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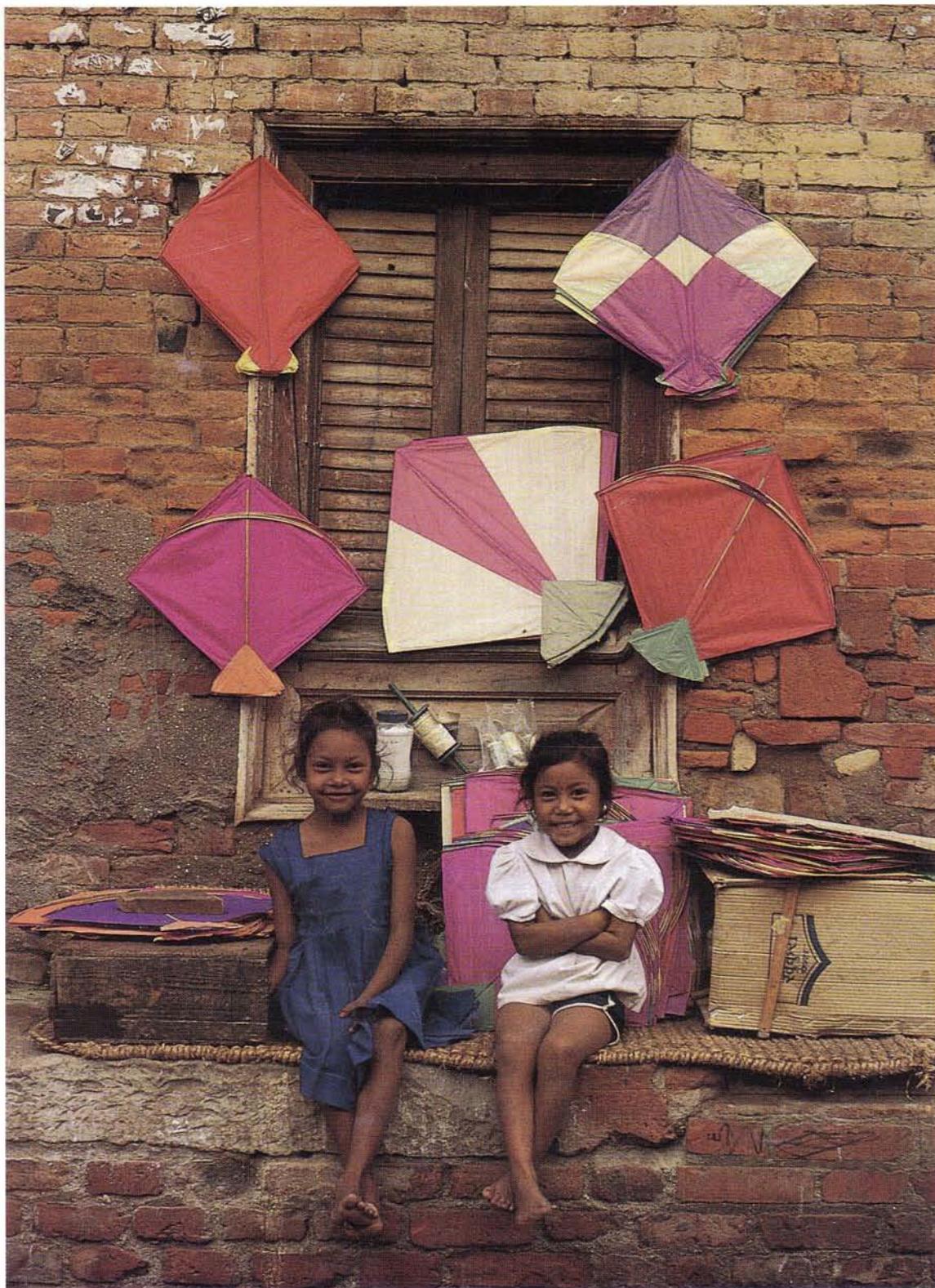
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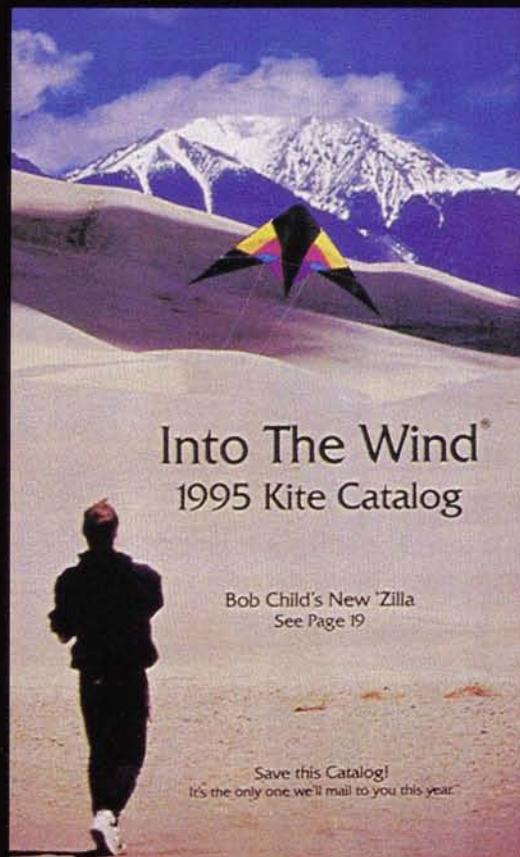
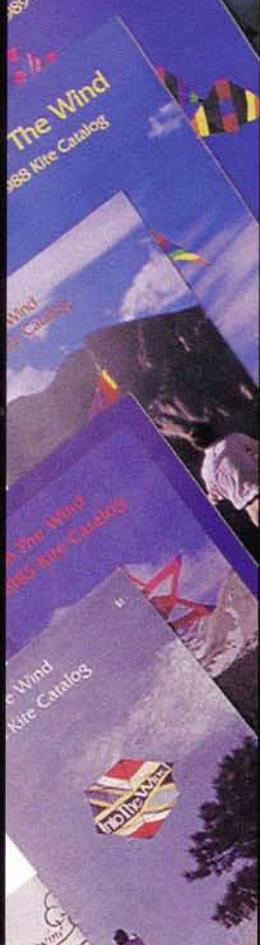
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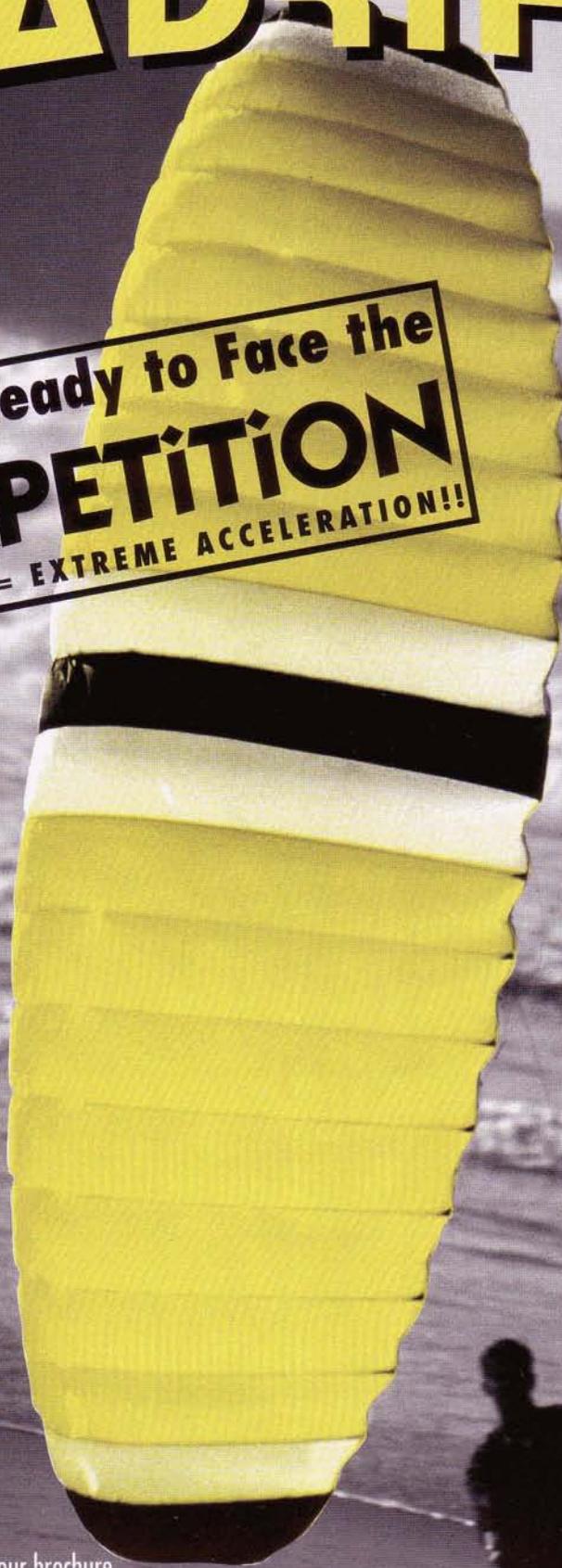
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Kitelines

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Kite Lines is the comprehensive international journal of kiting, uniquely serving to unify the broadest range of kiting interests. It is published by Aeolus Press, Inc. with editorial offices at 8807 Liberty Road, Randallstown, Maryland 21133, USA, telephone 410-922-1212, fax 410-922-4262, E-mail 102365.1060@compuserve.com

Kite Lines is endorsed by the International Kitefliers Association and is on file in libraries of the National Air and Space Museum, Smithsonian; National Oceanic and Atmospheric Sciences Administration; University of Notre Dame Sports and Games Research Collection; the Library of Congress, and the Deutsches Museum Library, Munich, Germany. It is included in the *Index to Craft Journals* from the Crafts Council of Australia.

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Subscriptions: In the U.S.A. and possessions, \$16.00 for one year (four issues), \$29.00 for two years (eight issues); all other countries, \$22.00 for four issues, \$39.00 for eight issues (includes air-lift service). Foreign payments must be in U.S. dollars through a U.S. bank or the U.S. Post Office. Single copies are available from the finest kite stores worldwide, or for \$4.50 plus \$1.00 shipping (surface) from the journal offices.

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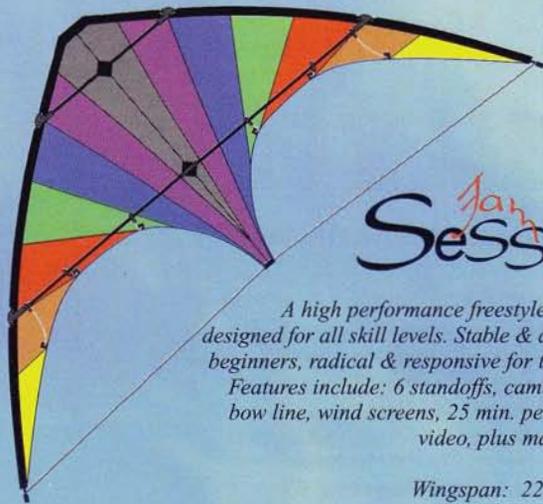
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A "kite shop" in Bhaktapur, Kathmandu Valley, Nepal where fighter kites are flown from rooftops during *Dasain*, the fall harvest festival. (See story on page 36). Photograph by Stephen C. Lowe.



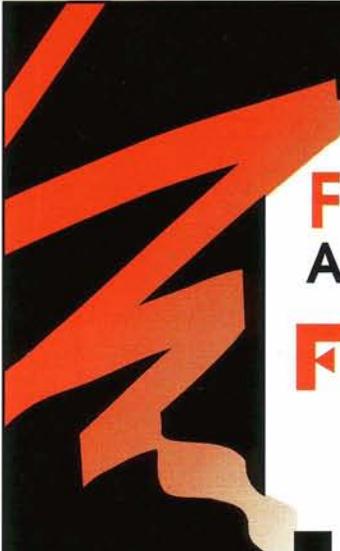
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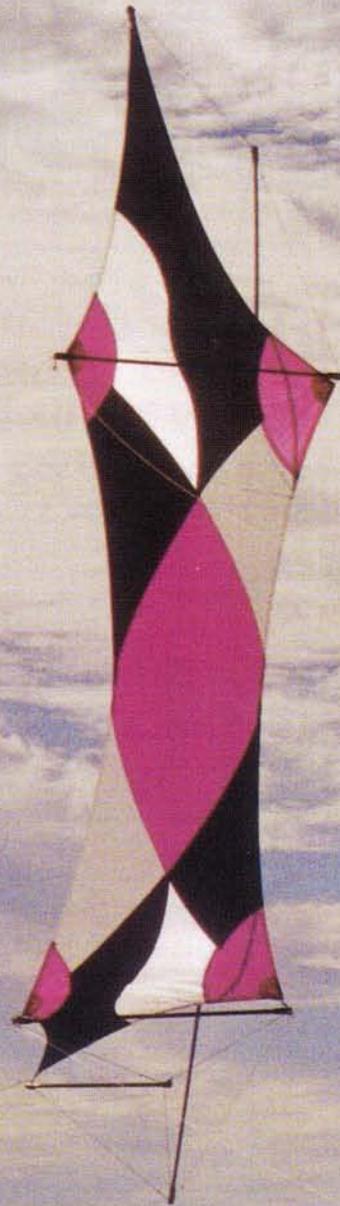
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Wanted: A Few Stout Hearts



Over the last 19 years, *Kite Lines* has charted the growth of kite extravaganzas. The drive for bigger, faster and prettier has taken kiteflying from children's hands and transformed it into a spectator sport. I don't discount the spectacle or regret the involvement of adults. I do wonder about the children.

Luckily, there are a few stout hearts who still get their greatest enjoyment from putting kites and kids together in the wind. This tradition could use a spot of encouragement. All of us need, now and again, to see the ingenuous discovery in a child's face on a first flight.

Of course, children are awestruck by the flying circus of the international kite festival, too. But that's viewing, not doing. There's nothing like seeing and feeling one's own kite fly.

Too often, though, teachers and parents want the kite to carry more than its designed load. A kite project at school, to be allowed

Your publisher yields this space for an important announcement from her spouse.

into the schedule, must have "meaning": a history lesson on the birth of aviation; a geography lesson on kites from foreign lands; a math lesson on weights, balances or symmetry; a spelling lesson on all the new words learned that week.

How about a fun lesson; a "Eureka" lesson; a wind in the hair lesson; a "Yes, I can" lesson. A fourth-grade teacher once scolded me for making it too easy for her students to succeed! She said it deprived them of the lesson of failure and the triumph of recovery. Her students, from poor rural neighborhoods, had chances enough for failure.

For the 10 percent or so who program their own computers, take toys apart to see how they work or delve into the whys and hows, this over-analysis of kites is great. For the other 90 percent, proven success is a

greater stimulus. From success one can explore all the other aspects of a project. Or one can simply go on succeeding, enjoying the empirical skills and crafts and perhaps one day passing them on to a child. That child might pass them on to another, and so on, ad infinitum.

For kitefliers who started at the end amidst the spectacle, I suggest a drift backward. Make a basic diamond kite from paper and wood. Make a few sled kites. Overcome your own embarrassment at this simple pleasure and share the experience. You will soon find that if you owe your pleasure to kites, the debt may run deeper. You may owe kites the pleasure of your life.

Share. Share with children. If you are uncomfortable with children, share with other adults and make believe they are children (hey, they were once).

Get the motion started, then stand back. Trust me, you'll enjoy it.



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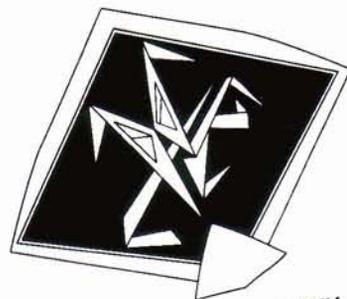


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**Favorite issue of Kite
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 1987 for Berlin: *Kites
 Above the Wall* (I grew up
 in Berlin), and *Thai Kites*
 which got me interested in
 traditional Asian kites.

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Festivals, Kite Art... & Bats

Balancing Priorities

A few words concerning the Israeli International Kite Festival, April 1995 that I organized (Summer-Fall 1995 *Kite Lines*):

The kite festival was the second one I've artistically directed. Fortunately and unfortunately I act according to my intuition which is sometimes left aside due to lack of experience. But I hope my development through the years creates the ability to balance priorities in such an event.

As a kite artist I want to create and fly kites with my friends. I want to meet kites from different places in the world and get to know how the kite is a reflection of their soul. Loving the kite is only part of my loving the artist.

As an art director I want to combine the needs of the whole (artists and spectators) to my satisfaction and create a sky scenery that we'll all enjoy. Is it possible to combine both at the same time?

I don't like to be motivated by the fear of making mistakes. I'll continue directing and creating, hoping to find the right balance between enjoying my love of kites and sharing it with others.

—Yael Padova Levi
Doar Na Hefer, Jerusalem, Israel

Astir in Spain

For more than two years, the Comevientos Club, with more than 80 members, has been flying kites the final Sunday of each month at Juan Carlos I Park in Madrid's "Camp of the Nations." It has taken a long time for kites to appear in the local press here. Madrid's *ABC* newspaper (clipping enclosed) has the largest circulation in Spain.

—Jose M. Mayorga
Villaverde, Madrid, Spain

Quilts that Chafe

I too am a bit miffed at the hijacking by stealth of kiting by artists. There was a time when you judged a kite by its launching, its behavior in the wind and its return to your hand. Now it is judged on its patchwork, appliqué or size. I think these are perhaps more appropriate for my wife's quilting club.

A few years ago I won the President's Choice prize at Sydney's Festival of the Winds with a simple "Peace" hexagonal kite. I glued the dove on and rubbed it with petroleum jelly to make it translucent. The total cost was five dollars. Gone are the days

when such a kite could win. It has to be very large, probably expensive, patchworked and appliquéd.

Sour grapes? Perhaps. But I think I would be invited to festivals around the world more if I put sticks on our double-bed's "Trip Around the World" quilt cover. It's big, it's colorful, it's beautiful, it would fly—but it's a quilt, not a kite.

—Brian Lemin
Victoria, Australia

Protecting Bats

I want to comment on flying kites underground, in a cave ("In the Wind" Winter-Spring 1995 *Kite Lines*). Disturbing a bat colony during hibernation can be fatal to a large number of bats. They must conserve their energy through the winter until insects appear in the spring. Each bat may eat hundreds of insect pests each hour. Damaging a bat colony can have serious implications for crops and insect-borne diseases.

If someone must fly a kite in a cave, I suggest finding a cave without bats, or flying during times when bats are not hibernating. Consult local park or college naturalists for information about local bats. There was an excellent article about bats in the August, 1995 *National Geographic*. If you would like to learn more about bats and how to protect them, write to Bat Conservation International, P.O. Box 162603, Austin, TX 78716, or phone 512-327-9721.

—Gary Hinze
San Jose, California, USA

Corrections & Clarifications

In the Summer-Fall 1995 *Kite Lines*, the review of the new Symphony quad-line stunter implied that its flat surface and symmetry in all directions were entirely new. In fact, the Peter Powell Omni (now called the Caicos quad) has been available since 1990.

In the same issue in the International Festivals section on Italy, the caption for the inset picture should read: "Vittorio Callegaro assembles the frame and covering of the kites and his son Ettore paints them." Also, the seagull kite in the bottom picture was made by the Callegaro family, not Li Rou Xin. We regret the errors.

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The Tekaweya

By Michael Graves & Ilene Atkins

This kite design challenged us more than any other we ever set out to create. Our main purpose with the Tekaweya was to explore the contrast between weight and drag reduction in sport kites. Our premise was that reducing drag would pay off in a wide wind range without sacrificing durability or branding the kite as merely an ultralight.

Beyond the technical aspects of the design, we sought to achieve a kite that would be very nimble for its size. So we selected wing geometry that resulted in tight, fast turning and an ability to perform serious ground work.

The depth of the sail is analogous to the frontal profile of an aircraft wing. Increasing sail depth, or frontal profile, results in increased drag but can also improve the kite's tracking. We found that other drag reduction measures more than offset the slight drag increase resulting from a deep sail.

Controlled Tension

After some experimentation we found that a wingtip vent could be effective at eliminating trailing edge buzz, a major source of aerodynamic drag. Optimally implementing this venting technique implied that we would have to carefully control cloth tension throughout the sail and especially the trailing edge.

You'll notice that the vents interface parts of the sail that are under different amounts of tension. The trailing edge, including the hem added to the mesh, is held under the greatest tension to minimize vibration.

At first glance there appears to be an inordinate number of sail panels (22 in all) in the Tekaweya, but each has a specific purpose, some admittedly only cosmetic. The large pieces at the spine and midwing allow the cloth to act naturally, taking advantage of the cloth's elastic properties to achieve an efficient airfoil shape. Each of the smaller pieces along the trailing edge take up tension in a specific direction.

There are three stages to breaking down a sail into optimal pattern pieces: areas on the straight grain, the bias and the seams. Most kitemakers understand straight vs bias placement of cloth, but seams are often



The Tekaweya is named for the Mohawk word for "two wings."

overlooked as part of the same equation. Where stretch is desired under load we use cloth placement along the bias. Where an area needs to be more dimensionally stable, we align it with the straight grain of the cloth, though even the straight grain still stretches. To really lock in a particular dimension we make sure there is a seam along that distance to take up whatever stress is being placed on the sail.

One of the other features of the Tekaweya is the "Dacron-free" crossover opening (the area where the spine and lower spreaders meet). From previous experience we knew that the crossover opening is an area of the sail that can see some abuse. Given the balanced tension of our sail plan, we were able to design an opening that needs no reinforcement, making it faster and easier to build. This opening can survive hard nose-down crashes or complete collapse of tension on half of the sail without risk of tearing.

Selecting the Frame

The frame provides the force needed to maintain the sail tension through curvature of the leading edge and lower spreaders. This design was created to use a type of wrapped carbon tube that is no longer available commercially. However, we have had satisfactory results using other carbon tubes with a relative stiffness of approximately 0.95 (see *Kite Lines* Winter-Spring 1995 for a comparison of spars).

Frame selection makes a huge difference in performance. An insufficiently stiff frame won't sustain the tension desired in the sail. Conversely, an overly stiff frame may be too brittle to take the pounding that can be given to the long, unsupported wingtip during groundwork. As a practical matter we

prefer a frame that errs on the flexible side, offering increased durability, though at the expense of upper wind range.

Materials:

- 1.5 yards of main color Carrington K-42 cloth*
- 0.5 yard each of two contrasting colors of Carrington K-42*
- 4.5 yards of 2" Dacron polyester leading edge strip. Cut this into one 2" x 2" piece shaped to fit along the

spine at the upper spreader; 2 pieces 1 1/4" x 1 1/4" for the stand-off reinforcements; and one 3/8" x 13" piece to reinforce the spine seam below the lower spreader.

- 1.5 yards of 1.5-oz. nylon strip 1" wide
- 12" x 3" ballistic nylon for nose reinforcement. From this cut 2 pieces 1" x 1 1/4" for wingtip reinforcements.
- 2" x 1.5" adhesive-backed Kevlar tape for nose reinforcement
- 3" x 1/4" lightweight lace or ribbon
- 8" x 28" fiberglass window screen
- 9 carbon fiber tubes 32.5" long (we suggest Avia Sport 2200, Skyshark IIIp, ProSpar Comp 15 or RCF6)
- 4 ferrules to fit the carbon tubes
- 2 arrow nocks and adapters to fit the carbon tubes
- 3 vinyl end caps to fit the carbon tubes
- 4 molded leading edge fittings**
- 1 molded crossover fitting to fit the lower spreaders**
- 1 molded end cap to fit the base of the spine
- 2 sets molded stand-off fittings**
- 18" shock (bungee) cord 1/8" diameter
- 9" shock (bungee) cord 1/16" diameter
- 24 of 0.109" (3mm) solid carbon rod
- 2 vinyl end caps to fit 0.109" (3mm) rod
- 15' 135-lb-test Dacron line for bridle

Cutting

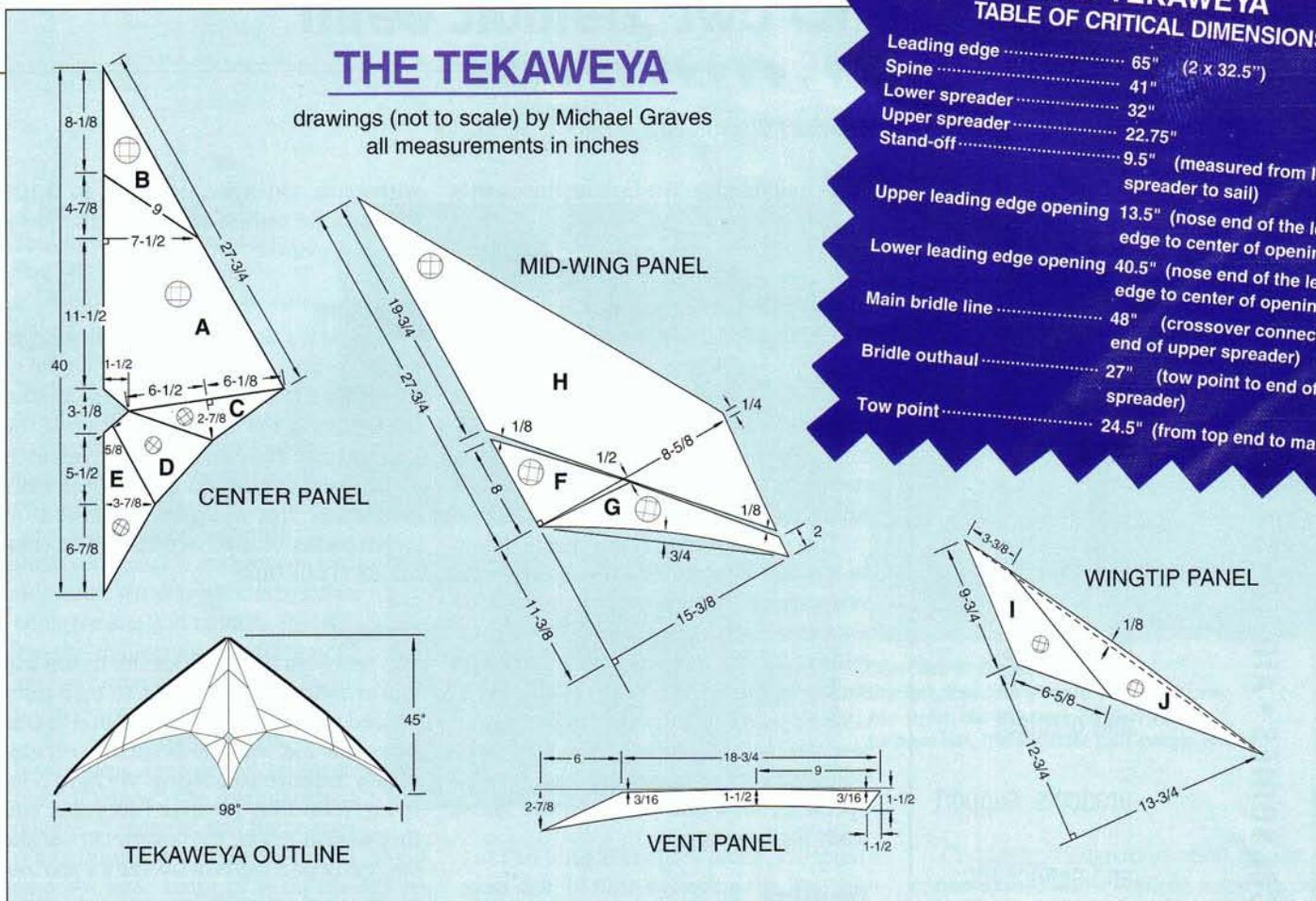
The grain line in the fabric is important to this kite, and the pattern is designed to the

*This design was developed to take specific advantage of the elastic properties of Carrington K-42 cloth. We cannot recommend substitutions.

**Or equivalent fittings from suitably drilled vinyl tubing.

THE TEKAWEYA

drawings (not to scale) by Michael Graves
all measurements in inches



THE TEKAWEYA TABLE OF CRITICAL DIMENSIONS

Leading edge	65"	(2 x 32.5")
Spine	41"	
Lower spreader	32"	
Upper spreader	22.75"	
Stand-off	9.5"	(measured from lower spreader to sail)
Upper leading edge opening	13.5"	(nose end of the leading edge to center of opening)
Lower leading edge opening	40.5"	(nose end of the leading edge to center of opening)
Main bridle line	48"	(crossover connector to end of upper spreader)
Bridle outhaul	27"	(tow point to end of lower spreader)
Tow point	24.5"	(from top end to main line)

fabric's best advantage. Carrington's K-42 is a fairly stretchy fabric and if the pieces are cut without regard for this, you will see pulls and stretches in the finished kite that you didn't expect or want. See the diagram for grain orientation.

Seam allowances must be added to the dimensions given. Add 1/2" on both sides of the seam where the screen meets the wingtip panels, and no seam allowance on the trailing edge of the screen section. Add 3/8" on all other seams, including the trailing edge and leading edge.

Probably the only thing you should be aware of when cutting Carrington cloth is that it has a definite wrong and right side. The sticky side goes to the back of the kite, so you need to flip the pattern over when you cut the right and left sides of the kite. If you ignore this point, you will have a sticky left side and a shiny right side of the kite.

Sewing

It is easiest to tackle the sewing on this kite if you consider it in three manageable sections: the center, mid-wing and wingtip. Sew each one individually before assembling into the final kite. If you haven't

worked with Carrington cloth before, you might be surprised by its stretchy nature and might want to practice with it before approaching the kite.

In joining the seams, place the right sides together, then fold the allowance over twice on the back of the kite and stitch it down. Some thought is required to fold the allowance towards the darker color for the sake of appearance. Now sew together:

First, the center section:

1. Sew spine panel (A) to nose piece (B).
2. Join (A) to (C), then hem their portion of the crossover opening.
3. Join (D) and (E), then hem their portion of the crossover opening.
4. Sew (C) to (D) and hem the trailing edge created along (C), (D), and (E).
5. Join right and left center panels together. This should now be a flat panel. You will want to bartack or otherwise reinforce all four corners of the crossover opening.
6. Attach the Dacron upper spreader reinforcement.
7. Attach the Dacron strip along the spine below the lower spreader (because this seam is along the bias and will eventually

stretch out this reinforcement).

8. Sew the lace loop at the base of the spine to project 3/8" beyond the aft edge of the sail.

Second, the relatively easy mid-wing section: Join the triangular piece (F) to the trailing edge piece (G), ensuring you have the proper sides joined. This you can indicate at the pattern stage so you don't get confused at the sewing stage. Join these to the main wing panel (H), and hem the trailing edge

Third, the wingtip:

This is the most difficult to sew. Join two wingtip panels (I) and (J) together, and then add the mesh. The mesh pattern is curved to allow extra length to be joined to the cloth. If this is not done, the mesh will tighten up the cloth and will be too short. This is part of what we have affectionately dubbed "pattern magic." Some of these pattern and sewing principles we have borrowed from our tailoring days, and it seems like magic to the uninitiated!

Last steps:

You are now ready to join the wingtip section to the main section, and proceed to the

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mesh trailing edge. The hem on the mesh is accomplished with the addition of a strip of strong fabric to prevent stretching along the trailing edge. Fold the 1" strip of 1.5-oz. nylon into four lengthwise folds, and stitch the mesh inside. There needs to be 1" of mesh exposed for the vent to be effective in all winds. Here again, the mesh is longer than the finished length, so you must push the mesh inside the folded nylon to create the length you need. If you don't get this the first time, rip it out and do it again.

This whole section is now ready to join to the center panel. Add the leading edge sleeve along with the ballistic nylon reinforcement at the wingtip, and the stand-off reinforcements. Peel the Kevlar tape and stick it to the center of the ballistic nylon nose to protect it from the spine rod, and sew the ballistic nylon to the kite. Once you trim and heat-seal the leading edge openings, nose and wingtips, the kite is ready for framing.

Framing

The assembly of the frame is typical of most good quality sport kites. We used custom molded plastic fittings, but suitable sizes of drilled vinyl tubing would work just as well. We also used small pieces of vinyl tube as stoppers along the leading edge, to ensure that the molded fittings cannot wander out of position. These should be secured by a drop of cyanoacrylate ("super") glue.

The leading edges are held under tension by 1/8" elastic shock cord. A hole for the cord should be burned through each of the ballistic nylon wingtip reinforcements. The reinforcement will keep the hole from elongating no matter how tight the shock cord.

The sail is tensioned along the spine with a lighter, 1/16"-diameter shock cord. It should be tied through the end of the milled cap and through the lace loop at the base of the spine. The result is that the spine extends only 3/8" below the sail, but can be adequately tensioned and disassembled as needed.

In our prototypes we used the usual 0.098" carbon rod for stand-offs, but these broke repeatedly. The stand-offs are significantly loaded as they help maintain sail tension. The kite was so good at ground work that we were tempted into performing tricks that were too much for the stand-offs to

withstand. Once we switched to 0.109 (3mm) solid carbon stand-offs, the problem disappeared.

Bridling

The bridle is a simple three-legged arrangement. We like to tie loops from 8" lengths of string, then lark's-head-knot these around the fittings at the crossover and along the leading edge. The four bridle lines can then be attached to these loops by more lark's head knots. This arrangement allows us to switch bridles, or attach several experimental bridles at one time.

Flying

The Tekaweya is an agile kite for its size and flies in a wide range of winds. Its tight turning and fast forward speed challenge you to fly it well and with persistence it will ultimately improve your flying. We have been flying Tekaweyas for over two years, and they remain among the favorites in our kite bag. We hope it will be a favorite for you too.

Questions or comments about the Tekaweya are welcome. Contact the authors at 905-456-9493 or E-mail: graves@leadingedg.win.net

what do you mean, PATTERN MAGIC?

It's making absolutely sure a design works on paper before you cut any cloth. You can use our techniques:

- Don't be afraid to make notes on your pattern pieces. We always name and date each piece, but we also add notes about how the pieces are to be cut and sewn. For example, our patterns include hem allowances, but we always draw in the finished edge dimensions of the piece. We also put alignment notches along the sides of long seams to make it easier to align the pieces as we sew.
- Most useful: literally assemble all the pattern pieces in the same way you would sew them before you cut the cloth. This makes simple mistakes become very obvious. Accuracy at this stage is the key to accuracy in your finished kite.
- Remember: when working on paper you always have time to make revisions and assure accuracy. But once you've cut the cloth, changes are wasteful. Remember the old carpenter's rule—measure twice, cut once!

Three Stunters, Two One-liners

By Michael J. Graves, Mel Govig & Valerie Govig

The Silencer

This new offering from Utah's Tori Tako (Tori Industries) brings a patented approach to drag reduction.

As its name implies, the Silencer's design is centered around reducing drag by eliminating trailing edge flap. Unlike many kites that employ leech lines or vents, the Silencer features ram-inflated wingtips. A mesh vent roughly midwing on each side forces wingtip pockets to inflate while the kite is in motion. This stiffens the trailing edge, cutting noise and reducing drag. The technique is novel yet effective.

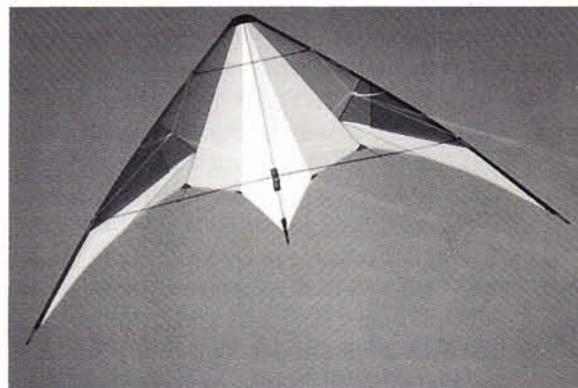
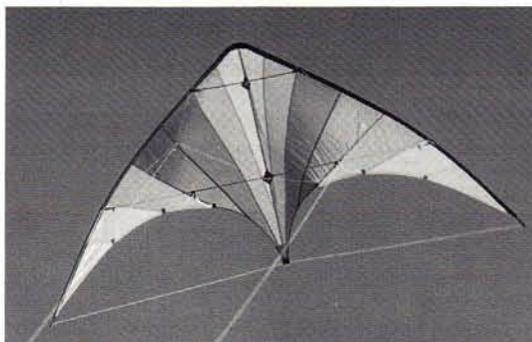
So we appreciated the design innovation. How about construction? It's good. The manufacturer's choices of material and frame components suggest that the Silencer is intended for a wide range of wind conditions. Seams are single-turned and double stitched, except the trailing edge which is double-turned.

The frame is joined by molded fittings, some of which are tapered internally, making them less susceptible to changes in temperature. The standoffs are permanently attached to the sail with molded fittings and rivets. The standoffs have a unique clamp and rubber-band combination by which they attach to the lower spreader. The result is that the lower spreader does not carry any fittings at all, making the kite unusually easy to assemble and disassemble.

We could launch from a range of positions on the ground. The kite's standoffs do not protrude beyond the sail, making the back of the kite free of entanglements. However, repeated fumbling moves on the ground tended to cause the standoffs to slide out of position along the spreaders. To prevent this, we eventually added vinyl stoppers along the lower spreaders.

We flew the Silencer for several weeks under light and moderate wind conditions. Our choice of Spectra lines included a 50-foot set of 80 lb and a 100-foot set of 135 lb.

The very brief field manual gives a wind range of "zip to whatever." We had to test



Stunters in flight:
top left, the Jam Session by HQ Kites;
top right, the Silencer by Tori Tako;
bottom left, the Prowler by Cosmic Kites.

out that tongue-in-cheek rating. We spent a great deal of time exploring the low-wind potential of the kite. "Zip" is optimistic, though we were easily able to run 360s when flags were not moving. The Silencer was fun to fly in a measured 2 mph wind. In 4 mph or more it offered a wide wind window, and was able to perform advanced tricks throughout the window. But we never did encounter winds strong enough to define the kite's high-end limit. Maybe the reason is that the bridles support each leading edge at three points, improving high wind performance.

The Silencer is the most nimble of the Tori Tako kites that we have flown. It performs tight spins centered well inside its wingtip, yet exhibits only a small amount of oversteer. Like most drag-reduced designs, the Silencer is quick, both in turns and in a straight line.

The Silencer's controlled agility makes it a good choice for a freestyle kite. Axels, stalls and slides were easily accomplished. Its forward speed posed an extra challenge for team flying when the wind picked up.

The kite handled most tricks on the ground including tumbles, tip stabs and the coin toss. Our ground work was hampered by hard winter ground, but the Silencer showed no signs of distress.

Combining design innovation, quality of construction, and excellent freestyle performance, Tori Tako's Silencer is a welcome addition to our admittedly bulging kite bag.
—M.J.G.

The Prowler

The Prowler is the first kite offered by Cosmic Kites, a new company based in the San Diego, California area.

The Prowler's basic design presents a pair of rhomboid surfaces under quad-line control. It adds to this a secondary sail between the twin spines, and in part behind the two front sails. This additional sail is supported by a bowed carbon leading edge as well as the twin spines. The extra sail area improves the kites' light wind handling—in fact, its handling in general.

For construction, the Prowler is impressive. The sail is zigzag-stitched and suitably reinforced where necessary. Elastic shock cords passing through the sail are buffered by plastic washers to minimize sail wear. The carbon frame is robust, and its various components are connected by custom-made aluminum fittings. While the Prowler is not a complicated kite, Cosmic Kites does a clean, even elegant job of it.

Though the supplied flight manual offers instructions, assembling the Prowler for the

first time is a bit of a challenge. Once assembled, the logic of the design becomes more obvious. We agree with the manual's suggestion that beginners assemble their Prowler at home at least once prior to flying.

When we received our sample kites the manufacturer was not providing quad handles, but the manual gave good instructions on setting up other quad handles to suit the Prowler. By the time you read this, Cosmic Kites will be including their own handles to round out the package. For our test flights we used 50-foot and 70-foot sets of 80 lb Spectra line on handles set up as recommended in the flight manual.

Our initial flights were in light winds of only 3-4 mph. Performance was acceptable, but the kite seemed to prefer a bit more breeze. (A model with ultralight spars will be available later.)

The Prowler was well behaved for a small quad, though generally on the quick side. When positioned downwind, the Prowler moved sideways just as well as forward or backward. As the kite slid closer to the edge of the wind window, the rear sail tended to luff and collapse. The kite offered an acceptably wide wind window, but it was at its peak when flying directly downwind. The Prowler's rear sail is supported only near the top of the kite, and tends to vary its attitude slightly with wind pressure. As a result the Prowler wanders slightly when held in a hovering position, reacting to gusts in windspeed. This was most pronounced when we held the kite in an inverted hover. After a few hours we were able to compensate for this except at the extreme edges of the wind window.

We could launch from a wide range of compromised positions on the ground. This was made easier by the bow in the rear sail, which kept the kite from resting completely flat on the ground. However, the three dimensional design kept us from doing 3D "catch and toss" tricks.

The leading edge and the rear sail provide a degree of linkage between the two front sails. As a result the Prowler reacted better than expected to simple left-right control. It was similar to a dual-line sport kite. This makes the kite easier to fly for absolute beginners.

The Prowler offers a unique quad-line

experience. With only a few framed quad kites available, fliers looking for a change of pace should to check it out. —M.J.G

Jam Session

The first design to come from the recent collaboration of German designer Christoph Fokken and the irrepressible Dodd Gross is the Jam Session by HQ Kites / In Vento.

Even before the kite was out of the bag we were impressed, because the Jam Session comes in the best kite bag we have ever seen! It also comes with a pair of mesh air brakes and a 25-minute video of Dodd demonstrating several HQ Kites.

In terms of design the Jam Session has no single outstanding feature, but numerous small refinements. Most immediately notice-

able are the six standoffs which control the shape and tension of the trailing edge. The wingtips also feature small cloth pockets which inflate in flight to stiffen that area of the sail. Both of these measures ensure that the Jam Session is near dead silent in flight.

The upper spreader is bound to the spine by a strong rubber ring. This significantly stiffens the upper half of the frame. A "cheater" line spreads across the bottom of the wingtips and spine to reduce the chance of line tangles during tumbling tricks.

Living up to its name, HQ builds high quality kites, and the Jam Session supports that reputation. The kite uses only top grade construction techniques and components. We were particularly impressed by its molded fittings, among the best that we've encoun-

Stunters			DATA CHART		One-Liners	
Prowler	Silencer	Jam Session	Name of Kite		Mighty Mite	Le Frog
						
Cosmic Kites	Tori Tako	HQ Kites	Manufacturer		Jordan Air	Inflight
\$180	\$159	\$165	Retail Price		\$49	\$135
RN	RN	RP	Sail Material		RN	RP
DT	RN	DT	Leading Edge Material		n/a	n/a
CFt	CFt	CFt	Framing Materials		CF	n/a
AL	MP	MP	Fittings		Vt	n/a
72 x 30	94 x 45	86 x 42	Dimensions (in.)		26 x 23	32 x 100
n/a	8.75	7.75	Sail Depth at stand-offs (in.)		n/a	n/a
1275	1166	1000	Sail Area (sq.in.)		299	800
8.75	10.37	10.87	Weight (oz.)		0.7	2.5
0.1	1.28	1.56	Sail Loading (oz./sq.ft.)		0.33	0.45
4-20	2-18	2-20	Suggested Wind Range		2-15	7-15
80	80-150	80-150	Suggested Line (lbs.)		10	50
N	N	N	Skill Level Required		I-S	I
1-2	<1	<1	Assembly Time (minutes)		5	<1
G	VG	VG	Ease of Launch/Re-launch		VG	G
G	E	VG	Ease of Landing/Ground Work		n/a	n/a
F	F	M-F	Straight Speed		n/a	n/a
F	F	M	Speed in Turns		n/a	n/a
G	VG	E	Precision/Tracking		n/a	n/a
M	L	M	Amount of Pull		n/a	n/a
SL	SL	SL	Amount of Noise		n/a	n/a
G	VG	G	Visual Appeal/Graphics		VG	VG
VG	VG	E	Workmanship		E	G
E	VG	G	Portability		VG	E
VG	VG	VG	Durability		VG	VG

NOTES: Retail price (US dollars) is "advertised" or "suggested." Wind range (mph) covers minimum and maximum speeds deemed suitable by our evaluators. Dimensions are in the following order: width x height. Measurements and (usually) drawings are made with the kite standing on the floor facing the viewer. Materials: AL—Aluminum, RN—Ripstop Nylon, RP—Ripstop Polyester, DT—Dacron Tape, WD—Wooden Dowels, B—Bamboo, FG—Fiberglass, GR—Graphite, EP—Epoxy, CF—Carbon Fiber, r—Rods, t—Tubes, MP—Molded Plastic, V—Vinyl. Speed: SL—Slow, M—Medium, F—Fast. Skill levels: N—Novice, I—Intermediate, SK—Skilled. Pull: L—Low, M—Medium, H—High. Noise: SI—Silent, L—Low, M—Medium, H—High. Other ratings: P—Poor, A—Acceptable, G—Good, VG—Very Good, E—Excellent, n/a—not applicable.

tered. They're a good fit for the frame—flexible, while adding to the overall stiffness of the frame. The sail's 14-panel radial rainbow graphics are pleasant if uninspired.

We flew the Jam Session in winds from light to moderate, selecting sets of 80-lb Spectra line between 50 and 120 feet in length. Like many drag-reduced kites, the Jam Session would fly in light breezes, but needed a steady 3–4 mph to make the experience enjoyable. In light winds it had a solid feel, increasing to a healthy pull as winds freshened.

With the bridle set at factory defaults, the kite was smooth and consistent. Turns were centered about the wingtip, though the kite required a heavy hand to execute tight spins. Hard corners were precise and straight line tracking was excellent. The Jam Session was very stable in a stall, which allowed us to perform slides across large portions of the wind window.

Moving the bridles to the advance setting as designed in the manual improved the kite's ability to do tricks. Turns became slightly tighter and oversteer increased but not so much as to be a problem. Advanced tumbling and rotating moves became much easier to execute.

Regardless of the bridle setting, it's apparent that the Jam Session is built for competition. It is well adapted to precision moves but would also be at home in ballet or freestyle events.

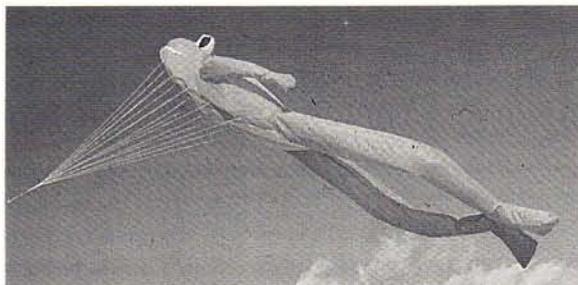
In stronger winds we used the air brakes supplied to reduce the kite's speed. These install between the two inside standoffs on each wing. Unlike some air brakes that impact only forward speed, these are positioned to reduce turning speed as well.

For competition or just casual flying the Jam Session is an impressive kite. Its versatility makes it an excellent choice for those who like to travel light, and the accessories provided only sweeten the offer. —M.J.G.

Mighty Mite Fighter

People have gone to great expense to make fighters of synthetics that perform as well as the traditional paper and bamboo kites of India and Indonesia. We have yet to see one

Right, the Mighty Mite fighter by Tim Elverston for Jordan Air Kites. Below, Le Frog by Jim Rowlands of Inflight.



that was better than the originals; more durable, yes; better performing, no.

The Mighty Mite by Jordan Air is different. It doesn't copy the Indian traditional except in overall shape. It is fitted with a unique, three-piece cantilevered center spar. The finished effect is a fighter kite whose sail is stretched over a center spine from the base to the cross-spar. From the cross-spar to the nose, the sail is a continuous, three-dimensional carved surface, outlined by the leading edges of the kite and the taut cross-spar. Interesting—but we were skeptical.

Off to the kite field. In light winds the Mighty Mite responds well to either side. It hovers in a tight regular spin from waist level to 60 degrees or so. Above 60 degrees it wanders back to center downwind and moves easily at the slightest hand motion. When you take in line rapidly, it tracks straight and true. It is not particularly fast across the sky, but it is very predictable and responsive. What it gives up in speed it makes up for in maneuverability.

The Mighty Mite is very light (0.7 oz) and because it turns toward pressure on the line, it's a natural for indoor flight on a short tether.

Outdoors, though, the kite's graphics give it something extra. Two colors are set within a black perimeter, but one of the colors overlaps the other. The combination makes a third color. Depending on how the sunlight strikes the kite (from back or front), you see different colors. And if the kite flicks back and forth in bright sun, it switches colors and looks iridescent. Fast-moving

kites (such as fighters or stunters) most evince this pearly glow. Sophisticated kite-making takes advantage of it. Tim Elverston, who designed this kite for Jordan Air, describes in the instructions the numerous adjustments you can make in this kite; obviously the graphics too, are no accident.

The unusual construction of the Mighty Mite could have other applications. Get one and you'll have a great fighter and some new ideas at the same time. —M.G./V.G.

Le Frog

Many have read the book, *Soft Kites and Windsocks* by Jim Rowlands of England, and made the kites depicted in it. Now here is a soft kite from Inflight, the company of the author himself. We've seen some wonderful frog kites, such as ones by Jürgen Ebbinghaus of Germany and Cheryl Gleckner of Pennsylvania. High time we had a commercial version in the frog derby.

Simpler in construction than a parafoil, Le Frog has two small openings in the lower jaw for inflation. At first these were covered by a plastic mesh that was more plastic than mesh. We couldn't seem to get air into him in light winds or even with a blower. We replaced the mesh with nylon netting and on reflight it worked well. We hear that future models will have better breathability in the vent material.

Like all long, narrow kites, Le Frog responds poorly to rapid changes in wind direction, especially near ground level. Fortunately the small openings that make it slow to inflate resist deflation as well. As a result, when the kite dives to the ground, it bounces right back into the air. In a steady wind above the ground turbulence, Le Frog flies at a respectable 45-degree angle.

When the wind drops off, the light weight of the inflated legs and the weight of the bridles and line turn Le Frog from a kite to a glider. Keep tension on the line and you can pull it in with ease, or just stand and wait for it to glide home.

When you buy soft kite wonders like Le Frog, you don't expect them to be models of perfect flight, you're just grateful that they fly and amuse. In this case, as we tugged on the line and created kicking action in the sky, we had big grins on our faces. But the flying went swimmingly too. —M.G./V.G.

At Last, A Little Expertise

By Peter Lynn, Valerie Govig & Michael J. Graves

Insights on Stability

The Tao of Kiteflying: The Dynamics of Tethered Flight by Harm van Veen (Randallstown, Maryland, USA: Æolus Press, 1996), in English, softcover, 56 pages, \$12.95.

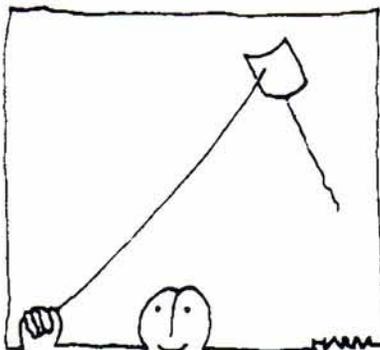
If you are a serious type of kitemaker with a low bullshit tolerance and are turned on by words like "reductionism," "testable hypothesis," "rigor," "numerical methods," and "peer review" but have an automatic off-switch activated by the whole gamut of eastern mysticism and words such as "holistic," "synergy," and "spiritual statement" then you would probably choose not to read *The Tao of Kiteflying* by Harm van Veen—but this time you would be wrong!

The Tao is a collection of insightful, numerically-based statements about single-line kite stability. It is clearly the distillation of a lifetime of careful observation and experimentation backed up by considerable aerodynamics savvy. Prior to *The Tao*, nearly everything I have read on kite aerodynamics has been basically rubbish. In *The Tao* possibly, just possibly, there is a starting point from which a general predictive theory of kite stability may emerge. Harm is right on in using chaos theory as a starting point. Kites, being immersed in turbulent airflow, are operating within the definitive chaos system.

The Tao includes more than a few stand-alone statements which are largely unsupported and lack adequate clarity to allow numerical verification. But in general and for instances where I was already familiar with a relationship, Harm's statements were correct. The "Mass Ratio" concept he introduces for kites is undoubtedly useful but I have some as-yet-unanswered doubts about the range of its applicability.

No matter, *The Tao* is in an entirely different league from most previous kite aerodynamics literature. It is also, I hope, a revelation to the wider kite world of the relatively superior level of technical understanding of kite systems that exists in Holland.

Very good work, Harm. I look forward to expansions, additions and some robust discussion, but (personal plea) please Harm, don't use such a touchy-feely title next time! —P.L.



Harm van Veen's drawings range from crisp and technical to casual and wry, above.

Wolfgang in English

Making & Flying Stunt Kites & One-Liners by Wolfgang Schimmelpfennig (New York: Sterling Publishing Co., 1995), in English, hardcover, 80 pages, \$19.95.

At last we have in English those two admired German kite books, *Lenkdrachen bauen und fliegen* (*Making and Flying Stunt Kites*) and *Neue Lenkdrachen und Einleiner bauen und fliegen* (*New Stunt Kites and One-Liners to Make and Fly*), both in one book—more or less. Actually, if you take two books, one 80 pages long and one 64 pages long, and turn them into a single 80-page book, you have to cut something. Thankfully, the cuts are made in the designs of commercial kites. Good kites (six stunters, three single-liners) remain.

You first notice the book's high technical quality. The color photos throughout are handsome, safety is well treated, there's an index—much is good. But it's the drawings by Peter Morgenbrodt, exceptionally clear and detailed, that provide spectacular excellence. Their use of color is more than adornment and really clarifies the parts and pieces in the projects.

We noticed improvements made on the original writing, for example acknowledgment of Steve Edeiken for development of the "no-knot system" for sleeving Kevlar line.

The book's content ranges over wide territory, even attempting to give a quick art-school-like lecture on color theory that we found too abbreviated. However, the emphasis on creativity, on following your own ideas, deserves huge applause even if the book does end up paradoxically giving very precise directions for making specific kites.

We could have been happier with the

translation. Probably the hiccups will not cause huge problems, but the terminology is off in places: seat-belt webbing becomes "waistbands," safety harnesses become "trapeze pants" and the clove hitch becomes a "weaver's knot." Several trade terms or acronyms (Ertalou? PUR? NIRO tubes?) just don't make it across the Atlantic.

The number of misspellings is relatively few, but one error is sure to be mentioned everywhere: Edward Graber stands in for our beloved Paul Edward Garber. This is a particularly curious error because the name was correct in the original book! (Wolfgang must be tearing out his curly hair.) Also there is one utterly senseless sentence in the second chapter: "The frame for a stunt kite should only be made with round wooden dowels." Luckily, this edict is thoroughly contradicted in all the instructions.

Are there any larger errors? No, but some shortcomings. The section on appliqué is inadequate for the topic. The chapter "Tuning Your Kite" describes single-line and stunt kites in the same terms. And (as usual, classic offense of so many kite books) the colorful cover shows kites that appear nowhere inside. Five big soft Peter Lynn creations glamorize this book but Peter's name cannot be found in type of any size! (No doubt this was the publisher's doing.)

But the flaws in *M&FSK&OL* are small in proportion to the whole. This book will help anyone interested in making kites. Even if you don't build the particular designs offered, you will learn much from the drawings. However, if you already have the German book you may be just as well off without the translation. —V.G./M.J.G.

Too Many Translators

China Kites by Liu Zhen (Jinan, China: Shandong Science and Technology Press, 1994), in English, hardcover, 132 pages, \$34.95.

Greg Jones at China Books (importer of *China Kites*) put it this way: "The more translators a book from China has, the worse the translation seems to be." Well, this book has 13 translators, an unlucky number from any point of view. And although the kite literature has more than its share of bad translations, this one rises immediately to the top of the incompetent heap.

Prepare to be amused and confused as

you try to figure out what is meant by "plank-shaped" kites, "rugged-wing" kites and "bucket-shaped" kites, which are major classifications, used repeatedly. It is helpfully explained that "In some places, bucket-shaped kites and relief kites are also known as stereoscopic kites."

The maze of varieties and classifications do little to clarify things. If you are not lost to start with, you will be by the time you get to this: "There are three basic model types, three branch schools and eleven key figures in the Weifang school of kites."

China Kites does have some desirable elements. There's history, with five explanations for the origin of kites. There are wild tales of execution by kite, early kite fighting and even an eagle kite reportedly flown to induce shame in Japanese invaders in 1942. There are useful instructions on how to fly kites, especially small ones and centipedes. There is more than you want to know about Weifang and its International Kite Festival but little about other festivals, even in China. There are general techniques of kitemaking the Chinese way plus specific drawings and illustrations for 10 Chinese kites. (This is challenging material. Just pretend it's a foreign language.)

Finally, there are the illustrations, probably the best part of the book. About 60 percent are photos and the rest are very realistic paintings. Most of the pictures fill the last chapter, "The Elegant Kites of China," a lovely dessert after a heavy meal. The tiny kites, the dragons and the birds will captivate most kites for their beauty. I especially loved Fig. 125, "Playing Pipa in a Special Way (kite in the shape of plank)." Despite its befuddling name, this kite is an excellent example of the Chinese use of asymmetry. It clearly signals the mastery and sophistication in kitemaking that marks this country, the probable home of kites.

This book has tried hard to make a case for the glories of kites in China. It's a big book and you sense that it has come many miles, through many changes of heat and humidity, to reach us. Its cover is warped and the gold and silver are flaking off. Such a shame that after all this the language cripples all the book's ambitions. The best one can say is that, after working so hard to pull meaning from *China Kites*, a dazed

"Playing Pipa in a Special Way" from *China Kites*.



reader might accord the book a kind of historical validity by default. Something certainly *seems* to be there—it *must* be there!

—V.G.

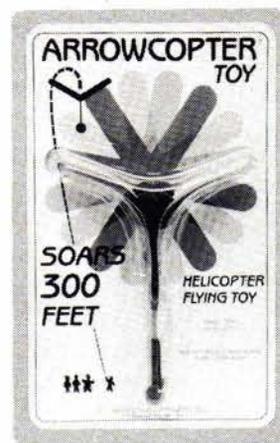
Note: This title will not be carried in the Kite Lines Bookstore. Interested collectors may obtain the book direct from the importer, China Books, 2929 24th Street, San Francisco, CA 94110.

Book News & Forecasts

Who's working on a new kite book? Several people... ♦ Pierre Fabre is tapping away on his keyboard, title and contents still under wraps, but the publisher, Hachette, is one of France's largest. Meanwhile in the same country, Gérard Clément and Eric Damage have books in progress if not in print already. ... ♦ David Gomberg is working on another book about stunt kites, more advanced, maybe with construction plans and/or tips. His previous book, *Stunt Kites!* is going into its 6th edition. ... ♦ Of course, Tal Streeter is working on a book, if not two, if not five. Weatherhill, his publishers, stabbed kites in the heart when they took *The Art of the Japanese Kite* out of print. We hope they redeem themselves when Tal's book on India's kites comes out in the fall (after four postponements? five?). ... ♦ The Drachen Foundation, devoted to all things good and ambitious in kiting, has some well-designed booklets out. Two are personality profile books/catalogs for the Kite Pin Invitational and The World on a String exhibition (53 and 31 pages respectively). "From Kites to Wings" is a 20-page booklet related to the kite history pins made by Drachen Design (predecessor of the Drachen Foundation). Also of interest is a 16-page item, "Aerial Photography by Kite" by Raoul C. Fosset. To obtain copies of these, all at \$5.00 each, contact the Drachen Foundation, 1907 Queen Anne Avenue North, Seattle, Washington 98109. They also have an "Occasional Newsletter." —V.G.

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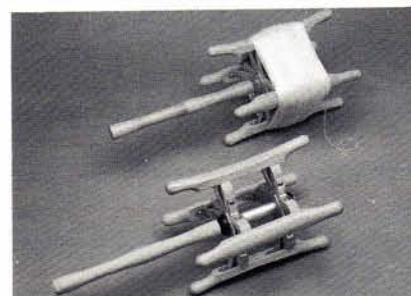
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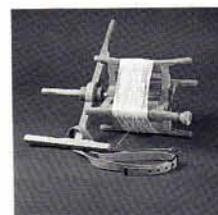


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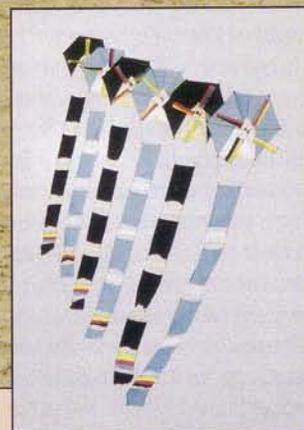
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POSTCARDS



Get on the buggy train! Here, Sven Weidhase and the Crazy Peel Club linked 67 buggies together and powered them with a kite every 10 buggies.



Wolfgang Grimsel's windmill train took top honors at the Drachen Club Deutschland convention in 1995.



Fanø was alive with buggies like this one circling a bol. Hundreds of buggies weaved in and out of kites and traffic.



The detailing on Ervin Dorper's big Cody looks even better up close.

FROM FANØ. . .



The big Danish beach provides room for even the youngest fliers to practice their skills.

Fanø is just amazing! You stand on the beach, and as far as the eye can see, the sky is filled. It's the biggest, most extraordinary kite gathering you've ever seen. The scope of this thing is enormous!

Technically, Fanø isn't a festival at all. No organization, no schedule, no events and hardly any spectators. People just drive onto the nine miles of hard sand, park in little groups and fly incredible kites. This year, they estimate there were 7,000 kitefliers. Seven thousand! The sky is so totally congested that photos look dirty with "spots." As we walked among the cars, we were offered a "welcome beer" every 50 yards until we just couldn't walk anymore.

At day's end, the cars drift back to campgrounds and the parties begin. Kites fly over the houses all night. Every morning, the kitefliers appear later and later on the beach. And because of Fanø's far-north location the sun never sets in the summer. An eerie twilight sets in about 11:00 at night and dawn returns at 2:00. Some buggy riders never leave the beach.

—DAVE

P.S.—Just a reminder that it's not easy to get to Fanø. You have to fly into Hamburg or Copenhagen and then take a train or car to the ferry landing in Ejbjerg. The ferry leaves approximately every 20 minutes, but you must reserve a place in advance, which is hard to do over the phone. You can arrange housing or campsites with the Fanø Tourist Bureau, but housing is limited and usually reserved a year in advance by regulars.

My advice is to join a group and let someone else worry about the details!



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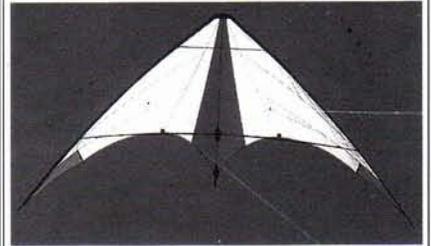
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Subject: Re:

WHAT IS A

KITE?

Kite Lines never expected the response we got to our article, "What is a Kite" by Paul Siemsen (Summer-Fall 1995). Discussion ran especially high on the Internet and ranged from hilarious to insulting to scientific. At times it went completely off topic, veering into debates about what is a fluid or a gas. Below are excerpts from only a handful of the colorful responses the article provoked. Do you have anything to add?

Date: 17 Oct 1995

I started reading the strangest article on page 18, "What is a Kite?". Here is his new definition:

"A kite is a device which attains position in the relative flow of a fluid medium by being connected nonrigidly to a relative anchor(s), and by constantly presenting an upwind face(s) which deflects the medium's flow. The device must be capable of attaining a position which is off gravity's ground."

If we really want to include almost anything as kites how about this definition: A kite is a thing at the end of a string!

—Charlie Charlton
Liverpool, England
charlie@akg.u-net.com

Date: 17 Oct 1995

As soon as I read the article it made me think of a politician writing a piece of pork barrel legislation. The first thing that really struck me as wrong was that windsocks and their like were excluded. The interior face is just as much into the wind as any high profile parafoil and if the author doesn't think a spinnaker or bol doesn't generate any lift, the bugger's never seen Bob Anderson's Bobby Sock flying 50 feet off the ground without benefit of any kind of lift kite holding up the swivel, or a bol spinning mightily overhead while anchored using only a twelve-foot strap.

—Derrol J. Hammer,
Tracy, California
hammer@popcorn.llni.gov

Date: 17 Oct 1995

My "simple" definition of kite: A kite is an air-born object at the end of a string due to the force of wind. I think you could include lead weight in your definition.

—Sam Ritter
Ann Arbor, Michigan
sritter@umi.com

Date: 19 Oct 1995

Re: when you fly a kite underwater it is not wind lifted... Ah, but air and water are both fluids (check your physics reference book). A kite is a tethered aerodyne. It should generate an altitude at least 20 degrees above or below the horizontal plane, thereby eliminating most windsocks and banners.

—Corey Jensen
Monterey, California
coreykite@aol.com

Date: 19 Oct 1995

Adrian Pierorazio writes: "A kite is a tethered object that flies solely because of the relative motion of a fluid impinging on it."

Now that is a definition. —John Mitchell
Munich, Germany
john.mitchell@multinet.de

Date: 20 Oct 1995

Here is my kite definition: A kite is a tethered object—often amazingly beautiful—that can lift its own weight above the ground without any helping devices like poles (excludes flags, etc.), driven exclusively by aerodynamic forces (excludes blimps, etc.) and that can stay unlimited above the ground as long as the aerodynamic force (wind) allows it (excludes windsocks, etc. because they will come down soon).

—Kai Griebenow
Cambridge, Massachusetts
griebeno@ATHENA.MIT.EDU

Date: 24 Oct 1995

Anne Sloboda wrote: "A kite is an offering to the wind gods proffered on a line that they find sufficiently attractive to accept when it is dangled in front of them."

—Jim Feldt
Athens, Georgia
jfeldt@homebase.icad.uga.edu

Date: 23 Oct 1995

A kite is the thing at the opposite end of the string from the individuals debating "What is a kite?"

—Mike Eason
Lake Stevens, Washington
kichiwa@eskimo.com

Date: 25 Oct 1995

Paul Nord wrote: "Considering the previously mentioned definitions of kites, is a waterskier a kite?"

Absolutely! I do think he's cheating a bit by skimming along the surface. I once built an airplane-type device to tow behind a boat—you could go up and down (with mask and snorkel) plus left and right, do rolls, etc. Great fun. And no question—a kite.

—Dave Culp
Pleasant Hill, California
daveculp@bdt.com

And two comments by mail

I'm afraid that Paul's suggested definition is not as good as the one in the *Grolier Encyclopedia Americana*: "A heavier than air flying device that gets its lift from the action of the wind and is controlled from the ground by one or more lines."

This definition combines the three necessary elements to properly define that a kite (1) is heavier-than-air, (2) rises above eye-level, and (3) is tethered. So a simple working definition could be: "A kite is a heavier-than-air device which rises in the air as a result of air movement and has a tethering location of one or more lines." —Ed Grauel
Rochester, New York

Paul has forgotten the important tenet of keeping it short and simple. I offer my contribution: "A kite is a device which flies in a relative wind, in opposition to gravity, on a tether." That, in my opinion, is complete.

The mass of air at sea level is about 0.0807 lbs per cubic foot and the mass of water is 62.4 lbs per cubic foot. Therefore, water is 773 times as heavy as air and the forces developed in water are much greater than in air.

—A. Pete Ianuzzi
Catonsville, Maryland

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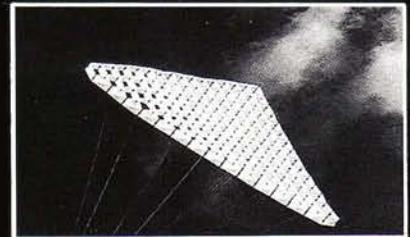
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How did three adventurers ski the Greenland ice cap? They used a

Synthetic Dog Team: KITES

Article by Eric Philips

It is a rare clear day and I have an unobstructed view of a 360-degree line that is the horizon. A colorful Quadrifoil kite is looping graceful figure 8's fifteen meters (49 ft) ahead and a plastic kayak with 80 kg (176 lbs) of food and equipment is snaking disobediently behind me. I am "skiting"—being pulled by a kite on my skis across a sheet of ice in Greenland.

I called our expedition the "Green Ice Traverse." It was the first Australian crossing of the Greenland ice cap. Our three-man team kayaked, rappelled, trugged, skied and skited across Greenland, almost 700 km (435 miles) in total distance. Our arduous yet triumphant expedition was filmed for Australian and American television.

Why would we attempt this difficult journey? Our prime objective was adventure—it is the quest for adventure that drives us. Our second objective was to complete the first all-Australian crossing of the ice cap. Also, we wanted to re-enact the Greenland crossing of Australian polar explorer John Rymill. Rymill's journey is a classic tale of hardship and survival: In 1931, he joined the British Arctic Air Route Expedition to establish a link between Canada and England.

The expedition's planes got wrecked on the east coast of Greenland so Rymill and Englishman Wilfrid Hampton were chosen to cross the ice cap. They dog-sledded across the ice and then paddled seal-skin kayaks down the rivers to the west coast of Greenland.

We successfully completed our journey with kayaks too, along with skis and of course, our kites, our Quadrifoils.

This was my first kiting experience, so I was a bit uncertain when we left on our journey. If the kites failed, we would have skied the entire distance. As it turned out, the kites were our savior, a sensation in wind-assisted polar travel.

A Long Day's Journey

In mid-July our team flew to the east coast of Greenland, and arrived in the small town of Angmagssalik. Two Australian adventurers, Larry Gray (a kayaker and cameraman) and Ben Galbraith (a kayaking and skiing instructor) joined me for the first leg of the expedition. On July 19, we began the sea kayaking leg, paddling our bright yellow three-meter (10-foot)

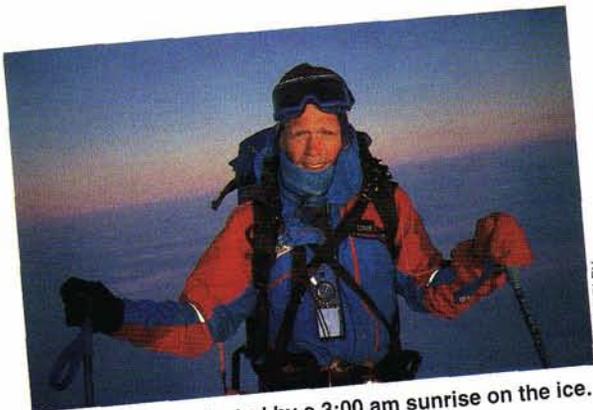
plastic kayaks from Angmagssalik to Isortoq. We plied our small crafts between towering icebergs, over gravelly ice and across ice-choked fjords. The icebergs ranged in size from sailing dinghy to ocean liner.

Six days and 110 km (68 miles) later we reached the frontier town of Isortoq, a small village hewn into the rock. We met up with the Australian film crew who were filming our expedition: director Michael Balson, production manager Mary O'Malley and cameraman Wade Fairley. Wade would join Ben and me to film our crossing of the ice cap, while Larry, Michael and Mary spent the month filming the people, culture and natural beauty of east Greenland. →



Ben Galbraith (front) and cameraman Wade Fairley "skiting" the ice cap.

ERIC PHILIPS



WADE FAIRLEY

Eric Philips illuminated by a 3:00 am sunrise on the ice.

Our kayaks would become sleds which would store all we'd need for a month of isolation on the ice cap. Ben and I towed our kayaks behind us as sleds, while Wade used a fiberglass sled to store his film gear.

A Rotten Start

On July 26, we began the ice-crossing leg from Isortoq. Our first five days were horrendous. We spent them climbing steep ridges and deep crevasses and using crampons (climbing spikes) to get a firm hold on the icy surfaces. Wade's fiberglass sled developed severe cracks which we repaired with a sawed, flattened plastic bottle that we bolted onto the sled.

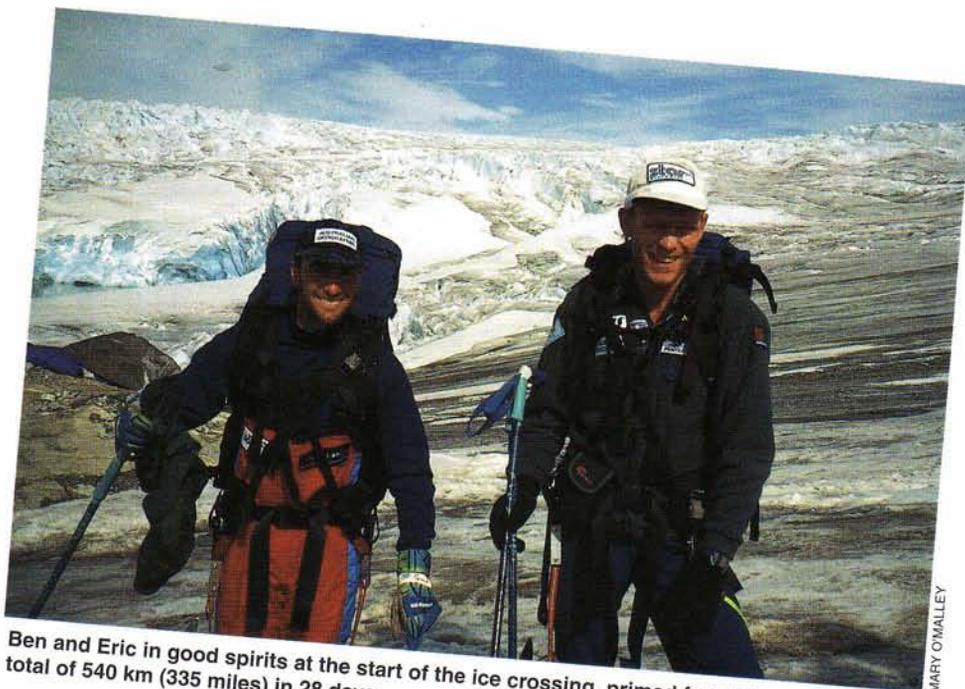
Finally, we reached our highway to heaven: a snowy gully (eroded trench) that led us out of our misery and up onto the ice cap proper where we could start skiing.

But the weather was still rotten. The horrid rain had turned into heavy snowfall and strong winds. For a week we saw neither sun, moon nor stars. At times the horizon was completely obliterated, making compass navigation frustrating and nearly impossible.

The daytime temperatures hovered around 0°C (32°F), making the surface snow too soft for skiing. We found ourselves floundering in the soft snow, like swimming in a pool of cold porridge. We switched to night travel, to take advantage of the firmer snow. My fingers began to scream from the cold.

Mush!

On July 31, after those miserable five days, we got our first reasonable flying wind—12 knots (14 mph) from the south—and it was time to pull out our Quadrifoils and begin skiting. This lifted our spirits. The kites became our synthetic dog team, our "nylon huskies." They pulled us and our sleds in



Ben and Eric in good spirits at the start of the ice crossing, primed for skiing and skiting a total of 540 km (335 miles) in 28 days.

MARY O'WALLEY

winds ranging from 5–25 knots (6–29 mph). These kites helped us cover 240 km (149 miles), almost half our total distance on the ice cap, 540 km (335 miles).

The Quadrifoil works on the same principle as a paraglider, with cells which inflate in the wind, providing stiffness and pull. Our Quadrifoils, designed by Ted Dougherty, were made by Papa-

gaois of Spain and donated by Der Spieler of Switzerland. They weighed about 2 kg (4.4 lbs) each and had a surface area of only 4 square meters (43 sq ft). They could be set to fly or packed away in minutes.

The beauty of the Quadrifoil is its steering ability. A steering line and a brake line were attached to each of two foam-covered aluminum handles. These four lines could lift, stall, loop and hover the kites while creating incredible pull in almost every

direction to the wind. We learned how to maximize the pull: We attached a rope joining the two handles to a carabiner and clipped it into our climbing harness. This relieved the strain on our arms and reduced the tugging on the ropes we were using to tow our sleds.

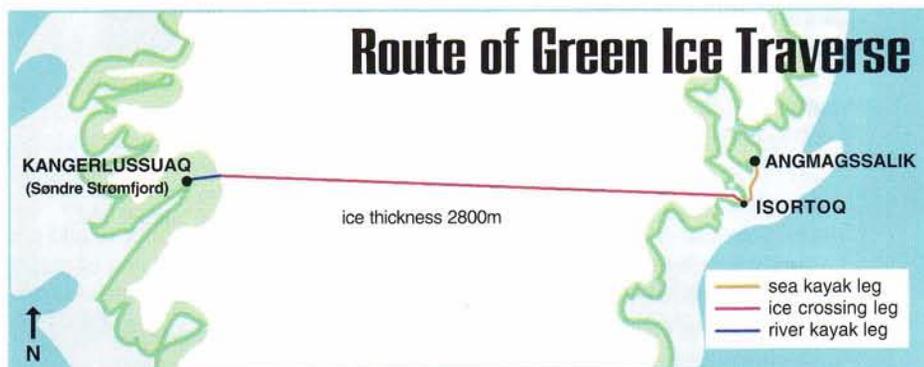
Wade got off to a comical false start on our first day skiting. He had no experience kiteflying, so after taking the handles from me he promptly spent the next minute flat on his back, ploughing headlong towards oblivion. His yelps of surprise were drowned out by our laughter.

Learning and Struggling

On August 2 we again had favorable winds and we skited 28 km (17 miles) in the afternoon. It began to snow lightly which made the situation even more surreal, like floating weightlessly through a fluffy white cloud. At times I could almost fall asleep in my sailing harness—there were no obstacles in my path for hundreds of kilometers. With such a vast expanse of ice to practice on, we could experiment endlessly without having to stop, change direction or look ahead. Blindness was no obstacle on such land so the mist didn't bother us when it obscured all but our skis below us. By the end of the day we achieved a valuable altitude gain of 400 meters (1312 ft).

My fingers began to lose feeling and I developed large black blisters on all of them. Lunch stops (3:00 am) were often cold and miserable and we wasted no time devouring our daily quota of noodles, cheese and pesto, all smothered in a liberal dose of margarine.

At times I could almost fall asleep in my sailing harness—there were no obstacles in my path for hundreds of kilometers.



"Who's got the third bottle of Milo?" I ask, scraping the remains from the second.

"Ben's got it!" replies Wade, turning the last page of his book. He eyes my copy of *Miss Smilla* in my tent pocket and I stuff it into my sleeping bag. I've still got 200 pages to read.

"It must be in my boat," says Ben coyly. Outside it's blowing at 25 knots (29 mph) and the wind chill is -30°C (-22°F). Already the tents and sleds are half buried. "Who's up for a cup of tea, then?" asks Ben.

We knew it was time to depart when Wade let out his usual exclamation, "Brrrrr."

Skiting Along

August 11 was our day of reconciliation. We were four days behind schedule when we got some much needed help from mother nature. The wind sprang up from the southeast at 12-15 knots (14-17 mph) and was perfect for flying. Ben howled a big "mush" and the three of us were soon skiting at considerable speed. Although we were all becoming equally skilled, the inevitable crashes tended to separate us and we often stopped and waited for the hapless victim.

There's no room for competition on such an expedition, so we tended to travel at our own speeds, that is, until I fell behind. Coaxing every ounce of speed from my Quadrifoils and skis, my face contorted with effort, I forced myself ahead to catch Wade and Ben, then sailed nonchalantly past them, serenely smiling, or maybe even chewing on a chocolate bar.

We totaled 80 km (50 miles) for that day, past the halfway point of our expedition, and sailed beyond our highest altitude point of 2800 meters (1.75 miles). We rejoiced with a cheesecake and endless relating of our skiting talents.

The Final Leg

On August 15 the sun presented itself after a weeklong absence. Wade pointed out a white dome sitting on the horizon about 17 km (10.5 miles) away. We reached it in six hours and found a huge, abandoned U.S. military base. The base was deserted in 1988 after the Cold War ended. Wade and Ben decided we should spend the night inside, in the eerie catacombs of what was once an instrument of war. I spent the night in my tent pitched in the smelly dining room. I was glad to leave this blot on the landscape of Greenland.

For the next couple of days we skited in the southeasterly winds, enjoying the sunshine and the knowledge that we would soon be reaching the west coast mountains. The disturbances within the ice provided

us with the perfect test of our abilities. We hooted along at 30 km/h (19 mph), jumping over ditches and racing down hillsides, zig-zagging through crevasses and sliding over frozen lakes. Both skier and sled would be airborne. This was the greatest test of our control, since one wrong pull, a misguided ski edge or a maverick gust of wind could result in an icy grave.

Further on we struck corrugated ice with 30-meter (98-foot) gullies, so we had to go back to climbing and hauling our sleds. These last five days were slow and laborious. Our bodies strained as we pushed hard against a seemingly endless terrain of ridges. During a fall of one of our sleds, my daily ration of chocolate, nuts and dried fruit fell out of my deck bag. "Oh well, I didn't really need it today," I said, but inside I could have cried for the rest of the day. Wade's sled got totally trashed in this icy hell and we had to abandon it and strap his equipment to our sleds.

On August 22, we ended our days on the ice: We reached a wide river valley and rappelled down to its sandy bank. We were in Greenland heaven, surrounded by sheer ice cliffs, waterfalls and a river of icebergs. The next day, after a short paddle on the icy white water, we combined the two kayaks to make a raft and drifted the 30 km (19 miles) to Kangerlussuaq, our final destination and the end of our expedition.

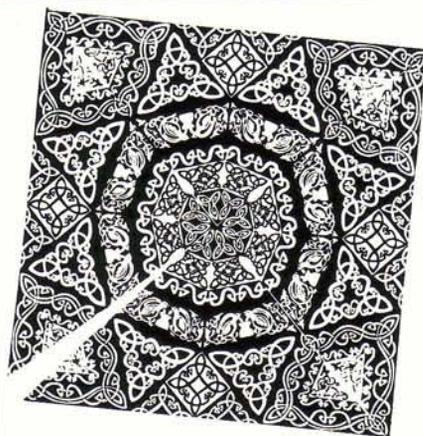
A Warm Room

We made it. We arrived at our hotel room battered and exhausted. With a "do not disturb" sign on our door and "out of order" signs on our bodies, we spent the next week soaking up beer and gobbling Danish pastries.

We departed Greenland September 2. Our Quadrifoils were stowed in the ends of our kayaks. They had done their job well, without a hint of wear and tear. Our combination of kayak, ski and kite has been acknowledged by polar experts as an innovative and effective form of travel. My treasured "nylon husky" will definitely be with me on my next expedition, to the South Pole.

Oh—and if anyone finds a bag of chocolate, nuts and dried fruit on the Greenland ice cap, it's mine. ◇

ERIC PHILIPS is 33 years old, has a degree in outdoor education and taught for nine years in schools and outdoor centers. He is now a musician and adventurer in Melbourne, Australia. He enjoys regular mountaineering trips to New Zealand and is a keen rock climber, in-line skater and sailor.



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Kite Patents:

A History of American Kite Patents

How many kite patents have been issued in the United States?

In the 205 years since the U.S. Patent Office opened in 1790, there have been 838 patents issued covering kites or kite accessories. This is an average of about four patents a year. The total breaks down into:

- 84 patents for airplane-type kites,
- 186 for accessories or controls,
- 45 design patents,
- 6 reissued patents, and
- the remaining 517 for all other types of kites or construction methods.

It wasn't until 1866 that Thomas Perrins of Philadelphia, Pennsylvania obtained the first kite patent, for a flat hexagon kite with two longerons for a mast (*see illustration*). After this delayed start, kite patents averaged:

- about one a year for the next 30 years,
- four a year for the following 30 years,
- six a year for the next 30 years,
- more than doubled to 13 a year during the following 30 years, from 1956 to 1986, then maintained 13 a year for the past eight years.

During the year 1991 an all-time high of 29 kite patents was issued—as many in just one year as during all of the years between 1790 and 1896 put together.

Many familiar names show up on these patents—Bell, Eddy, Rogallo, Allison, Jalbert, Garber. But probably the most intriguing is Sophocles Xenophone Pantcheff, an inventor living in England, who filed a U.S. patent in 1920 for a means of connecting three sticks at the center of a star kite. In 1923 he filed another patent, but this time he confused everyone by using the name Sophocles Xenophone Pantsos.

Who's been issued the most kite patents in his or her name?

While most of these familiar names are known to serious kites, the person with the most kite patents issued by the U.S. Patent Office is almost completely unknown. Julius Christoffel, Jr. of Yuma, Arizona holds this honor with an impressive total of 14 Certificates of Patent Registration. Chris-

toffel's credentials are solid: Vice President of Gayla Industries, the kite manufacturer in Houston, Texas; then President of Hi-Flier Mfg. Co., kite maker in Penrose, Colorado; then back to Gayla for a spell as President; then Vice-President of Spectra Star Kites in Yuma; and now retired.

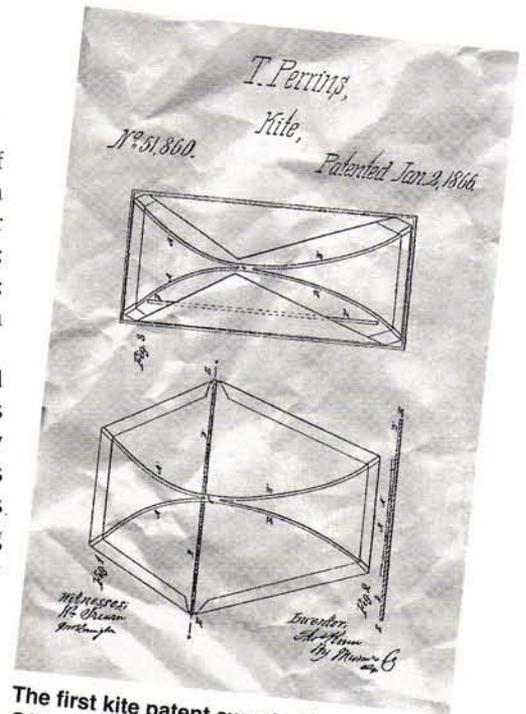
Second place in the number of awarded kite patents, and almost as unknown, is the late Ray Holland, Jr. of Roswell, New Mexico, with nine certificates. Holland's first kite patent was issued in 1938 and his last in 1980, a span of 42 years, during which time he formed and operated the Airplane Kite Company, a maker of novel kites for its day.

Behind Christoffel and Holland, Domina Jalbert comes in third with seven patents, followed by Jonathan Prouty with six, Russel Pohl, Lester Phillips (co-inventor on five of Christoffel's patents) and Louis Lawrence Lasky with five patents each, and George Wanner, Conrad Dahl, Kenneth Howard and Will Battles each with four patents to their credit.

What are all these kite patents about?

The 84 on airplane-type kites cover almost every conceivable shape and variation, not only monowings and biplanes but also gliders and helicopters. It's hard to think of any design not already covered, and apparently inventors are also finding this true. Only three patents on airplane-type kites have been issued during the past 10 years.

However, it's quite different with patents for kite accessories and controls. Practically all of these 186 patents have been issued during the last 40 years and they are averaging about six issuances a year. Over half of them are for line travelers which release objects on the line or from the kite, and the rest cover multiple-line controls, windmills and propellers on kites, vibrating devices, pinwheels, kite launchers, bridle length adjuster, noise makers, antennas, rudders, dive stabilizers, movable vanes, windsocks and even a blower to create air movement to fly a kite.



The first kite patent awarded by U.S. Patent Office, to Thomas Perrins of Philadelphia, in 1866. Perrins believed the two curved vertical masts were an improvement over the previously-used straight ones.

Among the more fanciful is one with a wind wheel in the center of the kite to flap the wings; another with an electric light and battery on the kite activated by a line traveler; and one with a whistle on the kite and a telephone receiver at the end of the flying line to listen to the whistle blowing!

The remaining 517 patents constitute the principal kite classification and include important inventions since 1866. About 25% are patents issued under a non-kite classification by the Patent Office, but they're cross-indexed into a kite classification because the examiners thought they had some pertinence to kiting. Some of the most important contributions to kiting are in this group, such as Eddy's photo apparatus, Jalbert's Parafoil, Rogallo's Corner Kite and Sutton's Flow Form.

One-third of the 517 patents cover construction details involved in making kites. Only two-thirds are for actual kites—principally shapes and designs. Up to 1886 the patents covered only the flat kites which were generally in use, but in that year a patent was issued on a six-sided kite with a

wind bag in the center, which billowed out on the back (or top) of the kite—the first three-dimensional kite.

Of all the American kite patent ideas, which is the most important?

Two standards might be applied: the best all-around kite within the widest range of flying conditions and the invention which will ultimately prove to have the most lasting benefit for kiting. In the second category,

Lawrence Hargrave's invention of the box kite could easily rank first for the best patent ever, except he purposely never patented it, in Australia or anywhere. Hargrave believed his idea should be available to everyone without restriction.

My nomination for the American kite patent of most importance long-term is the Jalbert Parafoil, closely followed by Edward Sprague's 1918 patent covering control of a kite by using two or more flying lines. This

idea was suggested in the Wright Brothers' first patent in 1906, for a glider with controllable flaps operated by four lines. But the patent did not mention the use for a tethered aircraft.

For the best all-around kite within the widest range of flying conditions, I would nominate William M. Allison's "polymorphic kite" (better known as the sled) followed by the kite patented in 1893 by Edward Boynton that first showed the use of a keel.

How—and If—You Can Patent Your Kite

Is it worthwhile to apply for a kite patent?

If you have a brilliant idea for a new kite or kite accessory and you're wondering if you should try to patent it, here are some things you'd better think about:

- Your idea must be new, novel and not obvious to someone familiar with kiting.
- A patent attorney usually must be engaged to file an application, at a cost between \$1,500 and \$2,500, including searching and filing fees.
- The life of a patent is only 20 years and not renewable.
- Maintenance fees to keep a patent current during its lifetime can run \$1,000 to \$1,500.

If financial return is a factor, you should consider whether or not the idea can be

put into production easily, cheaply, without a long lead time—in short, whether you can make a profit on the product. Over 90% of all issued patents on kites or accessories do not meet these qualifications and never come on the market.

Ideas for patents come in various forms: for a design only, for construction methods or details, for a part or portion of a kite or accessory or for a complete kite or accessory. Design patents are relatively simple to obtain, but are easy for copiers to get around by making small changes in the design. Patents covering construction methods or details are usually important only to large-scale manufacturers, where simplicity and short-cuts are essential to production.

The cold reality is that fewer than one in 25 kite products patented ever go into commercial production. I doubt more than 2% of inventors ever make any money on their creations.

Based on the above considerations, the answer to your question is probably not, unless you are subsidized or ego values are involved.

What steps do I take in getting a patent?

1. SEARCH: If you decide to go ahead, then your first step is to search all existing kite patents. This has to be done in Washington, DC, the only location where all patents are filed by subject rather than by number. A competent search is essential to save costs and litigation later. Any prior

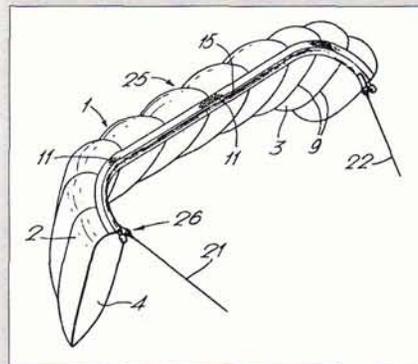
Tips & Tales about Patents from People Who Know

Marguerite Stankus, Jackite, Virginia Beach, Virginia: "My attorney in D.C. actually flew the kite with the examiner on the Mall, and the examiner said, "Get it out of sight, let's start writing." He helped us get the patent because it was a U.S. product."

Jeanne Merry, Cobra Kites, Island Heights, New Jersey (referring to Ray Merry's copatent with Andrew Jones on the Flexifoil): "Prepare to pay a lot of money. We have patents worldwide, a list of more than a page, and we renew them every year in every country."

Merrick Munday, Merrickites, Kendall Park, New Jersey (referring to his Symphony quad-line kite): "It's an arduous process. There is much more discussion of the language used than anything else. It was a year and a half struggle. Arcane? It is!"

Jim Hadzicki, Revolution Enterprises, Inc., San Diego, California (referring to the Revolution kite): "My number one advice is, Don't use your brother-in-law, go to a real patent attorney. And know what your expenses will be. Also, we had to clarify something people don't understand, that an individual can't use the patented kite or build one without permission. But we don't push that aspect that hard."



Technical drawing from U.S. Patent number 4,363,458, "Jones et al., airfoil structure," otherwise known as the Flexifoil.

If you want to get a patent, don't fail to read *Patent It Yourself* by David Pressman. The new 4th edition is not only a thorough guide for doing it yourself, but a map for understanding and managing the process, whoever does the work. It really helps you look at marketability. The 30 Inventor's Commandments and the Invention Decision Chart are among many notable features. The book includes recent changes brought about by GATT and all the forms you need. If not in your library or bookstore, you can buy it from the publisher, Nolo Press, 800-992-6656 for \$39.95 plus \$5.00 shipping.

patents which appear to anticipate or be in conflict with your idea must be studied carefully to determine whether the patent examiner may decide that the prior patents predominate.

If you elect not to employ a patent lawyer during the preliminary steps, you can engage a patent searcher direct. The Washington, DC telephone book (possibly available at your local library) contains the names of more than a dozen searchers who will study the subject-matter patents to determine possible conflicts. Searchers charge an hourly fee and the amount depends upon the nature and complexity of the idea being searched. The searcher's fee can range from \$200 to \$1,000.

Another possibility is to obtain a list of all kite-related patents, including descriptions, and conduct your own preliminary search. If you find any patents which seem to be in conflict, you can get copies of them from the U.S. Dept. of Commerce, Patent & Trademark Office, Copy Fulfillment Service, Washington, DC, 20231, for \$3.00 each. Enclose a check or money order and request a folder which lists the requirements for preparing a "Patent Disclosure Document."

Study the copies of the patents you receive to determine whether or not your basic idea appears to have been covered, either in the patent description or in the claims. If you can't decide whether or not there is interference, you should consult with someone who is familiar with kite patents, or with a patent attorney. You can find names of patent attorneys in your telephone book. Request an estimated fee to cover only the patent review, not a patent application at this point.

2. FILE: If there appears to be no serious conflict with previous patents, you can file a Patent Disclosure Document with the Patent Office. You can fill this out yourself using the information you requested from the Patent Office. The fee to cover a two-year holding period is \$10.

3. MARKET: Once a Patent Disclosure is filed you are free to approach kite manufacturers or others in an attempt to market your idea under license, royalty or outright sale—unless, of course, you wish to make or market the product yourself.

4. APPLY: After you find a manufacturer, you prepare a patent application. I recommend hiring a patent attorney because of the Patent Office's strict regulations on the wording and necessary drawings. The Patent Office insists that patent applications be written in "patentese" and use the exact terms and definitions they proscribe in Title 37 Code of Federal Regulations—even when

Many features we regard as "modern" can be found in American patents decades old:

1893:	a keel for a kite	Edward Boynton, Brooklyn, New York
1898:	box kite construction	Charles J. Greiner, St. Louis, Missouri
1900:	bowed kite	William Eddy, Bayonne, New Jersey
1902:	three-sided winged box	Silas J. Conyne, Chicago, Illinois
1904:	tetrahedral kite	Alexander Graham Bell, Washington, DC
1912:	a vented kite	Otto Seydel, New York, New York
1917:	a winged box kite	Samuel Perkins, Boston, Massachusetts
1918:	two-line control	Edward Sprague, Jr., Oak Park, Illinois
1929:	an open air-pocket	Levi Knott, Altoona, Pennsylvania
1940:	an inflatable kite	Percy T. Astle, Haven, Kansas
1951:	a non-rigid kite	Francis & Gertrude Rogallo, Hampton, Virginia
1953:	a parachute kite	Franklin Bell, Walnut Creek, California
1956:	"sled" kite	William M. Allison, Dayton, Ohio
1966:	the ram-air wing	Domina Jalbert, Boca Raton, Florida

"up" may mean "down" and "right" may mean "left." My patent attorney wrote my application for a patent in strict patentese, and frankly, I didn't recognize that it was describing my own patent. You can use a local patent attorney or one located in Washington, preferably someone who is familiar with kite patents.

5. WAIT: During the interim period while the application is in process, you can use the words "Patent Applied For" about your product. For most purposes these words are equivalent to an issued patent's protection.

Some 18 to 24 months later, after preliminary examination is completed, the examiner will file his objections to the application, reject some or all of the claims, and give reasons for nonpatentability. This doesn't scare seasoned inventors, because they know this is the examiner's way of putting the burden on the attorney and inventor to prove that the idea is new or novel, and thus patentable.

Before a patent is issued the applicant has to sign an "Inventor's Disclosure" which says you are the sole originator of the idea proposed and do not know of any similar idea, published or not. You don't have to file this declaration until you receive notification from the Patent Office that a patent will be issued.

What if you don't get the patent?

If your idea is judged by you, your attorney or the Patent Office to be nonpatentable, there is still the possibility of obtaining a design patent. A design patent covers only the shape, decoration or coloring of a kite or accessory. The disadvantage is that it is easy for copiers to get around this patent by

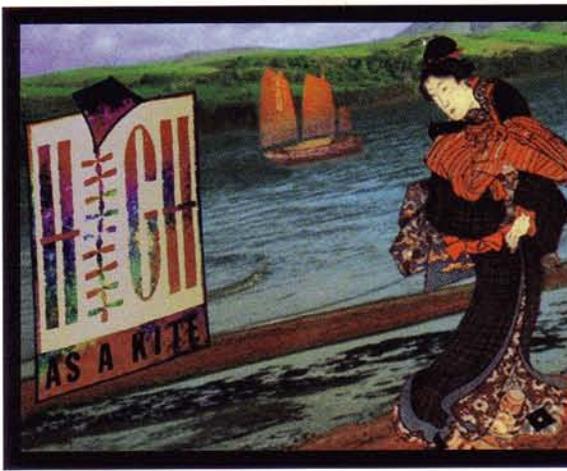
making changes in any of these small elements. For this reason, comparatively few design patents are filed, although they are easy, cheap and quick to obtain. In some cases the patent number on a design patent is just as effective as a number on a regular patent. A design patent is always designated by a "D" preceding the patent number. Design patents are renewable after their original 14-year life.

What if you DO get the patent?

Once a patent is granted, the Patent Office steps aside and it becomes your responsibility to protect your patent rights, both against opposition by other patent holders who feel their patents predominate or against infringement of claims. Such litigation can be time-consuming and costly and unless the patent has considerable commercial value, the added investment is rarely justified.

When a patent number is allotted and Letters of Patent issued, the inventor's name is entered in the record books of the Patent Office, where it will stay in perpetuity. Sometimes, that bit of immortality makes it all worthwhile. ◇

ED GRAUEL lives in Rochester, New York where he is a "general practitioner" of kites: he designs, studies, builds, flies, collects and exhibits them. He has created dozens of kites and has patents on several. His research projects include work on wind ranges, line tension, kite attachments, center of gravity and more. He is a member of eight kite groups, including the AKA. He contributed to Bob Ingraham's Kite Tales. He is well versed on U.S. kite patents and maintains a summary of all kite patents issued.



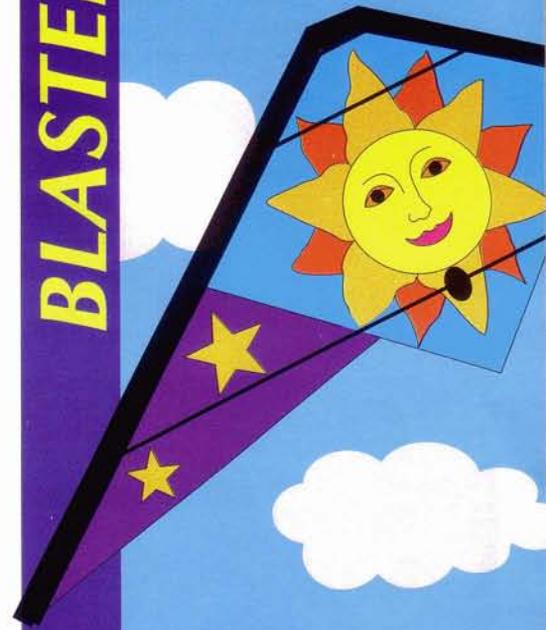
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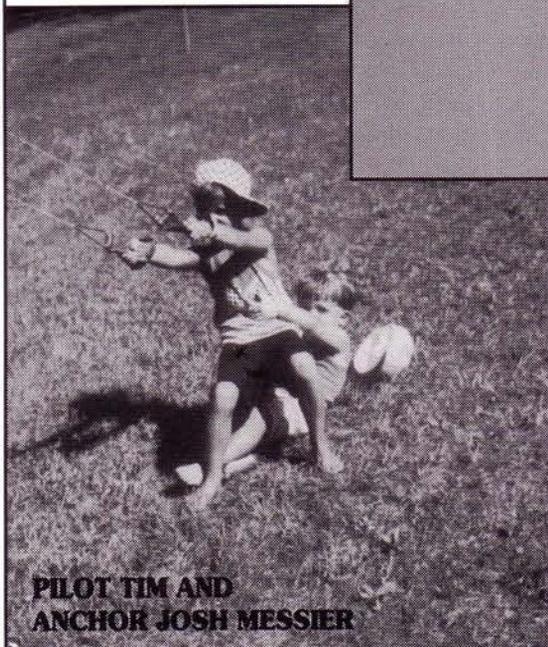
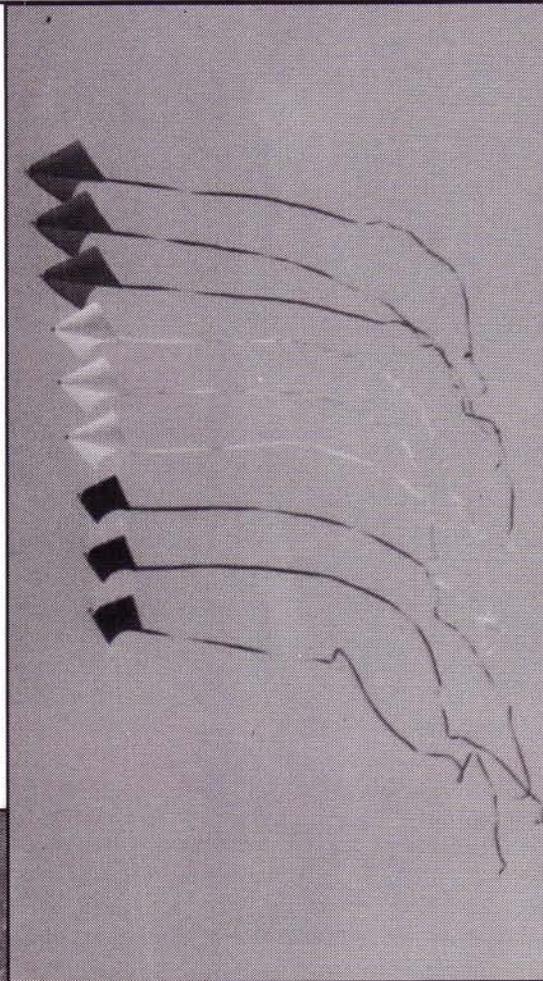
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Tal Streeter pauses during hanging of a kite made to his design by Italian Roberto Guidori
Below is the trademark of the foundation, a graffiti image of a bird that Miró drew on a studio wall.



ROMIG STREETER

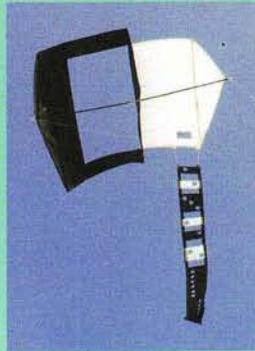
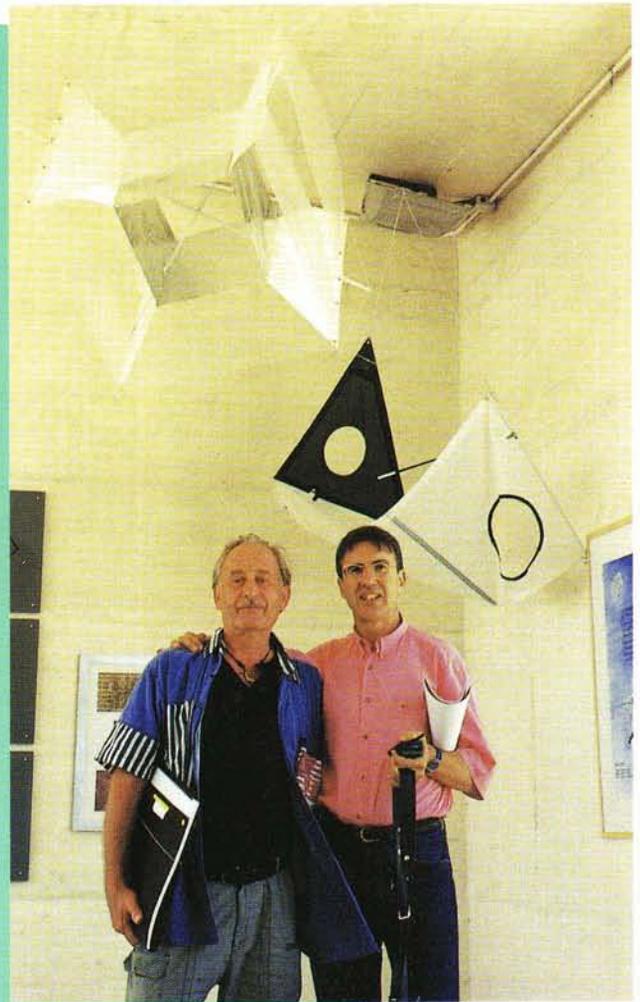


Mallorca

*Art Volant: Symposium, Exhibition,
Flight Demonstration & Manifesto*

June 22-28, 1995

Sponsored by Fundació Pilar i Joan Miró a Mallorca, Spain



Scenes from Mallorca, clockwise from top: Falko Haase, Jackie Matisse and Curt Asker share ideas; Falko Haase and José Yturralde pause during the exhibition; asymmetrical kite by Falko Haase takes flight; Michel Gressier launches one of his kites.

Article by Tal Streeter
Photographs by Falko Haase

“It was the wish of Joan Miró that we always have investigations, new ideas that we be open to, not knowing where these ideas will lead, what the results will be.” These were the welcoming words of J. Pablo Rico Lacasa, the Director of the Fundacio Pilar i Joan Miró a Mallorca. It is one of two foundation/art centers in Spain dedicated to Miró.

I must say I was from the beginning very impressed with the foundation director Lacasa. By the end of our kite group’s visit, I was enthralled by his enlightened ideas on the value of art and the fervor of his belief that kites might be a new direction for art.

Was all of Spain filled with this love of art? Mallorca was a dream. (Has anyone noticed that the United States is rushing forward to abandon many of these human attributes, dismantling what was by world standards a tiny National Endowment for the Arts?)

Lacasa went on to say in his welcoming address, “We are seeking new ideas in the world of art with this inaugural meeting, ‘Art Volant (Flying Art).’ We hope this is only the beginning, only the first year. Next year, more artists, a larger group. It is up to you to set the stage for this ongoing event.” He suggested museum sponsorship might have a different, more lasting effect than municipal sponsorship. It’s a provocative idea.

A Diversity of Thinking

This roundtable featured seven kite artists: Curt Asker of Sweden, István Bodóczy of Hungary, Michel Gressier of France, Falko Haase of Spain, Jackie Matisse of France, José M. Yturralde of Spain and myself (USA). We were there to put on a small exhibition of kites and to talk about our sense of kites in the world of art.

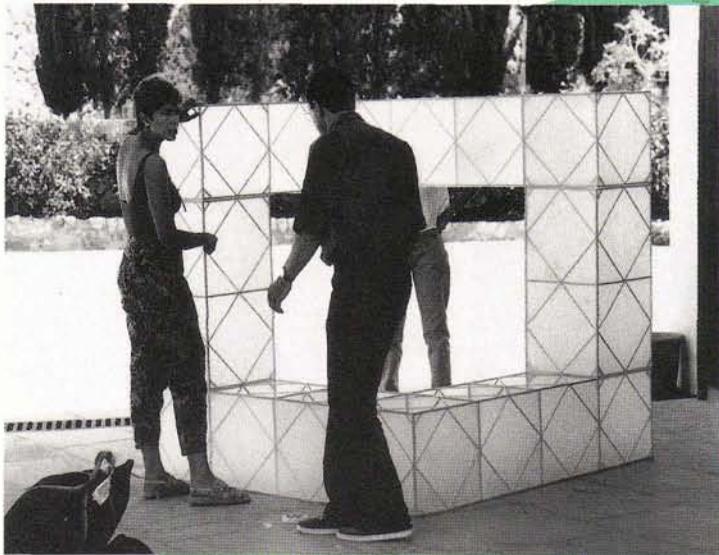
István pointed out that his kites from the beginning had been concerned with

artistic expression—“More like folk art.” He had spent a great deal of time exposing the populace to kites in workshops and writing. He was encouraging kites to continue as popular arts or “tools of the masses.”

Falko worried about the distance between art and popular forms. “There is a different tradition in Asian countries. Popular art, which would include kites, is based on astonishing levels of commitment and long apprenticeships.”

I suggested that the values of “high” (fine) art and “low” (popular) art have always been debated. Of course, this subject worries participants in kite festivals, but kite enthusiasts should realize that hierarchical rankings are a sticky issue in all aspects of the art and craft community.

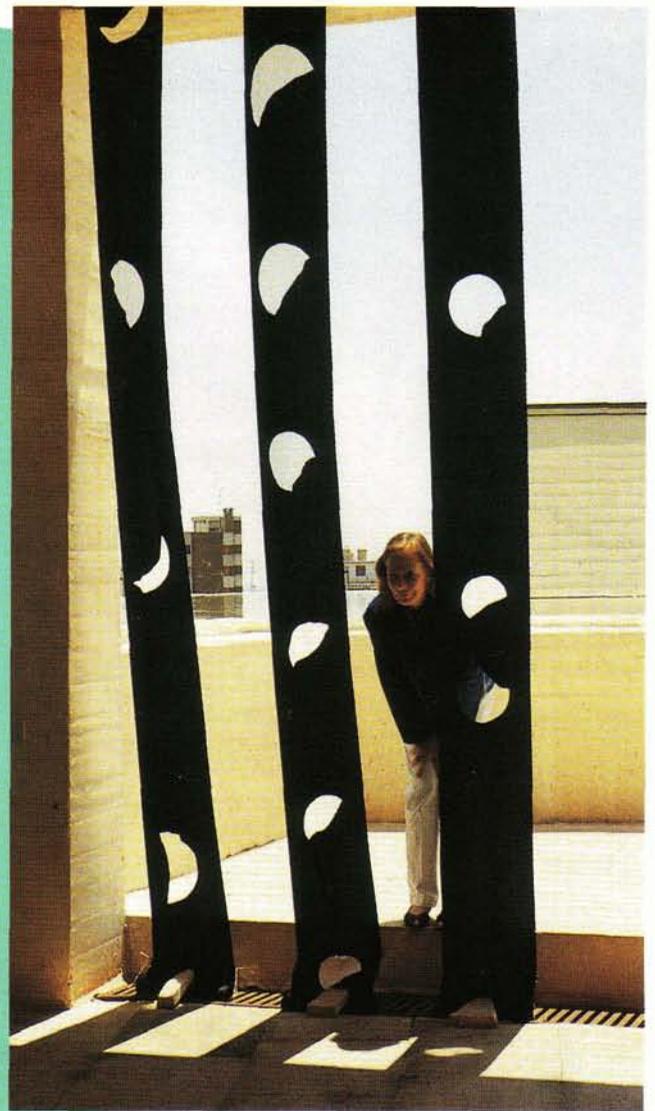
I didn’t mention it at the Mallorca gathering, but I’ve found that the traditional folk or popular arts in Japan are undergoing a change: interminably long apprentice-



TAL STREETER



Top, José and his wife set up for the exhibition. Right, Jackie Matisse peeks through her kite tails. Above, Curt Asker flies his Triangle, which hangs from the line of a distant delta.



ships are now virtually extinct. Instead, kite workshops seem to attract countless fine artists and enthusiasts. (For example, Takeshi Nishibayashi and Eiji Ohashi were early learners in Professor Tsutomu Hiroi's public kite workshops held in Tokyo.)

Curt insisted on a definition of art as "one's personal reference. It begins with the place where I live—always in front of my eyes, the sea and the horizon. Putting things in the sky began quite innocently: making for a boy a kite of a man standing in a boat. Later it became an instrument for seeing."

José said, "Kites were from the first an extension of my desire to grasp emptiness, time, space, the form of the wind. They are a tool for expressing ideas, like a pencil or a computer."

I believe if you grasp the principle of wanting these kites to be about something, to say something, then it is this *something* which makes the kite provocative or dull, clear or ambiguous, and so forth, not the bare fact that they are kites. Jose's kites are geometric and crystalline-like, orderly at

the same time they are complex, but asymmetric and pure white. José coming from the traditions of sculpture is more comfortable using pure white and avoiding the complexity of pretty colors. It's a simple principle—emphasize the form rather than use the form as a carrier of color—but one that is lost on many kite people charmed by all the colors of the rainbow.

Michel, on the other hand, as a colorist painter is understandably interested in color for his kites. "How did I start making kites?" he asked rhetorically at a panel meeting. "Painting. My first thought was to paint landscapes, then raise them into the sky." But let's not forget that Michel's kite paintings play with distances. This fact is not lost on him: "They are so big it is impossible to show them in many galleries. Then I wished to reach as large an audience as possible at the kite festivals. The kites are so big in the studio yet they are so small in the sky."

Jackie began to make kites "by accident. A small thin box I purchased out of curiosity in the store turned out to be a Pandora's

box. I couldn't believe it. It was a cobra kite. I began making my own out of crepe paper... Art interacts, emotionally, within its time."

One of the artists said: "At kite festivals, among all the hundreds of kites, one, two or three show a motivation, a deep, real, emotional need which is expressed through kites." This could be seen as a challenge for kitemakers as it is for artists, to invest their work with this elusive quality of emotional intensity. It is this which distinguishes a handful of artists from the thousands in practice.

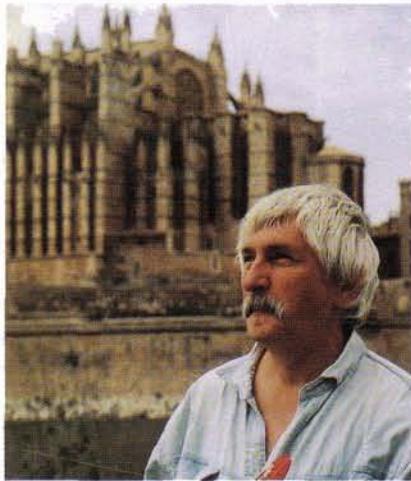
How Simple is Play?

Our group's display shared the hillside with Miró's spirit. Miró was surely one of the great artists of this century. But Curt reminded me of the harshness of Picasso's appraisal of Miró: "Miró is very talented but he has played too long with a child's hoop."

Curt observed, "Art has broken so many barriers, but the role of *play* is a path yet to be walked without some embarrassment and apologies." Falko said a painter friend

asked him, "Then you are you still playing with your kites?" Falko answered, "And you, you are still playing with your paints?"

Falko took us to a generously sized park to fly kites. His apartment balcony overlooks this park and the harbor where the U.S. Navy's Eighth Fleet anchors along with the old sailing ships. Our kites flew handsomely against a backdrop of blue sky and the spires of Palma de Mallorca's huge cathedral on the hillside.



István Bodóczy muses before the ancient cathedral of Palma de Mallorca.

Director Lacasa thanked us for our participation in the exhibition, panel forums and the flying demonstration. He ended his inspirational closing address: "Miró would not paint birds without a symbolic image of a woman; he was trying to suggest the desire of the imagination. Let's fly the imagination through the vehicle of kites!"

At that moment I felt Miró's energy and spirit there with us, sharing kite smiles.

I was inspired by the attention that artists and the museum were paying to kites. Art is a difficult subject for many people, and for

artists too, believe me. For dedicated kite-makers, I'm sure, this worry about "art" is perplexing as well. It was never meant to be simple but to challenge and to enliven by its challenge. Yes, the art world has progressively become more self-serving, there is too much money, and perhaps it has become as untrustworthy as so many other human endeavors.

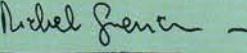
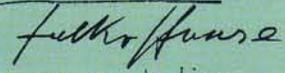
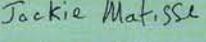
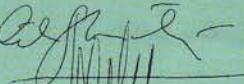
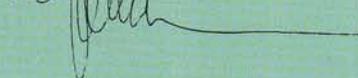
But artists have a kind of light which flickers, sometimes like a candle, sometimes like the sun. It is a light which has at its heart energy, spirit and purpose. I learned from these kite artists who gathered to share ideas and kites. I could feel the color coming back into my cheeks. Our discussions had rekindled my appreciation for the artist's role, working in the broader kite community, bringing to it the benefits that art brings to society as a whole.

Kites as a suitable medium for the painter's brush, the sculptor's hand? Absolutely! We are indebted to the Fundació Pilar i Joan Miró for this recognition. ◇

Art Volant Manifesto

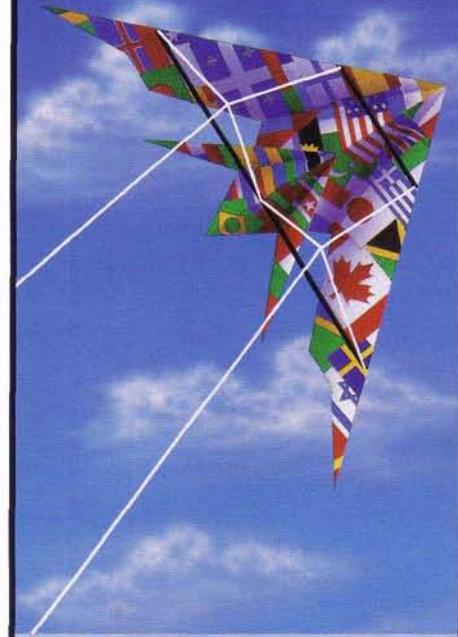
The primary, simple kite is a vehicle which speaks of the joining of the spirit and the physical. Kites then are tools, mediums of expression in space, meditations on space; structures and surfaces, colors and forms interacting...visual, aural, tactile. The kite's flying line connects the human hand and mind with the elements. Kites offer artists unparalleled opportunity to play, to explore, to experiment, manipulating scale and distance, making an immense space visible, unlocking the imagination.

We seven artists continue our work in this medium and encourage the development and support of Art Volant.

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István Bodóczy	
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Falko Haase	
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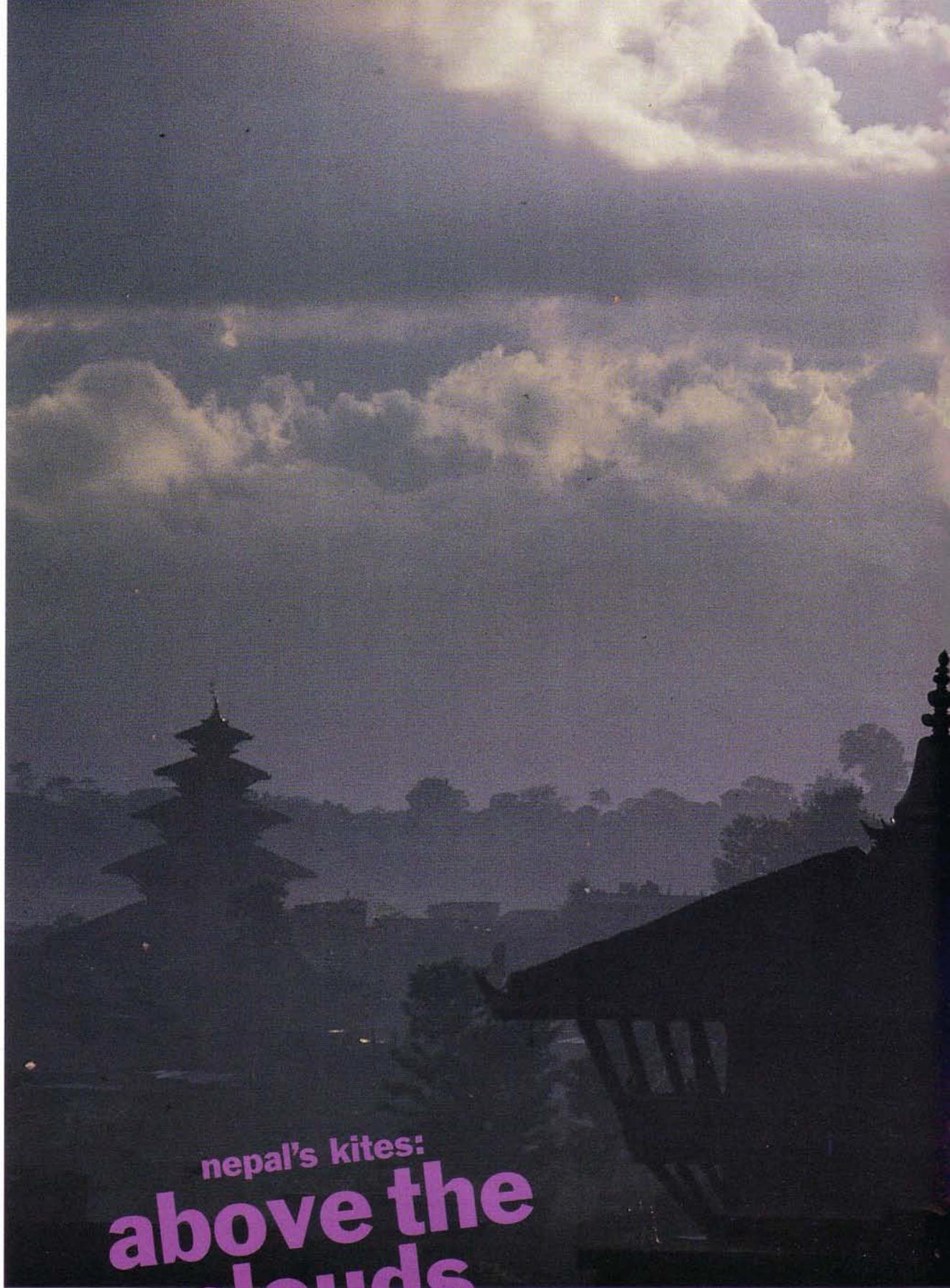
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nepal's kites:
**above the
clouds**

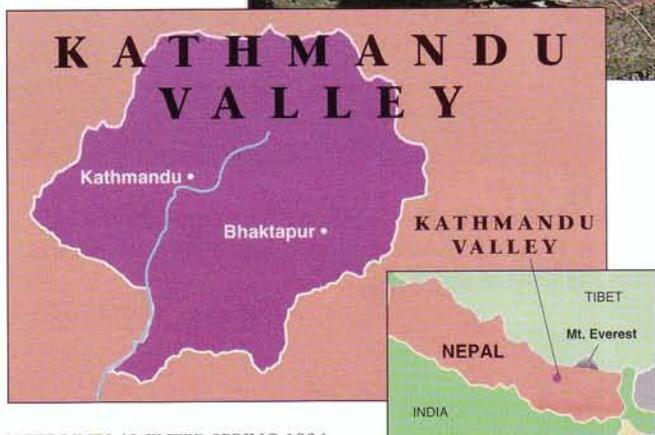
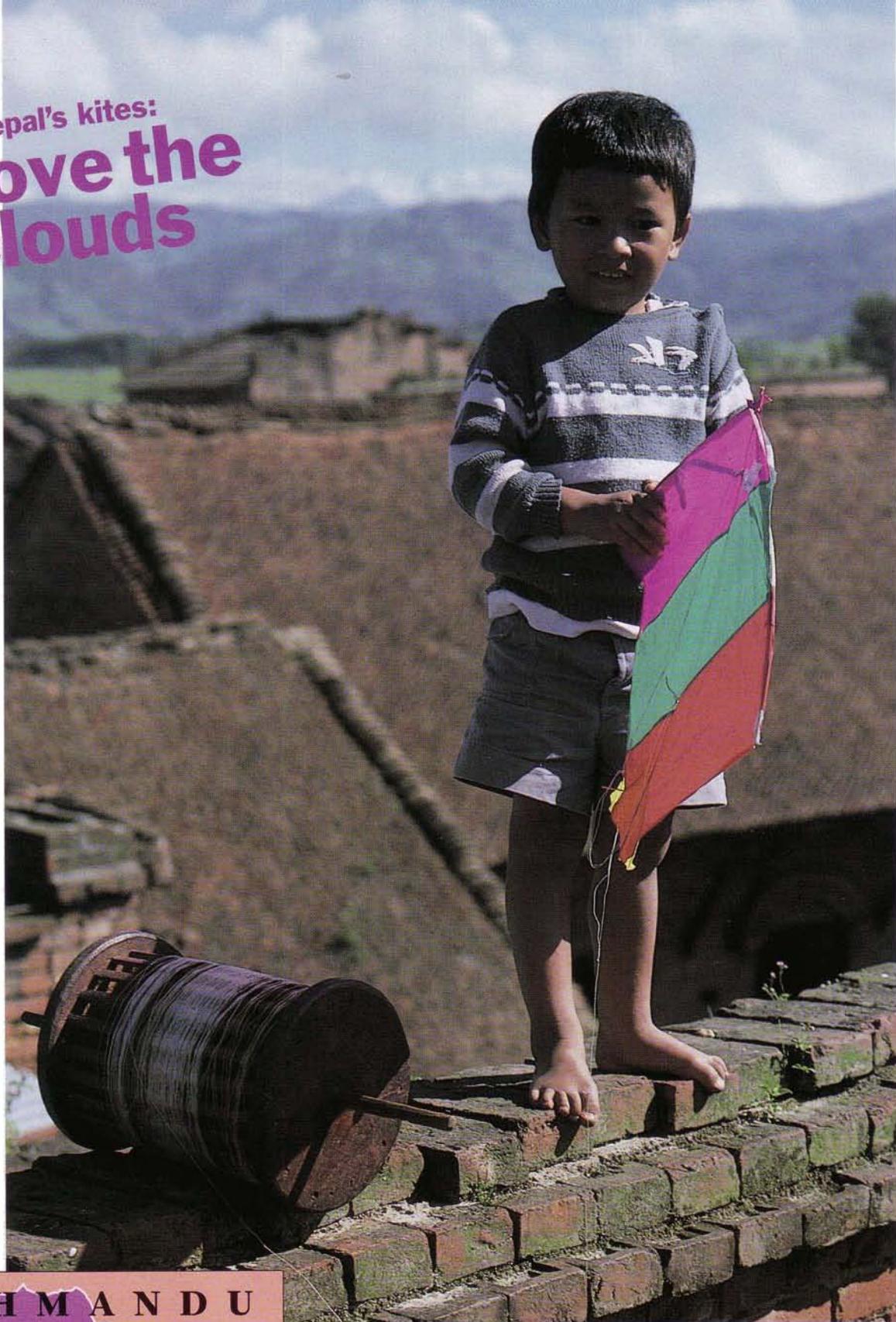
photographs by Stephen C. Lowe



During the bright lunar fortnight ending with the full moon of late September or early October, the monsoons are over, the rice is harvested, the weather is pleasant (not too hot or cold), the sky is clear blue, the wind blows...

...and kites fly in Nepal...

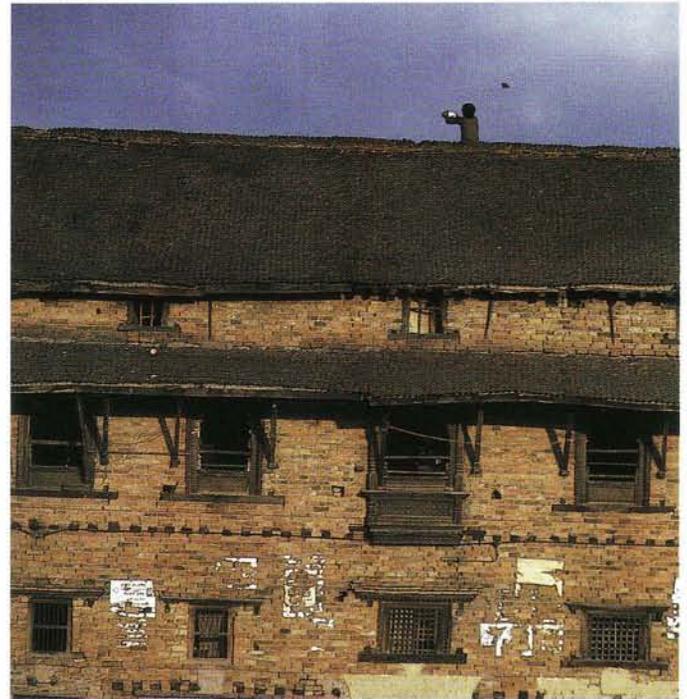
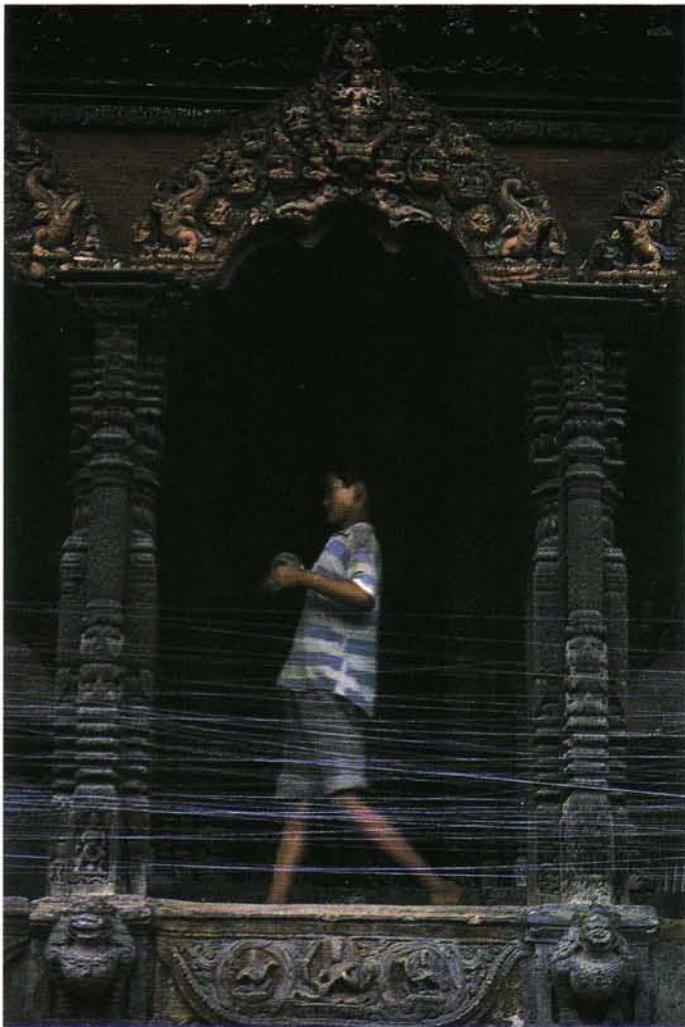
nepal's kites:
**above the
clouds**



Above, one of the 17 children of the Prajapati family Stephen Lowe lived with. Even the youngest must get a chance.

Previous page, shadows at sunset with the sky filled with hundreds of shimmering kites and the five-story Nyatapola temple in the background. The Nyatapola is Nepal's tallest temple, built in 1708 by King Malla.

All photographs were taken in Bhaktapur, Nepal's third largest city in Kathmandu Valley.



Left, a boy uses Nyatapola temple's columns to keep string in place while winding it up on the spools.

Above, a boy on a multidwelling home launching a kite. All homes are multidwellings built 1600. Most have clay-tiled roofs and carved window frames.

Two Views of Kiting in Nepal: **ALWAYS TIME FOR KITES**

By Stephen C. Lowe

Any kiter would agree that the ancient Newar town of Bhaktapur, set in the gusty Kathmandu Valley of Nepal (12 km [7½ mi.] from Kathmandu), is ideal for kites. Bhaktapur enjoys a unique environment and architectural layout of low-storied, tightly congested houses with interconnecting clay-tiled roofs. Kites are taken seriously and informal annual competitions test the skills.

The history of kiteflying in Nepal, like so many other customs embraced there, invariably lies hidden in transcultural obscurity.

The genealogy does lead, though, to neighboring India, where the tradition has also endured for countless centuries. As a result an extremely maneuverable kite design developed.

Nepal's kites are square in shape, flown point up, one- to two-foot in size. Two split bamboo sticks are shaped to form the spine and bowed spar of the kite. The spine is tail-weighted. On very breezy days, the universal use of tails, made from strips of paper

or cloth, helps to stabilize and beautify. Otherwise, most kites do not need tails, which can easily get you into tangle trouble.

The traditional kite skin used to be hand-cast rice paper, but today kites use thin, machine-pressed paper. Another recently introduced material is plastic, which bears colorful designs of advertising logos. No matter the components of the kites, all are very fast in climbing and descending and riding the breezes and updrafts.

Successful flying in Nepal involves mastery of the line and the spool. It is a constant two-handed operation, the quick feeding out and taking in of line while swaying the spool back and forth and using sweeping arm movements. The smallest children, some barely larger than their kites, quickly learn the motions.

Yet being a child in Nepal is not all fun and games. Most children have adult responsibilities and burdens, such as working in the rice and millet fields or around the house-

hold. In addition, the daily religious rites and seemingly endless series of festivals consume many of the children's hours.

Nevertheless, there's always time for kites. I vividly remember one delighted neighboring child who used a big one-foot-diameter spool. With ample lengths of line and the dexterity of a mountain goat, he obtained in 15 minutes such an incredible height for his kite that it almost disappeared, seemingly higher than any of the surrounding snow-encased Himalayas. As surely as the kites of Benjamin Franklin or Lawrence Hargrave, it gracefully embraced humankind's instinctive dream to fly.

STEPHEN C. LOWE, a photographer and sculptor, has lived and studied in Nepal for several years. His collaborations with master Nepalese artists have resulted in many bronze and wood sculptures. In 1984 he completed a photographic assignment there for UNESCO. He has also learned the ropes of Nepalese kites.



nepal's kites:
above the clouds



Top, children on Nyatapola temple's giant steps use a sacred place for play. The stone statuary of animals and human figures is arranged with each successively higher "guardian"—10 times stronger than the one below.

Above, launching a kite on a rooftop.

Right, a kite shop offers its wares at 25 cents a kite.

Opposite page, an overhead launch brings a kite into play.



Two Views of Kiting in Nepal: **CUTTING IS THE GREATEST FUN**

By Nirmal M. Tuladhar

It is on *Naga Panchami*, a Nepalese religious day named after the serpent god of the Hindus, that the kiteflying season officially begins. Ardent fliers, including children, bring out their spools and kites. Kiteflying becomes serious during *Dasain*, the fall harvest festival. All castes and creeds, both Buddhists and Hindus, joyously celebrate liberation from evil's miseries. The kite season ends on *Tihar*, the "Festival of Light."

Kites have flown in Nepal from its earliest history. This tradition incorporates several beliefs: kites remind the gods to send no more rain; kites bring prosperity to the family; and kites connect with heaven, by guiding recently-released souls there or contacting and honoring ancestors.

The Nepali consider the Indian fighter to be their own creation. This is the well-known and ancient design of two equal sticks crossed and tied together, flown without a tail and bowed across the back for a self-balancing dihedral. The Nepal model sets the spar one-seventh of the way aft of the spine's nose. The kite is flown on a two-leg bridle.

People from neighboring mountains, hilltops and villages compete. They may fly

their kites up the mountains from a nearby village below. A challenger fluttering and diving above your rooftop could be flown by a person one kilometer below you. Gaining altitude may be necessary for attack. But in cities such as Kathmandu, where kites are flown from rooftops and roof porches, height is less important than maneuverability.

The Nepalese spool is larger than those of other Southeast Asian countries. You reel in your line by rocking the spool clockwise between your thumbs and index fingers. The reel can carry up to 2,000 meters (over a mile) of line for high flying and is maneuvered by reeling in and out from the spool rather than by hand-manipulating the line. Steering the kite comes with practice.

The greatest fun comes from cutting another kite's string. With its coating of adhesive paste and ground glass, the string is as sharp and abrasive as sandpaper on your opponent's line.

The technique is to touch your rival's string and immediately reel out line at high speed. The Nepalese style of kiteflying is aggressive, and though the kites look simple, they are strategically designed for bringing down other kites.

During *Dasain*, Kathmandu's rooftops are covered with kitefliers who jump and shout "*Chet!*" when they cut another's kite line. Big speakers on the roofs blare the latest Nepalese pop songs. Fliers dance on the roofs while their friends are busy bringing others' kites down. While *chet* is the word universally used outside Kathmandu Valley, variants such as *va-chet* or even *hakkad* (believed to be derived from "high-cut") can be heard in the eastern mountains.

No organized kite contests are held in Nepal except for a local international festival held by the Japanese Embassy. The Nepali have started making kites with different designs representing their architecture and culture. However, these kites are not what a true believer would call "Nepalese kites." They don't deliver the thrill of the cut.

NIRMAL M. TULADHAR is one of two kitefliers from Kathmandu who were invited to represent Nepal at the Thailand International Kite Festival in Bangkok, 1994. He makes and flies his own kites. Ron Spaulding of Bangkok assisted in preparation of this article.

Pushing the Envelopes

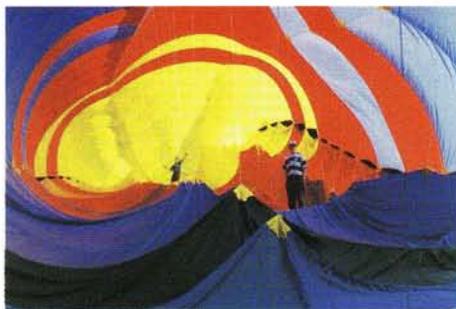
By Valerie Govig

Largest Kite?

Rumors cannot prepare you for the Megabite, the monster kite by Peter Lynn of New Zealand. Using 1,900 sq m (20,000 sq ft) of ripstop nylon, it seems to swallow the adjacent monorail full of gaping park visitors. From the inside (you can walk inside it when it's idle) it's Quonset-like, a superdome of a kite.

Peter Lynn, 49, and his aide-de-camp Philip McConnachie, were passing up meals to tend the behemoth during the World Festival of Kites at Epcot Center in Florida, September 9–24, 1995. In this pumped-up atmosphere the kite is indeed superlative and stupendous—but is it *actually* the World's Largest Kite?

The Megabite, at 55m long by 22m wide (approximately 180 x 72 ft), with a claimed flat area of 700 sq m (about 7,535 sq ft), was meant to surpass the previous



Above, Megabite makes its test flight (views are from inside and out). Right, Peter Lynn handles the lines during a launch at Epcot Center.



EPCOT PHOTOS: VALERIE GOVIG

record, set by the Dutch team in 1981, of 553 sq m (5,952 sq ft). However, *Kite Lines'* calculations from the structure's drawings show it does not.

Based on the fully stiffened body portion only (not the flapping or tail parts), we calculated that the kite has well over 400 sq m (4,300 sq ft) of projected, effective area.

Projected area has been the generally accepted measure of a kite's surface area. Peter Lynn has suggested that a proper measurement would take angle of flight into account as well. This higher standard, while it may be more exact, has not been used before for world records. For now, projected area is a consistent and serviceable gauge.

Peter Lynn cleverly designed the Megabite with zippers for transport in sections. He is making at least one other section to zip into the middle of the kite to increase its area. The enlarged Megabite is expected to clinch its world record indisputably and soon, perhaps in February. The system of zippered increments also will allow the kite to "grow" to meet future challengers (two or three are expected).

The kite's design is based on a trilobite, from a group of extinct Paleozoic marine arthropods which Peter has interpreted in soft kites, starting with prototypes in smaller sizes. Air intake is at the mouth and a pink

"tongue" valve holds the air inside to maintain lift in lulls.

Prior to the Epcot show, the Megabite took its first test flight in ideal winds in Argyo Park in New Zealand. During part of this flight it was flown by just one person. At Epcot, Megabite enjoyed a 12-person crew, was witnessed by tens of thousands of tourists and was seen on television. It flew in sessions of an hour or so for a total of over 40 hours.

Lynn pauses briefly during a launch to speak of Megabite: "It has impact," he says. "It will go to other big shows. Got to keep the presence up to keep the sales up."

Smallest Kite?

Every now and then someone makes a tiny kite (from a postage stamp, say) and thinks, Wow! This must be the World's Smallest Kite! Many such small kites have been made and their sizes recorded, but their flight quality has not been documented. There are no hard-and-fast standards for what constitutes acceptable flight—and flight is what makes the object a *kite*.

None of these esoteric debates deterred Kelvin (Kel) Krosschell of Rochester, Minne-



A sewn rokkaku kite by the Takeda family of Japan stands in view of Epcot's "big golfball."

EPCOT the really big show

Bruce Flora had dreamed of it for six years but was given less than three months to put together the World Festival of Kites at Epcot Center in Walt Disney World, Florida. The 15-day show in September featured kites from the 11 countries having a pavilion at Epcot.

Though visitors were not invited to fly kites themselves, the exhibits were extensive and thoughtfully handled. Children made kites at workshop tables and, in a break with Disney precedent, went "backstage" to an open area to fly them.

About 30 kites were paid to organize, show or demonstrate kites. (There was a decent budget!) Hundreds of thousands of people were exposed to kites.

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**Kelvin
Krosschell
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square-inch
kite on his
chest. (Can
you see it?)**



sota, who has been making micro kites for over a year. News about him impressed the Epcot people enough that they invited him to their World Festival of Kites. In the American pavilion, he strolls, chats and flies his tiny kites—in dramatic contrast to Peter Lynn's Megabite on the parking lot.

Inspired by the kites of Illinois miniaturist Charlie Sotich, Krosschell tried dozens of materials and techniques before discovering that a gently scored square of lightweight aluminized Mylar wrapping paper reduced weight. A simple fold became both spine and cross spar, producing a "unibody kite."

Krosschell set challenges for himself, to go from a kite with one-inch dimensions to half that, then half, then half... Having reached 3/8-inch dimensions (1/16-square-inch area), he says he has "already drawn another line in the sand. The rule is that I won't go public on a size until I have the next size down and working." He intentionally makes his kites slightly undersize, to leave no doubt that he is within the measure. He mainly stays with Eddy kite proportions, but has done small kites in a number of forms. Lately he's feeling the limits of his materials, that they may force him to go back to frames to take further weight out.

Line is a problem, too. Krosschell used Dacron polyester, but it ended at 20 microns, so he bought yardage of the softest nylon in his local fabric store and pulled fibers out of it. Even under an optical microscope it was hard to see. He tried blackening it for contrast—but it added weight!

Unable to tie bridle knots at mini sizes, Krosschell learned to attach the tow line (just aft of the spar crossing) from a tiny dot of glue touched in place by a needle.

Krosschell says that at the micro level, he is "forced" to use tail. (There is debate about the propriety of tail in an attempt to be "smallest.") His tail is polyethylene, sliced exceedingly thin and carefully stretched until "all the molecules are lined up."

And how does it fly? On about a foot of line it is reasonably stable. The angle varies but the kite stays above the horizontal.

This is no easy game but Krosschell is committed to it. He has posed a challenge to the readers of "SKIL," the newsletter of the International Friends of Small Kites. He says, "I think I'll run into the limitations of me as a human before I run into the limits on what the kite will do."

As the Clock Ticks: New Records

August 24, 1995

Raymond G. Bethell of Vancouver, B.C., Canada has set another Bethell-style record in multikiteflying. Each year at the Washington State International Kite Festival in Long Beach, Washington, Ray flies more kites at one time, or for a longer period of time—or both. In 1994 he flew three stunts for 12 hours 2 minutes, *nonstop*—a major effort for anyone, let alone a guy of 66.

Friend Alec Marshall of Burnaby, B.C. says that he and Ray (now 67) "talked about doing something different this year" and hit upon simultaneously flying full-size kite

stacks, from the waist and each hand.

After doing trials in Vanier Park, Vancouver, the friends were ready. They set up in Long Beach at 6:30 in the morning. No wind, but by 8:00 three Kestrel stunt kites went up from Ray's waist. After doing ground passes and a dive, Ray sent up a two-stack from the right hand, then another two from the left—a total of seven kites.

Witnesses signed on a round-robin basis to assure Ray's full time-span was covered. Ray did more than fly; he did rare maneuvers, including his "maple leaf split," in which the waist stack shoots up at dead center while the two other stacks veer off right and left like the three points of the maple leaf. The crowd loved it.

At about 9:15, the wind increased to 16 mph and "Ray was really having a tough time," Alec said. "Every time he passed the stacks through the power zone he was pulled 100 feet or more. At about 10:10 there was a loud snap. One of the left-hand stacks' lines

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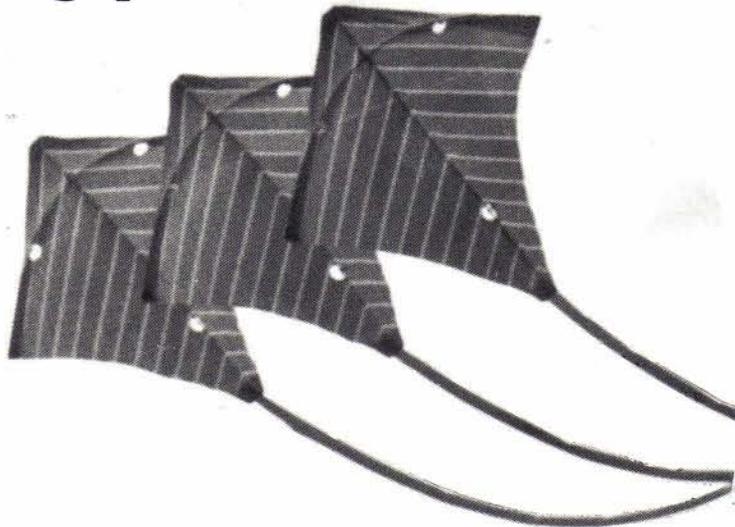
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FOR THE RECORD . . . Continued

had broken. Ray landed all three stacks. The official time was 2 hours 11 minutes. Most fliers could not have kept up one stack for just 11 minutes in that wind."

—from a report by Alec Marshall

September 17, 1995

"Astro" is the fitting name of the new World's Largest Windsock, flown at Cervoling du Touquet kite festival in France. Weighing 1,300 pounds, Astro measures 80 feet in diameter at the mouth, 40 feet at the exhaust and 400 feet in length—"an auditorium," according to Bob Anderson of California, who subsidized and supervised the project.

Though the builder, Dave Green of England, took only two weeks to sew the Astro, he and Anderson spent a year in planning and design. Anderson said the venting of this colossus was "different," allowing it to open and start rotating in 4 mph winds. But in its half-hour "flight" at Le Touquet, Astro never rose above the ground more than four or five feet, "maybe up to 50 feet in gusts." Is that "flying"? Is the Astro a tubular kite?

"Naw," says Anderson, "I don't want to throw it into that arena. It's just a wind-sock." HMMMM.

Whatever you call it, the Astro is BIG. Anderson claims it could house seven Goodyear blimps!

Just moving the Astro around is a massive task. Taking the sock from the Greens' workshop to the transport truck called for a crew of eight. The men first muscled the 85,000 sq ft of fabric into its monster bag (10' x 5' x 5'). This alone took hours. A car was used to drag the sock to the semi and then they had to lift Astro into the truck using pipes as levers.

Can Anderson explain why he does this? "Toys," is all he says. "Toys." —V.G.

October 24, 1995

A new "record" for kite buggy speed was set by Jason Furness in Pembrey, Dyfed, Wales. Using a homemade four-line parafoil, he achieved a speed of 48 mph, certified with timing gate, radar gun and videotape.

From the "Buggy Newz" newsletter, the Internet and other conversation, we know that 48 mph is not a "real" record because speeds of over 50 mph have been achieved repeatedly. Trouble is, those claims are based

on buggy-mounted speedometers which are neither accurate nor verifiable by third parties. By the rules, the best paperwork wins.

Meantime, Corey Jensen, editor of "Buggy Newz," hollers that "Top speeds are *nothing*. The only speed records worth anything are those made on a reaching run (across the wind) and backed up with another in the opposite direction." True enough, a system like Jensen's would level out wind variation and give a clean comparative of buggy skills. But for now we would just like good documentation of absolute speed in any wind.

—from a report by Mick Parsons, Wales

November 14, 1995

Most Box Kites Flown in Train—ever heard of this record? Us neither. But Richard Dutton of Hamburg, New York created it when he flew 101 two-foot Buffalo Box Kites at the Australian National Championships and World Cup in Lakes Entrance, Victoria, Australia.

Ideal weather contributed to the spectacle, in which each kite was individually numbered and signed by participants, including Dick Hargrave, great-great-grandson of Lawrence Hargrave, inventor of the box kite. For an impromptu finale, the kites were flown as a 300-foot arch—a surprise to those who doubted an arch of box kites could fly.

—from reports by Richard Dutton and Meg Albers, Buffalo, New York

January 12, 1996

French Canadian Bernard Voyer became one successful skier among many trying to reach the South Pole during the same general time period. Voyer's distinction is that he's one of the few to use kites for added propulsion. (See also story on page 25.)

Voyer took 63 days to cover 1,500 km (930 mi), averaging 23 km (14 mi) per day, pulling a 400-lb sled of supplies. For Voyer the deed was not unusual; he's been trekking to remote places for 20 years and has already been to the North Pole. This was the first time he tried kite traction, which no doubt gave him an advantage over the other adventurers (from England, Norway, Poland and Russia). The British team using a Spider Modulus kite had to quit before completing the crossing.

—from a report by fellow French Canadian Denis Audette



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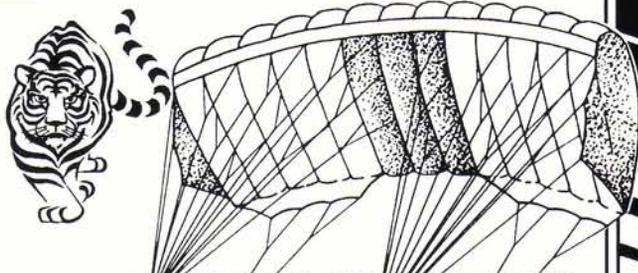
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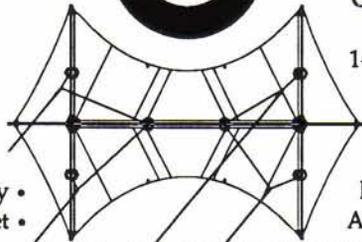
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Skiing the Beach

Article by
Steve McKerrow

Photographs by
Debbie Rosen McKerrow

Stan Rogers is loading his six-pack of delta stunters into the battered VW van he calls “my kite bus” when a man and his kid wander up. The man and kid study the odd contraption sitting on the sand beside the van.

The man squats down to read the logo stencilled along one of the contraption’s bright blue tubes: XF95 Ski the Beach Cruiser. He eyes the web seat and its safety belt, the three ski-like runners—one at the front and one at each side—and the flag on the pole behind the seat.

Finally, the man asks, “You pull this on the beach with kites?”

“Yes, but there isn’t enough wind today. You need a good wind to go cruising,” answers Rogers, with the air of a proud father.

The man shrugs. “That’s not so strange, I guess. Yesterday I saw someone on skis down here, being pulled along by kites.”

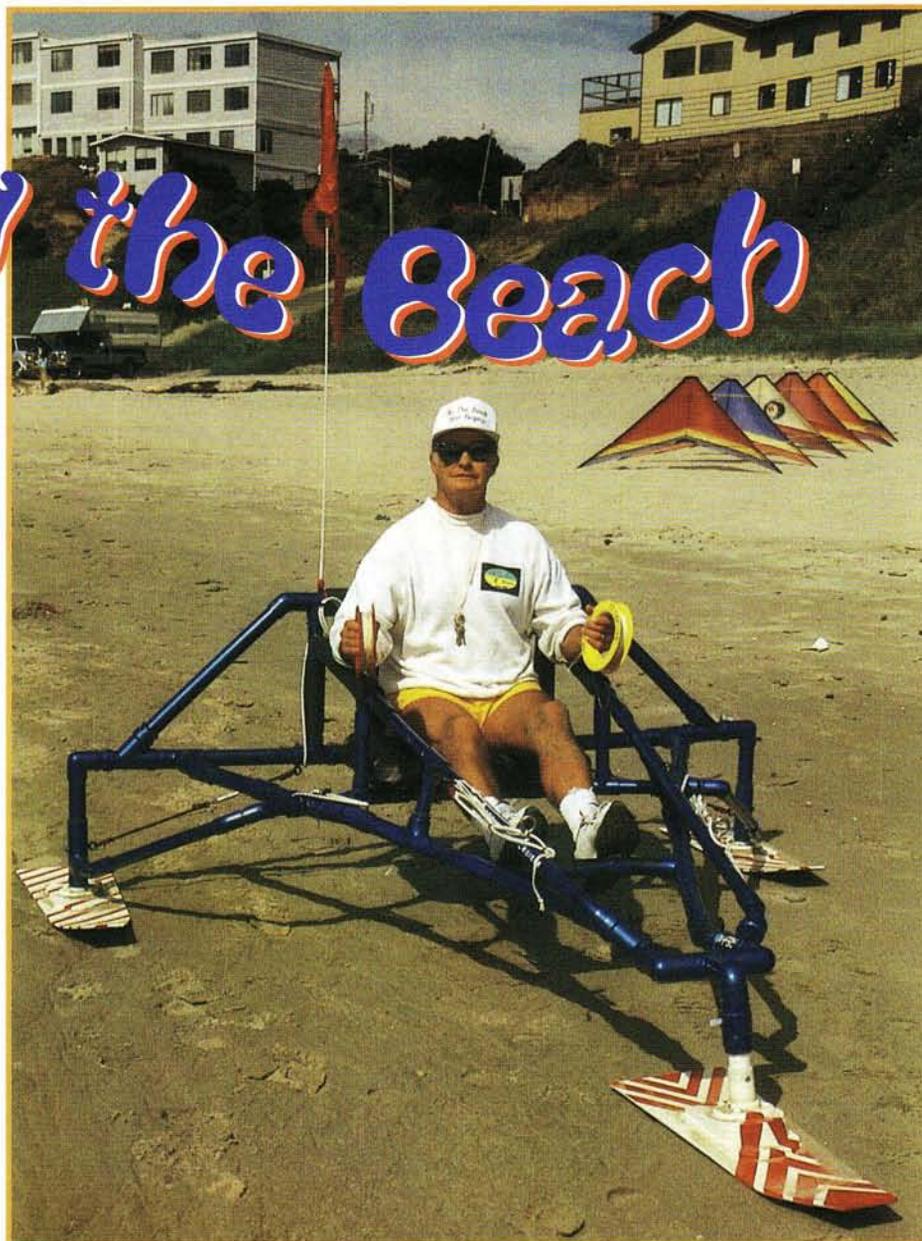
“Yeah, I had a good wind yesterday. I went two miles,” says Rogers affably, in a high voice reminiscent of Gene Kelly.

Rogers points to his baseball cap, decorated with the slogan “Ski the Beach Stan Rogers.” His sweatshirt, worn over yellow short shorts, bears the same slogan. “That’s me,” Rogers says, as he retrieves a pair of beach skis from inside his van.

Skis, Sleds, Books, Videos

The ebullient Rogers, 70 years old, has an infectious enthusiasm and dogged persistence. He tirelessly promotes his contention that skis, not wheels, are the way to get going behind kites on the sand—or grass.

Rogers contends that anyone with a moderate mastery of stunt kites can skim before the wind on his stubby skis or his



Sitting pretty in the flying position on his SS Cruiser, Stan looks like a bulldozer operator with dual hand controls—albeit a casual one.

unique sled, the SS Cruiser. He says these skis can negotiate the surf-washed hardpack (hard sand) favored by buggy kites or the soft sand at his home in Lincoln City on the Oregon coast. The skis can be powered by a variety of kites, but Rogers favors two-line stunters over the quad-line soft kites used by buggy riders.

Rogers wrote and self-published a book on the subject, *Ski the Beach*, and produced a demonstration video. He distributes the skis by mail order and sells them to kite shops. He sells about 12–16 pairs annually (the skis cost \$29–\$89, depending on the seven sizes). He acknowledges that it’s a very narrow market.

As for his beach sled, the SS Cruiser, Rogers isn’t sure there is a market yet. He made this first model as an experiment, try-

ing to find a way to make kite traction safer and easier. He admits it’s a tricky thing to stay up on skis and fly kites without bumping into things on the beach.

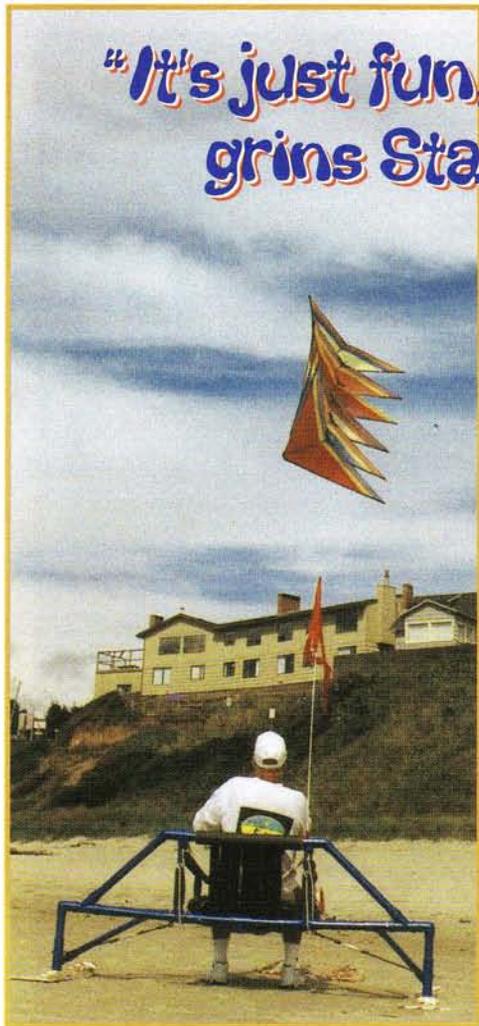
His prototype SS Cruiser is for sale—he figures the parts and effort combine for a \$200 cost, but he’s open to offers. He has plans to make another cruiser, somewhat smaller and lighter.

“People say I’m an innovator, but I’m not really. I’m just interested in the challenge of coordinating kite power,” says Rogers modestly.

Hooked on Kites

Not long ago, Rogers was a retired government engineer with no interest in kites. A Texas native, he retired to Oregon after 17 years monitoring the construction of the

"It's just fun, man. That's all there is to it," grins Stan the Ski the Beach Man.



Stan skims the sand in the Cruiser by flying the triple stack from his seat.

Alaskan oil pipeline for the U.S. Department of the Interior.

Rogers' son, Stanford, came home on leave from the Air Force in 1988 and went to work for Steve Lamb at Catch the Wind Kite Shop in Lincoln City. One day, Stanford came home with an \$18 kite and Rogers was amazed—that his son paid that much money for a kite. "I was furious with him," recalls Rogers, who is a widower. "I mean, \$18 for a kite? Who could spend that much? Then Stanford came home with a \$120 stunt kite and of course, I had to try it."

Rogers laughs and looks around the beach as if he doesn't want anyone to hear. "After that, I was hooked. Know what I spent on kites in one year? \$15,000!" And he laughs even harder.

But he got tired of just flying the kites, so he set his technical mind to what he could do with them. He heard about Lee Sedgwick using skis on frozen Lake Erie and became aware of the buggy revolution and kite traction on water. "Then I just got the idea I could ski the beach."

Rogers cut his first pair of skis from the deck of a wooden skateboard, which he

flipped over to use the built-in curve. He rigged a makeshift binding and found the skis would, indeed, skim the sand when he flew patterns through the power window. But the wear factor was fairly high and the resistance factor was rather substantial.

Soon, he turned to more durable, high-density plastic with a fair amount of flex, and experimented with shapes and lengths. He kite-skied more than 100 miles as he developed his current line of models.

The seven sizes of the skis are based on the skier's weight: from 24 inches long for skiers under 100 pounds to 48 inches for skiers over 220 pounds. A simple criss-crossing of bungee cords make the bindings and a skier can go with or without shoes.

Recently, Rogers has been improving the bindings, by attaching a spring device that allows the skier to step into the skis once the kites are flying, instead of having to strap in before taking off.

The Cruiser

Rogers worked out the design for the beach cruiser in sketches. He bought a supply of thin wall PVC piping and connectors (just like you would use for a new basement bathroom), spray-painted them blue and assembled the prototype.

The cruiser measures nine feet long and nine feet wide, and can disassemble into three units that can be transported in a car. When you sit down, the frame offers a noticeable amount of flex because of the plastic construction. Yet, the sled weighs only 64 pounds, a significant consideration, since kite sledding is pretty much a downwind affair. Rogers has to tug the cruiser back to its starting point.

"I'd like to figure out how to make it tack across the wind. It's not too bad, though," he says, demonstrating the sled's relative lightness by pulling the tow rope with a single finger.

Typically, to power the cruiser he flies a triple stack of ultralight SpinOffs, from Top of the Line Sportkites. The control lines are led through rings at either side of his seat.

Sand skis do everything Stan Rogers says about them, no less and no more. David Town of Petersburg, New Jersey tried them to see for himself.

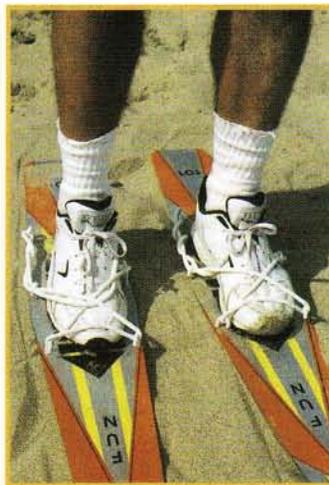
Back in 1985, Dave set a record for kite traction without vehicle: 2.7 miles along the Jersey shore strapped to an eight-stack of six-foot Flexifoil kites—with only his

A User's Report

worn-out sneakers between his body and the sand. Nowadays Dave is big on buggies (he's piloting his second one, having worn out his first buggy). But he agreed to stop buggying for a while to try the sand skis. He definitely found them much faster and smoother than sneakers.

But "buggies spoil you," he says. With the skis, "You can't get an edge to steer by. The kite alone doesn't give you enough steering, so you have to go in the direction of the wind—there's no control to let you go *against* the wind."

"When the kites get in the power zone, the nose lifts up and we do a wheelie," he announces. Although the nose runner



Stan's feet easily slide out from the bungee cords in a fall, so he has none of the limb-threatening confinement of snow skis.

looks as if it should swivel, like a buggy's front wheel, it slideslips in turns, which Rogers initiates by leaning his body as if he's on a toboggan. He figures top speed is somewhere around 85 percent of wind speed, so he doesn't begin to think about beach cruising or skiing until the wind is cranking 15 miles an hour or better.

"But that's good," he says, "because on the beach that kind of wind drives people away and you can get some room."

Rogers cautions that beach skiing or cruising with kites is not for novice

fliers: "You've got to be proficient enough that the kite is just a means of propulsion. You're going to have to fly the kite for a year before you're ready."

And when you're ready? "It's just fun, man. That's all there is to it," grins Stan the Ski the Beach Man. ◇

For more information on beach skiing or the SS Cruiser, contact:

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By holding the Festival in the city of Taejon we are giving participants the added opportunity of experiencing the many tourist attractions in the area. These attractions include the Yusong Hot Springs, the Expo Park (located on the site of the '93 Taejon Expo) and the historically significant towns of Kongju and Puyo.

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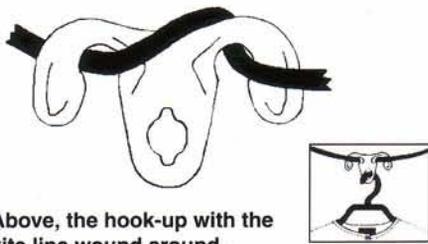
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Hooking Up & Pulling Out

1 Hook-Ups for Your Kite Line

From Alan Bole, West Kirby, Wirral, England: I have discovered "hook-ups," which are intended for hanging coat hangers on washing lines. I use them to attach drogues, spinners or windsocks to the kite line. They are quick to attach and it is easy to adjust their position along the line.

I find that if I put the line under, then over the top and under again, they won't fly off the line. To prevent tangled drogue bri-



Above, the hook-up with the kite line wound around.

Right, the hook up in its intended use.

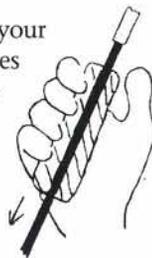
dles, a loop of line at the rim of the drogue will hold the "hook-up." It works like snapping the swivel to the rim of the drogue.

You can find hook-ups in stores where you would buy closet supplies. They sell for about \$3.00 U.S. for 12 hooks.

2 Pulling Out Your Spars

From Dominick M. Furlano, East Stroudsburg, Pennsylvania:

An arrow puller may be your best friend when it comes to extricating your kite spars from their vinyl tubing. This archery tool is designed to wrap around arrow shafts and easily pull them from target mats without damaging the shafts in the process. It also



An arrow puller saves your hand wear and tear.

makes twisting and pulling spars out of vinyl tubing a snap.

The arrow puller's non-skid gripping material conforms to any diameter spar. It is effective because it increases the surface area being pulled and evenly distributes the hand's force over the length of the spar covered by the puller. This saves your hand from wear and tear and helps prevent stress damage to spars—especially fragile carbon composite types.

The particular arrow puller I've found to be best is the closed-cell synthetic rubber model (approximately 4" long) made by Martin Archery, Inc., found at nearly any archery supply store for about \$4.00.

It Works for Me is your place to share your favorite kite hint or trick. Each published item earns your choice of (1) any book(s) from the Kite Lines Bookstore to a value of \$16 or (2) a one-year subscription or extension to *Kite Lines*. Send tips to *Kite Lines*, P. O. Box 466, Randallstown, MD 21133-0466, USA, or fax us at 410-922-4262.

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MY FRIENDS THE Düsseldorfers

Article & Photographs
by Mel Govig

DÜSSELDORF: Storybook land of clean streets, trimmed hedges, picture postcard houses along trash-free canals, haute couture, sidewalk markets, good beer and kites (marvelous kites) and home to the Düsseldorf Drachenfreunde (DDF).

It was my pleasure to visit this kite club in its natural milieu on the banks of the Rhein after seeing them abroad in Europe, Asia and America.

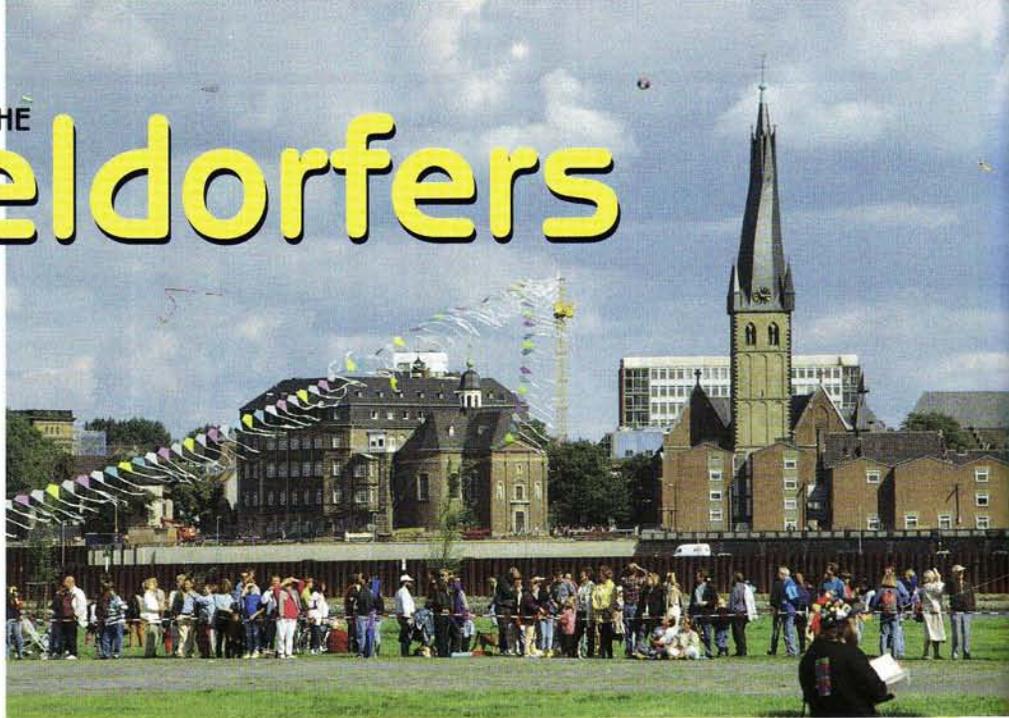
There are many skilled kitemakers around the world who share the stage with the DDF. But the Düsseldorfers have created a sort of trademark collection of lovable, even laughable kites and kite tricks that bring fun to kids and spectators. Often (but not always) these are soft kites.

Started in the late 80s, a period of increased kite activity throughout Germany, the DDF gathers on a regular basis to make kites and share ideas. According to Frank Schwiemann, "We used to make a kite a week, comparing, criticizing, improving the designs." In 1991, the DDF became organized, with officers and a treasury, "but it didn't hurt us" says Rolf Stürm. In fact, the DDF has twice provided presidents (Rolf Seligmann and Rolf Stürm) to the main German club, the Drachen Club Deutschland (DCD).

Most of the members I met had made a wide variety of classic and modern kites before doing anything original. The learning process gave each of them a bag full of kites.

Jürgen Ebbinghaus might be a typical Düsseldorf Drachenfreunde. He bought a kite on holiday. He flew it on the Rheinweisen, saw other kites, asked questions, bought a few kites at Drachenladen (Peter and Myung-Soon Rieleit's shop), met the DDF and started making kites—a large Eddy, then stunt kites, an Adrian Conn-design dragonfly, a Flexifoil. An inflated dragon was his first real figure kite. His next project? "It has to be a soft kite, an improbable flier, amusing to children."

Jürgen and the others have been influenced by respected kitemakers Til Krapp, Werner Hohenhurst, Karl Hussmann and, more recently, Peter Rieleit.



Top, the twisted spire of St. Lambertus accents the Rhein while Willi Koch's arch ribbon train draws spectators.

Above, Rolf Stürm's famous inflatable triplane dips and turns.

Above right, Walter der Falter is a conservation logo in kite form by Jürgen Ebbinghaus. Right, Rotokkaku by Karl Hussmann can be outfitted with a variety of whirligigs, here seen with three counter-rotating vanes. Bottom, Peter Sauer's young daughter can lift his soft piano 30 feet in the air.



GABBY EBBINGHAUS



In Düsseldorf, kitemakers have a wonderful sense of humor about both their Germanness and their kites. In their borrowings from other designers, they not only credit the designers they copy, but often do so long after their creations have lost even casual resemblance to their ancestors.

The glue and lashing that hold the DDF together are families and fun. Husbands, wives, children and parents of kitemakers rally to help with children's workshops, set up tents, provide food. Almost any kite fly by the DDF includes candies parachuting from the kites of Rolf Stürm. Each kite fly becomes a family picnic.

If you see Düsseldorfers on foreign soil, they give their whole hearts to putting on a show. They are always open and friendly,

especially with children. But, to truly appreciate the Düsseldorf drachenfreunden, you have to visit them on the banks of the Rhein. You have to experience their warmhearted hospitality, so contagious that you begin to be nicer to the people around you. You have to see them among their family, friends and, always, the children. ◇





PETER RIELEIT



Big soft kites by Peter Rieleit:
Left, a great white whale smiling above the waves.
Above, a giant seagull.

SPECIAL GUEST

Shape & Stability in Soft Kites



By Peter Rieleit

My sparless steerable kites function mainly by means of mechanical and aerodynamic effects, produced by rib panels connecting the kite's back and face panels. These internal rib panels determine the kite's structure and profile.

Understanding basic aerodynamic principles will help you avoid mistakes so you can create something new: If you can eliminate the frame, you can build a simplified kite. You'll reduce the airfoil's components to just fabric and line. The internal structural stability of the kite's flexible body results from and depends upon dynamic pressure. Keeping the right attack angle forcefully determines the airfoil's shape.

How does all this work? I'll begin as a theoretician and give you a couple of cues and formulae you can look into more deeply if you're interested.

In 1738 the Swiss physicist Daniel Bernoulli published the famous Bernoulli Equation, which says the potential and kinetic energy in a gas is constant for each unit volume.

$$Q + P = p \cdot V^2 / 2 + P = P \text{ (gas)}$$

Dynamic Pressure
+ Static Pressure
= Total Pressure

The basis for this formula represents the "Equation of Continuity":

$$A1 \cdot v1 = A2 \cdot v2$$

This equation says if both volumes (V1, V2) are the same, the speeds are inversely proportional to the areas (A1, A2) through which the medium must pass. Air being compressible, the formula applies up to a maximum airflow velocity of about 600 km/h (approximately 370 mph).

The kite's drag depends on its shape, size and dynamic pressure:

$$W = Cw \cdot Q \cdot A$$

FORMULAS' SYMBOLS AND DIMENSIONS:

A	= area	m ²
Cw	= resistance coefficient	nondimensional
p	= air density	kg/m ³
Q	= dynamic pressure	N/m ²
v	= airflow velocity	m/sec
V	= volume	m ³
W	= airflow resistance	N

But theories are dull. Let's leave them behind and check how airflow works with a simple experiment.

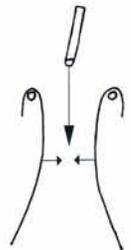
All we need are two heavy paper strips 60 x 100mm (about 2½ x 4 in), a piece of wire 200mm (8 in) long and a drinking straw.

First, bend the wire into a curved shape, with one leg 65mm (2½ in) long, the other 105 mm (4 in) long and a 30 mm (1 in) space between the two legs. Fold the heavy paper strips' shorter sides at 10mm



(½ in), enough to bend and curve both strips over the wires' length.

Now, hold the wire's long leg so the shorter leg faces you and hang the heavy paper strips on the wire with their convex sides facing each other. Blow through the straw down into the gap between the heavy paper strips. Those who don't know this principle are amazed that, contrary to their expectations, the strips are attracted to each other when air flows between them.

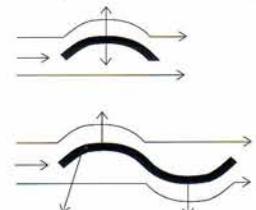


So, when we force air to travel farther around one side of an object than the neighboring or surrounding air flowing around the object's other side, we get different pressures on the object's (kite's) external surfaces.

Some will still be skeptical, but with the drinking straw you can aim the airflow precisely. Experiment on your own with irregular shapes—you'll soon see how this works.

After these experiments you'll know what causes negative pressure. In airfoils, we get reduced pressure where the air has to flow faster. We get greater pressure (sometimes too much pressure) where the the airflow's speed is reduced (for example on the nose and leading edge). In an airfoil with a uniform curve caused by airflow, we reduce the air pressure on the back which amounts to an upward force (lift) on the airfoil.

If we reduce the attack angle in order to reduce the line tension, with a uniformly curved profile the airfoil will be unstable and will yaw to one side. To prevent this, you can give your airfoil an S-



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SPECIAL GUEST . . . Continued

shaped profile. Your kite will then position itself against the airflow because of the reduced force in the forward area. This way stabilizing forces result proportionally to the airflow's speed. These forces keep the airfoil in the right attitude. You can apply these effects to sparless kites in building an airfoil that flies well.

A kite should be able to keep its shape. Doing this depends on pressure inside the kite's body. This pressure relates to the internal dynamic pressure at the point where the air enters the kite's body. As dynamic pressure is greatest on the airfoil's leading edge, plan an opening there so your kite inflates well.

Dynamic pressure (which increases as the square of the airflow's velocity) and the inflating opening's size determine how the airfoil inflates. Because air resistance depends on the C_w value of the airfoil, it can easily have a thick profile.

Unfortunately, I don't live by the sea and I like my airfoils to be able to fly in light wind, so a thicker profile suits my needs best.

When you understand all this, you can easily build a functional sparless airfoil that can fly in a wide wind range.

But although all this theory is true, "God is in the details," as Mies van der Rohe said. Since these kites are soft as pudding, drag tends to pull the airfoil's ends backward. This deforms the airfoil's central zone, making it flap in high winds and on long lines.

Because of this, you should keep the forward lift force in a reasonable proportion relative to the opposed downward rear force created by the low pressure. This way you'll avoid the otherwise inevitable airflow disturbance.

I had to try many kite forms following the principle of trial and error to get good results. For this I thank my wife Soon Rieleit for very generously donating fabric.

I build my kites according to physical and aerodynamic rules. I first have the idea, then I think about how it could be realized. If I try a new profile or shape, I make lots of attempts and with each one I improve the profile because I can see which types are working and which are not. But during the whole process, I follow as my principle that everything has to be as simple as possible. 

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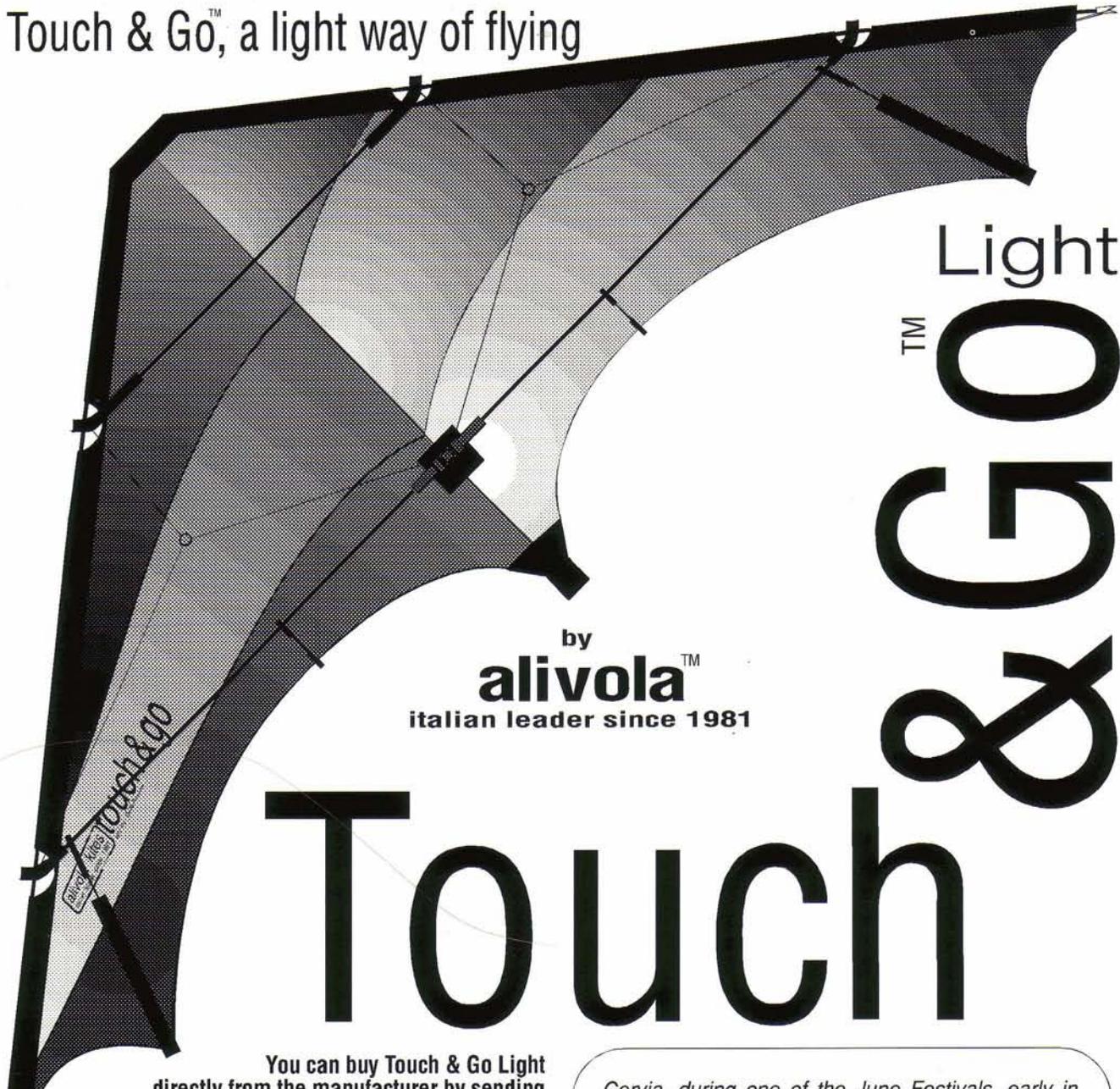
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Dimensions: 227 x 103 cm (91"x42")
Weight: 280 grams
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Leading Edge: Dacron
Sail: Carrington K42 ripstop nylon
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Wind: very light to medium
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Project Designers: G. Accascina & L. Pazzotti

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dyneema SK65
included

Cervia, during one of the June Festivals, early in the morning.

Calm sea, nobody on the beach.

Very light land breeze and a perfect silence.

I've a Touch & Go Light flying with two very thin lines of Dyneema.

It is flying horizontally, full and light, just over the water.

I move slowly along the water line and the Touch & Go follows me on the sea.

I notice somebody behind. It's a guy from Genova out this morning as I am.

I give him the lines and I look at him and the kite, flying and dancing together.

This little magic thing between us remains in the air all the day, even when the beach is full of voices and kites.

At the end of the day the guy from Genova asks for the kite and he goes back home with the Touch & Go in his bag.

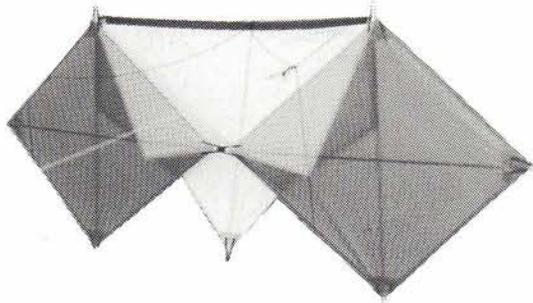
One month later I receive a photo from another beach, close to Genova: the guy with the Touch & Go flying on the beach.

The light in the photo looks like the light early in the morning.

Guido

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IF IT'S ABOUT KITES, the Kite Lines Bookstore probably has it—the common, the rare, the foreign, the domestic, the informative, the artistic, the good—and the bad. We carry nearly all the kite titles in print, even ones that give us a lot of trouble to obtain for you.

The Bookstore gives no endorsement to any

title, but we do guarantee your satisfaction with our service. We want you to feel like you're in your local bookstore. Pick a book. Look it over. If it's wrong for you, you can put it back on our shelf. No problem.

Kite books often go out of print without warning. If you want any of these, we suggest you snap them up now!

NEW AND DYNAMIC!

The Tao of Kiteflying: The Dynamics of Tethered Flight, by Harm van Veen, in English. Some of the toughest questions about how kites fly are tackled by one of Holland's most respected kites.

Clear writing and diagrams show you what stability is all about, how to upscale and downscale, the brilliant subtlety of the fighter kite and how to make two simple kites. Softcover, 56 pp., \$12.95



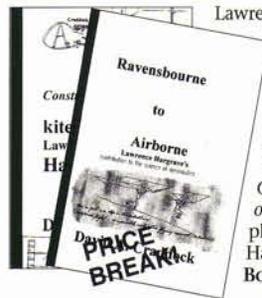
From AUSTRALIA . . .



Make Mine Fly by Helen Bushell. This 1988 edition is an excellent collection of tips, techniques, and hints (gathered since 1977) for beginners, experts, groups or individuals. Includes plans for the author's famous patented Trefoil Delta, plus several paper kites. Softcover, 90 pp., \$22.95



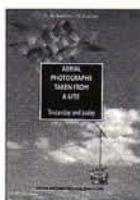
Kite-Folds by Beth Matthews. This improved edition has plans for 12 small kites, easily made from a single sheet of paper, plus the "Skyvelope." Clear instructions, lovely color photos, addendum on kites in teaching. Softcover, 36 pp., \$14.95



Lawrence Hargrave research by David A. Craddock, now in USA-printed edition at a price break: *Ravensbourne to Airborne* covers Hargrave's work on aerodynamics, gliders and kites, including his sketches of equipment, concepts, designs. No photos. Softcover, 57 pp., \$21.95
Construction Drawings for a Selection of Kites, companion volume of detailed plan drawings for a dozen moderate-size Hargrave kites. Softcover, 25 pp., \$14.95
Both books as package, \$34.95

From BELGIUM . . .

NEW in March! *Aerial Photographs Taken from a Kite* by G. de Beaufort and M. Dusariez, in English. History, systems, photos from the Kapwa Foundation archives. Includes a reprint of Batut's 1890 book. Softcover, 145 pp., \$39.95



From BERMUDA . . .

Bermuda Kites by Frank Watlington. Plans for five island kites, plus variations and hummers. Traditional methods and materials (flour and water paste: "a little cayenne pepper will keep away the roaches"). Tips and a little history. A charmer. Softcover, 24 pp., \$4.95



From BRAZIL . . .

Arte de Fazer Pipas 2 (The Art of Kitemaking 2) by Silvio Voce, in Portuguese. How to make 10 non-Brazilian paper kites. Softcover, 56 pp., \$6.95
Arte de Fazer Pipas 1 gives plans for 14 kites—half are Brazilian. Softcover, 50 pp., \$6.95
Both books as package, \$12.95



From CANADA . . .



Kite Crazy (the book) by Carol Thomas. Accompanies the video. Plans for fighters, dual- and quad-liners. Reliable text, black-and-white drawings. Softcover, 176 pp., \$25.95
Kite Crazy (the video) by SOMA Film & Video, Canada. Famous kites teach how to make and fly 1-, 2- and 4-line kites. Good clear instructions and lovely footage, VHS format, 102 min., \$34.95
Special book/video package \$57.95



Richard P. Synergy's self-published books convey lots of information and enthusiasm: *Kiting to Record Altitudes* tells everything that can go wrong with altitude efforts. Softcover, 72 pp., \$15.95
Stunt Kite Basics covers safety, social aspects, equipment and maneuvers (32 in all). Emphasizes success in competitions. Softcover, 142 pp., \$15.95



Fishing for Angels: The Magic of Kites by David Evans. A very pretty, colorful book. Great kite lore and flying tips (just avoid the kite plans). Softcover, 63 pp., \$12.95

CANADA continued. . .



Go Fly a Kite: The Kite Builder's Manual by John Bostel. Novel plans; pleasing drawings, but lacking dimensions. Old-fashioned techniques. Softcover, 80 pp., \$12.95

From CHINA . . .



Chinese Artistic Kites by Ha Kuiming and Ha Yiqi. The celebrated kites of the Ha family of Beijing. History, structure, decoration, flight. Over 80 kites in richly printed color. Good English translation. Limited supplies. Softcover, 160 pp., \$16.95

From ENGLAND . . .



A Beginner's Guide to Flying Indian Fighter Kites by Shirley Turpin. A well-compressed compendium of good advice gleaned from Stafford Wallace, British flier of Indian fighters. Discusses basic principles of fighter flying, line selection and handling, tuning, bridling, launching, changing direction, care, repairs, problem-solving. Simple but adequate black-and-white drawings. Softcover, 18 pp., \$4.95

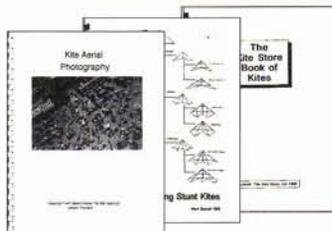
ENGLAND continued. . .

Mark Cottrell's books are homely and self-published, with plans that may call for a magnifying glass—but they are also some of the most honest, entertaining and useful in print:

Kite Aerial Photography. Three kite plans and a system to compare trade-offs among features in a rig. Source lists. Softcover, 44 pp., \$10.95

Swept Wing Stunt Kites. Analysis of stunt design elements; four plans. Softcover, 43 pp., \$11.95

The Kite Store Book of Kites. 10 plans for original Cottrell kites plus philosophy and a 5.25" disk for computer design. Softcover, 48 pp., \$13.95



Box Kites Making and Flying by Dr. Bill Cochrane. Plans for 17 types of box kites, from basic designs to Hargrave, Conyne and tetrahedral types plus three Cody styles. A little history and aerodynamics but out-of-date building methods. Color photos in an attractive layout. Scanty appendices. Hardcover, 96 pp., \$34.95



The Kite Lines Bookstore . . . Continued

ENGLAND continued. . .

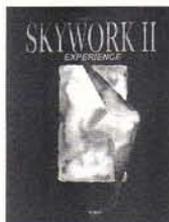


Kite Cookery by Don Dunford. Plans for four kites, with building methods. Includes Dunford's idiosyncratic aerodynamics. Softcover, 47 pp., \$4.95



Kites: A Practical Handbook by Ron Moulton and Pat Lloyd. A solid pack of information in slight disorder. Excellent drawings of 25-plus kites, including such English examples as the Hewitt Flexkite, the Chapman Navy Dove, the Pearson Roller and the Benson Scorcher 2. Fine sections on sport kites and parachuting teddy bears. Outdated appendixes; some color photos. Softcover, 255 pp., \$27.95

From GERMANY . . .



Skywork II Experience by Christine Schertel, in German. New volume following original *Skywork Experience*. Plans for 12 original, tested designs: nine stunters and three cellular kites, including a Hargrave, Cody and the "Revolver." Attractive paintings instead of photographs. Softcover, 52 pp., \$19.95

GERMANY continued. . .

Phantastische Drachenwelt: Die Festivals, Die Drachenbauer, Die Modelle (Fantastic Kiteworld: The Festivals, The Kitemakers, The Models), by Wolfgang Schimmelpfennig, in German. A handsome and colorful coffee-table book of real substance. Insert has traceable plans for the Relax delta stunter, the Libelle by Till Krapp, the Millestelle by Maurizio Angeletti and Martin Lester's Legs.



Hardcover, 128 pp., \$43.95 (no airmail shipping)

Books by Werner Backes, in German, compact and reliable, have good ideas, instructions, color photographs and drawings: **Drachen bauen** (Kitemaking). This well-rounded volume contains 35 kite plans plus numerous accessories and tips. Excellent, detailed drawings and fine photos throughout. Softcover, 128 pp., \$18.95 **Drachen aus aller Welt** (Kites from Everywhere). A 40-kite international sampler, including the Cloud Seeker, Cody, tetrahedral, rhombus and multicell boxes, parafoil, Roloplan and rokkaku. Also plans for trains, reels, aerial photography. Softcover, 128 pp., \$19.95 **Neue drachen zum Nachbauen** (New Kites to Replicate). Plans for 20 kites (including a diamond stunter) from available materials plus techniques and accessories. Good for workshops. Softcover, 128 pp., \$7.95



GERMANY continued. . .



Leistungsstarke Lenkdrachen zum Nachbauen (High Performance Stunt Kites to Make) by Peter Rieleit, in German. Plans for 12 original dual-liners (six deltas, three foils and three figure kites, including Superfly, banana, pteranodon). A stimulating, motivating, creative work. Includes fine charts plus tips on materials, sewing, knots and flying. Softcover, 96 pp., plus full-size fold-out airfoil pattern, \$24.95



... und sie fliegen heute noch—Geschichte und Geschichten um den Drachen (and They Still Fly Today—History and Tales about Kites) collected by Hans Snoek, in German. Poems, songs, tales, drawings, photos, plans from early days of Western kiting. Hardcover, 156 pp., \$34.95 **Band II (Vol. II)**, in German. Another fascinating scrapbook of kite lore. Hardcover, 156 pp., \$34.95

GERMANY continued. . .



Drachen mit Geschichte (Kites with History) by Walter Diem and Werner Schmidt, in German. Extensively researched, faithfully reproduced models from our rich kiting history. Brogden, Gomes, Grund, Hargrave, Kuznetzov, Lamson, Lecornu, Sauls, others. Detailed plan drawings and wonderful historic photos. Hardcover, 160 pp., \$29.95

From ITALY . . .



Aquiloni (Kites) by Guido Accascina, in Italian. A reliable mini encyclopedia, with kites in "family" groupings. Includes theory, techniques, sources, history, plans. Good printing including some color. Latest edition in standard pocketbook format. Softcover, 256 pp., now \$16.95



Aquiloni Acrobatici (Acrobatic Kites) by Cristina Sanvito and Giancarlo Galli, in Italian. The first Italian stunt kite book, a practical manual covering the basics and more. Graphics and

drawings are neat and clear. Gives a brief history, safety tips, basic-to-advanced techniques and maneuvers plus a book list and valuable *glossario* translating standard English terms into Italian. Softcover, 141 pp., \$19.95

From JAPAN . . .

Tezukuri Omoshiro Dako Nyumon (A Primer of Interesting Handmade Kites) by Eiji Ohashi, in Japanese. Both traditional Asian and modern kites are among these easy-to-make figure and box kites as well as Ohashi's famous arch train. Color photos, drawings, full details. Softcover, 100 pp., \$29.95



From The NETHERLANDS . . .

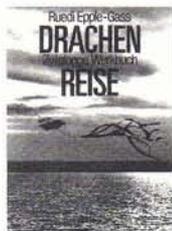
Two stunt kite books by Servaas van der Horst and Nop Velthuisen, in English, cover all aspects of the sport in up-to-date high-tech style. Well organized and printed, the books contain excellent drawings and photos, including some in color: **Stunt Kites to Make and Fly**. The first book includes clear plans for 10 stunters, some with novel touches. Softcover, 96 pp., \$21.95 **Stunt Kites II: New Designs, Buggies and Boats**. Plans for 8 kites plus advice on how to design your own. Emphasizes "power" kites, has plans for a buggy. Softcover, 96 pp., \$22.95 **NEW!** Companion diskette 2.0 for IBM-compatibles, prints out templates of S.K.II plans; also simulates stunt maneuvers, \$19.95



NETHERLANDS continued. . .



Kleine Papieren Vliegers (Small Paper Kites) by Harm van Veen, in Dutch. A very original, colorful little book with clear and detailed plans for 10 artful miniatures plus a tiny reel. Complete techniques, even splitting bamboo. Softcover, 32 pp., \$9.95



Drachenreise (Kite Journey) by Ruedi Epple-Gass, in German. Interesting black-and-white book. Countries visited and researched include Turkey, Vietnam, Dominican Republic, spots in the South Pacific, Latin America, Europe. Political overtones. A few drawings of biodegradable kites of these countries, plus poems and flying tips. Softcover, 125 pp., \$42.95

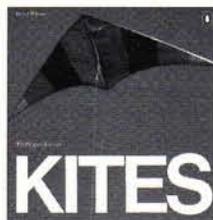


NEW! Drachen: Spiele mit dem Wind (Kites: Playing with the Wind) by Rainer Neuner, in German. Attractive introductory book with many color photos. Plans for eight kites (including numerous genki variants) and five wind toys. Geared to light winds. Minimal appendixes. Hardcover, 131 pp., \$39.95

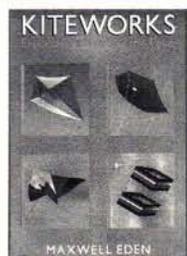
The Kite Lines Bookstore . . . Continued

From The UNITED STATES . . .

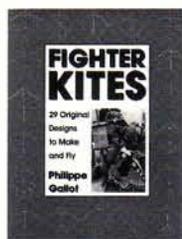
The Penguin Book of Kites by David Pelham. Called "The Bible," first published in 1976 and still recommended for all kitefliers. Plans for more than 100 kites plus solid, well-researched and -written aerodynamics and history. Color in half the book. Index and bibliography. Softcover, 228 pp., \$15.95



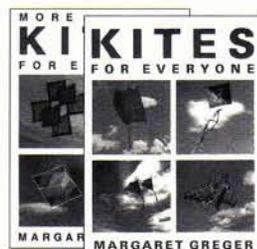
Kiteworks by Maxwell Eden. Revised edition. Hefty book with 50 kite plans (such as Yakko Stakk, Kaleidakite, Tri-D Box, Pterosaur) with detailed drawings based on material provided by respected designers. Sewing, aerodynamics, accessories and (un)related stories. Kite paintings, a few photos. Appendixes and index. Softcover, 287 pp., \$16.95



NEW! *Making & Flying Stunt Kites & One-Liners* by Wolfgang Schimmelfennig, in English. A wide-ranging and up-to-date book that emphasizes creativity. Superb technical drawings in color for six stunters and three single-liners designed by the author. A few oddities appear to have been introduced by the translator. Hardcover, 80 pp., \$19.95



Fighter Kites by Philippe Gallot, in English. Plans for 29 kites, tips on flying, tools, materials, games, accessories. Clear illustrations, adequate instructions. Watch out for metric conversions. Softcover, 96 pp., \$12.95

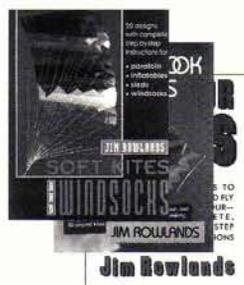


Books by Margaret Greger are ideal for beginner, expert or classroom: *Kites for Everyone*. Many well-selected kite plans shown in plain, straightforward style with variations and accessories. Second edition. Softcover, 136 pp., \$12.95
More Kites for Everyone. Some old kites, some new kites, plus more tips. Plans for 17 kites, from simple to complex. Softcover, 59 pp., \$9.95



Kite Precision by Ron Reich. A celebrated flier fully explains his maneuvers. Excellent sections on flying the Revolution and Flexifoil. Good introduction to team flying and choreography. Self-published, lots of low-resolution photos. Touches of humor. Softcover, 182 pp., \$14.95

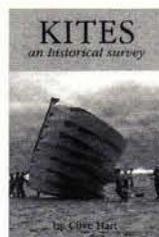
Books by Jim Rowlands have a few color photos within otherwise black-and-white pages of line drawings: *Soft Kites and Windsocks*. Same as British *Kites and Windsocks*. The best and most popular work from Rowlands. Plans for 11 kites (including whale, frog, parafoil and Flow Form), five windsocks, five drogues and two bags. Softcover, 104 pp., \$14.95
The Big Book of Kites. Same as British *Making and Flying Modern Kites*. Plans for 36 kites all on the simple side, plus materials, techniques. Softcover, 127 pp., \$14.95
One-Hour Kites. Same as British *Kites to Make and Fly*. Plans for 25 basic kites, including oversimplified Facet and stunter kites. Softcover, 95 pp., \$14.95



Books by David Gomberg are "homemade," lacking polish and photos, but useful to read: *Stunt Kites!* Thorough coverage of the basics plus advanced techniques. Maneuvers, tips, and proven advice from 20 well-known sport fliers; safety pointers. No kite plans or brand names. Softcover, 88 pp., \$11.95
The Fighter Kite Book! Flat in tone, but a good collection of information, mostly correct, about fighter flying. Includes plans for a basic fighter and rules for contests and competitions. Beware drawings of bridles. Softcover, 74 pp., \$8.95



Kite books by Wayne Hosking are uneven in style: *Kites*. Lavishly printed, colorful kite photos. Some good research on Asian kites. Kitemakers are unidentified. Softcover 120 pp., \$15.95
Kites to Touch the Sky. A homemade black/white book of plans for 32 basic plastic kites. Simple drawings, no photos. Softcover, 96 pp., \$9.95



Kites: An Historical Survey by Clive Hart. Revised, second edition (1982). Invaluable reference work with many black-and-white illustrations and photographs. Has the most extensive kite bibliography in print. No plans. Softcover, 210 pp., \$15.95

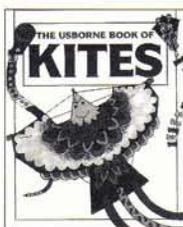


The Ultimate Kite Book by Paul and Helene Morgan. If it weren't for the exaggerated title, this book would be easy to recommend. Colorful, high quality illustration and printing. Extensive photos showing flying techniques. About six good kite plans, including a simple stunter and a tumbling star. Hardcover, 88 pp., \$19.95

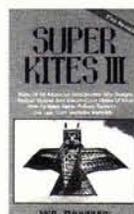
Make Your Own Kite (new kites) by John W. Jordan. Plans for nine original kites using unusual materials such as plastic foam. Clear and amusing reading from a genuine enthusiast. Black-and-white photos. Softcover edition out of print. Limited supply of hardcover edition, 90 pp., \$14.95



The Usborne Book of Kites by Susan Mayes. Cute, colorful collection for kids. Six easy kites, with clear, fully illustrated step-by-step instructions. Good introduction to materials, wind and flying. Many tips. Softcover, 32 pp., \$5.95



Super Kites III by Neil Thorburn. Many designs for delta-sled-box inventions. Tested, creative techniques using available materials (mostly plastic bags and wooden dowels). Some color photos brighten this "completely handmade" book. Softcover, 123 pp., \$8.95



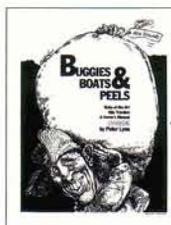
Art That Flies by Tal Streeter and Pamela Houk. An attractive anthology of unusual kites and philosophies from a 1990 Dayton (Ohio) Art Institute exhibit, featuring works by three noted artists. No plans. Softcover, 139 pp., \$14.95



Ski the Beach by Stan Rogers. All you need to know about sand skiing with kites. The only book on this topic. Safety concerns are explained throughout. Loads of charts. Scads of black-and-white photos. Homemade layout and drawings. Softcover, 100 pp., \$13.95



25 Kites That Fly by Leslie Hunt. Reprint of the 1929 original. Good old-fashioned kites (shield, elephant, yacht, etc.) using paper and wood. Hunt was a kitemaker for the U.S. Weather Bureau. Historical data and photographs. Softcover, 110 pp., \$3.95



Buggies, Boats & Peels: State of the Art Kite Traction by Peter Lynn. How to get started in kite buggying and kite-sailing. History, theory, how to "reach" (travel upwind) for top speed, how and when to turn, racing tactics, kite selection, buggy maintenance. Boat traction treated with similar thoroughness. Complete data on the Peter Lynn Peel. Second edition, softcover, 12 pages, \$6.95



The Compleat Rokkaku Kite Chronicles & Training Manual. Everything about the rokkaku challenges since the start in 1983. Includes reprinted historic material from *Kite Lines*, plus three detailed plans for making the rokkaku (by Mel Govig and Lincoln Chang) using modern materials. Appendix with resources. Softcover, 20 pages, \$6.95

an important announcement

Many loyal readers of *Kite Lines* have begged us to reopen the special subscription status of **Lifetime Subscriber**.

We have put them off, but after publishing the magazine for 19 years to an unusually high standard while facing increasing expenses, we think that now is the time to share the burden—and with it share some joy.

New planning is now in progress to bring out the best *Kite Lines* we can. Should we cut pages? or color? or the amount of time we spend on articles? Or should we ask for help and hold onto our quality? The last choice seems not only less abhorrent—but more satisfactory. So for a limited time, we are opening the **Lifetime Subscriber** category to our readers.

And as a way of acknowledging your vital importance to *Kite Lines*, we will print your illustrious name and home town in these pages (unless you prefer to remain anonymous). You can support *Kite Lines* at any of several levels:

□ **Angels:** \$3,000 or more/lifetime. Angels get a set of *Kite Lines* back issues (as complete as we have), a kite made and signed by Mel Govig, one copy of every *Æolus Press* publication or product (including a new contributors' pin) and receive their *Kite Lines* in a lovely Tyvek envelope by air mail for the rest of their life or ours (whichever comes first). And we publish your name in every issue of *Kite Lines*.

□ **Big Lifters:** \$1,000/lifetime. Big Lifters get a kite made and signed by Mel Govig, one copy of every *Æolus Press* publication or product (including a new contributor's pin) and receive their *Kite Lines* in a lovely Tyvek envelope by air mail for the rest of their life or ours (whichever comes first). And we publish your name in every issue of *Kite Lines*.

□ **Strong Pullers:** \$300/year. Strong Pullers get a new contributor's pin and receive their *Kite Lines* in a lovely Tyvek envelope by air mail for one year, as well as a copy of whatever we publish or produce in that year. And we publish your name in every issue of *Kite Lines* for a year.

□ **Steady Fliers:** \$100/year. Steady Fliers get a new contributor's pin and receive their *Kite Lines* in a lovely Tyvek envelope by air mail for one year. And we publish your name in every issue of *Kite Lines* for that year.

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WINTER 1989-90 (Vol. 7, No. 4)

China by Tal Streeter and Skye Morrison; How to Dye Ripstop; Modifying a Parachute; Stunting a Flow Form.

SUMMER 1990 (Vol. 8, No. 1)

New Zealand, Berlin, Washington (England); Parachute Stunter plans; Peter Lynn's Future Tech; Bobby Stanfield.

WINTER 1990-91 (Vol. 8, No. 2)

Dieppe, Montpellier, Bristol and Berlin; Stunt Kite Survey; D'Alto's Whitehead kite; Largest Eddy record.

SPRING 1991 (Vol. 8, No. 3)

Whistling Kites of China by Tal Streeter; Gomberg on Kite Pins; Angle Estimating; Wind Shot stunter plans.

SUMMER-FALL 1991 (Vol. 8, No. 4)

Pierre Fabre in Japan; Kinnaird on Rokkakus; Kocher's Obtuse Tetra; Huntington Beach scandal; Peter Malinski.

WINTER 1991-92 (Vol. 9, No. 1)

Stunting in Italy & Poland; Gubbio (Italy); Painless Parafoil plans; Painting Ripstop; Roberto Guidoni.

SPRING-SUMMER 1992 (Vol. 9, No. 2)

André Cassagnes; Thailand and the Natural Fibers Festival; Christmas Island feats; Stunter Survey; George Peters.

FALL 1992 (Vol. 9, No. 3)

Castiglione, Le Touquet, Barcelona, Ostia; Arch Ribbon; Niagara Falls; Tangles; Ianuzzi's Featherlight; Kim Petersen.

WINTER 1992-93 (Vol. 9, No. 4)

Hamamatsu; Kite Power, with traction chronology; fighters survey; Dieppe; GX-3 plans; Ron & Sandra Gibian.

SPRING 1993 (Vol. 10, No. 1)

Guatemala; Java; fighters; Celeb Rokkakus; Travel Tips; aerials of Ireland; quad-line Propeller; Jørgen Møller Hansen.

SUMMER-FALL 1993 (Vol. 10, No. 2)

Adrenaline tour of India; István Bodóczy; Crowell's Cross Deck; Sac City Festival; Kites at Pyramids; Tony Wolfenden.

WINTER 1993 (Vol. 10, No. 3)

North Sea events (Terschelling, Scheveningen, Fanø); Kite Camp Caravan; Rendez-Vous Mondial in Canada; Sheragy's Butterflies; Wolfgang Schimmelpennig.

SPRING-SUMMER 1994 (Vol. 10, No. 4)

Kite Sailing; South America: Colombia & Brazil; Buggy events + Scoot Buggy & Wheels of Doom plans; Australia's Bondi Beach festival; Reza Ragheb.

FALL 1994 (Vol. 11, No. 1)

Shirone's New Museum; Korea and its fighters; Art & Ideas of Joan Montcada; Thailand International; Aerial Photographer George Lawrence; Jimmy Sampson.

WINTER-SPRING 1995 (Vol. 11, No. 2)

Dieppe; Hargrave commemoration; Stockholm's Drakfesten; spar study; new buggies; Streeter on Hiroshima; Shannon's cicada fighter; Alex Mason; Roger Maddy; Scott Skinner.

SUMMER-FALL 1995 (Vol. 11, No. 3)

Great Festivals: New Zealand, Curaçao, Israel, Italy, Canada; kite artist Steve Brockett; The Smithsonian; Playsail & Windbow by George Peters; What Is a Kite?; Pierre Fabre.

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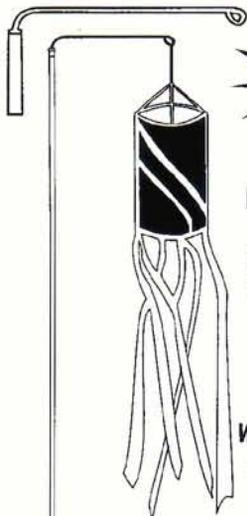
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Bob Ingraham, James White

We all knew Bob was dying. During his last months, his contributions to kiting were fondly recounted at kite events and in newsletters around the world. He was called “the man at the heart of the modern kite renaissance.” His main achievement was the founding in 1964 of the American Kitefliers Association (AKA) and *Kite Tales* magazine (predecessor of *Kite Lines*).

Robert Mosher Ingraham was born in Hornell, New York on January 15, 1911. In

the gradual evolution of *Kite Tales* from a mimeographed paper to an offset-printed journal and from a handful of readers to over 2,000. In 1976, Bob sold *Kite Tales* and the AKA to Valerie Govig in Maryland. It was she who determined that an association should not be owned and should have its own independent life.

Bob deserves his own long chapter in a book of kiting history. His own character rubbed off on kites and gave them a luster, an adult quality many of us hadn't imagined in the days when kites were seen as children's toys.

Bob gave me a number of photographs before he died. We've all seen him with a cap on his head, a

kite in his hand, a wry smile on his face. The photo I cherish shows an 18-year-old Bob standing on the lower wing of a turn-of-the-century biplane. It suggests a deeper,

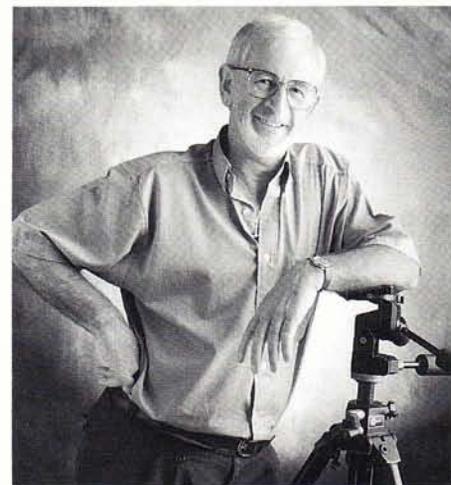
all-pervading spirit of adventure, the sheer joy of flying when it was a new phenomenon around the world. One of Bob's first employers was an airplane manufacturer in New York that hired Bob as promoter, “ride salesman and head maintenance man” for their weekend barnstorming flying circus. Soon Bob was a pilot himself. There are not many in the kite community who go back so far and who have stayed with us so long, passionately devoted to flight.

Bob died in his home on September 28, 1995 at age 84 from inoperable cancer. Besides his wife Hazel, he leaves two brothers, two children, three grandchildren and thousands of kite friends.

—Tal Streeter

In memory of Bob Ingraham, monetary donations may be sent to the Bob Ingraham Music Scholarship Fund, c/o Jerry Joy, V.P., Student Affairs, Room 201, Western New Mexico University, P.O. Box 1158, Silver City, NM 88062. (Make checks payable to Western New Mexico University Foundation.)

James David Alexander White, prominent New Zealand kiteflier and Napier International Kite Festival organizer, died on 18 January 1996 at the age of 56.



James White at ease with his tripod.

The kite world knew James for his limitless enthusiasm for kiteflying, but incredibly he applied himself with the same energy and commitment to all aspects of his life—especially friends and family. To all he brought the same strengths. Unimpeachable personal integrity. Unmatched communications skills. Passionate commitment to excellence. Envious patient tenacity with the small-mindedness that often obstructs great dreams.

During his tenure as president, the New Zealand Kitefliers Association evolved into the strong organization that it is today. He was awarded life membership in 1990. He was a strong performer, a born showman at local and world kite events over many years. His talent for making every individual visitor feel special was simply unique.

James was entirely self-made. Leaving school at 14, he rose to the top of his field, professional photography. He was a member for 33 years and past president of the New Zealand Institute of Professional Photographers. The NZIPP gave his name to a top award and he was recently awarded a Fellowship in the Australian Institute of Professional Photographers, a rare international recognition.

In civics, he left an enduring legacy as Napier City councillor and was highly successful in chairing fund-raising for hospital charities.

The diagnosis of cancer received just days prior to the 1995 Napier International Kite Festival did not deter James from a typical-



Above, Bob Ingraham as “ride salesman and head maintenance man” at age 18. Right, Bob serving as a judge at the first AKA convention in Ocean City, Maryland, September 1978.



BILL KOCHER

1949 he and his wife Hazel moved to Silver City, New Mexico to look after Bob's ailing mother and stayed for the latter half of their lives. Bob became a prominent figure in Silver City. From 1968–70, he was editor of the *Silver City Enterprise* (later the *Silver City Daily Press*).

Bob was talented in a variety of areas. He played the violin in a dance band as a young man, performed 28 years with the Western New Mexico University orchestra (concert master for three years) and gave violin lessons until the last weeks of his life. He was good with his hands, and the Ingraham home is filled with things he made: furniture, clocks and kites. Right up to the end he was still fabricating his deltas (he told me he had sold about 5,000 of them in his lifetime).

Bob had a lifelong fascination with things that fly, particularly kites. This culminated in Bob's establishing contact with several people as crazy about kites as he was. *Kite Tales* started out as a newsletter for an initial group of eight. The story is well known of

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Never a gloomy person, James turned his last months to purpose and virtue by undertaking a strenuous round of public speaking to tell people how hope, love and laughter can be found in the midst of sickness and approaching death.

The Napier Cathedral was packed for his funeral service which in typical James fashion was preplanned by him to provide time for grief but with an overriding theme of joy in living. On the casket were the traditional flowers, but also a small bottle of champagne.

James is survived by his wife Judy (the other and equal half of the phenomenal Whitehouse team), by his daughter Tracey, son André and two grandchildren.

André provided a highlight of the service in a quip which was vintage James White when he solemnly started his testament by saying, "Dad has given me so many things, bad eyesight, shortness and baldness to name three," adding after a pause for general laughter, "and his sense of humor."

Among James's many quotable quotes was one he wished us to keep in mind, especially during this time of grief: "Remember to drink champagne for no reason at all." Thank you, James. We will, and know you will be there with us when we do.

—Peter and Elwyn Lynn

My memory of the man was his style. Who had a better photographic calling card? Who was better dressed on the field? Who, in the entire kiting world, had married more people? His style showed in his letters, long and informative, well-crafted and full of fun—I could hear the echoes of laughter in the Whitehouse. He often started, "Shakib, Shakib, Shakib..." I knew that meant, "I have been over-stretched, I should have written earlier, but here I am." And I would reply, "James, James, James."

James White or James Bond? On Judy's 50th birthday she was abducted by strangers and whisked away in a helicopter, not without danger, to arrive at a red carpet reception into the arms of James. James's love of gallantry would have served him well on a white horse.

The perfume of sandalwood, rosebay or jasmine / Cannot travel against the wind / But the fragrance of virtue travels even against the wind / As far as the ends of the world.

James, James, James. —Shakib Gunn



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News, Rumors & Miscellany

PEEERLESS FAUNA PARACHUTER John Barker of England is credited with creating a new kite club, international in scope, the Trashed-by-Peter-Lynn Kite Club.

To become a member of this fast-growing outfit, you must have had a kite trashed by New Zealand's hyperactive Peter Lynn. Paul Chapman says that some kite festivals now advertise themselves as "Peter

the beautiful hill overlooking Medellin, used often for kiteflying by the Yaripa kite club. The site is now devastated: all the plants and trees are gone.

The second fire, resulting from a freak accident on January 6, 1996, completely burned the Yaripa office. Luckily, nobody was in the building but all the contents were lost, including kites, books and letters. Friends around the world who have admired the club's educational work should encourage and help them in rebuilding. Contact Yaripa c/o Ines Elvira Uribe, A.A. 051-201, Medellin, Antioquia, Colombia; telephone/fax: +57-4-254-8466.



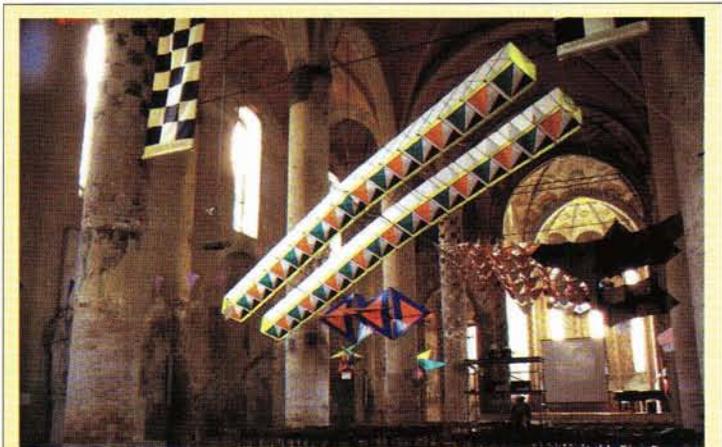
A MEMORIAL KITE FLY was held December 9, 1995, the 30th day after Israel Prime Minister Yitzhak Rabin's assassination, as reported by Eli & Shula Shavit. Five hundred dove kites flew over a Tel Aviv beach imprinted with the words "Shalom Haver," meaning "Good-bye Friend," the closing words of U.S. President Clinton's eulogy.

Lynn-Free" kite festivals. Are kite pins for the TPLKC under development? Hats? T-shirts?

Peter isn't alone. Kai Griebenow of Massachusetts says he has a rokkaku that's especially prone to trashing other kites. Kai has taken to creating patches for it "in the form of blood drops with name and date in them."

DENTIST KITEFLIERS LISTEN up! The National Museum of Dentistry will open on April 27, 1996, in Baltimore, Maryland. The once-and-again famous dentist Dr. Claison S. Wardwell's work will be shown. He's the man who put an aluminum cap on the Washington Monument and also patented a couple of kites around the turn of the century. The exhibit will show kites flying at the Monument.

VIA THE U.K.'S DEREK KUHN we hear of a double fire in Colombia, South America. The first occurred on November 30, 1995, after a fireworks display on Volador,



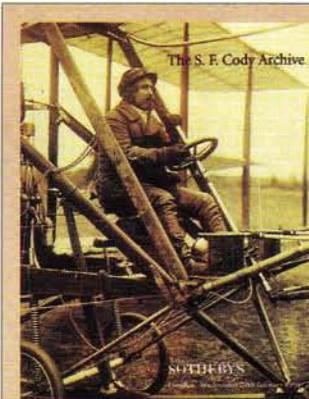
NOT THE FIRST TIME A KITE display has graced a church, but one of the loveliest: "The Kite, a Half-Unknown Hobby" was shown in Alba, Italy at the church of San Domenico on November 24, 1995. A show of 160 slides was organized by Alba's Photographic Society on the initiative of Ferruccio Nicoletto, a photographer and kiteflier. Aerial photos of Alba were included and some kites were suspended between the antique ceiling vaults for an unusual and suggestive effect.

Manuel Coymans, is called "Kite-winds" and incorporates sounds recorded from a "vliegerfoon" attached to an airborne kite as well as natural sounds from the premiere theatrical performance at a beach kite festival. Ultra technology brings the audio-only version together with other sounds in an

evocative experience: pleasing, creative—not elevator music. A lovely, detailed booklet is included. For details contact DJC Records, St. Janssingel 40, 5211 DA 's-Hertogenbosch, The Netherlands. ◇

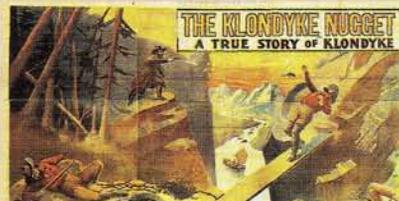


FANS OF EXPERIMENTAL MUSIC will enjoy a compact disk from The Netherlands titled "Dreams of Transformation." The first part, by



THE GREAT CODY KITE AUCTION

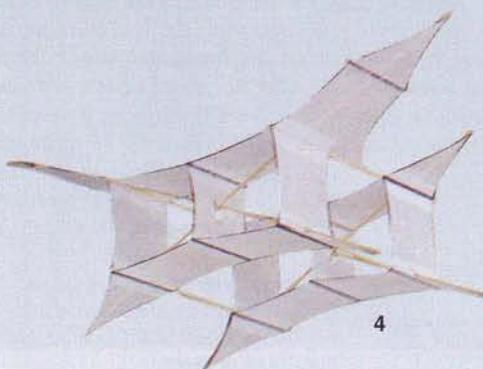
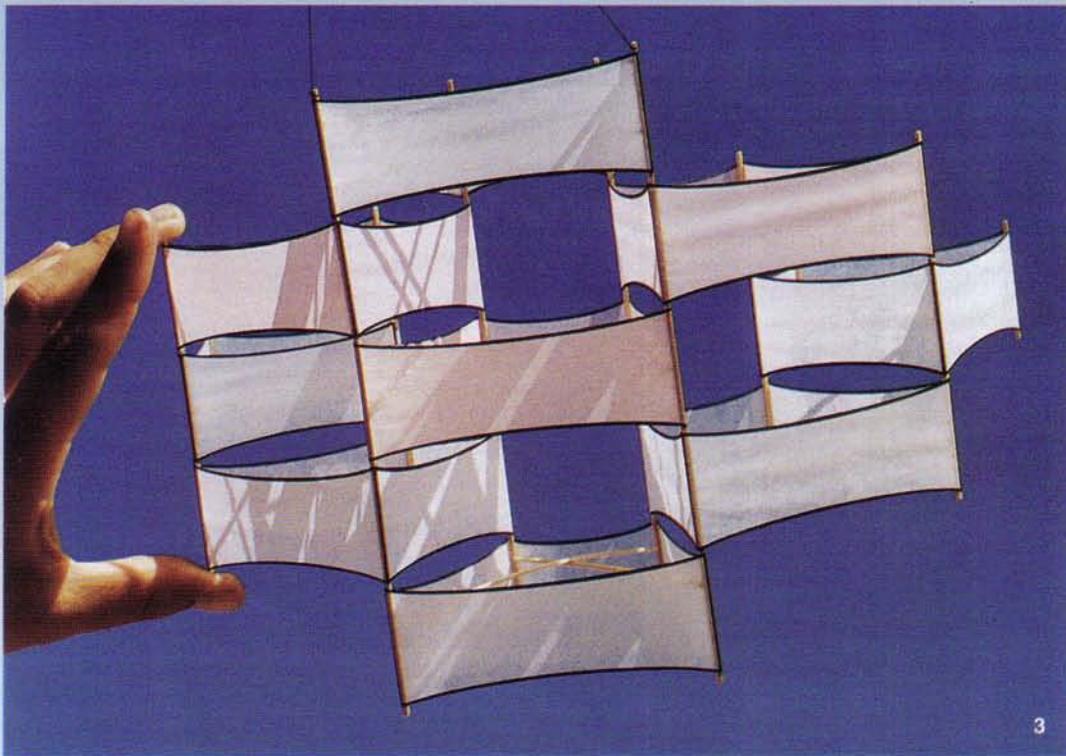
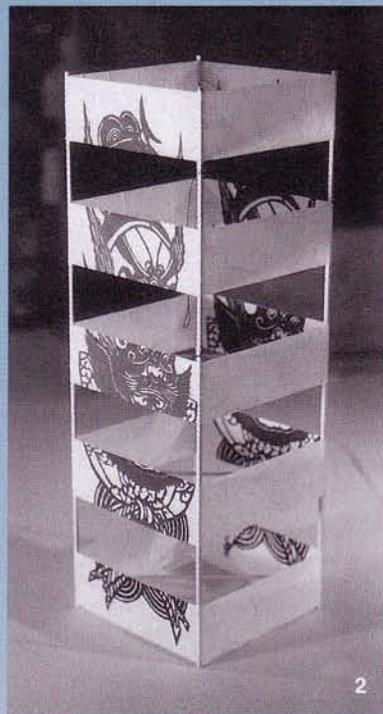
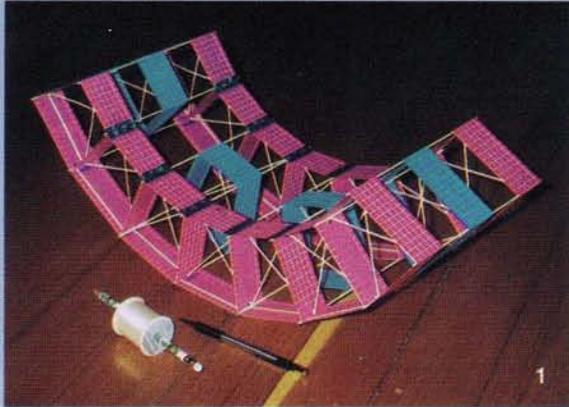
TWO WEEKS BEFOREHAND the news trickled out that the S.F. Cody family trove of memorabilia from the legendary kiter/aviator was being sold at Sotheby's on January 24, 1996. A luxurious 100-page catalog arrived, full of information and photographs, some in color, listing 271 objects of desire, such as the folding kite-driven boat in which Cody crossed the Channel, posters, photographs, drawings, documents, maps, publications, airplane parts, firearms, saddles, clothing (Stetson hats!) a preserved piece of the Cody tree, and of course Cody kites—13 in all. Valuations attached to each kite ranged from £200–2500 UK. Kite enthusiasts, in particular the historic restoration crowd, flocked to the Continent to the tony galleries for viewing before the big day. The auction itself drew 150–200 people, including a renegade contingent of the Cody family, with lawyer, trying to stop the sale. They failed and the auction ran from 10:30am to 1:00pm. The action was very fast. Telephone bidding was hard to track. "Lots of confusion, emotion, maneuvering and scheming," Paul Chapman said afterwards. He hoped that the buyers, including many known kites and the Drachen Foundation, could work together for future Cody research. The auction's highest bid for a kite was £2800 UK and the total garnered altogether (before VAT, buyers' premiums and shipping) was £280,000 UK.



Top, the cover of the Sotheby's Cody auction catalog. Items auctioned included photographs and theatrical posters.

SKYGALLERY

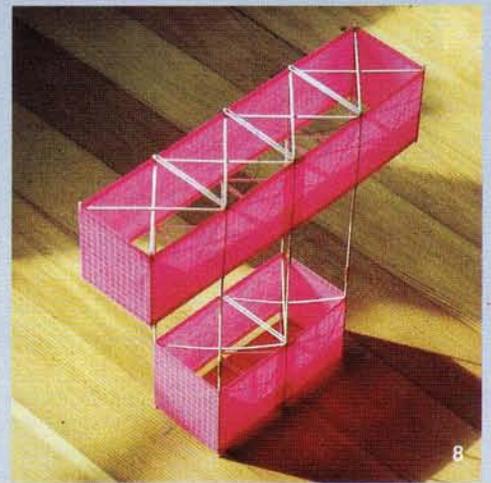
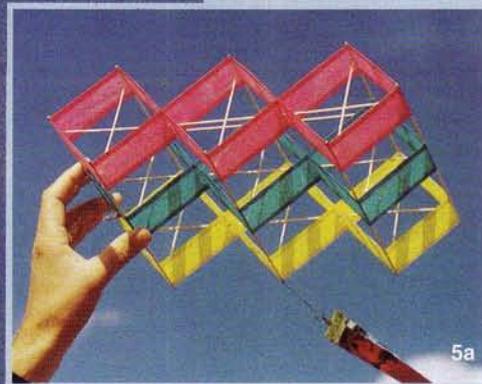
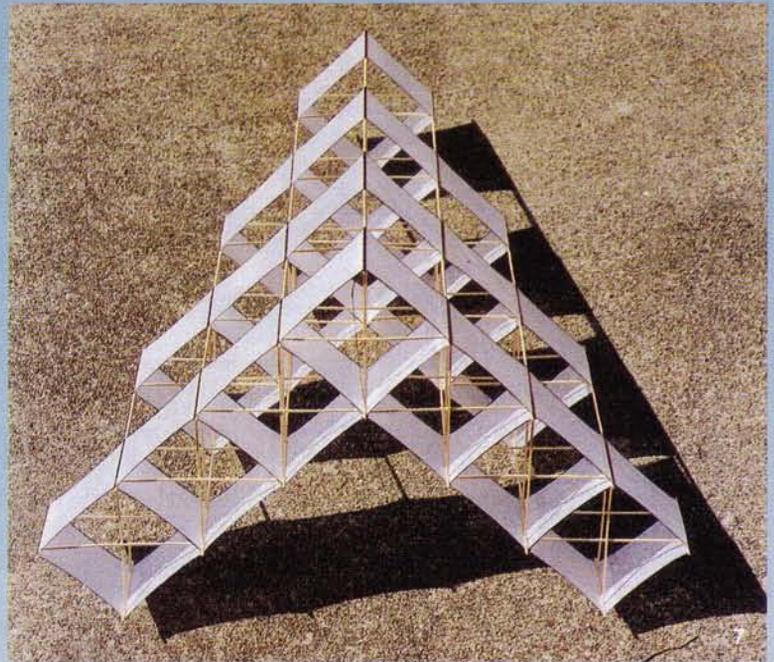
Tom McAlister



Kites by Tom McAlister:

1. The Bridge: 1990, 19x7½", 18 cells, 19g
2. Opera Mask Box: 1990, 3x9", 5 cells, 3.5g
3. Diamond Arch: 1994, 12x7¼", 9 cells, 5.5g
4. "Waterworld" Cody: 1994, 16¼x9½", 4 cells, 12g
5. and 5a. Nine Cell Box: 1992, 12¼x7¼", 9 cells, 10g
6. Workshop at Long Beach, Washington, 1994
7. "Corner" Kite: 1994, 17¼x15¼", 16 cells, 23.5g
8. Barrage Kite: 1993, 12x11¼", 2 cells, 12.5g
9. Bobby's Navigator: 1990, 21x13½", 13cells, 14g





5

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Kitemaker: Tom McAlister, 34, Richmond, California

Occupation: Owner of kite store, Highline Kites of Berkeley; organizer of Berkeley Kite Festival and West Coast Kite Championships

Kiteflying experience: My first kiteflying memory is when I was six years old and I flew Eddy and box kites with my brothers behind our house. Childhood projects notwithstanding, I have been building kites for the last 12 years. I suppose I inherited an interest in flying things from my father, who worked in the aerospace industry, and my mother and stepfather, who built and flew experimental aircraft in the late 60s and early 70s. My family would make weekend trips to "fly-ins" in California and Nevada to test experimental aircraft ("home-builts").

Philosophy of kitemaking: Kite building gives me a chance to combine my love of art with my love of flying things. My focus is on cellular forms and the constructionism involved. This focus is partially dictated by the relatively small size of my kites. Complex graphics could easily turn to mud on such little kites.

Influences: Lawrence Hargrave, Bobby Stanfield, Ron Gibian

Photographers: No. 3 and 7 by Pam Lim, all others by Tom McAlister

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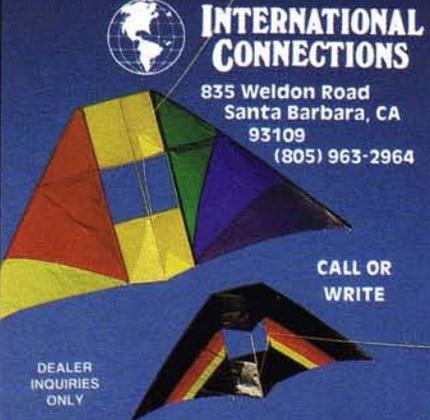
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KITE PATENTS: Every kite-related patent issued in the U.S. is available in capsule form to those sending \$50 to Ed Grauel, 799 Elmwood Terrace, Rochester, NY 14620. Included are patent numbers, filing and issuance dates, inventors' names and a brief description for each of the 836 patents.

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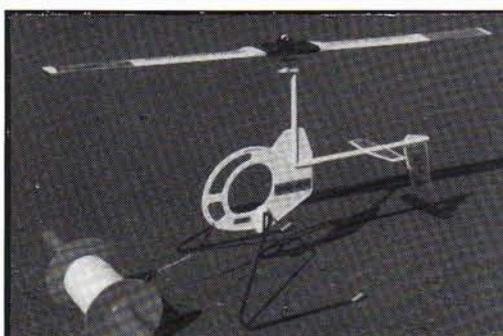
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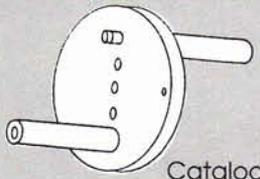
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