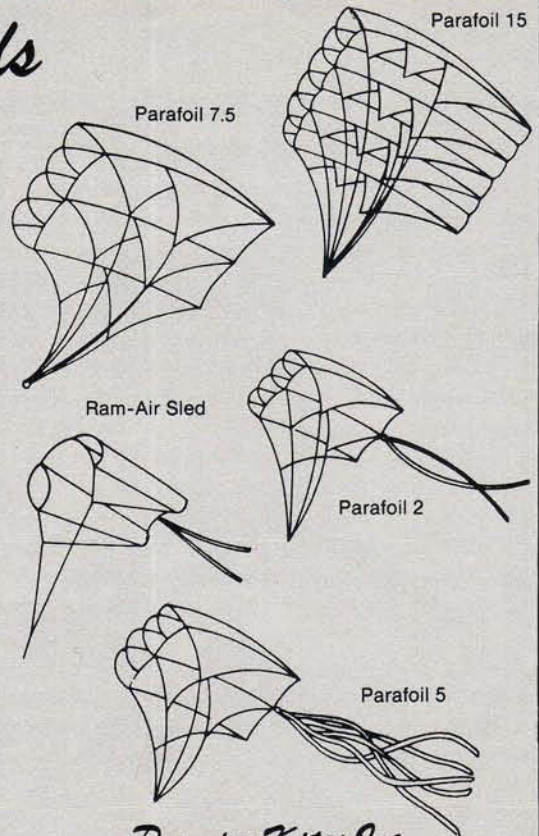
"The Peter and the Power" article (*Kite Lines*, Summer 1990) brought to mind a similar cautionary tale.

About five years ago I was flying next to somebody who was flying a head-stick kite (also known as the Trinidad mad-bull kite; see *Kite Lines* Winter-Spring 1983). About three feet tall, it was hard-pulling. It ripped the reel, a wooden board about 12" x 8", out of his hands. The reel was pulled across the field with people either scattering out of its path or chasing it.

The reel bounced its way up a hill and the line snagged on some power lines on

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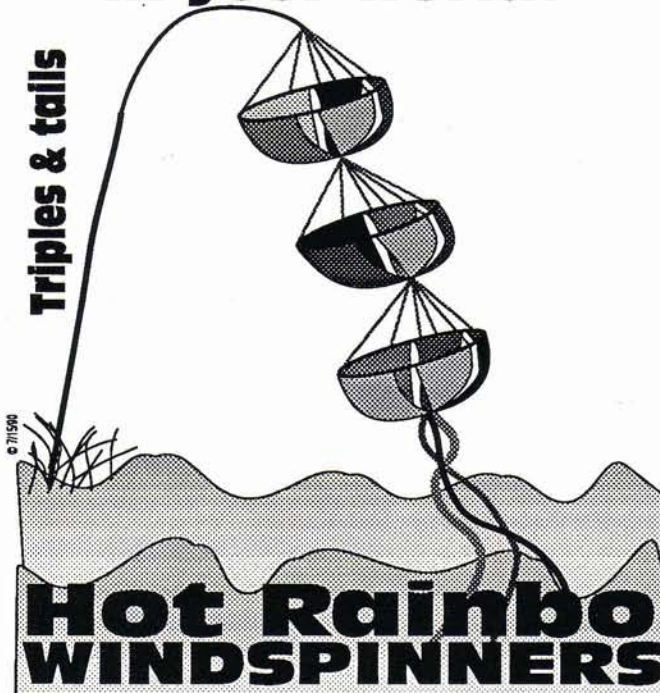


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a property containing an oil pumping station. The tails of the kite pulled the power lines together, caught alight, and a few minutes later the oil-soaked grass below was in flames. Before we could do anything, the whole hill was in flames.

The fire was brought under control, but we cannot be too careful when flying kites.

—Clarence Morean
Port of Spain, TRINIDAD

No Power Line is Safe

I should mention an incident involving a large parafoil and 90-foot windsock in Merrimbula, Australia. Barry Munyard and Michael Alvares had the kite flying on the beach near Barry's shop, held by a sea anchor buried deep in a sand flat. As the tide came in, the sand softened and eventually the anchor pulled out.

The parafoil proceeded to pull the spinning sock into the nearby power lines, and, in a spray of sparks, half of Merrimbula was blacked out. A large, unswallowable lump developed in Barry's throat! In the end the kite and windsock were recovered. The parafoil has been sent back to its maker, none other than Peter Lynn, for repair.

—Mark Lohrey
Melbourne, AUSTRALIA

What's Going On Up There?

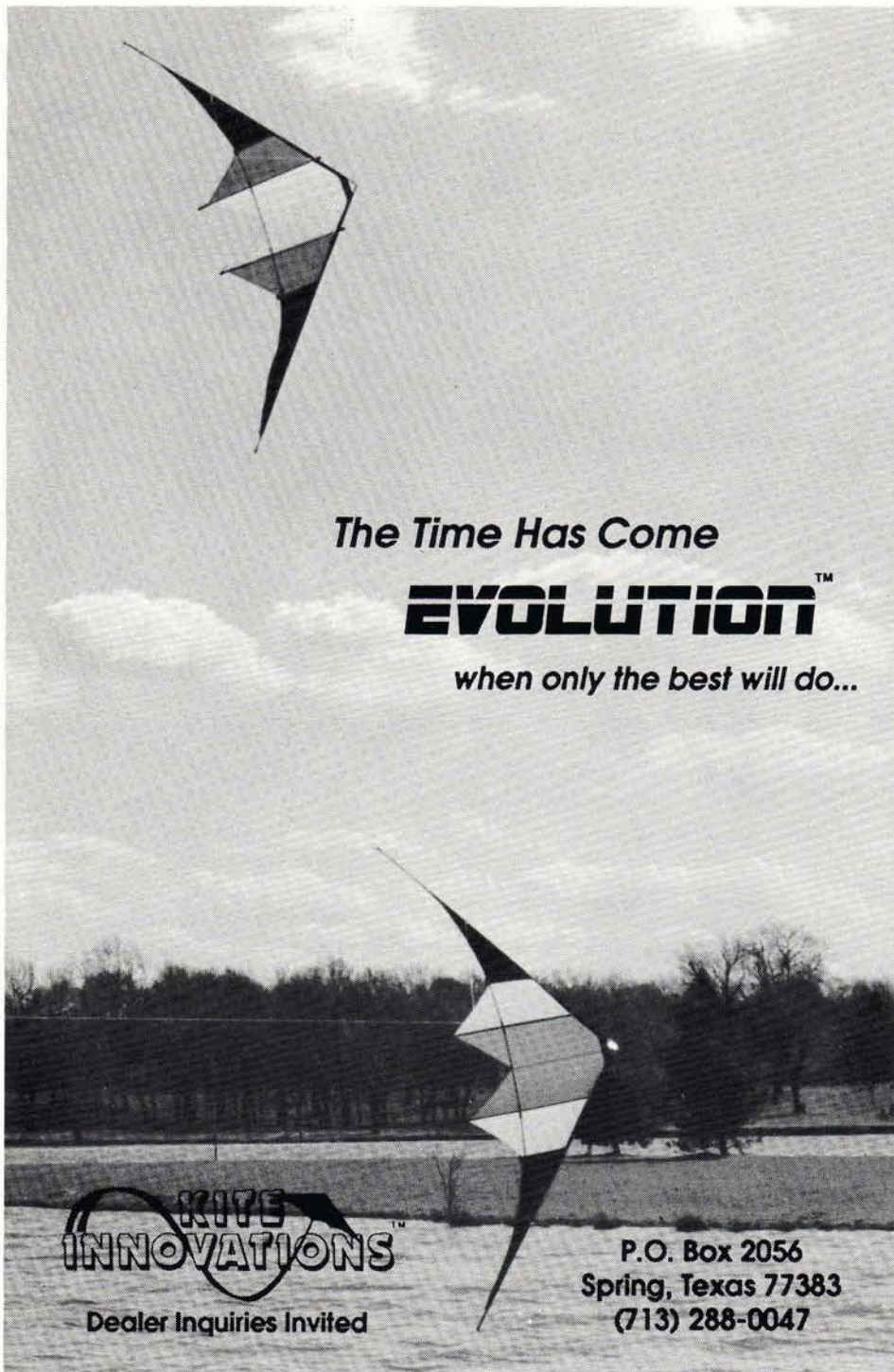
I'm quite interested in Douglas Bentley's plans to communicate with his kites via fiber optics (*Kite Lines*, Summer 1990).

I am trying to do something similar, but the fiber I've been able to find isn't suitable. Either it is designed for laboratory use and has no strength, or for telephone communication and is too heavy. Its sheath is designed for abrasion resistance (when it is pulled through underground conduit) rather than longitudinal strength.

As a meteorologist, I would like to lift an instrument package (electronic thermometers, barometric pressure sensors and the like) and read it on the ground. The large band-width of fiber optic lends itself to adding a video camera and having simultaneous live pictures. Control commands could be sent back up the cable to control the camera and instruments. The nonconductive properties of glass and relatively low weight compared to metal are definite advantages.

It should also be possible to control the kite with commands sent up the line.

If anyone knows of a commercial source for suitable fiber optic cable, or has



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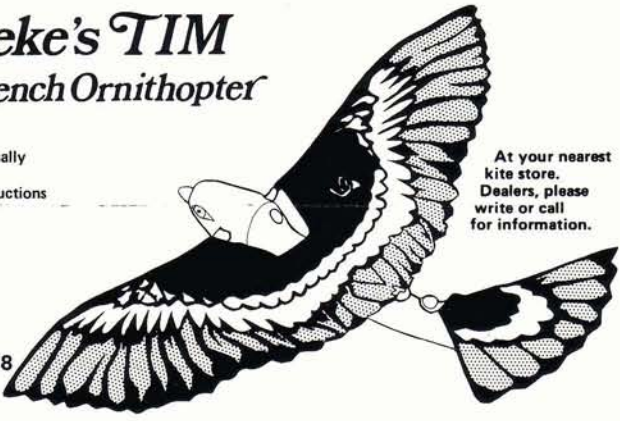
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some custom-made fiber they would be prepared to part with, would they please contact me.

—David Farrier

Warner Robins, Georgia, USA

Thanks for the Memories

We would like to thank you for the service you provide in keeping us informed of kiting events around the world through the Kite Lines Pocket Kite Calendar.

We travelled as a family to Japan in October to attend a wedding. Thanks to your information, one of the highlights of our trip was the Sanjo League Rokkaku Battle in Sanjo-shi. We are grateful that your magazine provided the information we needed to contact the organizers.

—M. Thompson

Auckland, NEW ZEALAND

Flat Chute

The year 1990 was of interest as I turned 55, got turned on by kites, bought my first sewing machine, learned to sew, entered some of my newly made kites in local contests, won a prize, subscribed to *Kite Lines* and attempted to create Joel K. Scholz's Gale Master on my new sewing machine. Its maiden flight brought the floppy-kite award, which led me to frustratedly wonder just where I had gone wrong.

Lo and behold, today I received my issue of *Kite Lines* with a correction for the chute's gores on page 13. Now, what's the best way to patiently take ripstop apart?

—O.A. Zeller

Chadwick Beach, New Jersey, USA

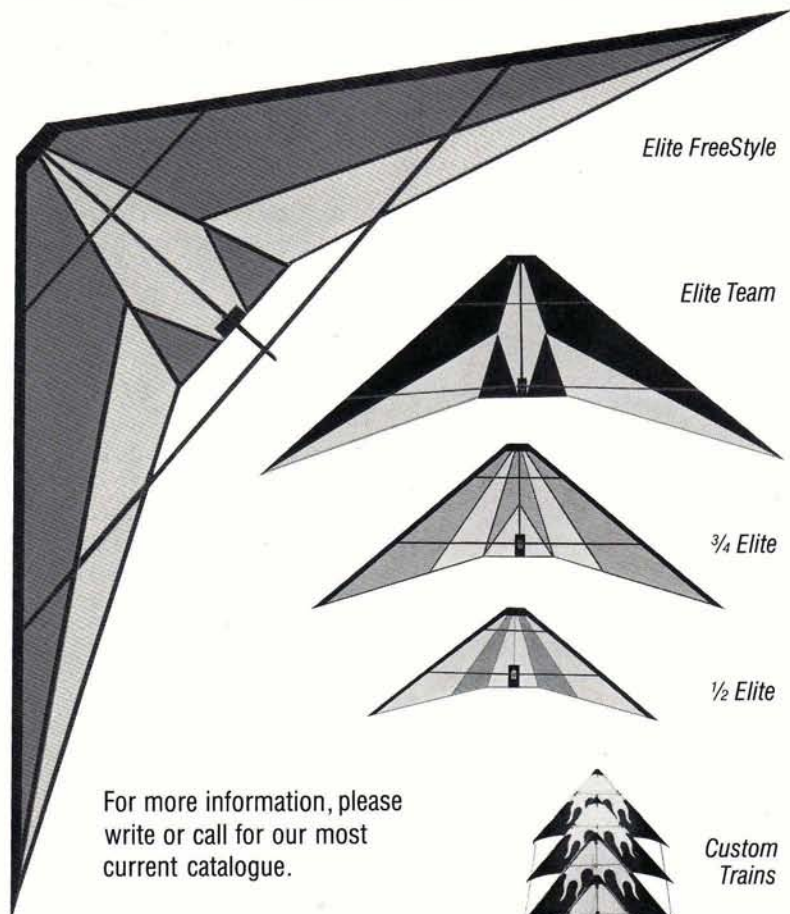
Meritorious Effort

A long time ago, in the days of *Kite Tales*, I read that the Boy Scouts of America and the American Kitefliers Association were having discussions to establish a Scout merit badge for kiting. This seemed to make sense, and they were going to publish the requirements for this merit badge. Last week, the Rotary Club to which I belong asked me to organize a kite festival for the Boy Scouts in the district. However, no one seems to know if this merit badge was ever instituted. Does anyone know what happened?

While I was looking into this, I pulled out all my old copies of *Kite Tales* and *Kite Lines* magazines and went through each of them again. I spent many days of pleasurable time going through them. This caused me to notice the effort you have

Continued on page 46...

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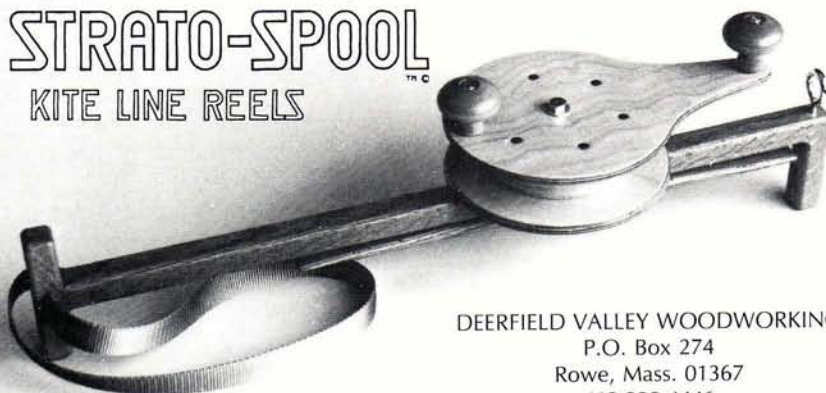


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A Fist Full of Fighters

By Mel Govig, assisted by Valerie Govig and A. Pete Ianuzzi

About the Fighter Kite Scene

As I have often said, I have hardly met a fighter kite I didn't like. Unfortunately, there have been too few commercially available fighters to like. Even some of these I qualify more as one-line-manueverables than as fighter kites; but that's all right, I like them too.

If you want to fly fighter kites, there are a few stores that still carry the paper Indian fighters. The Grandmaster kite of Mylar is available at fine kite shops around the world. The Butterfighter by Sky Delight Kites and the Carlisle Kiteworks fighter, both of nylon, are widely sold and Karl Szilagi's paper kite continues a long tradition of Manhattan fighters, available through Big City Kites in New York City. (There may be others I've missed in this quick listing.)

Now we have three new fighter kites, all of nylon, made respectively by Dale Vanderhoof of California, Martyn Lawrence of Wales and Stan Swanson of Colorado.

Light as a Feather

To American kitefliers, the name Old Vic does not bring to mind the Shakespearean theater in England. It means the no-longer-produced fighter kite by Vic Heredia. People who still have Vic's fighters are treating them like family heirlooms.

Now a new version of the Old Vic is on the market, an admitted copy except executed in ripstop nylon with hot-cut edges and utilizing a pair of overlapping fiberglass cross-spars that give the effect of a single tapered spar. The spine is spruce and a spare is thoughtfully provided.

As a fighter the Black Feather is very respectable. It flies well on about the same range of winds as the Vic's. If there is enough breeze to keep the kite downwind, you can fly it. Its double center-of-the-spar makes it stiffer and more responsive at higher winds without requiring second spars or stiffer ones.

I am afraid that the price required for a quality fabric fighter, nearly twice that of the Grandmaster, will limit its availability. Except for the subtle black feather at the center of the kite, there are no fancy appliques or inlays to make it a wall hanger: it's just a solid-color dependable fighter. It does have some distinctions: it is small (read: easy-on-the-fingers-in-a-strong-wind); and it can also be rolled

up for storage and transport to and from the flying field.

There are periodic rumors that someone is going to manufacture Vic's fighters again. Perhaps if the Black Feather is a success, the rumors will become reality. In the meantime, I welcome all good entrants.

Merlin Magic

This outstanding entry from Wales (Merlin Kites, made by Martyn Lawrence) employs two cross-spars but in a different construction from that of the Black Feather. It has a short fiberglass spar across the center two-thirds and a full-width flexible spar. The two sticks are fitted into pockets in the cover, without need for plastic fittings.

Our sample was of one of the four sizes in nylon by this maker, from a variety of diamond-shaped fighters in his catalog.

The Lawrence fighter has a shaped bamboo spine, hemmed edges and multicolor sail. It demonstrates workmanship and promises durability.

In practice, the Black Feather and the Merlin fighter fly about equally well. However, Lawrence's fighter has an edge in consistency over a wider range of winds, and ability to hold a ground-level spin.

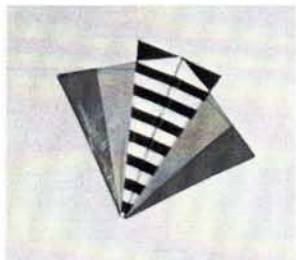
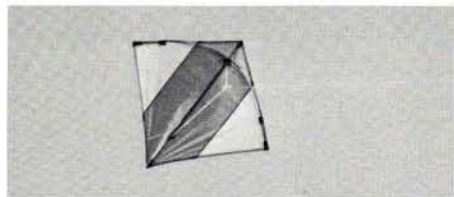
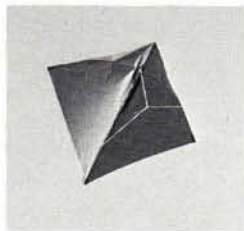
It is small enough to fly without injury to the fingers in all winds, it is light enough to fly on a zephyr and it flies the same way every time, hot or cold, dry or wet, light wind or brisk.

Except for a special-issue Tom Mallard kite that I eventually contributed to the Japan Kite Museum in Tokyo, I have never flown a cloth fighter kite that performed as consistently and predictably as this kite from Martyn Lawrence. Thanks to Scott Skinner for bringing it to us.

A Buzzy Bee

This kite, as bridled and flown by Stan Swanson at the AKA convention last October, is a cross between an Indian fighter and a Korean fighter. It turns square corners. It pulls like a tank. It hovers near the ground without spinning. It completes broad sweeps across the horizon. It takes out line rapidly without losing altitude. It behaves like a Korean—but it isn't one.

Stan's kite comes equipped with a very effective hummer of precisely sliced microfilm. The kite with the hummer suffers from



Valerie Govig

From top: The Black Feather by Dale Vanderhoof, the Merlin Fighter by Martyn Lawrence and the Japanese Bee by Stan Swanson.

FIGHTING WORDS, OR A LEXICON FOR FIGHTER FLIERS

For purposes of this review and as a suggestion to other people, I apply the following terminology to single-line maneuverable kites:

•SPEED:

The actual speed of the kite through the air.

•RESPONSE:

How quickly and smoothly the kite reacts to changes in line tension.

•PREDICTABILITY:

Does the kite behave the same way, time after time, to a given stimulus?

•STABILITY:

How does the kite fly in the absence of commands from the flier? (For fighter kites, this is more a matter of preference than a rigid criterion.)

—M.G.



THE HELIX

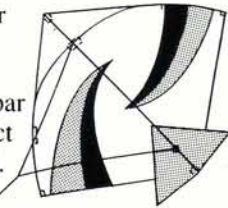
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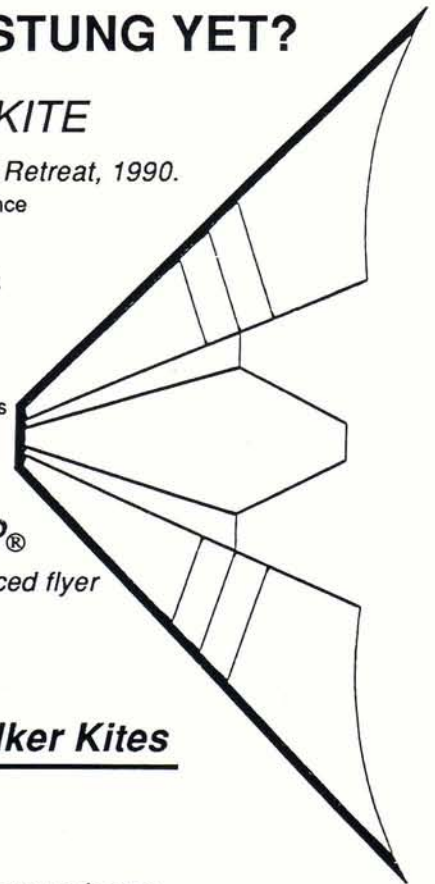
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Alexander Graham Bell would have been pleased

Although known mostly for his work on the telephone, Bell also had a consuming interest in kites. Favoring the tetrahedral cell for its strength and stability, he designed and constructed many tetras during his lifetime.

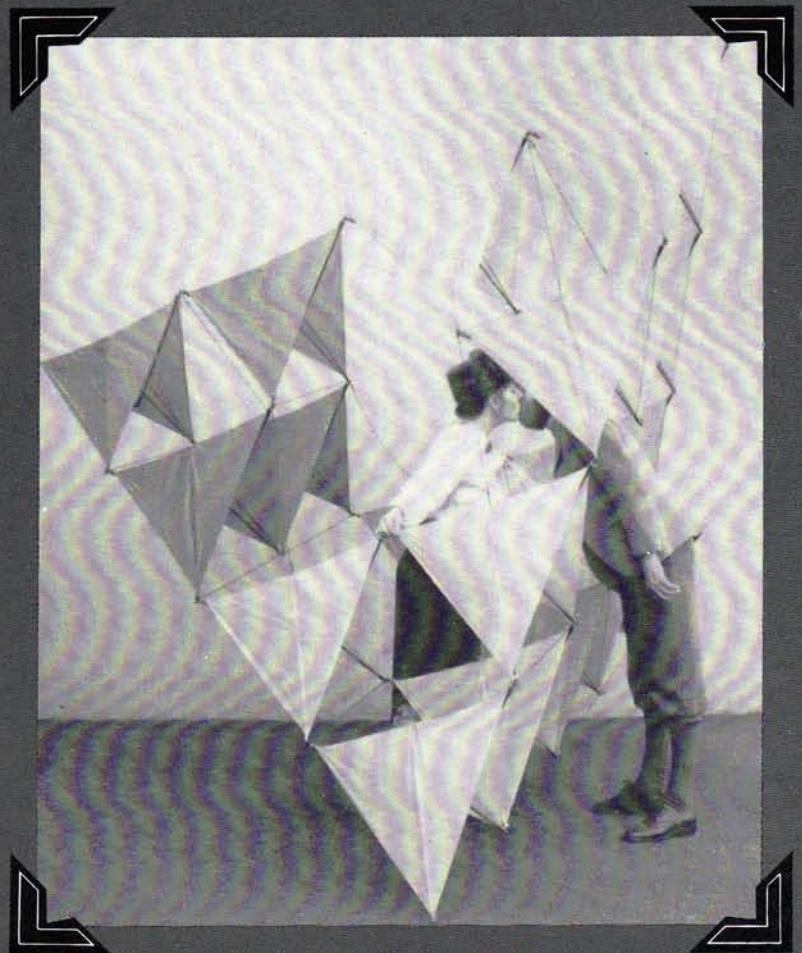
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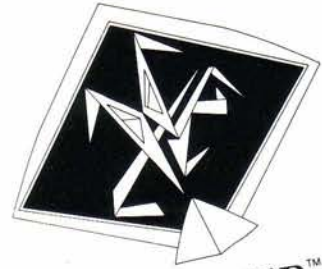
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Photo of Peter Lynn on Stunt Buggy, Dieppe 1990, by Simon Freidin

What's New: Kites . . . Continued

somewhat degraded (slowed) flight. It can, of course, be flown without the hummer for maximum responsiveness. The hummer seems every bit as well crafted as those of Satoshi Hashimoto (famous bee kitemaker of Japan).




As delivered, and at nearly three times the area of the Black Feather or the Martyn Lawrence, the kite has a shortcoming. It takes its toll in cuts and callouses on the index finger. The increased sail area also

imparts the sense of the kite's being slower in all its reactions, although experience teaches that the relative speed (relative to the kite's size) of the kite is more in the eye of the flier than in reality. Actually the Bee moves more rapidly across the sky than the smaller kites, dwells with about the same confidence and does all its maneuvers with just a bit more sky than its smaller rivals. It suffers only from heightened line tension.

Stan also makes a version called the Bumblebee, with clear wings. We didn't test one, but were told it weighs and flies almost the same.

The Japanese Bee delivers a predictable and controlled flight and a downright oriental experience, as well as superb craftsmanship and a unique appearance in the sky. The oak spine was recently replaced by an even stronger one of shaped laminated veneers. ◇

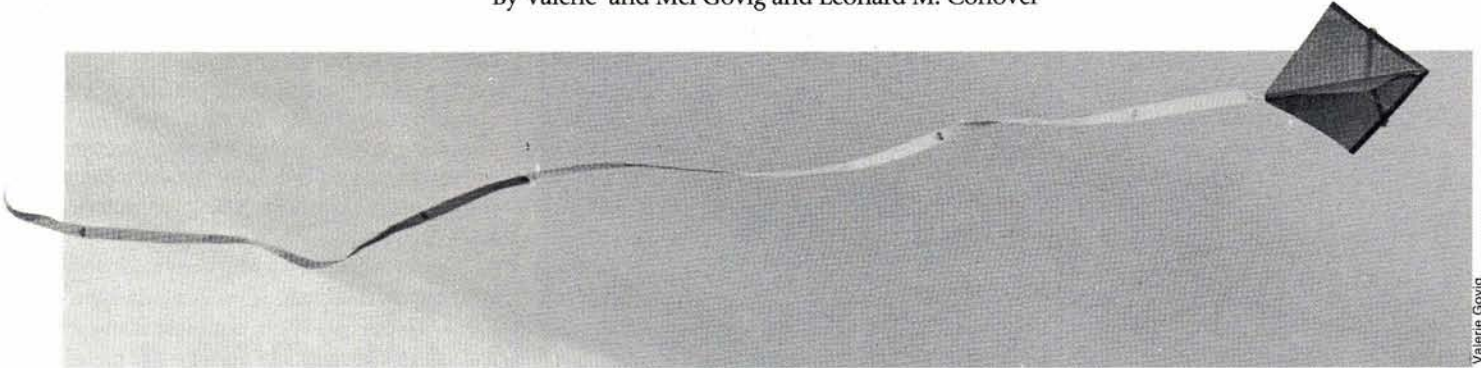
DATA CHART

Name and Shape of Kite	Retail Price	Dimensions (inches)	Weight (ounces)	Major Components	Portability	Assembly Time	Durability	Wind Range	Ease of Launch	Skill Level
Black Feather:  Black Feather	30.00	23x21	0.75	ripstop, fiberglass, wood	E	2 min.	E	3-12	G	I-S
Merlin Kites:  Fighter	16.00	24x21.5	1.00	ripstop, fiberglass, bamboo	E	2 min.	E	3-12	G	I-S
Stan Swanson:  Japanese Bee	47.50	34.5x26.5	1.80	ripstop, fiberglass, wood	E	5 min.	E	5-12	G	I-S

NOTE: Retail price (in US Dollars) is "advertised" or "suggested." Wind range (in mph) covers minimum and maximum speeds deemed suitable by our evaluators. Skill levels: N-Novice, I-Intermediate, S-Skilled. Other ratings: P-Poor, F-Fair, G-Good, VG-Very Good, E-Excellent. Dimensions are in the following order: height x width x depth. Measurements and drawings are made with the kite standing up on the floor facing the viewer.

Potatoes, Paper and Perfection

By Valerie and Mel Govig and Leonard M. Conover



Valerie Govig

The "Fly Kite" really flies.

Gone Kiting in Gananoque

Go Fly a Kite: The Kite Builder's Manual by John C. Boxtel (Burnstown, Ontario, Canada: General Store Publishing House Inc., 1990), softcover, 80 pages, \$12.95 Canadian (about \$9.95 US).

John C. Boxtel, a sculptor and former high school teacher in Gananoque, Ontario, Canada wants us to share his love of kites that began with "the best memory of my youth," making kites with his father.

There is no doubt that John Boxtel is completely sincere and speaks from a lifetime of experience. Clearly, he has made and flown all the 12 kites in his book (a trait that, pity, one cannot take for granted in our literature). And there is nothing in his work that is absolutely wrong (again a characteristic one cannot always expect in kite books). Some of the plans are novel in construction (the Pirate Ship, Windmill and Eagle). The line drawings are informal but pleasing, though lacking in dimensions. And the overall design of the book is charmingly, appropriately old-fashioned.

But "old-fashioned" is a merit that only goes so far, especially in kite books. Boxtel obviously has never read a thing about kites, or run across a kite shop, club or festival. In isolation, with only his father's guidance, he has independently created our avocation from scratch, including his own lexicon ("guy strings" for bridle lines, for example).

Amazing, yes, but this man is really—I mean *really*—out of date. Here is someone who talks about "mason string," about gluing paper using a cut boiled potato, who suggests you climb a tree to free a kite, run into the wind, and use the wet-finger wind test. The world has passed him by.

Admirably, Boxtel tells his truth, and we must tell ours, including what we see

as sketchy and vague directions, laughable uses of materials and a writing style that stops short of scintillating.

As my wry colleague Leonard Conover observed, "A novice kiteflier would not be able to confidently make a kite from this book; an experienced kiteflier would not want to."

For me, this was another example of a kite book that reveals more about the author's aspirations and character than about how one actually makes a kite. Kite book collectors will want this volume for its curiously cloaked history of John Boxtel. —V.G.

Paper Chaste

Fly Kites by David Pelham (London, England: The Penguin Group, 1990), four paper kites in kit form, £9.99 (\$19.95 US).

This latest invention from the fertile mind of David Pelham is not really a book, but four paper kites in kit form within a large folder. Illustrated instructions help you make, fly and enjoy them.

The kites (square deltas with keels and tails) are ingeniously identical except for color, so you can mix or match pieces among them. The colors are bright and cheerful. The paper is fine quality. The printing and die-cutting are meticulous.

Instructions are orderly, methodical, complete and painless. You supply your own tools, glue, string, etc.

At its price, *Fly Kites* will not break any sales records. Avid kites and/or collectors may purchase the "book," but casual kitemakers may say to themselves, "I could make those out of scrap paper." (But could they?)

For me the value of *Fly Kites* is the *reading*. It is both an entertainment and an education. David Pelham's wealth of kite knowledge is exceeded only by his sense of kite humor. Pelham knows what he writes and he writes it well. —L.M.C.

Naturally, making and flying these kites had to be part of the review of this "book." We made two of the "Flies," taking over two hours on each. The design is essentially a square diamond delta with its spars made of folded paper; when complete it has an appearance of classic simplicity.

We flew the kites in gusty 10-20 mph winds, not the most suitable for them. In spite of that, the Flies performed respectably. One needs some patience getting them up past the ground turbulence, but after that they ride the wind more than they jump around in it. Since small paper kites in our experience tend to be skittish, we were pleased.

We made one modification to one of the kites by extending its tail. The sections of paper strip tail are designed to link and unlink without glue, which gives the flier helpful flexibility in meeting varying winds.

Much as we admired the very clever creation of David Pelham, we had to admit that the experience of making and flying these kites was not on the whole a great thrill. It may be just a personal idiosyncrasy, but we'd rather make a kite from scratch than from a kit (*Fly Kites* are kit kites by broad definition). This is especially true when the kit takes longer to make than a good quick paper kite made from scratch. —V.G./M.G.

The Guru of Trains

Tezukuri Omoshiro Dako Nyumon (A Primer of Interesting Handmade Kites) by Eiji Ohashi (Tokyo, Japan: Sankaido Publishing Co. Ltd., 1990), in Japanese, softcover, 100 pages, 1500 yen (about \$25 US).

This latest book by Eiji Ohashi is full of kites that are novel, appealing and easy-to-make—a good combination for us all.

Famous for his trains, and in particular his arch trains, Ohashi demonstrates here

YOUR KITE DESERVES THE BEST!



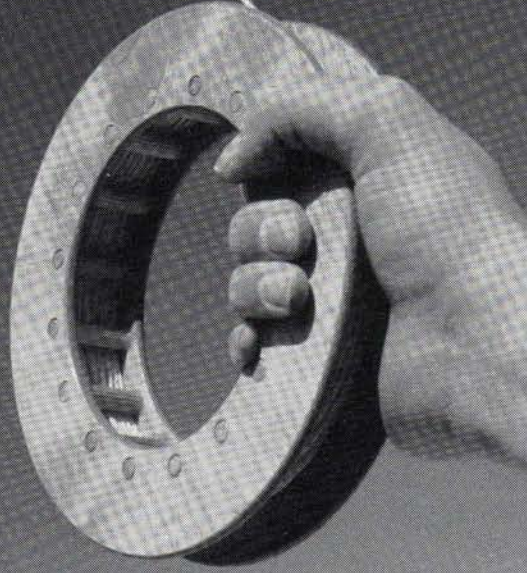
- HANDSOMELY HANDCRAFTED FOR THE ACCOMPLISHED FLYER
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What's New: Books . . . Continued

his wide-ranging knowledge of single-bridle-point kites. In addition, from his wide experiments, he has brought an eclectic collection to the grouping.

The book opens with four pages of color photographs and an eight-page chapter on the basics of construction, including tips on bamboo, patterns, painting, hummers, bridling and connecting kites in train.

This is followed by four major sections, starting with figure kites (cat, ladybug, fish—22 pages), then concentrating on trains (and specifically arches—32 pages), then turning to cellular ("western") kites (18 pages) and ending with several Japanese-style kites with detailed surface treatment and framing variations.

The book's layout is compressed, tidy and easy to follow, even if you don't read Japanese. The clear illustrations and the ample measurements (metric) are enough for the determined kitemaker. Even if you don't make any of these kites, you should find inspiration in the range of options.

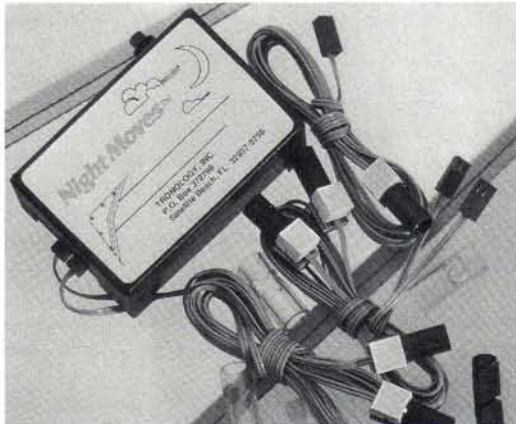
Is your thinking about trains patterned around the Eddy kite? Look at Ohashi's stuff—the X-frames, the I-frames, the way he cross-joins spine and spar. You get the feeling that Ohashi can train any kite (and probably has).

Consider the Edo. Who would try them in train with their many-legged bridles? Unintimidated, Ohashi says, "I invented how to make a one-bridle, no-tail Edo kite. In Japan, we have many-bridle kites. It is very hard for people to adjust them. I think it's no good. Meanwhile the Western kites, such as the delta, have one bridle—very easy to fly—very good. So I am researching and creating one-bridle Japanese kites."

On the back cover of *Omoshiro Dako (Interesting Kites)* are photos of Ohashi flying a train of 40 different traditional Japanese kites. He calls it "Japanese Kite Exhibition in the Sky." In February, 1990, he flew it in Iraq, "hoping to keep friendship, in vain...In the Middle East it is very hot in the daytime, so they fly at night. In Arabic, in some districts, they call it [a kite] 'angel of the night.' I think it is the most beautiful name in the world given to kites."

It is unfortunate that the book's format is small (about 6 x 8 inches), so the photographs are small too. There is no big, splashy effect. But look carefully at these little pictures. Think about them. And join me in quietly saying, "Wow." —V.G.

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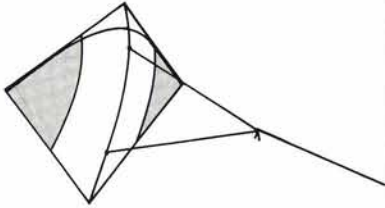
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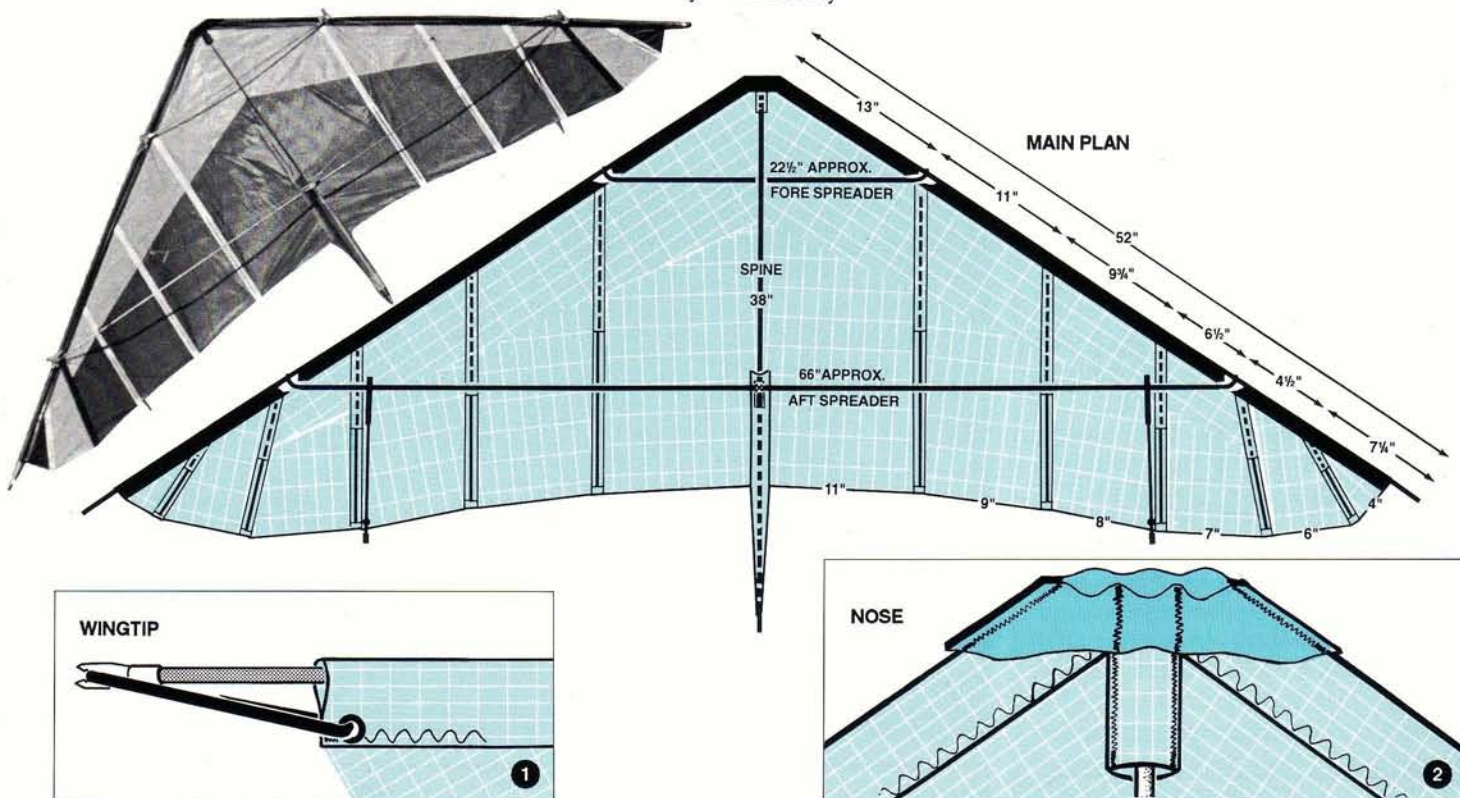
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The Wind Shot Stunt Kite

By Mark Lohrey



Illustrations: Kari Cross

The Wind Shot is a keeled, fully battened light-wind stunt kite with excellent straight-line flight and crisp cornering characteristics. It is also a remarkably quiet kite.

The design is a synthesis from other stunters, hang-gliders and wind-surfers. The work involved in battening the kite, adding the keel and scalloping the trailing edge is much greater than for most stunters, but if you want the performance advantages, the extra work is worth the effort.

The battens are designed to maintain the kite's airfoil shape in flight. The increased lift is really noticeable in ultralight versions, where this kite will burn when other ultralights are moving sluggishly.

The keel serves to smooth the airflow over the normally exposed airframe, to stabilize the kite in straight-line flight and to give greater acceleration in turns. The trailing edge design is intended to provide a smoother flow transition at the wing tips, resulting in a kite that is a pleasure to fly.

To get maximum performance, all excess weight must be eliminated. Rigid lightweight graphite composite spars are

essential. A wear-and-tear version can be built in 3/4-ounce ripstop nylon, but for the ultralight, 1/2-ounce fabric is used.

Materials List

- two yards ripstop nylon (1/2- or 3/4-oz)
- double-sided sailmaker's tape
- ten pieces of 3/32" by 3/32" split graphite composite arrow shafts (linear fiber) for battens, in pairs: 20 1/2", 16 1/2", 12 3/4", 9 3/4" and 6 1/8" long
- ten 3/4-oz ripstop strips, 7/8" wide, for batten sleeves, in pairs 6" longer than the batten lengths
- nine feet of 2"-wide heavy ripstop or light Dacron polyester edge tape for leading edge
- six inches of 2"-wide nylon seat belt webbing for nose reinforcement
- eight graphite arrow shafts (28" or longer, wound or linear fiber) 1/4" o.d., for spars
- 28" of aluminum alloy arrow shaft, 1/4" i.d., to make spar joiners (five 4" long, one 8" long)
- two arrow nocks and inserts
- 24" of vinyl tubing (tight fit on spars)
- two 12" solid fiberglass rods for stand-offs, diameter 1/8"

- six eyelets, 3/16" diameter for threading bungee cords
- approximately 18" of 1/8" diameter bungee cord
- sewing machine; hobby knife; hot knife; eyelet punch; hacksaw

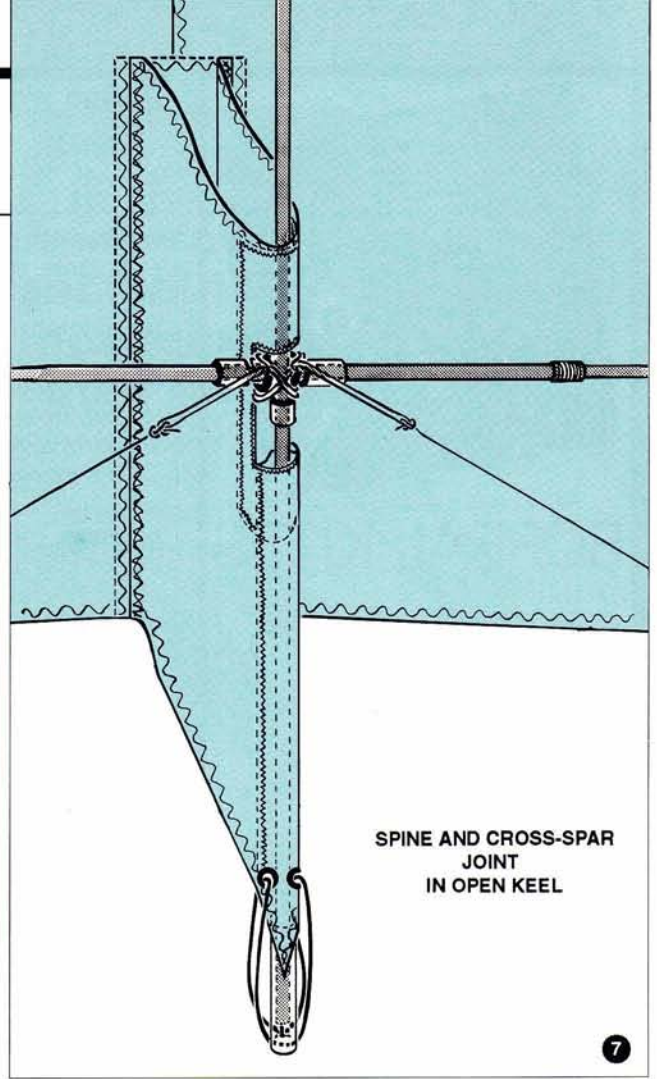
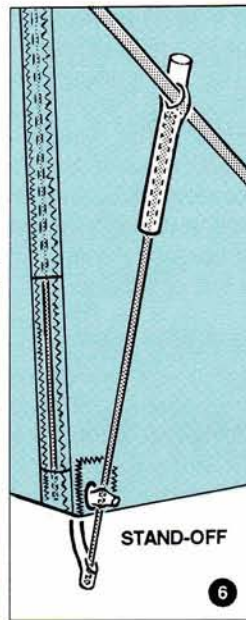
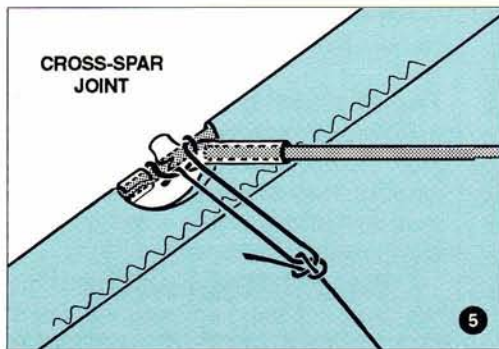
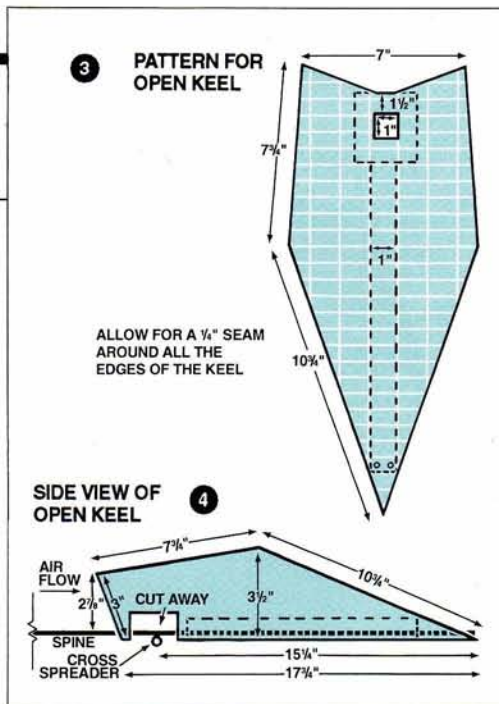
Fabric Grain

The grain should run parallel to both leading and trailing edges. To do this, you make the sail of the kite in paneled sections (see main plan).

The left and right leading edges can each be made from a single piece of ripstop.

Form the trailing edge surfaces from 12 panels, each with its grain aligned to the edge which will be at the bottom of the kite. This allows the fabric grain to follow the trailing edge scalloping. [For those seeking a shortcut: the four panels closest to the spine could be made out of one piece of material without much degradation in performance.—Editors]. Make a 1/4" seam on the trailing edge.

Wind forces tend to stretch or blow-out the skin along a line from the wingtip to the spine, at a point about 40% of the spine's length from the nose. To reinforce against this stretch, join the leading edge and trail-



ing edge sections along this line. You can make non-stretch seams using sailmaker's double-sided tape and zigzag stitching.

The Battens

Making the battens is the most time-consuming and messy job in this construction.

Use graphite spars that have been split or broken in kiting accidents. Wound rod is not suitable, as the wraps of fiber hinder easy splitting. Linear graphite rods, such as Beman, AFC and Hot Rod are the easiest to split. Other materials may be substituted, but the finished battens need to be very light, flat and quite stiff.

Wear thick gloves to avoid getting splinters, and split the rod with a hobby knife. Remove any large splinters of graphite by drawing the split rod through a thick cloth. Avoid breathing the fine graphite and fiberglass dust. Don't sand the battens, but to prevent further splintering, paint them with a coat of clear lacquer or polyurethane paint, which binds and seals the outside surface.

The battening has one disadvantage: compared to most other stunters, the kite cannot be rapidly disassembled to fit into a tube bag. You can transport it with the

two wings folded on top of each other. To carry the kite in a tube bag, all the battens must be removed. You can store them in a 0.3" i.d. spar 21" long, fitted with plastic end caps.

The Batten Sleeves

The battens are held on the kite in special sleeves which stretch the skin and still allow the battens to be inserted and removed.

Each sleeve has two pockets: a leading edge pocket underneath the sleeve and a trailing edge pocket on the front of the sleeve. There is a small crosswise slit halfway up the sleeve. The batten is slipped through the slit, pushed up the sleeve into the pocket near the leading edge, then the section of batten which protrudes from the slit is bowed an inch or two and slipped into the pocket on the trailing edge. The lower half of the batten is exposed on the front of the sleeve and can be grasped for insertion and removal.

Both the pockets are made from Dacron (7/8" wide 1" long folded in half) and held by double-sided tape to the sleeve. The tape prevents the batten being slipped under the pocket rather than into

it. The distance between the ends of the two pockets is equal to the length of the batten.

The slit lies halfway between the pockets. The area around it is also reinforced with Dacron. Attach a piece of Dacron 7/8" wide and 1" long to the sleeve with double-sided tape. Use a hot knife to make a 3/8" slit across the center of the sleeve and this reinforcing. Make sure the slit is made *before* sewing the sleeve onto the kite.

Another piece of double-sided tape adheres the leading edge pocket to the skin to prevent the batten slipping under the pocket. This pocket should be just below the stitch line that will run along the leading edge, while, to give the kite a finished look, the sleeve is continued up under the leading edge material.

Use a fine zigzag stitch and sew both long edges of the sleeve and the reinforcements to the skin.

The Keel

Unlike other stunt kites, the spine is not held by a pocket sewn to the surface of the kite. The projecting keel holds the spine forward of the sail and carries the spine in an open sleeve (see Figure 7). Make the keel



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Design Workshop . . . Continued

and sleeve from 3/4-ounce ripstop nylon.

Because the spine and aft spreader must be held together at a position where the spine is hidden by the keel, a hole must be cut in the keel. Sew a piece of Dacron onto the keel for reinforcing before cutting the hole through both the ripstop and Dacron. Reinforce for the eyelets also.

The connector is an 8" aluminum tube lashed to the spine by a piece of heavy elastic bungee cord. The aft spreader pieces are slipped into the aluminum tube when the kite is field-assembled. The bungee cord allows the aluminum joiner to be twisted out of the way when the kite is being stored.

The keel is sewn to the skin (reinforced on the back with Dacron) about 1/2" either side of the center line of the skin.

The Leading Edge

The leading edge is a 2"-wide strip of Dacron or heavy ripstop, folded along its length, and stitched along the entire leading edge. Make 4 cutaways to allow the vinyl tubing connectors for the spreaders to protrude from the leading edge spars.

The Nose

A pocket for the spine must be sewn onto the skin before the nose is reinforced with seat belt webbing (see Figure 2). Use Dacron taped to ripstop, 1" wide by 5" long, folded in half.

The ends of the leading edges, and this pocket, are covered by the piece of seat belt webbing, folded in half along its length. Use a soldering iron or hot knife to trim the edge of the webbing to the same angle as the leading edge.

The Spars

To allow for any variation between the plan and the finished sail, the spars should not be cut to length until the skin is complete. Each of the leading edge spars is formed from two lengths of graphite composite rod, connected by a 4" aluminum joiner. An arrow nock and insert should be glued to one end of the rod to hold the tensioning bungee cord.

Starting at the wingtip, the leading edge spar is threaded towards the nose, passing through a 3/16" hole punched in a 2" length of vinyl tubing at each of the cutaways. These will hold the fore and aft cross spars. About 3" of rod should protrude at the wingtip when the rod is fully inserted. A 10" piece of bungee cord is passed through the wingtip eyelet and the ends tied or hand-sewn together to form a 3" loop (see

Figure 1). This loop is slipped over the arrow nock, to stretch the leading edge.

The spine must also be made out of joined sections to make it 38" in length. The joiner can be concealed within the keel. The trailing end of the spine is held in a piece of vinyl tubing. Bungee cord is threaded through a 1/8" hole punched near the end of 2" of vinyl tubing and looped through two eyelets on the end of the keel before being tied to itself.

The forward spreader is 22 1/2" long, and each of the aft spreader halves are 32 3/4" in length. For the aft spreaders, join shorter lengths with aluminium tube if required. The forward spreader is passed underneath the spine.

Sew on reinforcing Dacron before punching holes for the eyelets.

The Stand-Offs

Stand-offs are the small rods which run between the trailing edge and the aft spreader. They help tension the sail, prevent any eddies in the wind flow and allow unaided launches.

Use 1/8" solid fiberglass rod slipped into two pieces of vinyl tubing (3 1/2" and 2" long). One piece of tubing is slipped through an eyelet in the skin and the other is attached to the aft spreader (see Figure 6).

The Bridles

The two 3-leg bridles are each formed from two lines, one 64" and the other 36". These lengths include allowances for knots.

Each long line is tied to the intersection of the forward spreader and leading edge and the intersection of the aft spreader and leading edge. A swivel is attached by a lark's head knot, which allows its position on the line to be easily altered. Each short line is tied to the intersection of the spine and aft spreader and to one of the swivels.

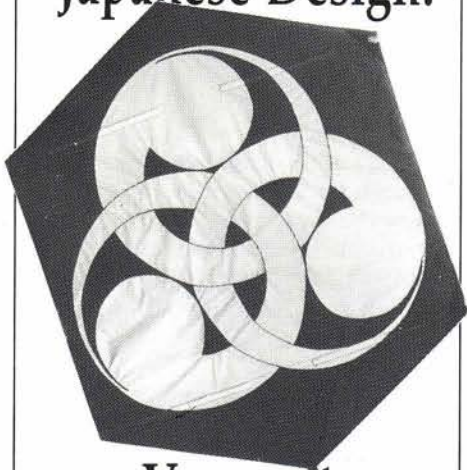
To work correctly, the length of the short bridle lines, and the place where they intersect the long lines, should be identical on the left and right sides.

The optimum flying setting has to be determined by trial and error, but as a start, set the forward bridle leg to a little more than 30".

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MARK LOHREY teaches physics in Melbourne, Australia, and has been actively designing and making stunt and single-line kites for the last two years.

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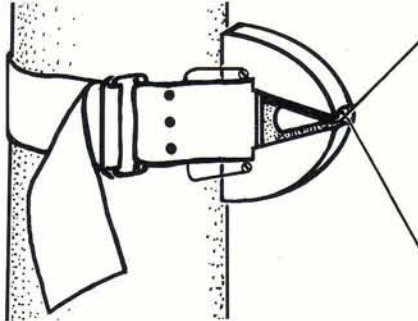
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Tips & Techniques

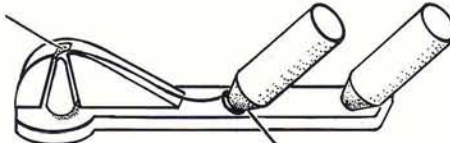
Grippin' Stuff

1 Getting a Handle on It: Gripper for Thin Line

From Mel Semler, Minneapolis, Minnesota:
The "Flying Wedge," constructed out of wood, is a line lock for smaller diameter line. This design can be used in a wooden handle, or as a component in an anchor,



either post-mounted (above) or staked on the ground (below). Measurements have

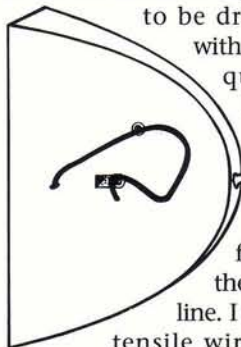


shown the ground-anchor version to resist 155 pounds of pull.

The key to the "Flying Wedge" is a spring-loaded wedge resting in a wedge-shaped groove cut into the anchor. The line passes from the wedge tip around the wedge's rounded base and back towards the tip. Force on the line, generated by the kite, causes the wedge to spread the line against the walls of the groove. The tighter the pull by the kite, the harder the friction lock.



For light-pulling kites, pushing the tip of the wedge back releases the line, and allows more line to be paid out, or the line to be drawn in. For kites with greater pull, or for quick control, the line can be pulled sideways out of the wedge.



The spring prevents the line falling out when there is no load on the line. I use a piece of high-tensile wire, whose force is

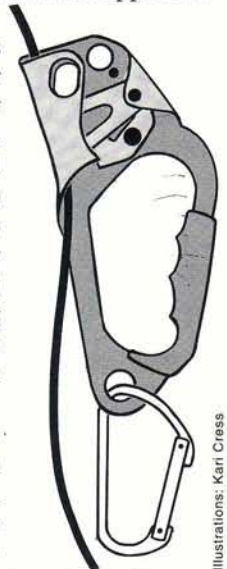
transmitted to the wedge by a screw. Several adjoining holes must be cut through the handle to accommodate the screw without gripping it, and to allow the wedge sufficient movement to lock and unlock the line. The screw also prevents the wedge from falling out of its groove.

2 Getting a Handle on It: Gripper for Thick Line

From Simon Freidin, Melbourne, Australia:
For those flying kites on line 4mm (1/4") or thicker, a tool used by many kitefliers is an abseiling ascender. It allows the line to pass freely in one direction, but to lock onto the line if force should be applied in the other direction.

The gripper allows you to place your hand comfortably anywhere on the line, and it can be attached to a solid mooring to tether a kite. It is also a useful emergency grip if a line should break, an aid in long launches, and a help in walking down a line.

Ascenders come designed for use with the left or right hand. The most popular brand among international fliers is the Petzl, made in France, and available from most mountaineering suppliers around the world. Although it is recommended for lines 6mm and above, it successfully grips 4mm line.



Illustrations: Karl Cress

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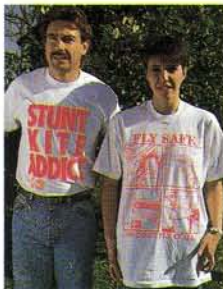
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Confessions of a Kite Pin Junkie



BY DAVID GOMBERG

PHOTOGRAPHS BY DAVID BOGIE



Metal-head Dave Gomberg

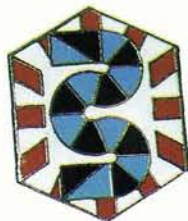
Susan Gomberg



Several months ago Robert Loera called me from Hawaii. He had just returned from Malaysia with three limited-edition cloisonné pins from the 1990 New Zealand International Kite Festival. As usual, he was willing to trade—but only at a very favorable rate of exchange.

I told Robert that I needed to check something and put him on hold. Then I dialed the international number for Kites—The Shop in Auckland. They had four pins left and were willing to send me one. Seconds later, I was back on the phone with Loera. “Sorry Bob,” I said. “I’ve already got that one . . .”

Cloisonné madness had struck again. . .



Like the origins of kite flying itself, it's difficult to say where and when all this foolishness about cloisonné kite pins got started. Four years ago, you hardly saw any at all. Today, hundreds of pins are available through kite events, clubs, and stores. Collectors feverishly track and barter for any new item available, and older or hard-to-get pins bring surprisingly high prices.

There is one basic and pathetic rule in pin collecting: for a good pin, you cannot stoop too low.

GOOD PINS

What constitutes a good pin? Obviously those that are unusual, older, limited-edi-

tion, or impossible to duplicate are more in demand by collectors. Most pins are now being produced in quantities of 100 or 200 which adds a regional element to the search, particularly with event pins that are sold out before the event is over.

This doesn't make the pin more valuable—just harder to get in certain areas. You have to work to maintain a “complete” collection.

There are some older and more difficult pins to find which are surprisingly valuable. A good example is the Kite Store 10th Anniversary pin, produced in London in 1986. Other hard-to-get items include the first-and-only pin of the Hyperkites logo, the pin of the short-lived Kiteport company of Lafayette, Indiana, the High Fly Kite Company original, the Drachen-Club Deutschland pin, and the elusive first edition Ariel Kite Society pin.

Some collectors will tell you that they have “hundreds and hundreds” of pins.

Don't believe them.

Lying, or at least exaggerating, is common among collectors.

The attractiveness of particular pins also adds to their value and collectibility.

WEBSTER'S DICTIONARY DEFINITION

cloi.son.né \ pronounced .klöiz-n-'a\ [from French, past participle of *cloisonner* to partition] *adj*: of, relating to, or being a style of enamel decoration in which the enamel is applied and fired in raised cells (as of soldered wires) on a usually metallic background.

This is obviously a matter of personal taste, but there are certain pins that stand out. Generally recognized as the best looking pin is Kites Over Indianapolis. Other outstanding examples of pin art include the Windjammers Stunt Kite Team pin, Kite Fantasy Hawaii pin, and the new Ariel Kite Society pin. Another personal favorite is from the Fort Worden Kitemakers Conference.

All of these items are out of production now and are fiercely sought on the collecting circuit.

WHEN IS A PIN A PIN?

Pin collectors are competitive, and as in any serious kite competition, there are rules. Gone are the days when you could say, "This pin is from Bombay. I once flew kites in Bombay so this is a kite pin." Keep your Bombay pins if you like, but don't try to pass off "indirectly-kite-related" pins at a serious kite pin challenge.

The basic rules for *real* kite pins were distributed in official form at the American Kitefliers Association convention in Oregon last October:

- 1 A pin must depict a kite, kite event, kite club or team or have the word kite on it.
- 2 Pins must be cloisonné only. Pins cannot be "badge-a-minute" buttons, plastic, wood, ceramic or made of cloth.
- 3 Pins can be handcrafted cloisonné, but must be available through sale or trade.
- 4 Pins do not have to be displayed on a hat.
- 5 Pins that are alike but are of different color, size, or base metal count as different pins.

This final rule has elevated collecting to a fine art and has allowed collections to blossom.

Most collectors know that the organizers of the Chicago Sky Circus Festival have their traditional pin made in a new color each year. They now come in blue, red, green, and yellow. The Hawaii Kitefliers Association produced their club pin in five different colors the first time out. All of the black ones have been hoarded by Brian Hirose and are trading on a three-to-one basis.

The Chicago Fire team ran out of their pins before the 1990 East Coast Stunt Kite Competition was over. The new ones feature the same Fire Dart and Flexifoil, but the tiny Flexifoil's even tinier leading edge is a different color. And the Kite Group of Boise has even done a series of identical pins with different background metals.

And now those pesky folks at the Minnesota Kite Society have really messed

things up. Their trademark kite club pin, a 13-panel rokkaku, is a real beauty. But each time they reprint it, one small panel is a different color!

Don't think about building a big collection if you are color blind.



STRATEGIES FOR COLLECTING

Collection techniques have evolved just as the number and types of pins have increased. Generally speaking, the collectors use a combination of three different strategies: buying, trading, and begging.

Buying is the oldest form of pin collecting. It is also the least creative. Besides, even with the modestly priced ones at four dollars each, a healthy collection can quickly add up in cost. Most serious collectors move on to the trading stage quickly.

An accomplished trader needs something to trade. Obviously, maintaining a trading "stock" which is varied or rare and unusual enhances your bargaining position. That's why good pins have a tendency to disappear quickly at events. Collectors buy up 20 or 50 at a time to sell or trade later. But even buying in mass doesn't provide you with a financial edge unless you're planning on a serious mark-up. The real advantage comes only when you produce your own pins.

A modest order of 100 pins will run in the neighborhood of two dollars each. Larger orders can cost half as much. Not only is the expense reduced, but you also get exclusive control of the product. And no matter how many manufacturers you call, always remember to ask for samples. This is your first lesson in pin begging.

Serious begging, however, is an art form and my personal favorite. The technique includes finely tuned strategies like "ogling" and a tactic I call "random solicitation."

Random solicitation is a fairly successful strategy for acquiring an item no longer available for sale. It's based on the presumption that, sooner or later, you will find someone willing to trade if you just keep asking. It also presumes that you have little or no pride. Just remember to be creative and and to gracefully accept rejection. The numbers are on your side.

When the demand for Great Lakes pins greatly outweighed the supply, I quickly realized that a statistical approach would

be needed. I began scanning hats and jackets for the coveted item. Whenever I saw one, I would boldly point it out to my wife and say, audibly, "There! That's the one I need." I only had to embarrass her about a dozen times before someone responded, "Well, what do you have to trade?"

Music to my ears . . .

The random approach is obviously limited to those situations where a number of pins were originally available. When supplies are scarce to begin with, ogling may be your only option.

Tom Casselman, Scott Skinner and I had just returned from the festival in Weifang, China and were spending two days in Beijing. Tom had learned of a major kite exhibition and festival in the city and made arrangements for the "ten minute ride." We had just planned to go and take a quick look around. However, after an hour and a half in a shuttle bus, the driver dropped us off and disappeared. Obviously the festival organizers wanted these international guests to stick around.

We were in the middle of nowhere in the cold. Tom was insisting, as only he can, that we wanted to go back to our hotel. Tensions and frustrations were rising.

Just then a small group of men in suits emerged from a large building. My eyes were drawn, almost instinctively, to the shiny pin on the leader's lapel. Chinese characters...the Great Wall ...and above it, a tiny Beijing Swallow kite!! What a find!

I stopped this obviously important fellow, and more in sign language than in words, asked for a closer look. He seemed genuinely startled—as much at being confronted by a foreigner in this isolated place as by my interest in his silly lapel pin. He took it off, handed it to me, and rushed away from the crazy American.

An hour later we got a ride back to town. We were shivering and had lost half a day in Beijing. I didn't care. I had the only Swallow Pin available outside China.

FACTS, FICTION AND FAVORITES

Despite rumors to the contrary, roughly 350 different pins have now been produced. That's if you don't count the 200 or so made in Weifang City which feature their trademark butterfly kite. Pin production and collection is catching on overseas. But for now, this thing the Europeans call the "metal-head phenomenon" is focused pretty much here in the USA.

Here are a few categories and examples to watch for:

Many pins are made by clubs. New ones include the Connecticut-Tako Kichi, the Colorado Skymaster (which looks like a license plate) and the Yakima



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Kite Pin Junkie

... Continued from page 27

or Squalicum Valley Flyers pins.

•Store pins, like Long Beach Kites or Candy and Kites are old favorites. New additions worth collecting include Catch the Wind, Into the Wind, and Paint the Sky logo pins.

•Manufacturers are beginning to produce a number of pins. Force 10 has been quite prolific with four different ones now available. Others include Flexifoil/Cobra Kites, Peter Powell and Revolution Kites. Martin Lester's "Legs" is nearly as good as the kite it depicts, and the Hagaman Parafoil pin is an essential addition to any respectable collection.

•Event pins are often gone before the event is over. AKA convention pins are standards since Chicago in 1988. The East Coast Stunt Kite Championships and Reno International Kite Festival pins are also quite collectible. Looking for something larger? Without a doubt, the biggest event pins are made for the Hawaii Challenge by Kite Fantasy.



•Team pins are starting to catch on among the stunter crowd. The Team

Cyborg pin is well worth having. Team Peregrine's pin from Washington state was available in very limited supply, and team High Performance from Hawaii produced a rare collectible several years ago.

•Not to be outdone, single-line fliers have also come on strong with pins representing their kites. Candyman by Art Ross is a favorite. It features his big pink candy-dropping Flow Form kite. Adrian Conn and Scott Skinner have beautiful pins displaying their famous creations. My personal favorite is the Lady Liberty kite pin by John and Linda Zilar.

Another "must-have" is the Purple People Eater by Greg and Sue Clark. It is undoubtedly the ugliest pin featuring the ugliest kite I have ever seen.

•Foreign pins are slowly beginning to surface. Some of the best include pins of the New Zealand Kitefliers Association, Drachenladen from Germany, the Bristol Festival from Britain, and AJSKA (the All Japan Sport Kite Association). Two of the best new ones are the 1990 Berlin pin and the Polish kite team pin.

Once you have been afflicted, the compulsion to acquire kite pins is almost overwhelming. It is an addiction or desire only understood by fellow collectors, choc-o-

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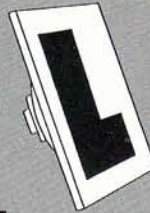
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Kite Pin Junkie

... Continued from page 28

holics, and some young men entering puberty. As a result, the search for a unique or highly sought pin can often take dramatic or unexpected turns.

THE URGE IN ACTION

Hamamatsu in Japan is an overwhelming assault on the senses. Hundreds of giant kites in the air. Huge teams maneuvering for position. Costumes, flags, marching bands, deafening noise and a hundred thousand people joining in what can only be described as a kite frenzy.

Our group was climbing the reviewing stands when I saw it.

The uniformed guard directing international guests was wearing a round white and blue cloisonné lapel badge with a dark red "tako" or "kite" symbol in the center. Suddenly, the noise, the sights, the dignitaries and even the kites became unimportant.

I immediately became overwhelmed with one single-minded obsession.



**I HAD TO HAVE
 ONE OF THOSE PINS.**

I began confronting uniformed officers in the crowd. Could I buy their badge? Was there a supply store in town where I could get one? Would they be willing to trade for several of the "wonderful" American pins that I had brought along? Did they know anyone who had retired and didn't need his uniform anymore?

I'm sure that my inability to speak Japanese contributed to the confusion. Their reaction was predictable and consistent. They looked at me like I was crazy.

Fortunately, my good friend Akino Takeda knew a bit himself about pin collecting. He also recognized the value of a unique addition to any respectable collection.

Aki went directly to the security chief of the festival. "This gentleman," he said, pointing to me, "is a guest of Mrs. Dorothea Checkley—wife of the principal American patron of the festival and an honorary citizen of Hamamatsu." The two of them disappeared into the security headquarters. Two minutes later, he came back with my prize.

Of course, he asked to trade it for two of my better American pins. Cloisonné madness was spreading. ◇

DAVID GOMBERG is the author of Stunt Kites! and currently serves as president of the American Kitefliers Association. He has won the annual AKA Pin Challenge both years that it has been conducted.

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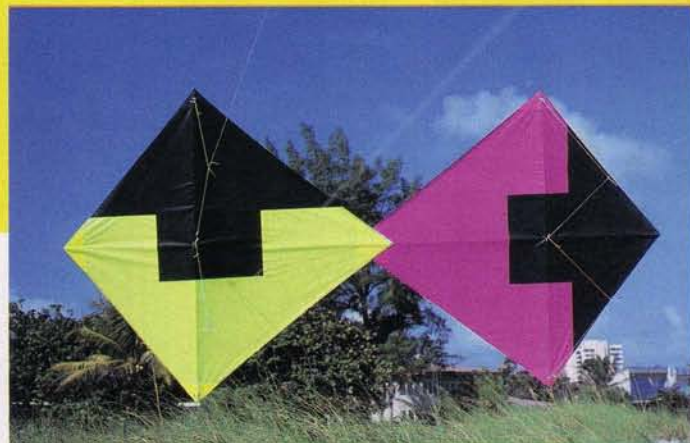
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'Wing'



Bill Edison
3rd Place
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Miami	Bill Edison	3rd Place Precision	Mark III
Miami	Saddam Hussein	4th Place Innovative	Tri-colors, Skyblazer, 6' Monster, Skyraker

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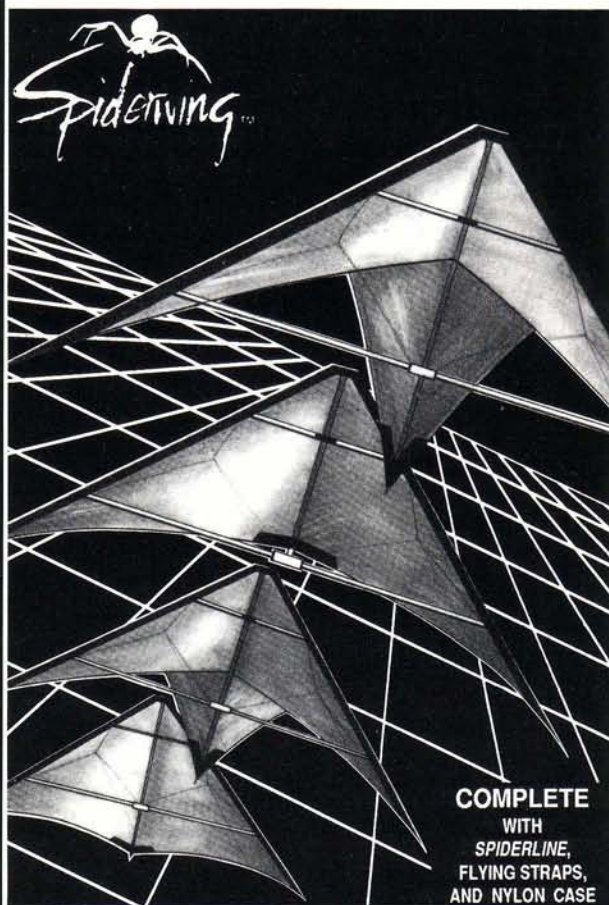
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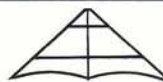
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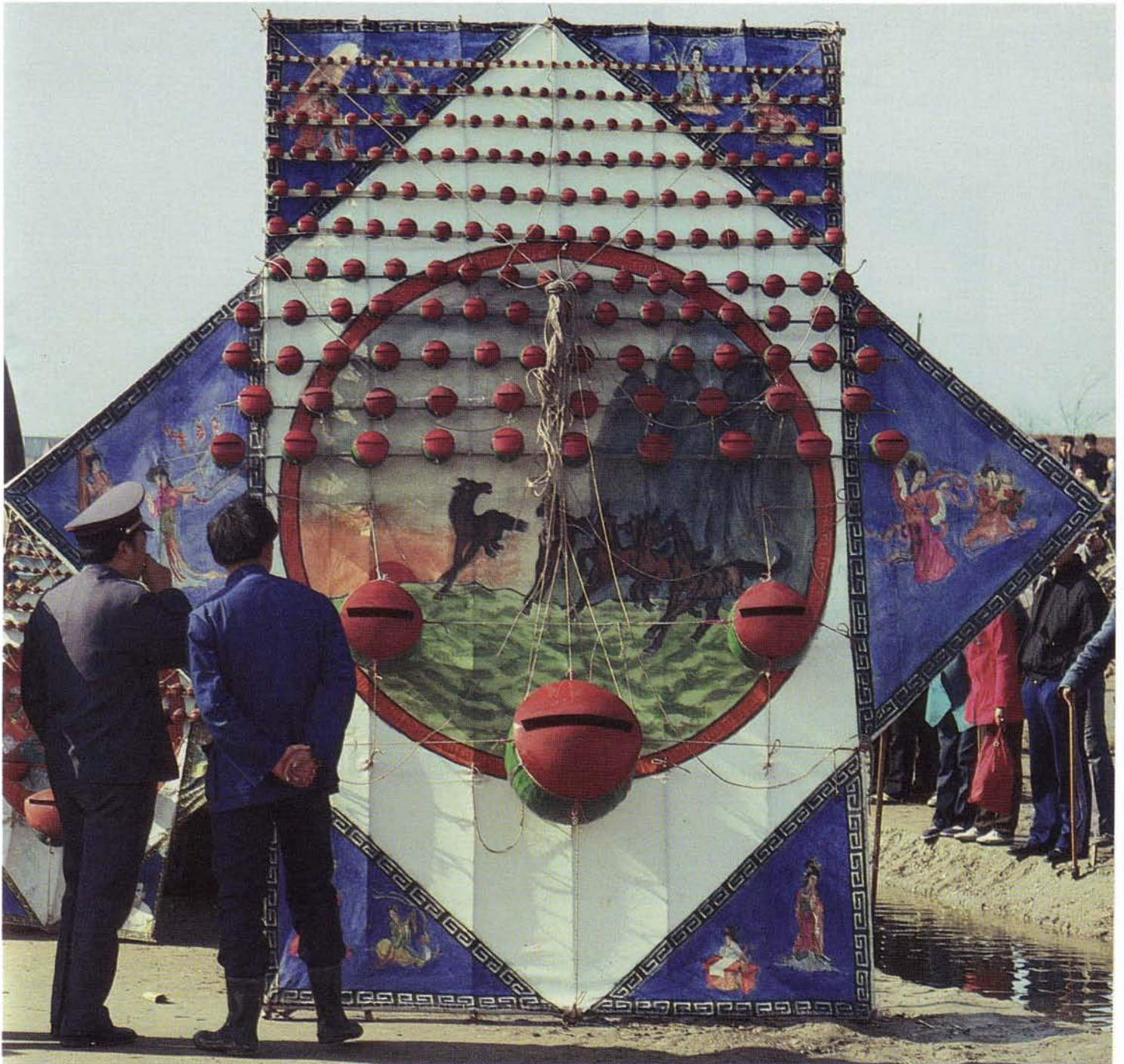


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THE WHISTLING KITES OF NANTONG

Article & Photographs by
TALSTREETER



OF ALL CHINA'S KITE TRADITIONS, NANTONG'S IS UNIQUE; WHEN LAUNCHED INTO THE WIND, THE KITES BUZZ, GROWL, MOAN, SING AND WHISTLE.

Although I had been to China twice before, this was my first visit to Nantong. Situated in Jiangsu Province and 110 miles northwest of Shanghai, Nantong is separated from the world's largest city by a bay, the mouth of the Yangtze.

The most convenient way to make the trip from one city to the other is over water, comfortably ensconced in a mod-

Below, an artful, restrained dragon uses a traditional Chinese paper folding technique for its body; top right, Beijing swallow kite with tympanic attachment by Kong Lingman; bottom right, a handsome hawk shown off for the judges.



ern, well-appointed hovercraft, a service which is offered several times a day and takes three and a half hours.

After the jam-packed humanity of Beijing and Shanghai, this city of 250,000 looked positively somnambulant at mid-day. The only thing which distinguished Nantong from the steady monotony of China's sleepy urban landscape was a familiar Western-styled telecommunication tower housing a revolving restaurant and topped by a needle-shaped antenna.

From the taxicab, I saw many long red banners with white lettering hanging from the walls of the downtown buildings. Some were in English, confirming the Second Nantong International Kite Festival. The international event follows many previous years as a national event and, before that, a tradition of flying kites in late March when the winds are good and the farmers have a slack season before tilling the ground.

Nantong's kites have earned a reputation on a par with those of Beijing, Tianjin and Weifang. The city is known for kites of all types (birds, fish, dragons, insects, immortals and others that are found everywhere in China). But it is best known for the ones specific to Nantong: the whistling kites. The tradition is so old it has no verifiable records, but local legends reach back some 2,000 years.

A welcoming banquet was already underway for foreign guests and Chinese kite enthusiasts, and at the taxi driver's suggestion we headed directly to the restaurant. We were greeted warmly by our Nantong host Lu Kun Song. He was a small man with engaging deep dimples and a smile which rarely left his face.

He said something about wishing more Americans had come—there were only four of us. I spilled out the thought foremost in my mind:

"Americans are worried about their safety

and welcome in China after Tiananmen."

Song replied just as directly, "But you're here!"

"Yes," I said quietly, "to report back home what China is like these days for a Westerner."

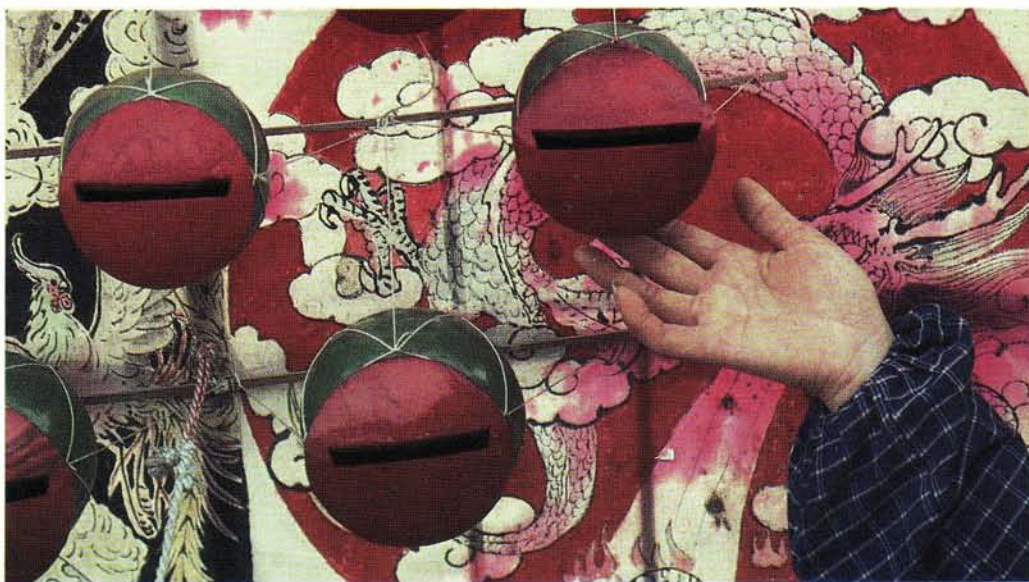
A Chinese man spoke from a nearby table, reflecting a widely-held opinion. "Ours is still an open-door policy. One man cannot close the door once it is opened. Believe me, we are very pleased and proud that you have come to our country and our festival."

But neither politics nor food was the principal concern as everyone circulated from table to table showing albums of kite photographs. The honored guests were an old Nantong maker of whistling kites accompanied by his son. Their photographs were only a teasing tidbit of the real thing we would see next day.

Song told me that the early-bird arrivals had toured a kitemaking family's



Top left, the Nantong judges at work; bottom left, pistol starting the competition; bottom right, Nantong whistles on a richly decorated kite; top right, the largest whistles, tied down with hemp.



home before the banquet. This was such a different approach from Weifang, where local kites and makers are all but submerged by politicians, unnecessary officials, ceremonies, lavish pageantry and an overemphasis on the "International Ten Best Kites" competition. In Nantong we were in intimate contact with the best of Chinese kitemakers and kites right from the start. It was a refreshing change.

Though the event was sponsored by the city of Nantong, and subject to inescapable bureaucracy, it was apparent that the festival would be well-organized but relaxed and easy-going. The only nonkite event was a street parade of floats by local industries. But this was fun, as the floats promoted everything from a paint factory to the local body-building salon (with well-oiled musclemen pumping up) and ended with teams of dragon dancers bringing to life the extraordinary mythical beast.

Breakfast at 5 a.m.! An impish grin spread across Song's face as he clapped me across the back at the breakfast table. "Time to learn a new oriental expression, the Chinese equivalent of Japan's *tako kichi* (kite crazy). It's *yao fashao!*—Chinese for 'kite-flying-fever!'"

There was a definite case of kite fever and craziness coursing through our dawn convoy of cars, vans and buses headed by a police car with red light flashing. We rushed past empty streets and closed shutters, out of town and through small villages. "Sixty kilometers (38 miles) to the flying field," Song exclaimed.

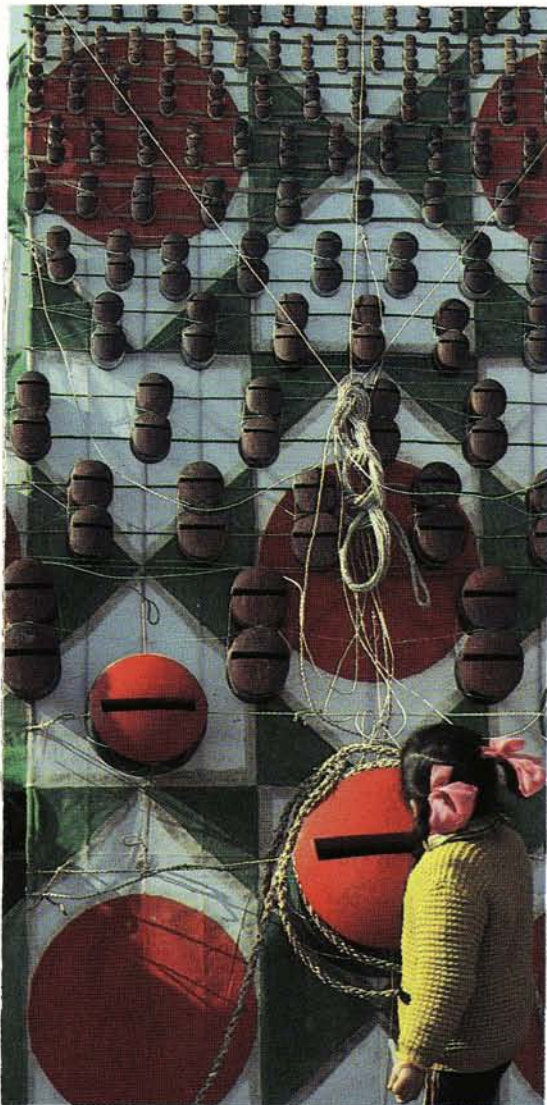
There were small kites flying overhead. The fliers paid scant attention to the convoy, enraptured in their own *yao fashao*.

We turned in suddenly at a corner displaying a freshly painted sign in English, "Welcome to Hungai Fishing Village." The tiny hamlet, by official count, was swollen by 120,000 kite enthusiasts. At what time, I

wondered, had all these kite-demented characters gotten out of bed to attend this event?

I quickly came to the conclusion that I had never been to a kite festival anywhere in the world as effectively organized as Nantong's. The first thing I noticed as we drove up was an unbroachable eight-foot-wide moat-like channel which had been dug completely around the treeless, billiard-table-flat flying field, effectively separating the spectators from the fliers. We lugged our gear over an earthen bridge which was politely but sternly policed by festival officials.

The separation of spectators and officials was in response to an unusual Chinese trait: insatiable inquisitiveness. The instant crowds which surround the most modest distraction are disconcerting for a Westerner, to say the least. Kiteflying at a China kite festival is normally accomplished in narrow lanes painstakingly cut through masses of spectators anxious to



Competition Rules of Nantong

As outlined by the All-China Kite Association

1. Three kites at most (of any size or complexity) may be entered by a team.
2. Each kite may be entered in only one competition.
3. Kites will be reviewed just prior to flight and after review they may not be altered.
4. Flight times will be set by the jury.
5. Seven kites will be flown in each heat.
6. Twenty minutes before each heat, contestants will be called to the jury stand. If contestant does not report by a second call, entry is forfeited.
7. Each heat will last 13 minutes: 10 minutes in the sky and three minutes for launching. There are three minutes between heats for lane judges to complete and hand in their tabulations.
8. One point will be deducted for each minute not in flight.
9. There will be three chances to launch the kite. Three failures disqualifies entry.
10. The stopwatch is started when the flier enters his lane.
11. The angle of flight is calculated from a formula which takes into account size and distance out.
12. Stability and smoothness of flight is judged.
13. Large kites may employ assistants, but one person must actually be responsible for the kite's flight.
14. The kite line's flying length cannot be less than three meters (ten feet).
15. The stop watch time is determined by the average of two timers.
16. The total score of 100 points includes 50 points for angle of flight, 35 points for craft technique and design and 15 points for quality of flight; without flight the entry is disqualified.
17. If entrants feel the score is unfair, they can protest within 30 minutes. Protests must be presented to the judges in writing accompanied by a fee of 10 yuan (30 cents).
18. If kites from adjoining lanes intertwine, the judges are empowered to determine which entrant is passive, which active.

Comments by Tal Streeter:

A special rule was set for international entrants that their kites would be judged solely on their "flying effect in the sky."

Awards were: two awards for best overall kite; two awards for largest kite; two awards for smallest kite; and two awards for longest kite.

Western kite festival organizers would do well to go to Nantong just to observe and learn from the Nantong City Kite Club's orderly, serious and well-managed competition.

be right at the center of activity. You are lucky if the flying line chooses to rise exactly in the latitude of your hard-won and briefly held pathway. What a relief to fly in a generous space free of the ever-curious crowd.

An old China friend, Yao Zhende, strode purposefully across the flying field to greet me. In his 70s, he is vice-president of the All-China Kite Association, as well as the Beijing Kite Association. In China he had assumed the role of my kite teacher.

He pointed out a dragon train flying in a straight line, then one with bristly legs which writhed in undulating curves. Then he compared two eagle or hawk kites, one which flew steadily, another which swooped and flew in wide circles.

"Which of these kites is the best?" he asked, then strode off across the field, not waiting for my answer, assuming I understood this "lesson." Before this, I would have considered the steady fliers the

Chinese style. I had never seen—or perhaps recognized—Chinese kites that attempted to imitate natural movements. It was apparent that Yao applauded the lifelike characteristic.

"First," he said, "to fly well. Next, to capture the essence of nature, its movement . . . the kite artist recreates life." Lagging behind him, my head pulled this way and that to take in all the sights, I remembered something he had told me once before: "Kites and wind are impatient; we must seize the moment when they come together."

Yao was anxious for me to see a swallow kite made by Kong Lingman of Beijing. The brushwork and lavish colors on this five-foot swallow were breathtaking. On the back side of Kong's kite, tiny windmill blades attached on either end of a ratchet mechanism moved mallets which alternately pounded on two bell ringers, one of chiming metal, the other

of percussive wood. Kong quickly disassembled the noise-maker to show off its ability to collapse into a tiny package.

Today at the festival the kites were being judged on flying ability, having previously been assessed for craftsmanship and artistry. I have never seen a kite competition with such complex, complete and careful judging. Seven 10-foot by 60-foot lanes were marked out in chalk dust, each with its own judge. Flare guns and starter pistols signaled the beginning and ending of the heats. Stopwatches timed a precise interval after takeoff and then the kite's flying angle was measured against a sextant on a pole.

But the show-stopping whistling kites of Nantong were not entered in the competition. They stood at the back of the flying field, leaning against the sides of the large dump trucks which had brought them there.

In size, the kites ranged upwards from

Ancient Kite Traditions in Nantong

By Tang Jin Jao

Nantong Kite Historian

translated by

French kite enthusiast Gerard Henry

In earliest times, kiteflying in Nantong was a very serious business. Before it was launched into the sky, the kite was placed before an altar on which paper horses were offered and incense was burned.

People flew kites to venerate the gods, to dispel evil and attract good fortune. To fly a kite was to send *Baihuxing*, the White Tiger Star, back to the Celestial Palace. This star, driven from heaven because of its misdeeds, revolved around the earth bringing misfortune in its wake. To encounter *Baihuxing* is to encounter a sometimes fatal destiny, so to send it back to the Celestial Palace meant that evil would be removed from the world.

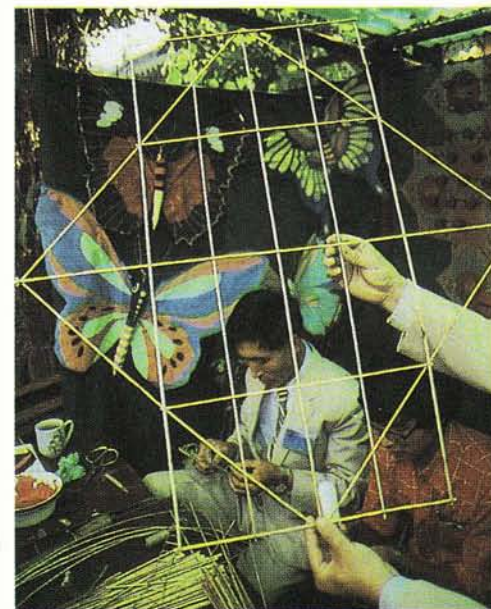
People used to glue images of horse or elephant spirits onto kites to act as links between men and gods, and enable the White Tiger Star to depart as rapidly as possible—on the backs of kites—from the human realm.

The whistles which sound to awaken heaven and earth had the purpose of frightening and dispersing evil spirits, and thus of restoring peace to earth.

Opposite page: one of the largest traditional Nantong kites.

This page: left, gourds of different sizes from which Nantong whistles are made; right, typical Nantong kite frame of a square overlapping a rectangle.

Photos this page: C.K.Tong, courtesy *China Tourism* magazine.



5 by 6 feet to 10 by 12 feet. They were flat kites, with rectangular, hexagonal, octagonal or polygonal shapes in bamboo lashed with hemp and covered in cotton, not silk or paper. They were painted in one of two ways: with dragons and celestial beings in subdued earthen colors; or with geometric patterns of circles and diamonds forming linked stars in red, white and black. The typical multisided shapes were accomplished by overlapping of rectangles and squares.

A kite could carry from 100 to more than 1,000 whistles tuned to different pitches and graduated in size from the leading to trailing edge. Though "whistle" is an accurate translation, these are not like policeman's whistles, but are shaped like kettle drums with a slightly arched cap and wind slot cut into this cap. The bulbous basso profundo whistles were made from round gourds of several varieties up to about 1½ feet in diameter and

one foot in depth (the walls thinned to make them lighter); the middle sizes were flat sided cylinders formed from bamboo strips; and the tiny piccolos were hollowed out from either bamboo, acorns or goose feathers.

The wind blowing over the slots (like air blown across the opening of a bottle) creates sounds, from high-pitched fife tones to low, moaning groans. The sounds produced by a kite are reputed to be audible for several miles.

The kites' local name was *banyao* (rigid sparrow-hawk) or *banzheng* (rigid kite), the rigidity being specified to differentiate them from the flexible dragons and bird kites. A good strong gale, long tails and a team of as many as 25 people were needed to launch the whistling kites into the sky. Unfortunately the winds were too light that day for these specimens to fly.

Yao told me, "I don't think ideas of 'musical quality' play a part in the Nantong

kitemakers' thinking. In the old days, kiteflying was not for fun, but an aspect of religion, to appease the good gods and dissuade the bad gods from staying around.

"I would never have believed or understood these marvelous kites until I had seen them for myself. Surely every kite lover will want to come to Nantong to see—and hear—them for themselves, not just once, but many times. I will be back next year, and the year after, and the year after that, I promise you!"

After a long, sunny, beautiful day, as our van carried us tired but happy to Nantong, I considered Yao's words. "Me too," I thought, "me too."

As we parted, Yao said, "You must fly your kites in Tiananmen Square."

I looked somewhat dubious.

Holding onto my hand and grasping my shoulder, he said, "I will make the necessary arrangements. We must seize the moment." ◇

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QUICK & EASY ANGLE ESTIMATING

Article & Illustrations by William G. Wing



Would you like to know, in a casual way, the angle of your kite above the ground?

You can easily buy something to measure the angle of elevation. There are clinometers, Abney levels, range-height finders and maybe a bubble sextant left over from World War II. Hardware stores have a variety of spirit-level devices. If you lust to spend money, you can put thousands into theodolites that will give you readings in degrees, minutes and seconds.

Who needs them?

Outside of contests with arbitrary rules for judging high-flying kites and outside of efforts to measure altitude through trigonometry, there is something fraudulent—or at least silly—about using ultimate precision in a medium as fluky as surface winds.

Here we will be talking about round numbers, round numbers accompanied by such words as “about” and “more or less.” We will be careful, though, to pay attention to the Kite-Worthy Principle.

To be worthy of kites, you have to have fun. Ingenuity is fun. Substituting imagination for money is fun. Simplicity is fun. Remember, this is a sport that grew from sticks, string, paper, paste and garbage bags.

Beginning with equipment that everybody has at hand, consider body parts as angle-measurers. First, eyeballs.

People can achieve remarkable skill in estimating angles by eye. A forester was talking recently about a device for estimating the height of trees called a cruising stick. He remarked, “But after using it

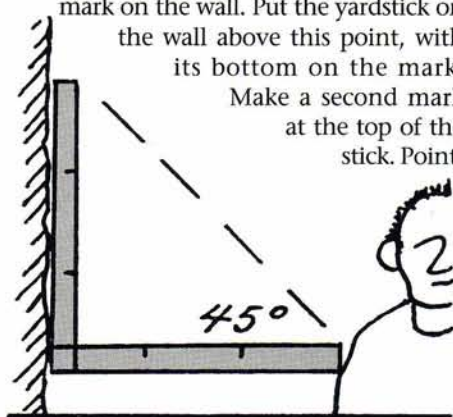
awhile you get so you can look at a tree and judge the height just as accurately.”

Arms can be used to approximate vertical angles. Straight up, an arm points at 90 degrees. Check yourself in front of a mirror or stand by a plumb line. Straight out from the shoulder is horizontal, zero degrees. Midway is 45 degrees.

There are ways to check the accuracy of your 45-degree angle. Residents of Bordeaux, France; Teshio, Japan; Sheet Harbour, Canada; and Minneapolis, Minnesota or Salem, Oregon, USA can simply step outside on a clear night, point at the North Star and know their arms are at 45 degrees. The rest of us in the northern hemisphere can remember that the angle of elevation of the North Star and the degree of our latitude north of the equator are the same, so we can learn to point at a definite angle. Alaskans can become expert at pointing at high kites, Puerto Ricans at pointing at kites on the horizon, and (by this method) Ecuadorians at pointing at kites on the ground.

Lots of tricks are available for estimating 45 degrees because of the happy fact that any right angle with two equal legs includes two 45-degree angles. If you know the height of any vertical object—a flagpole or third-story window—get the same distance away from the base and point. (I know you have to make adjustments for the fact that you’re pointing from shoulder height, or that the ground may not be level, but you can figure those things out.)

A fast-and-dirty way is to use a yardstick or meter rule. Hold it horizontally between your shoulder and a wall. Make a mark on the wall. Put the yardstick on the wall above this point, with its bottom on the mark. Make a second mark at the top of the stick. Point.



Whatever the angle, when you’re sure of it, turn your head until it touches your arm and you can feel your arm against your nose or cheekbone or brow. Memorize the feeling so you can repro-

duce your arm’s position when you’re flying kites.

Coastwise navigators have a trick for using fingers to take a bow-beam bearing when they’re too lazy to use an instrument. Thumb and forefinger stretched apart make a right angle. Bring the forefinger down halfway to make 45 degrees. A kiteflier can jam his hand against his nose so his thumb extends towards the horizon and his finger points toward 45 degrees.

Remember, ingenuity!

There was a priest in Iceland who visited the Holy Land in 1150. When he got back he told his friends: “By Jordan, if a man lies flat on the ground, raises his knee, places his fist upon it, and then raises his thumb from his fist, he sees the Pole Star just so high and no higher.”* That’s our boy.

The navigator’s bible, *American Practical Navigator*,† familiarly called Bowditch after its first author, has a chapter on lifeboat navigation with intriguing suggestions for estimating angles. Castaways have the same problem as kitefliers because they need to measure angles of elevation of bodies in the sky for navigation, and they may have left their instruments behind when they abandoned ship.

Extend your arm, hold a finger up and look at it with one eye closed. Did you know that if you open that eye and close the other, your finger will jump six degrees? You can use this vertically if you can crank your neck over to the horizontal.

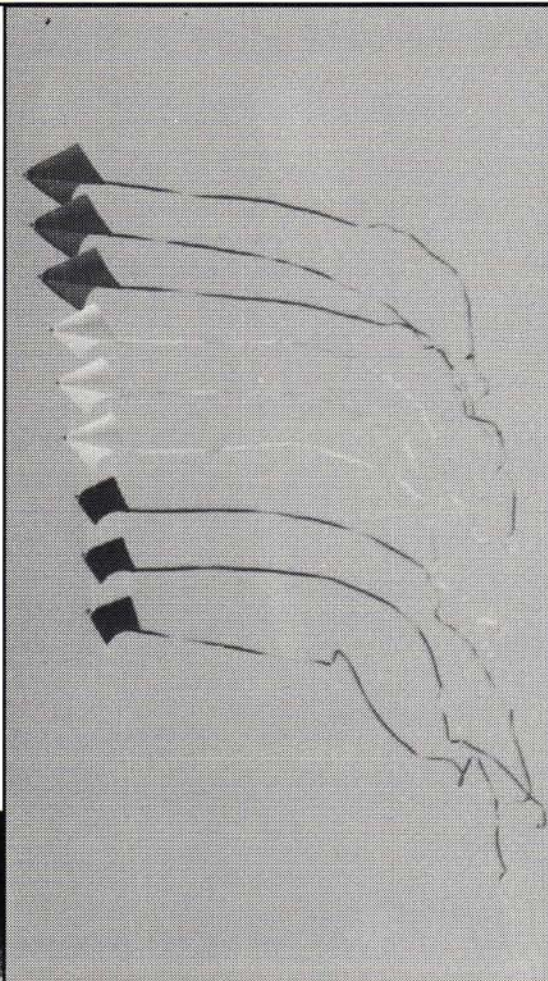
If body parts are supplemented with a ruler, a family of devices is opened to you. This is the family of the forester’s cruising stick. A kiteflier can hold the ruler with extended arm so it measures the distance between horizon and kite. Bowditch says if you are an average person with a distance of 25 inches (about 63.5 cm) between eye and ruler, each inch (2.54 cm) of the ruler will subtend an angle of about 2.3 degrees (or each cm about 1 degree). You will need a yardstick or meter rule for the angles at which most kites fly, and it will be a very rough estimate without a definite horizon.

In the Indian Ocean, Arab navigators used a slab of wood and a string called a

*E.G.R Taylor, *The Haven-Finding Art: A History of Navigation from Odysseus to Captain Cook* (New York: Abelard-Schuman, 1957), p. 129.

†*American Practical Navigator*, U.S. Navy Hydrographic Office, (Washington, DC: Government Printing Office, 1962), pp. 645-663.

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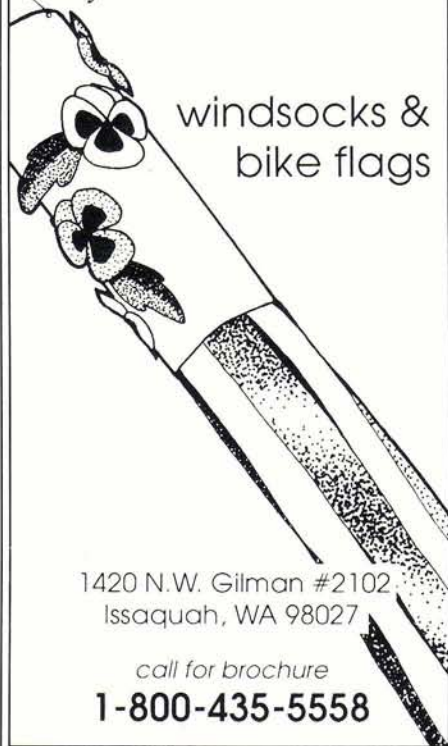
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A Scenario of Ingenuity Befitting the Kite-Worthy Principle:

kamal, according to the book *The Haven-Finding Art*. The slab was held so that it just covered the space between the horizon and an unknown star. The string, held in the teeth, was made taut. Knots in the string identified the star by its angle of

plumb line, older than anyone knows. Tie the string to the center of a straight stick, point the stick at the kite and you've captured the kite's angle of elevation between string and stick. All you have to do is figure out how to read the angle.

A simple way to do it is to buy a schoolchild's protractor (three for one dollar at my supermarket). Attach a thread to the center of the straight edge of the protractor (there is often a convenient hole there). Tie a weight to the other end of the thread. When the curved edge points down and the straight edge is level, the thread lies along the 90-degree line. Sight along the straight edge at your kite, and note where the string crosses the scale, either by holding the string to the protractor or by gently turning the protractor to one side.

Because the thread read 90 degrees instead of zero when the straight edge was level, this new angle will read 90 degrees too high. Just subtract 90 from the reading. (Say the reading is 140 degrees, $140 - 90 = 50$, so the kite is flying at 50 degrees above the horizon.)

If it's hard to sight along the clear plastic edge, tape the protractor to a stick. But don't bother with further improvements. ♦

Two kitefliers in a meadow. Flier A says, "Look at my baby up there! She's sitting at 70 degrees, easy." Flier B responds, "In a pig's eye."

Flier A ties off kite, rushes around looking for something flat with one straight edge. Tears off bottom of cardboard beer case. Then pulls off one shoe, rear-ranges shoestring so shoe hangs from string, forming plumb line. Holds string at front corner of straight edge, sights at kite along straight edge. Lowers cardboard, holding string in place.

Flier A then draws a line along string with lipstick. She draws a second line from other corner where her eye was so that it intersects first line in a right angle.

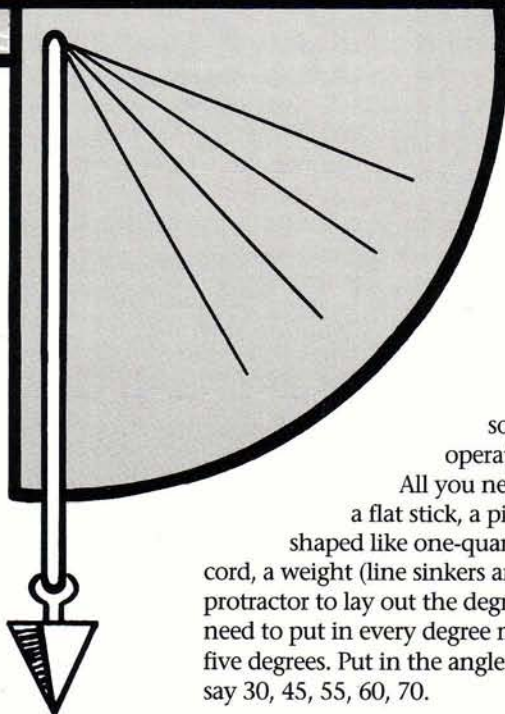
With graphic evidence before them, Fliers A and B settle disagreement. (Actually, her baby was sitting at 51 degrees.)



elevation. Celestial navigators in the South Pacific used measured cords to hold their hands the correct distances apart for measuring angles.

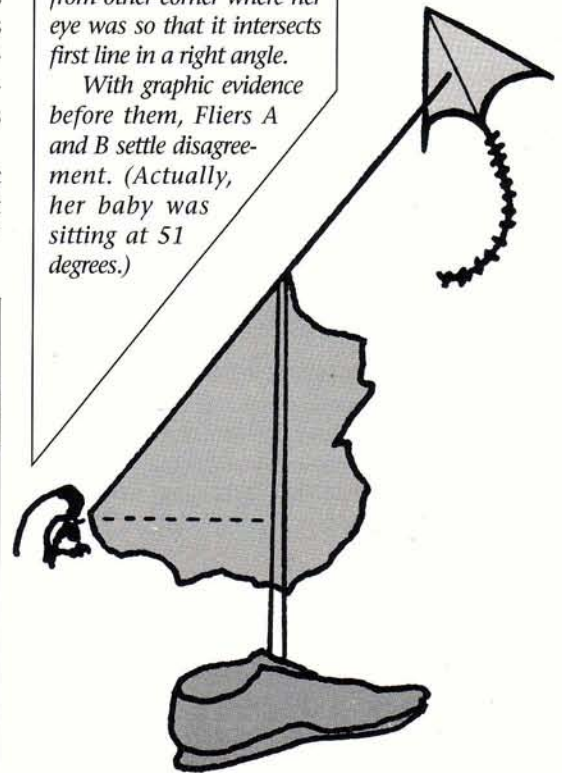
In improvising angle-measuring instruments, one starts with an advantage: a string suspending a weight points to the center of the earth at one end and towards the zenith at the other. This is the

Make yourself an old-fashioned quadrant.



It's easy and it's a dandy. It was invented by astronomers and tested on every ocean for 700 years. And it only takes one person and one hand to operate and read it.

All you need for the quadrant is a flat stick, a piece of cardboard shaped like one-quarter of a pie, a piece of cord, a weight (line sinkers are excellent) and a protractor to lay out the degree lines. There is no need to put in every degree mark, or even every five degrees. Put in the angles that interest you—say 30, 45, 55, 60, 70.



WILLIAM G. WING worked many years as a newspaper editor and writer. Since his retirement in 1984 he has returned to kiting.



Three To Get Ready, Fourth To Go

Story by David L. Dobbs

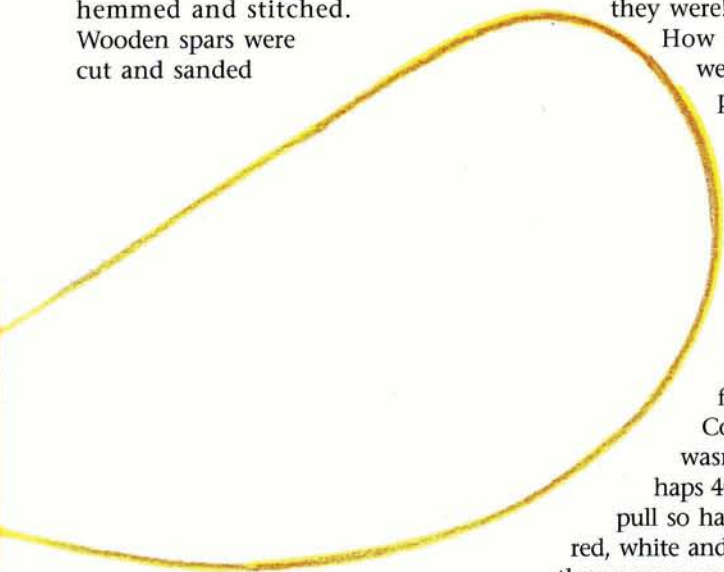
Illustration by George Peters

This Fourth of July would be special! Father had begun planning it before the slush melted in the gutters.

During the Great Depression, Minnesota winters were long and hard. Money was scarce. The few firecrackers we could shoot on the big holiday wouldn't last long. And now that we'd moved to the outskirts of the city, the Independence Day celebration in the park would be too far away to attend. We would miss the excitement this year.

The Depression taught people to depend on their own resources for amusement. "Make do or do without" was the motto of the times. Dad knew that we could have our own special celebration.

Somewhere Mother had found a good sale on cotton cloth. Dad scaled the dimensions from a book and laid out the patterns on tissue paper. Piece by piece, the cloth was carefully cut. With Mother's help on the Singer, the fabric was hemmed and stitched. Wooden spars were cut and sanded



in the workshop, their notched ends neatly bound with layers of fishing line and sealed with lacquer. On rainy spring Saturdays, the kites slowly took shape: three matched four-foot Conynes—one red, one white and one blue.

By Memorial Day, the first kite was finished and passed its flight test with flying colors. A month later, just in time for the Fourth of July, the train was assembled and ready to go.

Far back behind the house, atop an embankment that seemed high to 10-year-old eyes, ran the Northern Pacific tracks. We sledged down that slope on winter snows, and from its height in springtime launched Eddy kites of flour-pasted newsprint on lines of grocery string. It was here that the patriotic trio took to the air for the first and last time.

A brisk east wind was at our backs. Somewhat fitful, it was strong enough that Dad had to reset the bridles. Up went the blue Conyne from Dad's hand as I held the reel. Fifty feet or so down the line he attached the white one, and two were in the air. Then the red one was flying as well, off to the right a little until it cleared

the turbulent currents near the ground.

Dad took the reel and fed line to the kites. Up over the house they climbed, high above the trees and then the houses in the next block. What a beautiful sight they were! How steadily they flew! How appropriate for the day were our national colors displayed against the western sky!

We took turns holding the reel and marveled at the pull as the three kites rose into higher wind velocity above. The train must have been out about 900 feet. Surprisingly for Conynes, the angle of flight wasn't particularly high, perhaps 40 degrees. How could they pull so hard, those tiny swatches of red, white and blue? Whose house were they over now, so many blocks away?

Suddenly the wind strengthened. When he could, Dad fought to take in the line. One moment it was singing taut from the reel. The next moment it went slack and the kites were free, getting smaller and smaller as they disappeared in the west.

Where were they now? Over the rail yards and the tall grain elevators? Would they fly as far as the university or even the river? In moments they had passed out of sight behind the trees.

Dad ran for the car. He took off after them alone. The old Model A was down the driveway and westward bound long before those kites hit the ground. They were trailing most of the line. Would it snag and fly them somewhere from a tree? Would someone else get to them first? We could only wait and wonder.

Dad was away for hours. It was almost dark when he returned—without the kites. We never knew how far he had gone or who he talked to in that fruitless search, but he had made some kind of peace within himself. Where we had expected anger and despair, he seemed

calm and unconcerned. It was as though those beautiful kites had never existed. He said not a word about them—at supper that evening or ever—and we knew better than to ask.

I suppose we had a few fireworks that night. I don't remember. For me, that Fourth of July was over when the line broke.

Looking back now, it's strange that I never talked to my father about losing that train of kites. We might have reminisced about it when he lay in the hospital waiting to die. I didn't think about it then. Would it have made him laugh a little? Or did losing those special kites still hurt too much, even after all those years?

Did anyone ever find our kites, lost over southeast Minneapolis so long ago? They may have flown for miles, over downtown buildings, past lakes and farms and beyond. I hope someone found them, someone who admired their workmanship and appreciated the love and skill that made them fly, someone who thought they were a gift from heaven and flew them with joy.

Dad put a lot of effort into creating special occasions for the family. "Making memories," he called it. He certainly made one for me that day.

In my mind's eye, those kites still fly. I can see that train of matched Conynes, red and white and blue, climbing up the western sky. I can hear the sweet song sung by the line and feel its vibrant pull. The pride of that moment lives on. Those kites aren't lost at all. They're still as new and magnificent as they were on that Fourth of July long, long ago. ◇

DAVID DOBBS is a retired information scientist who gardens and writes in Cincinnati, Ohio. He began flying kites again with his children in the late 50s, and now three generations in three families share the fascination that began with this true story.

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Letters . . . Continued from page 13

placed in the production of *Kite Lines*. It has been an extraordinary work of love and dedication on your behalf. Believe me, it is duly appreciated. From its onset, *Kite Lines* has been a work of art, holding the interest of all and having something for the novice as well as the advanced kiting enthusiast. Thanks again for all of it.

—Cesar Quiñones
Ponce, Puerto Rico, USA

On at least three occasions there has been serious talk in the kite community of instituting a scout merit badge for kiting.

Once Scout Leader George Wilcox of Baltimore went so far as to outline the requirements and passed them on to the Boy Scouts of America. He was told his request would go on the list, but that even if selected as a suitable subject, it would take at least three years to establish. It never happened.

It's as good an idea now as it was in 1931 when Paul Garber wrote a Boy Scouts service manual titled *Kites and Kite Flying*. Kiting wasn't a merit badge then, either, but at least it was encouraged by an activity book.

It takes real persistence for such an idea to come to fruition. So, one more time, we have passed the suggestion along, this time to Dave Gomberg, president of the AKA, who has said he will follow through. —V.G.

Corrections & Clarifications

Regarding our last issue (Winter 1990-91):

In our article on World's Largest Eddy Kite, we inadvertently failed to name all the kitemakers. They were Bill Tyrrell, Terry Merkle and Dan Flintjer. The heat-sealing was done by Garrett & Sons.

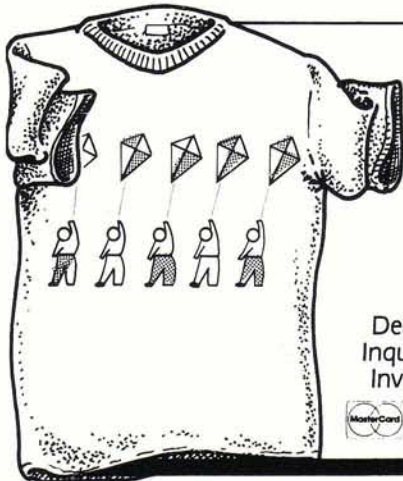
Our Permanent Invitation

Your letter in *Kite Lines* can be part of the ongoing dialogue that makes a community out of kites. Tell the world your ideas, reactions, discoveries and experiences. All of us can learn from all of us.

If you have photographs or drawings to share, don't be shy. Send them, too. We will return them after using them.

Any letter you write to *Kite Lines* may be considered for publication, so please mark it "not for publication" if you want no doubt to be left about it.

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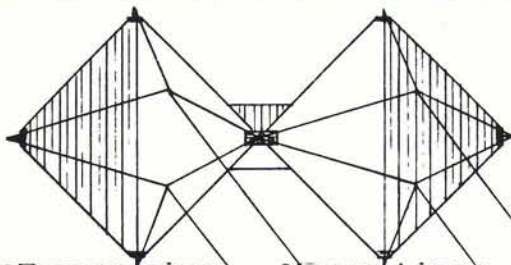
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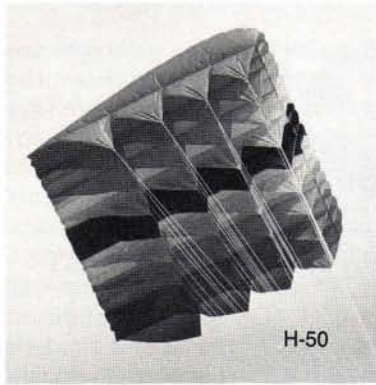
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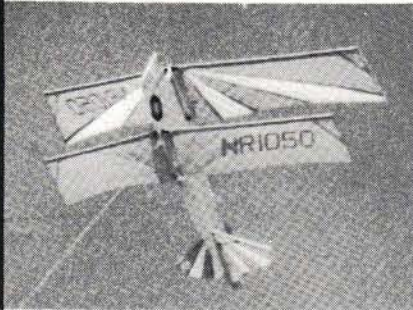
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Empty Spaces . . .



Alfred E. Hartig

The Nantucket Kiteman, Al Hartig, designer of the first cloth delta kite, died on September 3, 1990 at the age of 68. He had suffered from heart disease for three years.

The small kitemaking company that Al and his wife Betty began in 1966 on Nantucket island (off the Massachusetts coast) became famous for kites that were reliable, colorful and durable. The first kite, the Red Baron, was made when Al and Betty were on vacation in 1963. The kite was a cloth version of a plastic Gayla. Hartig's design used the classic curtain-hook spreader connections, trailing



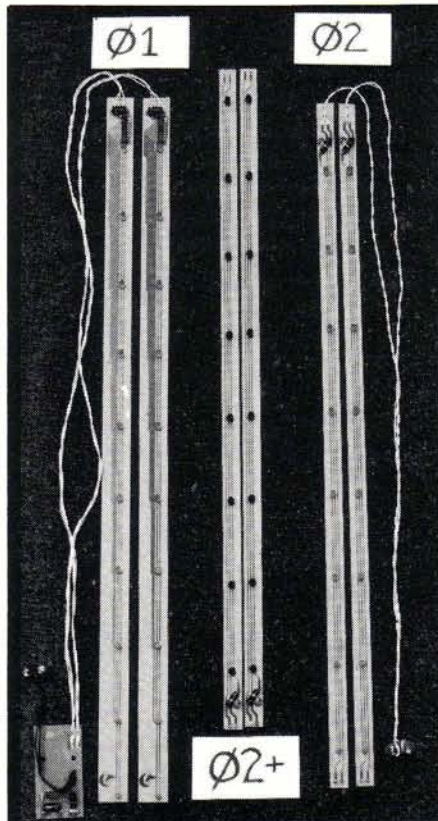
Al Hartig checking a spar's straightness.

edge tuck option and multiple choice towing points in the keel. It flew like a bird from his hand the first time.

Later Hartig made the four-foot Ace, the six-foot Valkyrie, and his more scarce models, the Bat, the National Eagle and the 14-foot Pterodactyl.

The business began in New York City's Central Park, where the Hartigs and friends flew their kites and then sold them (under the name of the Ace-Hi Kite Co.) Soon after this the Hartigs realized their dream of escaping the

city when they moved to Nantucket and opened their shop on the Old South



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... In The Sky



Wharf. Al became a colorful fixture of the island in his black derby hat with red band.

A steady stream of customers came to visit or ordered kites by mail from every continent except the Arctic.

Media attention to the Nantucket Kiteman included stories in *Yankee*, *The Wall Street Journal* and *Smithsonian*, a chapter in the book *The Inner World of the Middle-Aged Man* by Peter Chew and televised segments on "Harry Reasoner Reports," "Good Morning, America," "Captain Kangaroo" and others. *Kite Lines* featured Al in the Winter-Spring 1981 article "What Is Delta?" where his position in the evolution of today's delta was clarified.

Al Hartig was more than a kitemaker; he was also a fine artist, craftsman and shipmodel builder. In the spring of 1990 his painting of the Kent State Massacre was accepted as part of the permanent collection of the James Michener Gallery at Kent State University.

Al Hartig was survived by his wife Betty,

In October 1966 in *Kite Tales* (predecessor of *Kite Lines*), Bob Ingraham wrote of Al's Valkyrie:

"For sheer simplicity and superb flying ability, we've never seen an equal to this kite."

The praise helped Al's kite sales soar.

On hearing of his death, Bob wrote:

"Al Hartig had a humorous outlook on life. He was one of the first painters on the blue canvas of the sky with his colorful deltas. Reflections from them will always be seen somewhere in every kite in the sky."

his mother-in-law, his sister (since deceased), his sister-in-law, several nieces and nephews—and countless friends.

The status of the company is indefinite at this writing. We hope future visitors to Nantucket will continue to have reason to shout and point when the Nantucket ferry comes to dock and they see the kites.—V.G.

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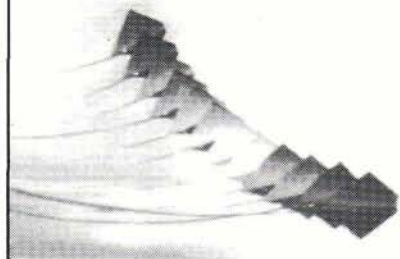
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Henry H. Boutwell

Kite Lines received the following letter from Kathryn M. Boutwell in New Orleans, Louisiana:

"On December 4, 1990 my father, Henry H. Boutwell, was taken by cancer at age 67.

"He made and sold kites that are now as far away as England. Most of his family and friends have one or more kites hanging from their ceilings.

A few of us still have kites left over from the record attempt (1,140 stayed up on one line). When someone's kite would need repairs he would rather crunch it up and make them a new one. He said patching a hole would throw it off balance.

"You and your magazine gave him other people to talk to about kites who were just as 'up there' as he was. Most of



Henry Boutwell and one of his three-dimensional box kites.

his days were filled in the shed cutting sticks, damming the tissue paper because it wouldn't go on straight, or reading. He would make a new change in his kite design and look through your magazine to be sure no one else had the same thing. I feel you counted among his friends for years."

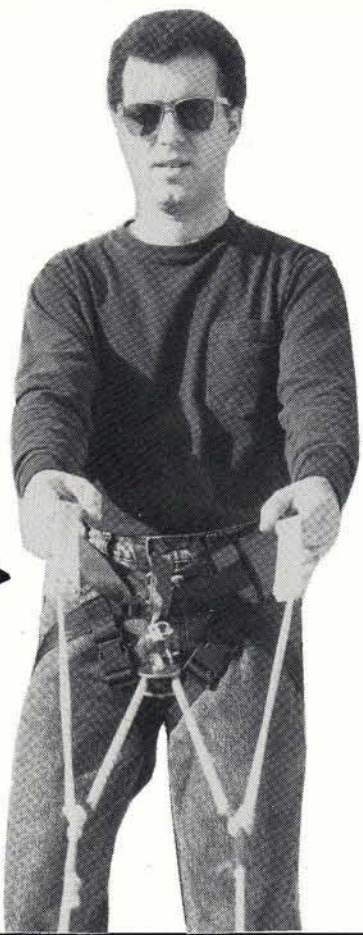
From the *Kite Lines* archives we have pulled a thick file of correspon-

dence with Henry, going back to 1975. It shows a former shipyard machinist's assistant who was devoted to kites, strong in his opinions and original in his designs. He regularly won awards at the New Orleans Kite Festival, a major kiting event in the 70s.

He had made model airplanes before he made kites and he brought techniques

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... In The Sky

of working with wood and tissue paper to a Marconi jib kite, a rotor, various deltas and his "Hazel" kite, a delta of his own invention named for one of his daughters. (As he said in a letter in 1988, "I was flying similar kite designs when Mr. Rogallo patented his kite. In no way is this a variation of Mr. Rogallo's [Corner] kite.")

Poor camera shots kept us from printing pictures of Boutwell's creations in *Kite Lines*, but in 1977 we published his letter about the (then) world record train of 1,585 kites set by Takeshi Nishibayashi and six helpers in Japan in November, 1976. The crew flew the kites on a doubled line. ("I see TWO lines! Protest!!!" Boutwell wrote.) A reply by William R. Bigge explained that the pair of lines was handled as a single line on the ground. Bigge conceded that Boutwell may have held the record for about two months: Henry and his crew (mostly family members) flew a claimed 1,140 sled-kite train from three branching lines that tangled in

a wind shift at Audubon Park, New Orleans on September 5, 1976. However, in this case there was no agreement on the number of kites that should be counted as flying at the same time.

In January 1978, a calamity befell Boutwell. Three days and nights of steady rain fell on his shed/workshop, and he wrote: "I thought I had a solid, leakproof roof . . . Over 300 kites have been soaked, 2,500 of them ready to fly and 300 not-completed small tissue-covered kites. NO HOPE! These kites were to make an attempt on the single [most-on-a-line] record in July. I am sick!"

But Boutwell bounced back. He kept making kites and writing feisty letters, signing them "A Southern Kite Flyer."

One time just after his protest, he wrote to us: "One of these days I will learn not to write letters to the editors of magazines, and let the world go to hell." Thanks, Henry. We needed that. And we will miss you. —V.G.



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Long...Very, Very, Very Long



Left, Craken, the new Longest Kite, towers over its launchers in Nîmes, France. Inset: Michel Trouillet gesticulates success with raised hand and voice gun.

hot coffee and await the arrival of Craken.

7:05 a.m. Three more vehicles have parked and Craken has arrived aboard a four-wheel drive vehicle and an all-terrain Volvo truck, both loaded to the roof.

The monster still sleeps peacefully for the moment, with its 3,393.85 feet of length, weighing, with its various accessories, over 400 pounds.

The construction team accompanies it to its baptism. They extricate themselves as best they can from the tiny spaces remaining for them in the vehicles.

7:35 a.m. A camouflage-painted 28-ton heavy wrecker from the Larzac Military Base pulls up a few yards from the group with a mighty hissing of airbrakes. The driver shouts through the half-open door, "Is it going to be OK?"

"Yeah, it'll do...although..." There is a heavy weight in our stomachs as we feel the wind strengthen.

8:30 a.m. Above flies a 12- by 20-foot banner, which cracks like a whip in the ever-increasing wind. The crew flies the three prototypes which preceded the birth of Craken: Baby, 31 feet long; Junior, 88 feet; and Senior, 150 feet. The boldest member of the crew is having his posterior tested as "landing-gear" along the runway, being dragged along by Senior.

9:00 a.m. The huissiers arrive. [Huissiers are commissioners appointed by the French Ministry of Justice to certify and document events.] They feverishly begin the measuring process, tapes in hand, while the monster, *grâce à Dieu*, still rests

Record Broken for World's Longest Kite

The world record for Longest Kite was broken on November 18, 1990 by the previous record holders, *Groupe OK Mistral* (Good Wind) of Montpellier, France.

Led by Michel Trouillet, nine makers and 25 support personnel flew a kite 1,034.45 meters (3,394 feet) long. The head, a keeled parafoil, was 12.75 x 9.45 meters (about 41 x 30 feet). The kite, named "Craken" after the mythical sea monster, weighed 106 kg (233.2 pounds) and took over six months to construct.

The flight took place at the civilian airfield at Millau/Larzac, Nîmes, France, with clearances from the Military District Command, Air Safety Control and the local *gendarmerie*. A mobile 28-ton heavy recovery vehicle was used as an anchor, and an all-terrain truck as a line-brake. Verification of the size of the kite was made by French notaries public.

The sponsor was Entrepôt Agniel, a French technical textile specialist, which underwrote the attempt and provided

the 20,000-or-so square feet of fabric. All the lines were provided by Cousin, a leading manufacturer of high-tech cable.

The kite was laid out on the aircraft runway, its tail folded on itself in a series of piles. With a windspeed of 35 knots, the launch was fast.

The kite flew at an altitude of 600 meters (1,000 feet) for 4 minutes, 35 seconds, before the 2,000-kg test (4,400-lb) Kevlar line snapped. The kite was recovered downwind. One fascinating aspect of flying a kite this long was that the tail of the kite aligned itself in the air currents to the contours of the ground underneath.

Congratulations to the record holders: Pierre Agniel, François Bertron, Phillippe Bertron, Michel Trouillet and last but not least Anne Vieu (28), Textile Architect, who not only sewed and assembled the entire kite, but was a major force in the project coming to fruition. —Report by Tony Sparrow from information provided by Michel Trouillet

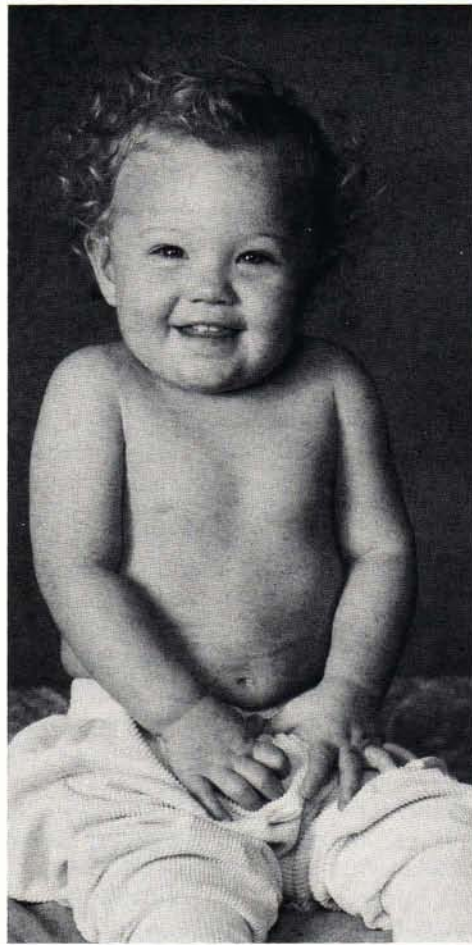
From the Craken Diary: Totally Crazy!

6:30 a.m. on the Larzac Plateau. Wind, invigorating! A cold drizzle, air equally frigid, a mist clothing the surrounding hills with a ghostly feeling.

Four cars pull up to the Millau airport, and ten "extra-terrestrials" in black-and-

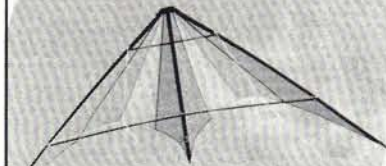
silver coveralls scan the mile-long runway in the fog. These strange beings stamping their feet in the morning cold are four women, five men and a teenager, all from Montpellier, France, answering to the password "OKM." They get out thermoses of

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peacefully on the floor of the hangar. The official measurement is in...1,034.45 meters. So be it! Now for some action.

10:00 a.m. Craken stretches out full length along the 5,250-foot concrete runway. A cry goes up from the loudspeaker, "Prepare to launch!"

The antics of the wind are even crazier than those of the launch crew. Though the head of the kite rises, the cells refuse to inflate, blocked by undulating layers of fabric. Three unsuccessful attempts are made; the crew, spaced along the length of the runway, battles masses of waving ripstop.

10:25 a.m. LAUNCH! The air suddenly rushes into the throat of the cells and Craken, in one giant convulsion, inflates itself and the first 450 feet of the tail drogue. The 2,432-square-foot airfoil head bounds furiously upward. The 25 assistant crew members rush along the length of the tail. Crisp orders come from the bullhorn and the walkie-talkies. Two pilots

struggle to laterally stabilize the climb of the beast. The 950 feet of line passes through their hands fast enough to literally draw smoke from their heavy leather gauntlets!

The main cable is stretched bar-taut and sings in the wind. In the 14-ton truck, two assistants cool down the pulley brakes with bottles of mineral water.

The radios crackle to life: "This is the certifying commissioner. You've done it! Congratulations." The fabulous Craken, stretched up almost into the low clouds, its length following the relief of the terrain, is an unreal spectacle. Wildly emotional feelings, totally *crazy!*

A few minutes are spent shouting and crying, tears of joy and excitement released from the stress of six solid months in the service of this enormous beast.

At this time, Aeolus, the God of the Winds, redoubles his strength. With a crack like a rifle shot, the line parts. It breaks under a strain of 4,000 pounds. (Can you believe it?...4,000 pounds!)

Just like its legendary Andromedean namesake, Craken sinks softly beneath the waves of the wind, beneath the destructive glare of the Gorgon; the crew watches with horrified eyes. No superstars, beefy athletes or death-defying heroes in this crew. These are everyday people, parents, factory and office workers who have spent their weekends pursuing a goal without practical benefit, only the most rewarding experience ever—that of comradeship and a shared adventure. Now they are faced with the task of recovering and rolling up 335 pounds of fabric (and an almost equal weight of water that the fabric has absorbed).

A special thank you to the record-holders and their assistants without whose help OKM and the Craken would have remained as sketches on file in that corner of our minds under the label of Impossible Dreams.

—Michel Trouillet, Team Captain,
OKM Craken Project.

Translation by Tony Sparrow



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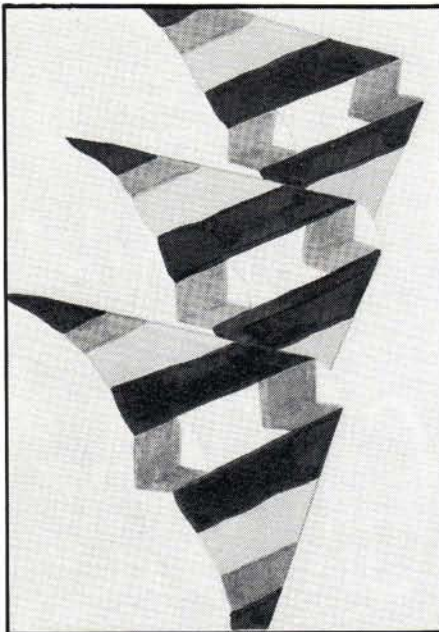
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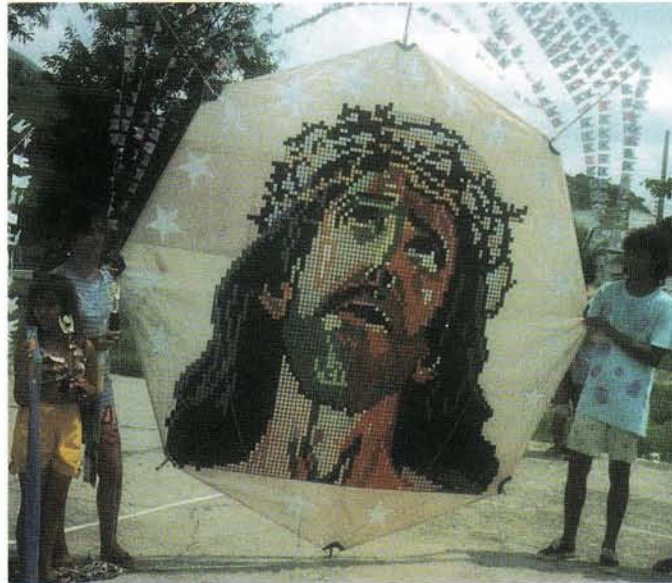


"Kabuki" by Kiyoshi Kobayashi is the winning kite down under.

It's official: the Geraldton (Western Australia) Art Gallery's international kite exhibition last October was "very successful—a high standard of entries," according to Barbara Bennetts for the Gallery. The winning kite, taking \$1,000 (Australian), was a box (Australia's "traditional" design) decorated with costumed Japanese figures.

The total of 34 entries was received only from Japan, Australia and New Zealand. The organizers hope more countries will be represented for the next kite exhibit, in October 1992.

The judging standards of craftsmanship, design, artistic creativity and function ("the entries must fly") place this show in a class by itself. Interested artist-kitemakers may contact: Friends of the Geraldton Art Gallery, P.O. Box 1158, Geraldton, W.A. 6530, Australia.



Antonio Augusto of Rio de Janeiro spent three hours a day for two months to make this intricate mosaic kite from 3000 paper rectangles, each 1" x 4".

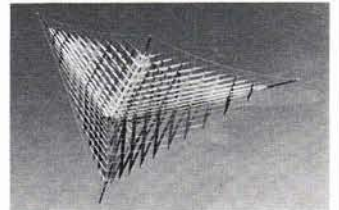
How often do you see mosaics of paper? The low durability-to-labor quotient doesn't seem to discourage the members of the *Cultura e Lazer* (Culture and Leisure) kite group in Rio de Janeiro, Brazil.

According to Max da Fonseca Cardoso, a champion kitemaker who organizes festivals and workshops in Rio, the construction techniques come from those used for giant paper hot-air balloons which were a popular hobby in Brazil. Unfortunately, they were banned in 1985 because brush fires were started when the balloons tumbled over.

Max's favorite kite is a traditional fringed octagon. Paper box and "new-art kites" are also popular among club members. Materials used are "white paper, colored tissue paper, translucent tracing paper, packing thread, plastic glue and special bamboo." Tools are "pencil, ruler, scissors and very imagination."

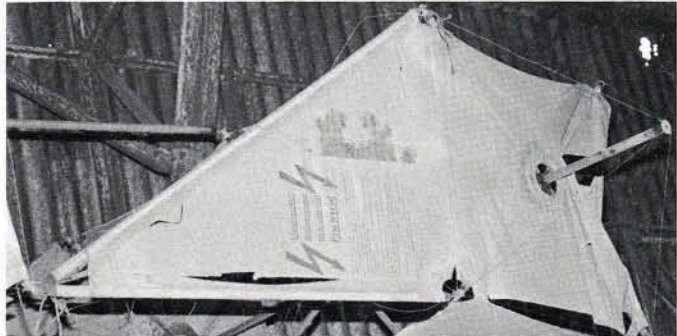
Max has asked that we publish his address so that other kitefliers from around the world can contact him: Max de Fonseca Cardoso, Rua Mozart Barcelar, 51, Bangu, Rio de Janeiro 21810, BRAZIL.

Watch for the June issue of *Popular Science*. It will feature seven familiar kites representing the latest in kite design using new technologies.



Silvio Maccherozzi of Italy has created another astonishing cellular kite (see cover and above) built of countless pieces of fabric (similar to his Best of Show in *Kite Lines*, Summer-Fall 1987). Constructed under the supervision of Franco Giubilini, "my maestro," the kite's plan appeared in the bulletin of the Associazione Italiana Aquilonisti.

Silvio says, "As I sewed, my ideas became clearer and I thought of increasing the width and reducing the anteroposterior length, and of constructing every cell in a different size, getting bigger from the center outwards." Besides nylon, the structure entailed fishing rods, a network of Kevlar and Dacron lines, a year and a half of agonizing and work, and a "certain deterioration of family ties."



Unrestored Prussian Box kite sits in the old kite hall, Lindenberg.

More news from the *Fesseldrachen Club Otto Lilienthal*. Jörg Kopec, its president, writes that the club is embarking on a restoration of the Prussian Weather Bureau winch-house in Lindenberg, (formerly

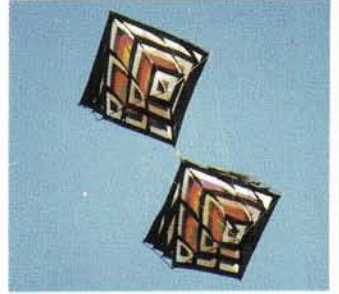
East) Germany. This project is in addition to restoring the original kites (each of which was numbered) for the 1994 reenactment of the world record altitude fly of 1919. Members are trying to find old cotton to use as covering.

Updating our last report: Bill Tyrrell and Joe Williams have returned from Christmas Island after flying instrument-carrying Jalbert parafoils for scientific studies of the troposphere. Four ultralight parafoils were specially built for the effort, the lower three being built in halves so they could be flown in train.

The trials were successful, and Bill and Joe got two of the lifters in train to an altitude of 11,400 feet.

Among other tribulations: kites on a half-mile of line diving into the sea and washing onto shark-infested coral reefs!

Bill is writing up his adventures for *Kite Lines* and stirring up other new projects.



William Wetzel's Double Quilted Snowflake is a hefty 5 1/2' x 12', and flies well in light mountain winds.

Kites and hiking make a great combination. If you don't believe it, ask William Mason Wetzel of Clifton Park, New York. He flies kites from mountain tops on weekly walks all over the region with the Crooked Cane Hiking Club. The other members, infected with Bill's enthusiasm, fly along with him.



Number Eighteen in a Series

Legend has it in Japan that the crane can live a thousand years. The crane is our national bird and a symbol of long life. Many Japanese kites are decorated with cranes. This train is 50 cranes, and took three years to complete. I spent a great deal of time developing the kite, since the early models were very unstable.

I am constantly exploring and learning about the secrets of single-bridle kites. It is my pleasure to share this knowledge with other kitefliers. There are many reasons for my 15-year fascination with kite trains. Most kites in Japan are multi-bridled and people have difficulty adjusting them. The technical knowledge needed to get the kite to fly is too great. I think single-bridle-point kites are much better because they are easy to fly. So I have been researching one-point bridle Japanese kites for some time.

My trains are designed to give pleasure to both spectator and flier. They can be stored in a box, yet be a massive presence in the sky. My arch trains are legendary in the kite world. I see them as true sky art.

Now I travel the world, exhibiting Japanese art through kites and trying to help spread a message of international peace and friendship.

—Eiji Ohashi
Tokyo, JAPAN

Eiji Ohashi has devoted himself to the study, research and original design of kites for many years. He has made innumerable kites and won many awards in Japan. He has invented many novel kites, in particular the expansible box* and the arch train.**

In 1988 he traveled twice to the Middle East, visiting Kuwait, Oman, Qatar, Bahrain, Egypt and United Arab Emirates. The growing understanding of the outside world which oil has brought to the region led to his invitation to teach Japanese kitemaking to Arab children.

As evidence of his traveling the world, in 1989 he was in the USA for six weeks, the UK for eight weeks and the USSR for ten days. He wrote that in Russia, the people are "too busy standing in line at the shops. They have no time to make a kite to play with."

—V.G.

Takashi Ohashi, Eiji's son, is a professional photographer. This photo was taken in April, 1990, in Eiji's favorite "field," a dry river bed in Tokyo's suburbs.

This *Kite Lines* series features a reader's kite picture on a whole page in full color in each issue. Yours could be the next one! What kind of kite photograph qualifies for this honor?

First, the kite must fly well. Supporting information must be included describing the kite's typical flight and giving its dimensions, materials and history.

Second, the kite must be beautiful. Agreed, beauty is in the sky of the beholder. This is an openly subjective criterion.

Third, the kite must show some quality of originality in either form, craftsmanship, color, decoration or use of attached elements. (No commercial kites, please!)

Fourth, the photograph (as a separate consideration from the kite in it) must be of high artistic and technical quality—sharp, well-framed, rich in color. For printing, we prefer 35mm or larger transparencies. We can also use color prints if they are 8" x 10" or larger. Tip: we favor vertical format over horizontal.

The photograph should be taken in one of two modes: as a close-up of the kite in the sky, the kite filling at least one-third of the film area; or as a background-inclusive shot, showing people, scenery, etc., behind the kite. In any case, the kite should be shown well, although not necessarily flying, as long as the supporting information establishes the kite's flyability. In fact, background features give a reference point and sometimes increased interest to a picture.

We suggest you take many pictures of the kite. Snap it in the sky, at festivals, morning, noon and night—even indoors on display. Discard any preconceptions of what a "correct" kite photograph should be. Then send us no more than five photographs of one kite at a time. To avoid risk of sending an original transparency or photograph, you may send a duplicate for review.

Ship in stiff protective packaging and enclose a self-addressed envelope with stamps or international reply coupons for return of your material—otherwise, we cannot guarantee its return.

Photographs submitted must be not previously published. After publication in *Kite Lines*, further rights revert to the photographer and kitemaker.

Kite Lines credits both kitemakers and photographers. A photographer may take pictures of a kite not his or her own, but in such case should ask the kitemaker's help in supplying information for the submission. You are invited to enter! You have nothing to lose but your obscurity. ◇

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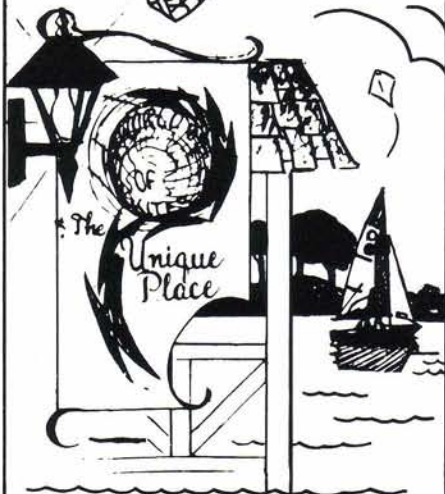
**Kite Lines*, Summer-Fall 1984, cover and pp. 26-29.

***Kite Lines*, Summer 1989, pp. 25-27.

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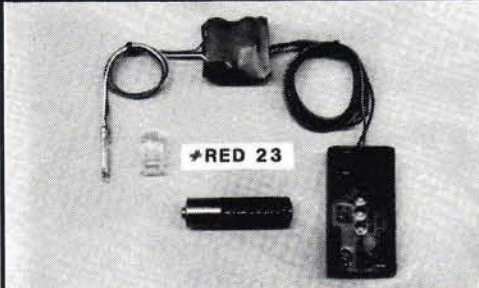
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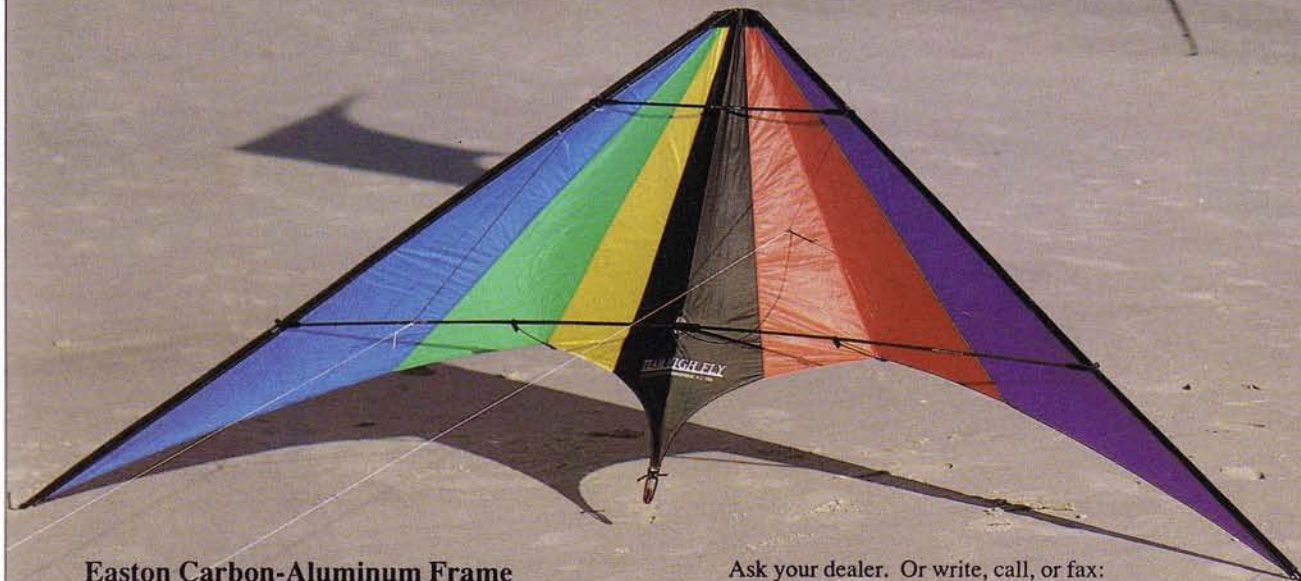
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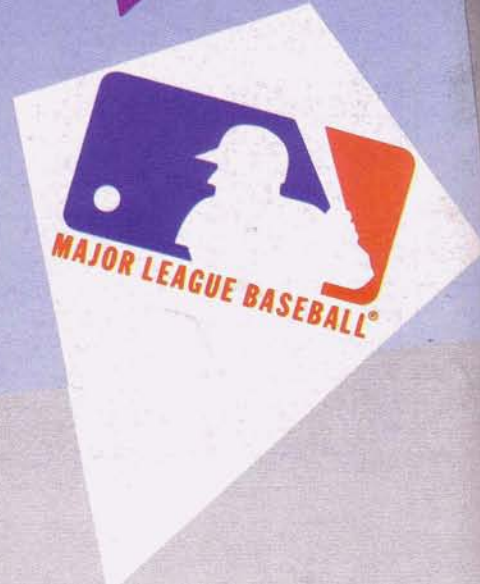
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