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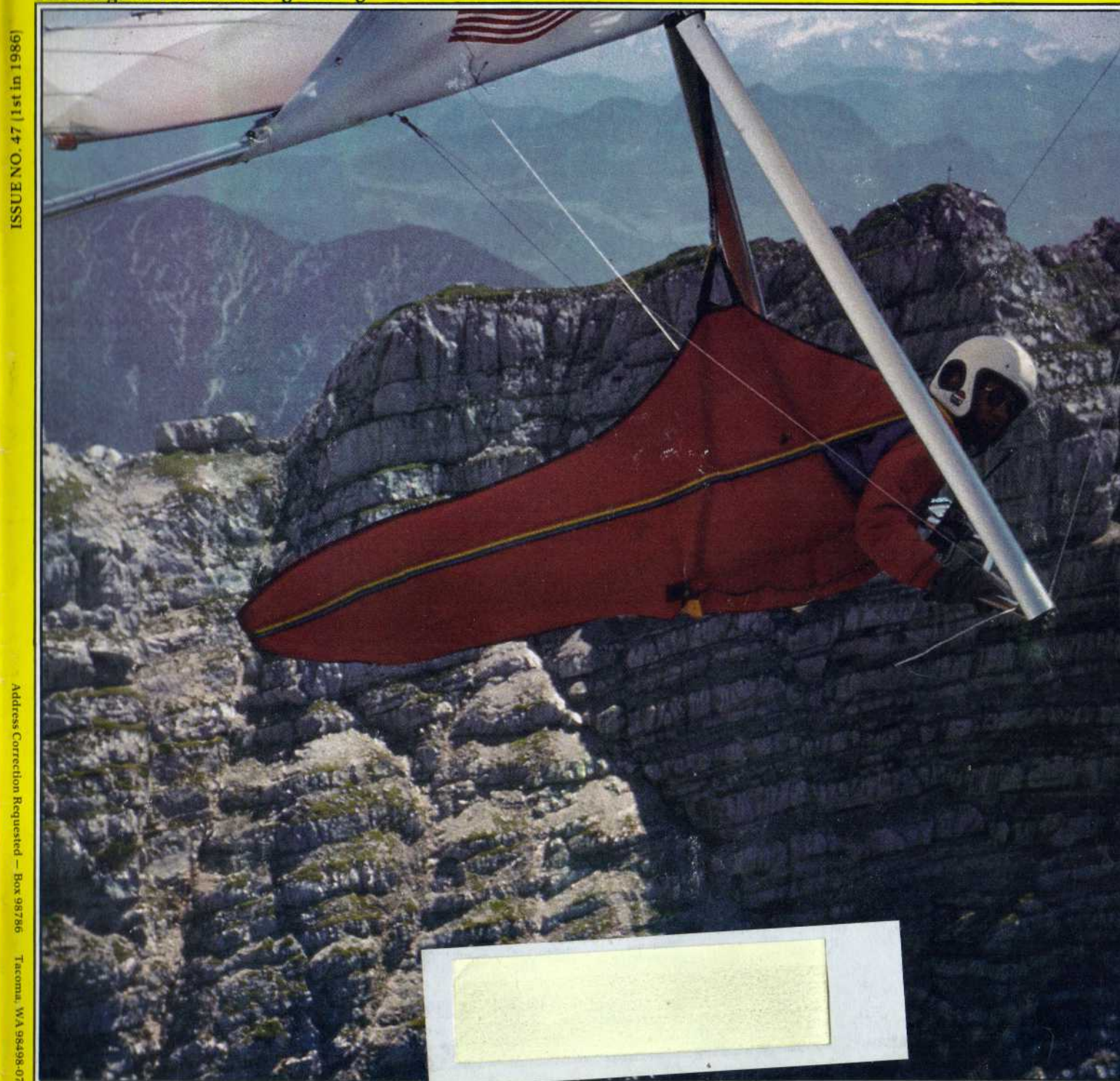
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The Magazine for the Hang Gliding World

APRIL 1986 — \$2.50

ISSUE NO. 47 (1st in 1986)



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Tandem flight, Owens Valley. Photo by J. Heiney.



Torrey Pines. Photo by J. Heiney.

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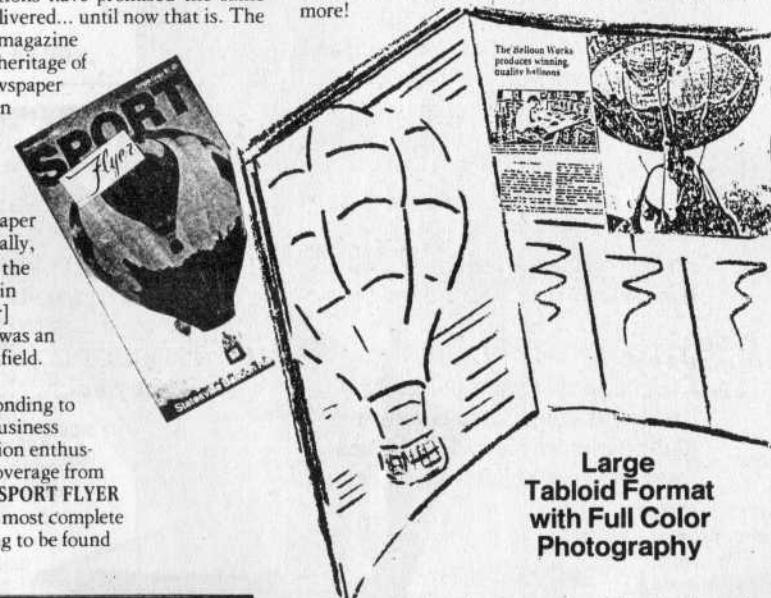
Because the **SPORT FLYER NEWS** magazine is printed on high-grade newsprint, we can keep subscription charges and single copy prices extremely low. (Just compare our \$9 per 12-issue year to many other periodicals... even those *without* our broad coverage!) Plus, with our quick turn-around time for printing and mailing, we can have stories printed and mailed to you before the slick magazines have even thought about getting started. And using the latest in laser technology for color photograph reproduction, we will continue bringing you outstanding color photography of sport and recreational flying activities.

IMPRESSIVE EDITORS

Our full-time editorial staff are experts in all phases of newspaper production and writing, and our list of contributing correspondents is lengthy and impressive. It includes world-renown figures as photographer Howard Levy, hang gliding pioneer Dan Johnson, ultralight expert Jack McCormack, aviation historian Peter M. Bowers, aviation expert Don Downie, plus leaders from sky diving, soaring, ballooning, homebuilding, among many others.

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We're including special sections on virtually every phase of sport and recreational flying each issue. Not a page here and there, but in-depth coverage with sections ranging from two to eight pages, including color and black and white photos. In our first year with **SPORT FLYER** we had sections on "Airshows, Flying in Alaska and B.C., Living with Your Plane," and others, and we began a new institution for all of sport flying... our very popular "Issue of Triumph," which chronicled and congratulated winners in nearly every category of sport aviation competition or achievement. 1986 will bring all these and even more!



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WHOLE AIR

The Magazine of the Hang Gliding World

ISSUE NO. 47, VOLUME NO. 9, NO. 1

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Everyone needs a change of pace at a hang gliding event, pilots and families alike. LaTorre provides a number of options in Monterey and surrounding areas.

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36 BRITAIN'S JUDY LEDEN
Official world record holder Judy Leden gave up a lot to enter hang gliding competition, and achieved more than most pilots—male or female.

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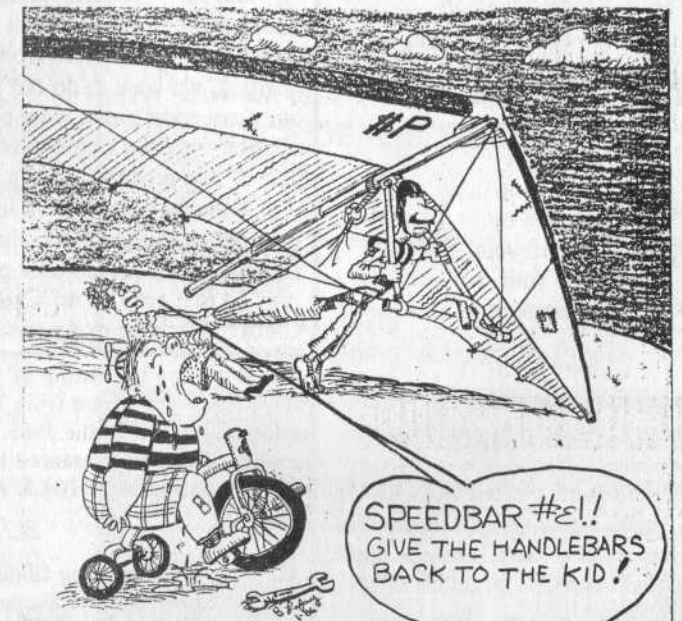
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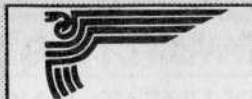
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Cartoon by Bob Lafay



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Cover Photo
Jo Bathmann

On The Cover:

Dr. Jo Bathmann captured this closeup of rugged Austrian mountain terrain while attempting to fly the same triangle route on which he had earlier logged an official world record flight.

CALLING ALL CLUBS!

GET IN ON WHOLE AIR'S
FREE LISTING

Publisher's Column



WELCOME TO 1986 with **WHOLE AIR**. Oh, I realize it's a bit belated, since most of you already rang in 1986.

But for **WHOLE AIR**, it is a brand new season. To flow with a bubbling enthusiasm we've heard from many quarters, we want to do our part to help our great sport grow. New pilots—in our opinion—are the single most important part of any growth for hang gliding.

To help, we will do a listing of all the quality clubs/chapters that we can be sure are ready to help new pilots.

To that end, we're "Calling all Clubs!" We hope many answer.

The following is a listing of all the clubs we've heard from since our mailing late in the 1985 season. They are presented in the order received in **WHOLE AIR** offices:

- 1..... Arkansas Hang Gliding Association
- 2..... Sylmar Hang Gliding Association

- 3..... Cochrane Hang Gliding Club
- 4..... Santa Barbara Hang Gliding Association
- 5..... Tennessee Tree Toppers
- 6..... Hawaiian Hang Gliding Association
- 7..... Cloudbase Country Club
- 8..... Telluride Air Force
- 9..... Central Virginia Hang Gliding Association
- 10.... South Carolina Hang Gliding Association
- 11.... Northern Sky Gliders, Inc.

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CALLING ALL CLUBS!

- 12.... Storm Peak Hang Gliding Club
- 13.... Houston Hang Gliding Association
- 14.... North Texas Hang Gliding Association
- 15.... Rogue Valley Hang Gliding Association
- 16.... North Carolina Hang Gliding Association
- 17.... Coastal Condors
- 18.... Southern New York Hang Glider Pilot's Association
- 19.... Cross Country Tow Pilots Association
- 20.... Ladies International Pilot's Society
- 21.... Ultralite Flyers Organization
- 22.... Alberta Hang Glider Association
- 23.... Capitol Hang Gliding Association
- 24.... Wings of Rogallo
- 25.... Association de Vol Libre du Québec
- 26.... Marin County Hang Gliding Association
- 27.... Nittany Valley Hang Gliding Club

28—74.... Chapters listed in the February 1986 issue of *Hang Gliding* that did not respond to our earlier call for all clubs and/or chapters (USHGA affiliation not required for this free listing).

IMPORTANT NOTE: These clubs must contact **WHOLE AIR** offices at the address below to be included in our listing. **BUT ACT NOW!!!**

Source of This List

The above list resulted from a mailing to all 89 USHGA Chapters listed in the "Directory," produced last in 1983. Many of the listed organizations are defunct, as evidenced by the return of over 25 pieces of this mailing, saying "No Such Addressee," or a message to that effect.

Because we felt response to a letter was a minimal action, we have eliminated all chapter affiliates that did not do so, even if the National Association's records show them as properly registered.

The logic was that if a chapter club could not muster the effort to respond to a mailing—which offered *free* publicity in **WHOLE AIR**, then they were not likely to respond to a letter from a potential hang glider pilot. We are after those organizations that can offer a place for interested would-be pilots. We also *welcome* clubs in Canada, where **WHOLE AIR** has many readers.

It's Not Too Late, Though

If your club or chapter is not represented above, we strongly encourage you to contact this magazine immediately. The deadline for inclusion in our free listing is April 15th, 1986. (That date should stick in most taxpayer's minds.) It means your club must act now, today. Don't delay. Unless, of course, your club wishes to remain a well-kept secret. Clubs who got this message late may also call us... 206/588-1743 (see below before calling, though).

Here's What We Need

We want to know:

- 1—Your club or chapter's full name
- 2—Your club's current mailing address
- 3—A contact name (individual)
- 4—A contact phone number
- 5—Your newsletter title (if any)
- 6—25 words (ONLY) of text telling us what your club offers, such as: any meets or fly-ins sponsored regularly, instruction given, annual parties held, flying sites owned or managed, number of sites operated or regulated... in other words, the sort of information that will make your club worth joining. Twenty five words is not very much, we realize. So pick your best thoughts and send them to:

WHOLE AIR Club List
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FORUM

Eclipse Errors

First, congratulations on your new directions for 1986. Your interest in an exchange of information from different countries will be instrumental in offering, to all pilots, the latest technology and advancements of the sport of hang gliding in the world today.

The Vision Eclipse press release used for the news item in your December [newsletter] issue contains three inaccurate points that we at Pacific feel should be corrected.

* Only one size of the Vision Eclipse (the 171 square foot model) was presented and accepted for HGMA certification at the November 21 meeting. Our press release erroneously indicated both sizes would be presented at that time.

* Both variable geometry and camber devices as well as the Vision Eclipse streamlined control bar will be made available as options as soon as presented and accepted by the HGMA review board.

* The Vision Eclipse

introduces a new foam entry section offering much better airfoil definition. These leading edge inserts are available in 1/8 and 1/4 inch thickness, not one inch as printed.

A second size is indeed fully developed and will be released upon its HGMA certification

I would like to, again, thank you for working so hard at making **WHOLE AIR** a constantly better magazine. Keep up the good work!

Sincerely yours,
JEAN-MICHEL
BERNASCONI
President,
Pacific Windcraft, Ltd.
Salinas, CA

Since the above letter was received by **WHOLE AIR**, both sizes of Pacific Windcraft's new Vision Eclipse have received certification from the HGMA (compliance certificates were forwarded for our verification). —Ed.

European Marketing Works

I would appreciate it if you could pass on my compliments to the marketing personnel for their work in the European market. I have recently received a letter from a member of the Canadian Armed Forces stationed in Germany who was able to contact me after noting the list of Hang Gliding Schools in **WHOLE AIR**.

He will be returning to Manitoba and was wondering if there was any air to be had in our region.

You're providing a valuable service.

ROD REGIER
Prairie Wind Flight School
Winnipeg, Manitoba, Canada

Some Hated It—Some Loved It

Wow, seven issues in one year. Was I ever excited to get my December **WHOLE AIR**. At least until I read it.

Thirty one pages [sic]; a half page editorial telling me how good your magazine is; a small feature on a new glider, competition results (I don't compete); a bunch a free advertising for Airwave, High Energy, Christmas cards, etc.; an accident report... and then 26 pages of airplanes, ultralights, etc.

Don't get me wrong. I love flying and flying-related stuff. But it seems you just spent my subscription money on something totally unrelated to soaring, and then you tell me how wonderful it is.

If I wanted an airplane book, I'd buy one. Does this mean I've got to re-subscribe to *Hang Gliding* magazine to hear about hang gliding? I hope this isn't an indication of things to come.

BARRY BERTO
N. Vancouver, B.C. Canada

Thanks for the comments, but a couple of points are in order, Barry.

One, no subscription dollars were spent on the December newsletter. It was a freebie. Subscriptions were based on six issues per year.

Two, the issue may not have been "heavy" enough for you, but it is important to realize that the issue went to some 25,000 "other" pilots which may help some new persons become interested in the sport we love. —Ed.

We here in the Treasure Valley area want to thank you wholeheartedly for the color photo [from our area] in the December newsletter.

With your projected circulation for that issue of over 25,000, it's a lot more exposure that would have been obtained with the color calendar page in *Hang Gliding* (which we couldn't afford anyway).

MIKE KING
Region 5 Director
Nampa, ID

The **WHOLE AIR** December newsletter (7th in 1985) was very well done. I applaud you for your continuing efforts under adverse circumstances. We need you desperately; please keep up the good work.

Thanks ever so much for the complimentary copy of the same edition. However, I find it a bit distressing to realize that, had I not paid for a subscription, I would have received my copy in any event. Thinking that it is simply a means a allowing further distribution of your newsletter, I placed the extra copy in the reception area of my law office and found that it promptly disappeared. Send four or five the next time!

DICK CASSETTA
Sacramento, CA

You're right, Dick To obtain distribution for 25,000 sport flying enthusiasts, we were bound to duplicate some names. Thanks for taking the affirmative action you did.

SPECIAL NEWS

Dan Racanelli Dies While Attempting A Rescue

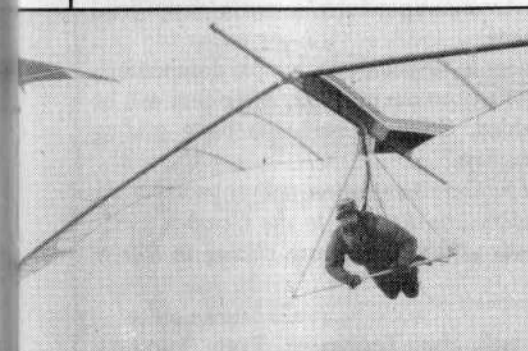


Photo by Terry Ferrer

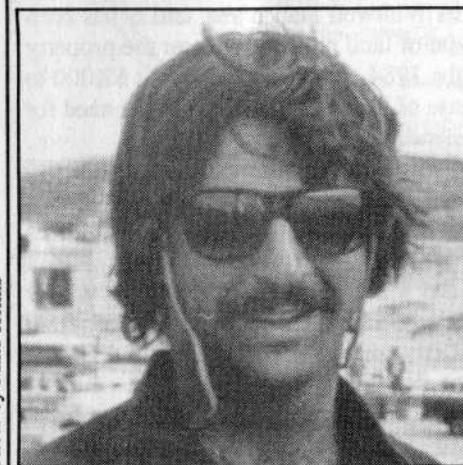


Photo by Mike Helms

Hang Gliding Officially Recognized As Olympic Sport

SAVING 0310410001 14 JAN 86 11:07:11 EST
VIA: P100351244
COMO SAI DIBBO
COMU SAN DIEGO
AEROPRA 411504P
TO MR. W. IVARS
WE RECEIVED FROM LAUSANNE TODAY THE FOLLOWING LETTER.
SUBJECT: RECOGNITION BY THE C.I.O.
MR. CHAIRMAN,
IT IS WITH GREAT PLEASURE THAT I CAN INFORM YOU THAT DURING OUR RECENT MEETING OF THE INTERNATIONAL OLYMPIC EXECUTIVE COMMITTEE, WHICH TOOK PLACE DECEMBER 5 AND 6, 1985 IN LAUSANNE, AND UPON RECOMMENDATION OF THE PROGRAM COMMITTEE OF THE C.I.O., THE OLYMPIC INTERNATIONAL COMMITTEE HAS DECIDED TO BESTOW ITS OFFICIAL RECOGNITION TO THE INTERNATIONAL AERONAUTICAL FEDERATION FOR PARACHUTE JUMPING, SOARING AND FREE FLIGHT.
I WOULD LIKE TO TAKE THIS OPPORTUNITY TO WISH YOU AND YOUR FEDERATION A WARM WELCOME TO THE FOLD OF THE OLYMPIC MOVEMENT.
VERY TRULY YOURS,
JOAN ANTONIO SAMARANCH
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Well-known aerobatic pilot Dan Racanelli, 29, was killed on Saturday, January 18th while trying to extricate fellow competition pilot Rick Rawlings as the two participated in the final events of the Australian Nationals at Mount Buffalo, near Mytleford.

The best information is still very skimpy as of press date, but evidently Rawlings had landed in some high current electrical wires. While attempting to help his friend out of this dangerous predicament, Racanelli apparently was touched by a part on Rawlings' glider and died by electrocution.

According to Craig Worth, the organizer of the event [as reported in the *Los Angeles Times*], "Rawlings' glider became entangled in the power lines and his friend landed safely nearby to help free him. When he touched the snarled glider he was knocked to the ground by the high voltage and died instantly.

"While Rawlings' glider was suspended swinging in the breeze below the power lines, he was in no real danger. Rawlings freed himself from his harness and dropped safely to the ground and was not hurt at all.

"The death was a sad and unfortunate accident," continued Worth. "The two men were not only hang gliding companions, they were close friends.

"The death was indirectly related to the gliding component of the sport because gliders [pilots] are often not fully aware of the potential landing dangers. The frustrating part of the incident was that neither of the men realized the danger involved in earthing the glider to the ground. They were not conscious the risk was there."

Further details will be provided as the exact occurrences are obtained from reliable sources.

However, a fund has been set up to memorialize the spirit that Dan Racanelli represented to the sport. Contributions may be directed to either the USHGA offices, earmarked for the World Team Fund, or to Elaine Herskowitz, a San Francisco bank loan officer. USHGA offices can be reached by writing P. O. Box 66306, Los Angeles CA 90066, and Herskowitz may be reached by calling 405/544-5077.

by BRUCE WILLIAMS, editor of *Western Flyer*

The International Olympic Executive Committee has officially recognized hang gliding, soaring, and skydiving as Olympic events, clearing the way for one or more of the activities to appear as demonstration sports in a future Olympic Games.

According to Larry Sanderson, executive director of the Soaring Society of America, the decision "has no practical effect" towards including the sports in the Olympics until a host country's Olympic organizing committee includes them in its plans. It is possible, Sanderson said, that one or more of the activities could be included in the 1988 Summer Olympics in Seoul, South Korea, but he indicated it's more likely that their first appearance would be in 1992.

Sanderson said the SSA nevertheless was "absolutely delighted" with the executive committee's decision to recognize soaring as an Olympic event. He pointed out that soaring was a demonstration sport in the 1936 games in Berlin and was scheduled to become a regular event in the 1940 games set for Helsinki. That meet, of course, was cancelled after the outbreak of World War II.

"We've had the basic desire to get back involved for some time," explained Sanderson. An appearance at the Olympics would bring "new recognition" to soaring, he suggested.

Mike Johnston, director of training for the United States Parachute Association, agreed that Olympic exposure would be good for skydiving, but he added, "Personally, I don't see that it's real positive."

"This is primarily motivated by the European community," explained Johnston. "They get more [government] money." In the U.S., he said, there is not direct government support for the Olympic sports, so official recognition won't bring in government money. It will, he pointed out, "increase the public's knowledge of the sport," however.

The United States Hang Gliding Association is somewhat more enthusiastic about the Olympic invitation. Association president Russ Locke sees difficulties in areas such as

CONTINUED on Page 10

the definition of a "professional" pilot. Nevertheless, he said, "It gives us a valuable opportunity to enlist corporate sponsorships for our team. Fund raising is always a challenging chore, and the Olympics could help us over the hump."

Agreeing with USPA's Johnston, USHGA treasurer Dan Johnson reports that, "The initiative for Olympic involvement was predominantly European." An Austrian pilot and competition organizer, Sepp Himberger, was a prime motivator. Himberger sits on the hang gliding committee (CIVL) of the Federation Aeronautique Internationale, the official world body for aviation sports, based in Paris, France.

"Problems are also seen in the area of equipment to be used by Olympic competitors. A standard model agreed upon in 1986 may be quite obsolete by 1992, and pilots will be reluctant to fly dated technology," Johnson added. Still, he said, the hang gliding community regards the action as "tremendously positive."

[As it is possible that the Korean Olympic organizers may select one or more of the new sports, even at this relatively late date, readers are directed to the October 1985 **WHOLE AIR** (issue No. 45) for two comprehensive articles on hang gliding in Korea. —Ed.]

Tennessee Tree Toppers To Fight U.S. Steel; Raising Funds



Photo by Cliff Whitney

A battle is brewing between U.S. Steel and the Tennessee Tree Toppers. The southeastern club has been denied access to its Whitwell launch site, and is has been asked to pay exorbitant prices for the small amount of land required to enter the property it owns on the southeast-facing mountain. After the 1984 expenditure of about \$2,000 to build an reinforced earthen launch ramp, the expense of litigation has brought the need for more funds.

The Tennessee Tree Toppers are therefore planning another of their quite successful raffle ticket fund raisers. The last was the "Great Glider Giveaway," which awarded valuable prizes to entrants scattered around the country. Grand Prize winner, James Yocum of Colorado (see the 1985 Aug/Sept **WHOLE AIR**), won a Wills HP, a Bennett Airstream pod harness, Ball 652 vario, and a set of FM radios, valued at over \$3,500.00. Significant prizes were also awarded for second and third places. Proceeds from '85 raffle were used to erect a clubhouse on the club's northwest site of Hensen Gap (see photo, with current club president, Dennis Michels).

The 1986 raffle will award a trip for two to Hawaii, including airfare, motel for seven nights, tours, and an orientation breakfast. Second prize will be a state-of-the-art VCR. Ticket prices for the new raffle have been halved, to \$10 each. Proceeds from this raffle will be employed to fight the U.S. Steel company's refusal to allow the club access to its land.

For more information on the Hawaiian Giveaway raffle, contact the club at P.O. Box 136, Lookout Mtn TN 37350, or call 615/949-2301 or 949-3384.

USHGA Spring Board of Directors Meeting Summary



The USHGA Board of Directors met for the spring meeting of 1986 in Las Vegas, Nevada. Details of the meeting can be found in a later issue of *Hang Gliding* magazine, but here are the highlights.

Perhaps the most important decision reached was that of the executive committee to hire an executive director. The decision, supported by the full board, will put Cindy Brickner in the much-needed post of day-to-day manager of the USHGA. Brickner has been employed by the Soaring Society of America in a wide variety of posts. Through Brickner's considerable experience in tasks that are very similar to ones at USHGA offices, it is felt that gains may be made in areas like increased membership retention, greater stewardship for new members, tighter control of costs as a whole, increased income in other areas, and the chance for increased member services. The finance committee had already built the cost of this new position into its targets for 1986.

The membership and development committee has been rather dormant for some time, but this changed at the Las Vegas meeting. Region II's Gary Hodges took the chair and initiated an ambitious list of specific goals to increase membership. He got an enthusiastic response from his large committee as directors from across the country rallied to the effort.

The insurance committee delivered the satisfying news that the association once again is insured. In addition, the committee will propose an approved action to include some 500 members of the Canadian hang gliding associations. This could create a significant extra revenue center for the association.

The finance committee—largely through a considerable effort of committee member

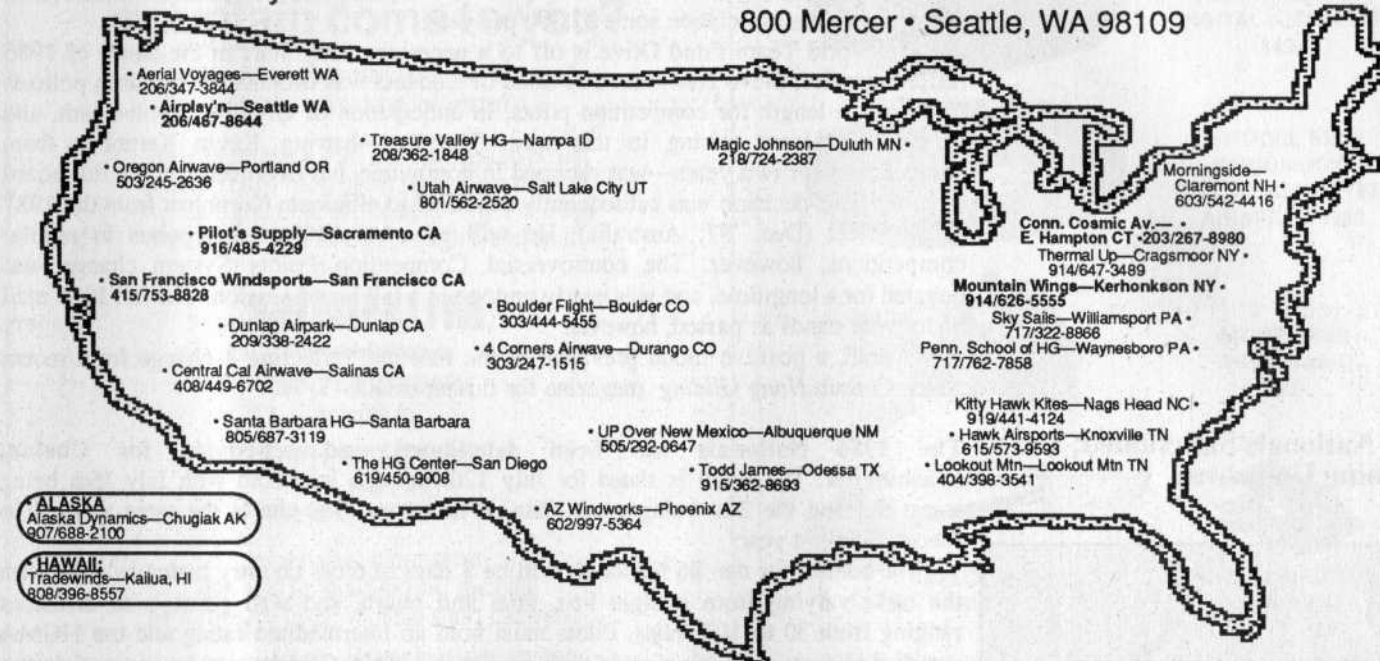
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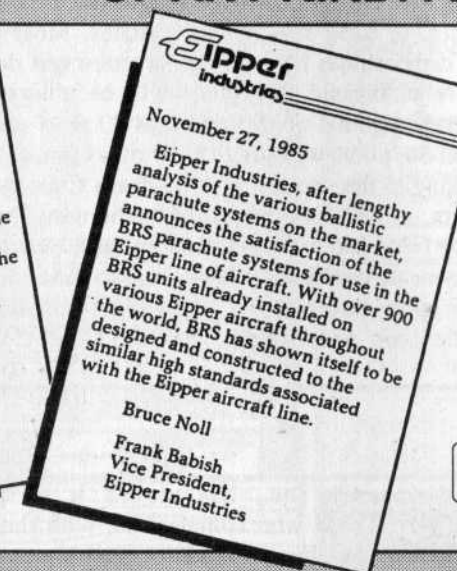
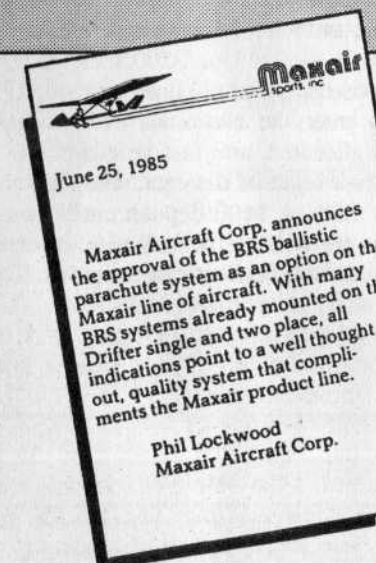


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1986 Nationals Sanctioned; Planning Underway



Photo by Sherry Kindel-McMinn

and association president, Russ Locke—presented the best accounting for the association in its history. Additionally, target were presented for income and costs for calendar 1986. The projected deficit from all operations was trimmed to about \$5,500 from 1984's estimated \$60,000 loss. And all indications were that the deficit could be eliminated and some surplus generated through a variety of positive changes. One change effected at the Board meeting was the elimination of any reimbursement of board members' airfare expenses. This change, which narrowly passed, will present hardships to some Directors, but will save the association some \$7,000 per year.

The World Team Fund Drive is off to a necessary early start in the hands of 1985 raffle organizer, Steve Hawhurst. A Code of Conduct was established and drug policies discussed at length for competition pilots, in anticipation of Olympic involvement, and to stem problems arising in this area. The ban—barring Kevin Kernohan from competitions for two years—was dropped in committee, but overturned in the full board meeting. This decision was subsequently modified to eliminate Kernohan from the 1987 World Meet (Dec. '87; Australia). He will now be able to earn points in regular competitions, however. The controversial Competition Points System change was debated for a long time, and was nearly undone in a full board session. The fall 1985 mail ballot vote stands as passed, however.

Overall, a positive mood prevailed at the meeting, reflecting a change from recent years. Consult *Hang Gliding* magazine for further details.

The 1986 Nationals has been sanctioned and scheduled for Chelan, Washington. The event is slated for July 12th through July 20th with July 16th being a rest day and the 21st being a rain date, if necessary. The site is the same as used so successfully last year.

The contest for the '86 Nationals will be 8 days of cross country racing to goal, with the tasks varying from straight line, goal and return, and turn point, with distances ranging from 30 to 107 miles. Pilots must hold an Intermediate rating and use HGMA certified gliders—or equivalent in their country of origin. Gliders may be changed during the meet. Helmets and parachutes will be required as will use of a 35mm camera. Two-way radios will be permitted. Scoring will be normalized TET, as last year.

Besides the personnel to run and score the Nationals, organizers intend to provide ground transportation up the hill only. "Retrieval was not needed for the most last year due to the number of of personal vehicles going to goal, and therefore [this service] will not be provided this year," reports C. J. Sturtevant. Camping is anticipated to be an improved situation from last year. Sturtevant reports, "If all goes as planned, there will be no fee for camping for competitors or support personnel."

Entry fees range from \$100 for Alaska, Hawaii, and other areas outside the contiguous 48 states, to \$250 for the closer states. Most will be \$225 or \$200 fees. Accounting which demonstrates how this fee structure was devised may be obtained on request.

It is anticipated that pilots will be able to enter the Nationals even without the customary regional qualification, as 80 slots are allocated, and last year about 65 pilots entered. So, pilots wishing to enter may contact their regional director, who has forms, or by writing to the sponsoring Cloudbase Country Club. A \$100 deposit must accompany the form, as well as a photo for media use. This fee will not be refunded unless all 80 slots are filled and excess entries received. Personal checks will not be accepted as several bad payments were handled last year, so money orders or certified checks only.

For more information... Lodging—call the City of Chelan, 509/682-5031, or the Cascade Loop Association, 509/682-LOOP. Contest—Call C. J. Sturtevant at 206/888-3856.

INDUSTRY NEWS

Ball Vario Moves Plant

Ball Variometer Inc., has moved its offices and factory, effective in January of this year. Those who communicate with this leader in variometer manufacturing are asked to note the change of address and phone number. The company is now located at 4747 Pearl Street, Boulder, CO 80301. Their new phone number is 303/449-2135.

Wills Begins '86 ICPs

Wills Wing has announced the 1986 beginning of their Instructor Certification Programs by releasing a schedule of planned ICPs already slated. The company also announced plans to release dates for additional programs in upstate New

CONTINUED on Page 14

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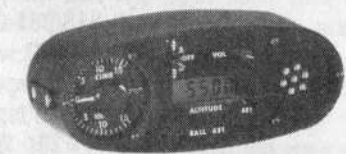
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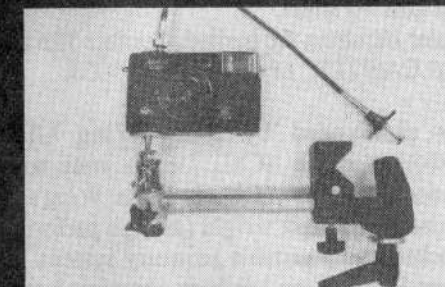
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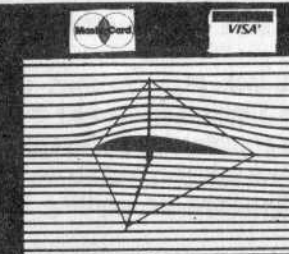
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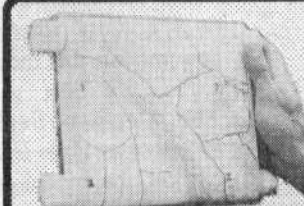
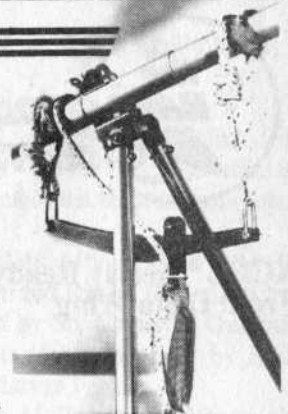
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Delta Wing Announces Lite Mystic

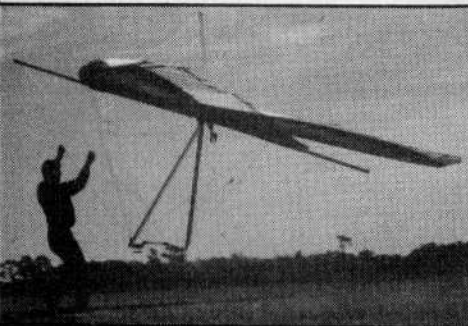


Hang Glider Center Imports Helmets



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German Saphir Begins U.S. Distribution



York and Tennessee. Plus, they extend the offer to areas not currently scheduled, requesting that those interested contact them.

Currently scheduled: For Colorado on April 18-21, at Golden Sky Sails. Call George at 303/278-9566. The program leader will be Jim Shaw, who has performed many of these ICPs for Wills Wing. Another is in California on April 19-23, at Windsports. Call Joe at 818/988-0111. The program leaders will be Greg DeWolf and Joe Greblo. This particular ICP will include a tow clinic and a tandem clinic, with the two leaders using their special expertise in these areas. The third will be in Washington state on June 20-23 at Big Bird Wings. Call Fitz at 206/523-2436. The leader will be Jim Shaw.

The Wills Wing series of ICPs are fully recognized by USHGA, and have been organized by Wills Wing and are sponsored by the dealerships listed.

Delta Wing has announced the introduction of their new Lite Mystic. The Van Nuys company says they have "totally re-engineered" their 1985 Mystic model to provide buyers with what they claim is "the lightest all-American airframe glider."

Their February literature lists the weight at 62 pounds (though the model size with this weight was not listed). The glider—which retails for \$2,295—uses .049 wall tubing in the 6061-T6 designation. The Lite Mystic follows from their favorable experience with the Lite Dream.

The Variable Geometry (VG) system is an add-on option, as is streamlined tubing. Either the owner or your dealer can install the high performance kit. The new model also features a "fast fit" luff line assembly procedure.

Delta Wing also says they have a new shipping method that will cut this expense in half, though the way this will be achieved is not specified. They ask those interested by this potential savings to call.

For more information on the Lite Mystic, contact your Delta Wing dealer, or get in touch with the factory at P. O. Box 483, Van Nuys CA 91408, or phone 818/787-6600 or 785-2474.

The Hang Gliding Center (San Diego) has a new supply of helmets and is entering the wholesale market with the product. Manager John Ryan encountered some early delays in gaining supplies of the imported helmet, but is now gaining ample stock.

The helmet is constructed of the popular polycarbonate plastic which is seamless (side to side). Sizes are listed in metric plus small, medium, large. The interior is the usual styrofoam, covered in blue fabric with a foam rubber pad underneath it for pilot comfort. Three-quarter inch webbing, attached at four points, is used for straps, and the buckle is a quality construction stainless steel with knurled slider.

The helmet retails for \$59, and dealer inquiries are invited. Contact The Hang Gliding Center at 4206-K Sorrento Valley Road CA 92121, or call 619/450-9008.

A new glider line was recently announced by Delta Wing Gliders. The new model for the 1986 season will be called the XCEL. Details were not plentiful in February, evidently awaiting finalizations, but the XCEL is Delta Wing's newest high performance entry and has been optimized for a light weight (as high performance gliders go), features fiberglass tips, no keel pocket, and a variable geometry system.

This model, among a slew of others Delta Wing has been examining throughout the winter months, was to be involved in the "Delta Wing Challenge." It was envisioned to be a "contest" where six top-ranked pilots were to fly each of two sizes for each of three new models that the company was considering for release.

The German Saphir has begun making inroads in the U.S. market, thanks to importer Hans Frings, who is located in New York City. Frings has released plans to market the model which has enjoyed excellent success throughout the big European marketplace.

Distinguished by its lack of a crossbar, using the familiar—if somewhat dated appearing—bowsprit, the Saphir is revered by many pilots on the continent as possessing generous performance in combination with superb handling characteristics. Many pilots queried about these qualities said they had no real idea how manufacturer Bautek achieved the difficult union of performance and handling. Nevertheless, it has attracted an intensely loyal following.

Frings is offering three packed sizes of the Saphir 17 (15' 6" to 9' 5"), and claims to

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offer "reliable parts service." For further information on the Saphir, contact Hans Frings, at P. O. Box 2343, New York NY 10009, or call 212/673-6461.

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For further information, you may write the company at 331 S. 14th St., Colorado Springs CO 80904-4096, Dept. PRWA.

INTERNATIONAL NEWS

5th American Cup Scheduled in Canada

The fifth running of the well-known American Cup is scheduled for Invermere, B.C., Canada August 2-9, 1986. The primary site will be Mt. Swansea, located on the western slopes of the Rocky Mountains. Six teams have been invited—England, Australia, America, Germany, Japan, and Canada. To date, all but Germany and Japan have confirmed their participation.

Organizers Barry Bateman and Andrew Morin of British Columbia, have been able to secure partial funding from the Recreation and Sports Branch of the provincial government, and have purchased one-time American Cup rights from founder/owner Tracy Knauss.

Each of the six teams will have six members, a team manager, and back-up pilots. The format will be open distance, out and returns, and racing to declared goals. Competition is planned for at least five days of the period.

For further information, contact Bateman and Morin at 2960 Manitoba St., Vancouver, B.C., Canada V5Y-3B4, or call 604/874-5589.

Muller Hang Gliding Publishes X-C Log

Muller Hang Gliding of Canada has published a thorough list of Canadian X-C flights as part of their first newsletter of 1986. They list official (registered with the Royal Canadian Flying Clubs) as well as unofficial records during the recording period which began in 1982.

Official Open Distance (126.75 miles) is held by Willi Muller, Altitude Gain (10,150 feet) and To Goal (50 miles) is held by Cliff Kakish, and Out and Return (78 miles) by Willi Muller. Unofficial Open Distance (145 miles) was flown by Stu Cameron, Out and Return (108 miles) by John Duthie, X-C after towing by car (50 miles) held by Rod Regier, and Female Open Distance (58 miles) was earned by Maryse Perron.

The recording task is primarily undertaken by Vincene Muller, and is thorough enough to include all registered cross-country flights even if modest in length.

For a complete listing contact Muller Hang Gliding by writing RR#2, Cochrane, Alberta, Canada T0L-0W0, or calling 403/932-6760.

Tandem Flight From 16,000 Feet

A tandem flight from Mt. Blanc was achieved late last year, as a team ascended the 4,810 meter (15,781 foot) summit. Riccardo Tarello, an instructor, and Alberto Ottoz flew the tandem glider (not specified), and were accompanied by Tonino Liporace and Rodolfo Toscano, flying in single place gliders. All are members of the FIVL (Italian Hang Gliding Association).

The team was guided by mountaineer Mario Mochet. After climbing the mountain and assembling their craft, the group found good weather conditions and launched. Flying over Cirque du Maudit, Mer de Glace, and Punta Helbronner for some two hours, they landed at the base of Grandes Jorasses in Val Ferret (Courmayeur), Italy. It is believed to be the highest launch for a tandem flight to-date.

26,361 Foot Launch

The first successful flight from an over 8,035 meter (26,361 ft. MSL)

CONTINUED on Page 16



Raymond Working On Rigid Airwave?

mountain was made by frenchman Jean-Marc Boivin.

After climbing Mount Gasherbrum in northern Kashmir in Pakistan, he launched a specially-built, 37-pound Tecma (french brand) single surface glider. Flying for 25 minutes, he landed at a lower camp at 18,000 foot elevation.

The glider had been brought up earlier, but the actual flight had to wait out poor weather. When Boivin returned, he found his assembled glider covered with frozen snow. After spending some four hours to remove the snow, a chunk of ice stubbornly refused to let go, and had to be removed by ice pick. Doing so tore the lightweight Amithan sail, and Dacron tape would not stick in the 5°F temperature. Boivin elected to go anyway, but without the battens, to reduce chordwise sail tension

The following new items are excerpted from France's Gazette La Mouette with permission from publisher Sherry Thevenot. Subscriptions may be obtained to this excellent 12-page international newsletter. It is available in English and French. See their subscription ad on page 17.

Is Eric Raymond working on a rigid wing at Airwave? The origins of Airwave are well known (see our articles in this issue). Last spring, a conflict arose between the employees of UP that resulted in the departure of Eric Raymond, reputed for his excellent photos of hang gliding, who was also the specialist of rigid wings at UP. At the time of his departure, the UP team had projects to build a rigid wing, a similar model to the one tested in Germany before the war.

Unless Raymond is simply satisfying his appetite for beautiful photos on the Isle of Wight, it won't be surprising to see a rigid wing come out of Airwave if the English are able to surpass the Germans by solving the problems of stability that led their predecessors to abandon the project.

French Hang Gliding Association Growing

The French Hang Gliding Federation (FFVL) counted 6,500 members at the end of 1984 and expects 7,000 for 1985, 20% of whom are from Paris.

The FFVL lists 200 clubs, including five specialized in aerotowing, and 40 hang gliding schools. In 1984, a total of nearly \$100,000 worth of hang gliding material was purchased for national clubs, two thirds of the cost being covered by the FFVL and the balance by the clubs.

As of September 1985, the annual accident report given by the FFVL was four deaths, 176 injured, an average accident rate of 0.22% and about as many fatal accidents as for squash. (These statistics do not include non-members.)

Update On Danish Activity

Hang Gliding in Denmark is presently limited to coastal soaring. The country is flat and opportunities for towing are present, but so far no X-C attempts have been made, except outside the country.

Two groups of pilots exist in Denmark, one on the mainland, and the other on the island (around Copenhagen). The membership lists show around 1,000 associated (a figure similar to Canada).

This year they plan to purchase, with the aid of the hang gliding association, a German hydraulic winch, which they hope will give a lift to X-C flying in the country.

Russian Champion Selected

The Russian National Champion for 1985 is Alexander Sutiagin from Tomsk, who won the Russian Nationals at Alma Ata.

In Russia, most gliders are still homemade, with the new factory types being based on the Azur (France—La Mouette) and Typhoon (England—Solar Wings). As an example, the Kanaus Hang Glider Club has a total of 23 gliders, three of which are Slavutich UT gliders and twenty are homebuilt.

(This item compliments of British Hang Gliding Association's Wings! magazine, written by Bart Doets, who translated information from Germany's Drachenflieger.

England's Gold Marque Sports Glider Manufacturer Closes

England's Gold Marque Sports has closed its doors, the demise blamed partly on the poor pitch stability of the pre-production versions of their high performance Javelin.

The pitch problem was discovered during a test flight by Dave Clayton, and was proven on the BHGA test rig. Another contributing factor was cited to be "stiff competition from other manufacturers."

CONTINUED on Page 28

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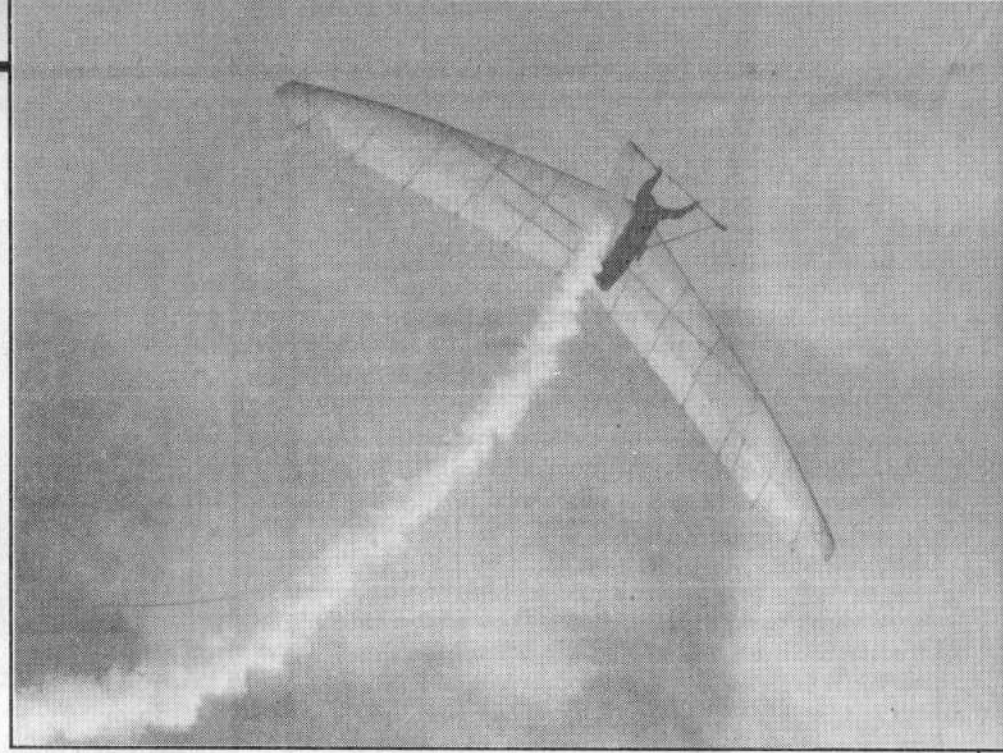
OFFICIAL PROGRAM

SPECIAL SECTION
Pages 18-25

Sixth Annual Monterey Bay

STEEPLECHASE

The Marina Dunes Race grew up, took on a new name, enlisted sponsors, attracted a crowd, yet lost two out of three probable winners. Still, under the careful direction of Jim Johns, the Monterey Bay Steeplechase plays a significant role, the first important meet of the year. ...And it's fun! Written and edited for **WHOLE AIR** by John LaTorre.



THE SUNLIGHT REFLECTING off the sandy beach dazzles your eyes, but it's not a good day for sunbathing. A chilly, twenty-knot wind is blowing in from Monterey Bay, and temperatures are not expected to break seventy. So why are several hundred people here at Marina State Beach?

Cars are lined up on both sides of Reservation Road, extending for a half mile toward the town of Marina. The parking lot has been closed since early morning. Families with picnic baskets, couples with blankets and lawn chairs, people with cameras and binoculars, stream through the gate to Marina Beach.

They're coming to watch one of the most uncommon races in the aviation world—the Sixth Annual Monterey Bay Steeplechase.

All or Nothing Flying

As you arrive at the beach, you first notice dozens of hang gliders lined up on the beach in front of the parking lot, in an area cordoned off from the crowd. The line of sleek, high-tech gliders proceeds north, up a dune toward the right and onto a redwood ramp. As each pilot reaches the ramp, he is given a small sandbag with a numbered slip of paper inside. This he attaches to the control bar of his glider. He calls out his number to alert the timekeepers, who activate a stopwatch the instant his feet leave the ramp. He makes a hard left turn and skims the beach in an all-or-nothing attempt to reach the next series of low cliffs a few hundred feet to the south.

With skill and luck, he'll be greeted by the ocean breeze as it is deflected upward by the cliff, producing lift which he will immediately convert into speed. For the next twenty minutes and twelve miles, he will fly as fast as his skill and equipment will let him, because he knows that only seconds will separate the winning times.

The only ways a glider can store energy are with speed and altitude. And because this is a race, the pilot will sacrifice every inch of altitude possible to generate top speed. He will hit 45 MPH or more... not a great speed, as air races go, until you consider that most of it will be scant inches above the beach or cliffs. The slightest brush with the ground could throw the pilot out of control and force a landing. The only time, in fact, when he will attempt to exchange speed for altitude—the other version of the energy equation—is when he climbs enough to round a pylon at Sand City, six miles to the south. He'll drop his numbered

sandbag to an official waiting below. Then turning back north, it'll be six more miles at breakneck speed back to the finish line at Marina State Beach.

The race course consists of a six-mile series of cliffs and dunes that border the eastern side of Monterey Bay, from Sand City at the south end to Marina Beach at the north end. These dunes and cliffs vary from about a hundred feet in elevation to only a few feet, creating the infamous gaps in the ridge line at the north end of the course. The nearby cities of Monterey and Pacific Grove are visible at the southern edge of the bay, and on clear evenings the lights of Santa Cruz can be discerned on the bay's northern shore.

The bay is at the northwestern end of the Salinas Valley, where a combination of prevailing westerly winds and valley convection—a weather phenomenon the local pilots affectionately call "valley suck"—provides Marina with unusually dependable soaring winds in the spring and summer. Occasionally, "sheer" conditions will allow altitude gains of up to four thousand feet. But most soaring here involves working close to the edge, with maximum ceilings only a few hundred feet over the ridge line.

Steeplechasing Explained

In a sport and at a site where altitude is valued above practically anything else, a ground-skimming race seems oddly out of context. It was an even greater oddity a few years back, when hang gliders didn't have the top speeds and flat glides they possess today. Pilots often couldn't cross the gaps in the cliff line and were forced to land, climb up the next dune with their gliders, and relaunch—a practice which gave the race its name, like a steeplechase

where riders could remount their horses after a fall and finish the course. If the winds were light, it frequently took several relauncheds to complete the course. Today's rules still permit relauncheds, but in practice, a pilot loses so much time in the process that he is effectively out of the running. It is a race where seconds count, and to shave a second off his time, a pilot will take risks which in other circumstances would be reckless. Only the smooth consistency of the sea breezes and a relatively yielding terrain of sand will keep him at arm's length from disaster, and only the test of his skill and the incentives of prizes and notoriety convince him to take the risk at all.

The first Steeplechase took place in March 1978, when hang gliders were just beginning to evolve from their kite-like predecessors. Called the Saint Patrick's Day Steeplechase, it was organized as an informal contest by Pat Denevan, who today operates the Mission Soaring Center, a hang gliding store and school in Fremont. Denevan used to take his students to Marina to learn the basics of hang gliding on the gently sloping beach and discovered the challenge of soaring the cliffs to the south. He realized that here was the place to hold a contest that would test all the skills of a pilot—takeoffs, landings, and close-in soaring. About 30 pilots throughout northern California came to participate, many flying at Marina for the first time.

To enter, a pilot put \$5 into the pot, which would go to the pilot with the best round-trip time. The rules were simple: get to Sand City and back as fast as possible, taking off and landing along the course as many times as needed. Denevan recruited judges, timekeepers, and other officials from the ranks of his students. Flying one of the most advanced gliders at the time, Dan Racanelli took over an hour to complete the course—more than three times last year's winner. Racanelli won the \$150 and celebrated by buying the beer for the rest of the pilots.

The Steeplechase was never planned as an annual event. Kitty Hawk's Johns saw the potential for promotion. He increased the awards (to \$2,000 in values this year) believing this would attract top competition pilots, and he was right.

CONTINUED on Next Page

Steeplechase

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Racing Into the "Big Time"

In recent years, the Steeplechase has grown into a major event in hang gliding's competition circuit. Because it is the first big contest of the year, glider manufacturers are quick to send their latest models and hottest pilots to compete against each other. Like the races for cars across Baja California, it's as much a testing ground as a contest. The gliders can be compared one-on-one to see if they have the speed, the glide, and the handling they need to conquer the course.

The predominance of manufacturers, with their supply of spare parts and spare pilots in what used to be a local contest, prompted Johns to create an Amateur Class in 1985 at the suggestion of amateur racer, Robert Cartier (see **WHOLE AIR**, June 1985).

The Amateur Class for non-professionals without factory sponsorship, will return this year. It is joined by two new classes: a Women's Class, and a Vision Class.

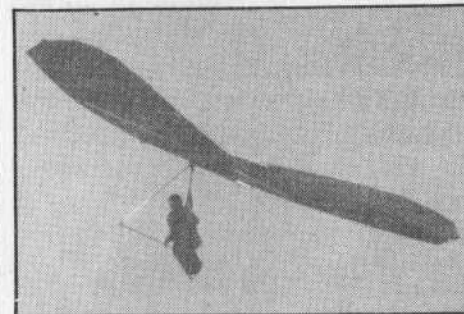
The latter is open to pilots flying the Pacific Windcraft Vision, a popular

intermediate glider with good performance. "The Vision is a classic design, like a Corvette or a J-3 Cub," Johns told **WHOLE AIR**. "It's the longest running current design." The creation of the Vision Class marks only the second time a competition has been organized around a specific model of hang glider. The first was in 1979, when now-defunct Electra Flyer conducted a

meet in Tennessee for its Cirrus 5 intermediate.

The Monterey Bay Steeplechase is so different from most other hang gliding competitions that even the most seasoned pro finds that he can learn a lot from a talented local pilot. Because competitions are usually held in the mountains, using lift from thermals to gain thousands of feet in altitude and flying triangular courses that may stretch from one mountain range to the next, most pilots aren't used to working as close to the ground as is required at Marina.

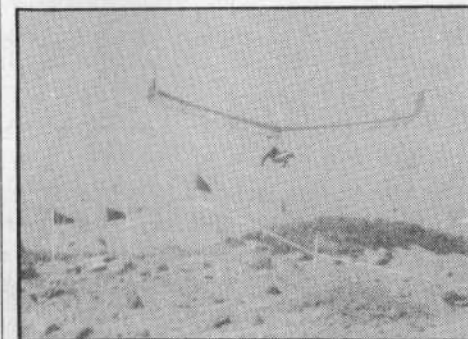
Pat Denevan fondly recalls many of the mountain pilots at the first Steeplechase. After they examined the line of low ridges, they wondered, "Where's the flying site?" They watched in awe as a local pilot



followed the exact contour of a cliff with his wingtip, and stretches his glider to lengths they had thought impossible. The ability of regular Marina pilots to soar the tiniest ridge in the lightest breeze is rivalled only by Florida pilots, who have few elevations with which to work. It is not uncommon for a pilot to land, only to take another step and once more become airborne for another few minutes of soaring.



(Top) Spot landing champ' Mark Liliedahl hot-dogging; (Center) Three pilots have totally dominated the race: (L-R) Racanelli, Bulger, and Brown; (Below) . At the pylon



The Perils of Dune Racing

While the mountains have their share of flying hazards, few are as perilous as the ocean that extends the entire length of the Steeplechase course, only a few yards from the pilot throughout his flight. The Pacific Ocean's surf can crush a downed hang glider pilot before he or she can even disconnect from the glider.

Visiting pilots are warned to forget about even attempting to land in the water. The Monterey Bay's terrible undertow would start them on a fatal journey that will end only in the mile-deep underwater canyon just off the Pacific Coast. "Even a crash on the beach is preferable to a landing in the water," they are told. But over the years, a few pilots have chosen to disregard the message. Many were lucky enough to land where the water was shallow, the surf weak, and the help close at hand. Some were not so fortunate.

Johns is concerned enough about the dangers of water landings that he has banned contestants from using equipment that might be hard to exit in a hurry (such

as drag-reducing pod harnesses).

The pilots who come to win, though, use drag-reducing devices everywhere they can. They replace all exposed tubes on their gliders with streamlined tubing or slip fairings over them. Some have covered all the openings in the wing with tape or Mylar, redesigned the tips of their gliders for more efficiency, and used

helmets specially designed to reduce drag. A few use gliders made of a special form of low-drag sailcloth made of polyester bonded to a glass-smooth Mylar coating.

Almost all of them use some sort of "pitch-enhancement" device to keep their bodies at the angle of lowest drag as they move forward or backward to regulate the glider's speed. (This device also allows them to shift their weight with less effort, an important factor because the glider must be flown fast. This requires a sustained rearward movement of the control bar, very tiring in a twenty-minute race.

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DIVERSIONS

IF YOU DON'T FLY, OR IF YOU SEEK AN ALTERNATIVE TO HANG GLIDING
HERE'S SOME FUN CHOICES SELECTED BY PROGRAM EDITOR, JOHN LA TORRE.

"Other" Things to Do on Central

California's Beautiful Bay. Since Monterey and the nearby cities of Santa Cruz, Pacific Grove, and Carmel are resort areas in true California fashion, it's difficult to find yourself with nothing to do. We've some suggestions for a variety of experiences that we think you shouldn't miss when you are in the area that so inspired famous author John Steinbeck.

MONTEREY CARMEL SANTA CRUZ PACIFIC GROVE

For Openers, take the Monterey Bay Aquarium. This \$40 million facility houses possibly the finest display of marine life on the West Coast. You'll see a kelp forest four stories tall, a tide pool, a recreation of a salt-marsh, and countless other exhibits.

Extensive use of educational aids and video give you a glimpse into the workings of the ocean that no other museum or zoo can even approach. Did you ever want to pet a bat ray? Here you can.

But the Aquarium has been so popular that you'll want to buy your ticket in advance, either at the door or through any Ticketron outlet. Call them 649-6466 for more information.

If surfing's your choice O'Neill's Surf Shop in Santa Cruz or Sunshine Freestyle Sport in Monterey can set you up. Sunshine Freestyle Sports can also serve your sailboard desires, as can Kitty Hawk Kites in Marina, or Windsurfing Monterey in Pacific Grove.

Or rent a bicycle from Carmel Cycle Sports in Carmel Valley or at Bay Bikes in Monterey. This is a great way to see the area at a relaxed pace and get a little exercise at the same time.

Whatever your liking, be sure to bring a swimsuit and enjoy the fine beaches of Santa Cruz and Carmel in the famous climate known throughout the country and the world.

In the evenings, you can have fine dining in a variety of formats and cuisines, located all over the Monterey Bay area. But of special interest is the old Cannery Row beachfront development. Here Steinbeck's memory lives on in beautiful renovated restaurants in former canneries that will today cater to any palate.

SALINAS Pacific Windcraft Factory

California's largest producer of

wine grapes is the nearby Salinas Valley. Numerous wineries in the area offer tours and wine tastings for several of state's most highly respected wines. Monterey Bay Vineyard, Bargetto Winery of Cannery Row, Jekel Vineyards, and California Cellars are all easy drives from Monterey.

Tour a hang glider factory as the Salinas company opens its doors for tours of the facility during the Steeplechase event. Pacific Windcraft often uses Marina Beach as a test flying and development site. call them at 422-2299 for more information.

More information

As befits a resort town, Monterey and its sister cities host a variety of cultural events all year round. For the latest information on what's happening, two weekly publications will provide a lot of guidance:

Coasting and *The Monterey Peninsula Review* are both free of charge and are readily available at local hotels, motels, restaurants, libraries, and other outlets in the area.

A similar publication, *Good Times*, covers the Santa Cruz scene.

Welcome to Monterey and Central California!

CONTINUED from Page 20

Many "re-tune" their gliders for maximum speed, sacrificing much of the glider's turning ability, since they'll need to fly fast most of the time, but will turn only once.

In the last few years, the Steeplechase has been dominated by three pilots. Ken Brown, who learned to fly at Marina Beach, took first place in 1983 and 1984. He now lives in Seattle and imports a brand of highly competitive British craft called the Magic built by Airwave Gliders. Brown usually shared the winner's honors with Dan Racanelli, a master of aerobatic flight, who won the first race in 1978, and with Chris Bulger, America's most successful competition pilot of 1983, who

won last year's Steeplechase with a record time of 19 minutes, 18 seconds.

Tragedy Strikes Twice

But tragedy has struck twice in the past year. Bulger was killed last summer when he fell from a tumbling ultralight aircraft. Racanelli died this January of electrocution while attempting to rescue a friend trapped in high-tension wires.

The loss of these two pilots has shaken the sport of hang gliding. Even though neither pilot died while flying hang gliders, their untimely deaths were reminders of an era not so long ago when many of the sport's pioneers had perished at the peak of their careers.

The team of Brown and Bulger managed to take two of the first three places in each of the last four contests, even though they flew a series of different gliders (Flight Designs Titans in '82—Delta Wing Streaks in '83—and Airwave Magics for the past two years). While each of these designs was state-of-the-art at the time, it is significant that even with the changes of equipment, the same pilots came out on top. This year, the Magic faces stiff competition from fast gliders from Wills Wing, Delta Wing, Seedwings, Ultralite Products, and La Mouette. These gliders have all had a good

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6th Annual Monterey Bay Steeplechase

The 6th Annual Monterey Bay Steeplechase
(12 Mile Out and Return Sand Dune Ridge Race)

Dates:
April 25, 26, & 27

Divisions:
Pro Class
Amateur Class
Women's Class
Vision Class
Targets Only

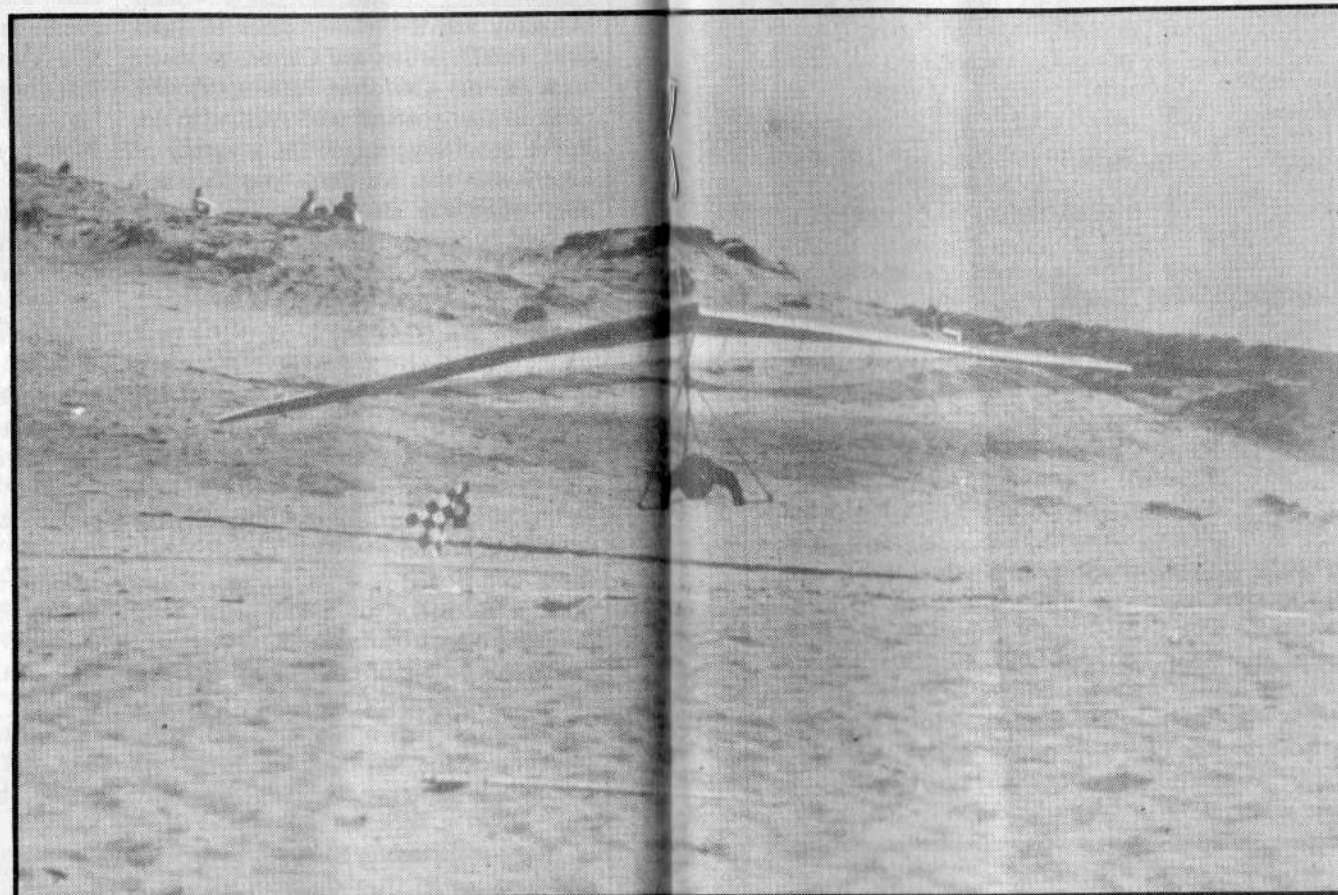
Prizes:
Pro Division
Grand Prize—Trip for 2 to Hawaii + \$300 cash
2nd Place—\$350 Cash & Trophy
3rd Place—\$200 Cash & Trophy
4th Place—Trophy
5th Place—Trophy
All Other Divisions
Trophies
Day Prizes
\$50 Cash
Target Competition
\$5 Cash per Target
Overall Winner—Harness

Entry Fees:
Pro Division—\$30
Amateur Division—\$20
Vision Division—\$20
Women's Division—\$20
Targets Only—\$15

Other Events:
Hot Air Balloon Rides
Motor Glider Exhibition
Aerobatic Biplane
Ultralights
Gyro-Copter
Aerial Comedy Routines

Major Sponsors
Kitty Hawk Kites
Pepsi Cola
Associated World Wide Travel (Salinas-Monterey)
Phone: 408/758-9313

Additional Sponsors
Pacific Windcraft
Women with Wings
Robert Cartier

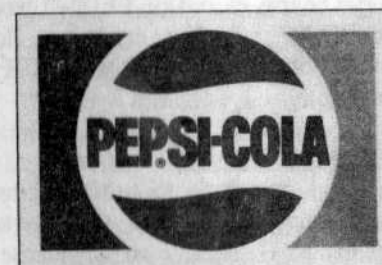


DEDICATION

to:
Dan Racanelli
and
Chris Bulger

Two of America's
Finest Competition
Pilots, and
Several-time
Winners of the
Steeplechase

LEAN 'N LOW—Last year's second place pilot, first year and previous winner, Dan Racanelli, maintains a low-drag profile as he zeroes in on the bullseye after a heated run of the course.



SCHEDULE OF EVENTS Monterey Bay Steeplechase April 25-27, 1986

Friday, April 25th:
10.00 Target Landing
12.00 Race Window Open
4.30 Race Window Closed

Saturday, April 26th, and
Sunday, April 27th:
8.00 to
11.00 Balloons
10.00 Target Competition
11.00 Parachute Team
11.10 Aerobatic Biplane
11.20 Aero Towing Demonstration
11.30 Gyro-Copter Fly-By
11.40 Motorglider Fly-By
11.50 "Pelican Helms" Clown Act
12.00 Tandem Flight

Demonstrations:
(Tentative)
12.15 Pilot's Meeting
12.30 Race Course Open
4.30 Race Course Closed
7.00 Pilot's Party
(Saturday only)

Tours:
Pacific Windcraft's Factory
in Salinas...
Available through the
weekend

GREATER BAY AREA

IF YOU'RE A PILOT coming to to watch the Monterey Bay Steeplechase in April, bring your glider! If you aren't making the 1986 event, save this issue of WHOLE AIR. It'll provide you with a site guide to some of the best-known Greater Bay Area [San Francisco] sites.

A variety of coastal and inland sites stands ready and willing within easy reach of Marina. To fly, bring your USHGA card.

Fort Funston

A two hour drive north of Marina will bring you to Fort Funston, one of the West's premier coastal soaring sites. It is the host of another well known air race, usually held in May.

With an elevation of 200 feet, it overlooks the Pacific Ocean and boasts easy top landings, or, if you can't keep it up, a narrow but long beach at the base of the cliff.

You must be a Hang III to soar Funston, although if you have a Hang II, the launch monitor may allow you to fly in non-soaring conditions. A Hang IV pilot is permitted to fly Westlake, a higher bluff about two miles to the south, if

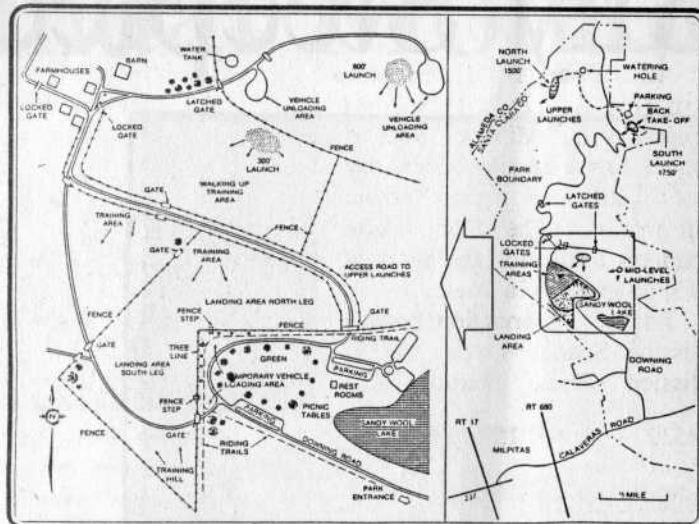
accompanied by a Westlake guide pilot.

All pilots must procure a Fort Funston helmet sticker at either of the two local hang glider shops. For more information, contact San Francisco Windsports, 3620 Wawona, San Francisco CA 94116 — phone 415/753-8828, or, Chandelle Hang Glider Center at 488 Manor Plaza, Pacifica CA 94044 — phone 415/359-6800.

Ed Levin Park

Located in Milpitas, a little over an hour's drive from Marina, Ed Levin Park provides a variety of west-facing launch elevations and a large landing area. This helps it accommodate skill levels from novice to master.

The highest launch is 1,700 feet over the landing area; access is provided by a dirt road that is occasionally closed in wet



weather. Other launches are at 40 feet, 300 feet, 600 feet, and 1,200 feet. Fees are collected for entry to the park and for hang gliding.

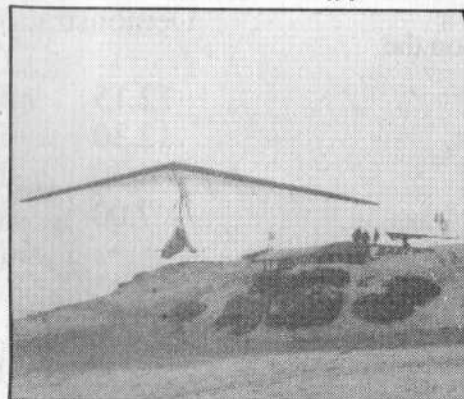
Although most flights at Ed Levin Park are sled rides, many notable soaring and cross country flights have occurred when using Ed Levin's ridge and thermal lift. Adjacent to the Park is Mission Ridge, where the first soaring flight of a Rogallo took place in 1971. Mission Ridge is open only to Hang IV pilots.

CONTINUED from Page 21

year in contests around the world, and the Steeplechase format is sure to put them to a grueling test of performance and speed. Whether the Magic can retain its title without the help of Bulger and Racanelli is one of the big questions of the 1986 edition.

Another unknown in this year's race will be the effect of Marina's dune restoration program on the race times. In an effort to repair damage to Monterey Bay's coastline caused by years of storms, off-road vehicles, and park users, the State Department of Parks has cordoned off many areas formerly used as relaunch sites. This change will force downed contestants to spend more time on the ground, walking their gliders to the next unrestricted area. Since even one landing effectively knocks a pilot out of contention, the change is not expected to alter the winning times, but it may reduce the number of runs a contestant can make

Meet director Jim Johns takes off for a relaxation flight



in a day. Another park project was to build an artificial ridge along one of the gaps in the cliff line, to reduce the damage caused by funnelling through the gap and "blowing out" the dunes behind it. This artificial ridge makes it easier for contestants to maintain speed along that part of the course and will probably lower the winning times, particularly if the winds are light.

Neither of these changes will make as much difference as one that was made last year, when restricted access to the old pylon site forced Johns to lengthen the course by a quarter of a mile. Even with the extra distance, Chris Bulger was able to set a course record of 19:18. "I have a hard time imagining it being flown faster," Johns told **WHOLE AIR** in February.

Safety First, Though

Jim Johns has gone to great lengths to ensure the safety of the contest's participants. He'll have an ambulance on standby at the starting line, a precaution never needed in the history of the contest but provided nonetheless at each of the last five races. Provisions will be made with the U. S. Army to airlift any pilots who are injured anywhere along the course where ambulances cannot reach. Two officials will be monitoring the course

SITE GUIDE

All pilots flying Mission Ridge or Ed Levin Park must check in at Mission Soaring Center to obtain sites rules, day use stickers, and other information. The shop also conducts instruction for pilots of all skill levels at Ed Levin.

For more information, contact Mission Soaring Center, 43551 Mission Blvd., Fremont CA

94539 — phone 415/656-6656.

Pacific Valley

Located on the spectacular Pacific coastline south of Monterey, Pacific Valley offers scenery that has been compared to Yosemite's for sheer beauty. To find the site, drive south for about an hour and half along California Route One. You must stop at the Pacific Valley Ranger Station or the Plaskett Creek Campground for a free one-day permit in order to fly. You will also receive information on the location of the three launches, two large landing areas, and several areas over which flying is prohibited.

The 3,000 foot main launch, called

Plaskett, faces west; other launches accept a north-west to south-west wind direction. All these launches, which require a minimum Hang III, actually sit on Prewitt Ridge about a mile behind the coastline. They are not visible from either the primary landing area at Sand Dollar Beach, or the larger landing area across the road from the Ranger Station.

Most flights at Pacific Valley are sled rides, but ridge and thermal soaring is possible if conditions are right. Be advised that the site may be closed in fog conditions (common in the summer).

It is wise to phone the Ranger Station at 805/927-4211 at 8:00 a.m. to see if the air is expected to be clear. You can also



Program author John LaTorre launches at Pacific Valley

reserve a permit, which you must pick up by 10:00 a.m. on the day you wish to fly. (A reservation, while not necessary, is a good idea because only twenty five permits are issued per day.) For more information, contact the Pacific Valley Ranger Station at the number above, or at Kitty Hawk Kites (see MARINA STATE BEACH, below).

Marina State Beach

The site of the Monterey Bay Steeplechase, Marina Beach offers a variety of challenges for any pilot Hang II or above. Free flying will be prohibited when the race is in progress, but pilots are invited to fly at any other time.

Kitty Hawk Kites, located right on the beach, provides a full pro shop and instruction at the site. Due to the danger of surf landings, pilots are required to carry a sharp knife and a pair of cable cutters (both items available at the shop).

For more information, contact Kitty Hawk Kites West, P.O. Box 828, Marina CA 93933 — phone 408/384-2622.

Launch Officials help steady Brian Porter's Voyager



Aviation Administration, and the United States Army, which operates Fort Ord (over whose coastline much of the race is run) and Fritzsche Field, a local military airport providing medical airlift services.

Not All Serious Flying

The planning for the race includes several events for the amusement of the spectators. In recent years, these

performances have included sailboard competitions, precision parachute jumping, aerobatics demonstrations, both with hang gliders and aerobatic airplanes, aerial clown acts, a morning spot-landing contest, and fly-by exhibitions of motor gliders and ultralights. Most of these crowd-pleasers are expected to return this year. They will be joined for the first time by hot-air balloons, which will offer tethered balloon rides in the morning, and "a U.F.O. contest." (When pressed for details on this last event, Johns would only smile inscrutably.)

Admission is free. Spectators are advised to bring a windbreaker and a blanket or chairs; binoculars and cameras are recommended to catch all the action.

For more information on the 1987 event, or to get last minute details for this year's race, contact Kitty Hawk Kites at P.O. Box 828, Marina CA 93933, or phone 408/384-2622.

FAST AS A SPEEDING

Chuck Toth tests the Australian Bullet spring-ejected emergency parachute/
Article by Chuck Toth; Photography by Doug Barnette

I WAS ATTENDING the 1985 Nationals in Chelan, Washington when Bill Bennett showed a group of pilots his new Bullet Parachute System. The advantages of such a system were instantly obvious:

- Quick Opening
- No Hand Throwing
- Less Bulky (Lighter) Harness
- More Streamlined Harness
- Easier to Reach Deployment

Handle

- Less Likely Wire Entanglement
- Better Protection for Chute
- Improved Descent Attitude for Glider (Flat)

Alas, the disadvantages were not so obvious. (More on this later.)

After much discussion and "hang talk" from everyone, I flashed on the idea of testing the Bullet system for ole "Uncle Bill." Actually, I wanted to try it out. I thought it was neat.

Fast Talker

It took some fast talk on my part to convince Bill to let me take the Bullet back to Chattanooga for testing. After I had reminded Bennett of the Raccoon Mountain Adventure Park's Hang Glider Simulator (formerly of Crystal Air Sports; see the December 1984 *Hang Gliding*, cover and page 44). This unique device had been used for repeated testing of the highly successful BRS ballistically deployed parachute system for ultralights. It was the only logical place to safely and quickly test the Bullet under simulated



flying conditions. Bill readily agreed.

"Great!" I thought. I'll have a new toy to play with and get some ink on the side.

Well, it has not been quick in the making. I've directed three or four "real" deployment seminars using the Hang Glider Simulator. I deployed my own parachute several times, and have aided others many times in these seminars. They all worked quite well. I didn't envision any problems. However, old Murphy and his Laws were lurking nearby...

When I returned from Chelan, the grass badly needed cutting, the mower of course then broke, and since I was the only pilot on my work program, I really had to dig into my seasonal motel maintenance chores.

For the unaware, author and Bullet test chief, Chuck Toth operates the Crystal Air Sport Motel with his wife, Shari.
—Ed.

Careful arrangements were made with Dennis van Dam of Aerial Dynamics (a sail loft in Chattanooga) to get a rip cord sewn to my harness. Other provisions were made for a professional photographer, a video cameraperson, and the right weather was ordered.

Murphy had other plans. No photographer. No Video. But we did the first tests anyway, and with great results. Let me tell you about it.

Assembling and Attaching the Bullet

Mounting the unit is straightforward, and no problems were anticipated. However, the stainless mounting brackets were very sharp edged. Several cuts later (ugh!), the unit is mounted to the Simulator glider.

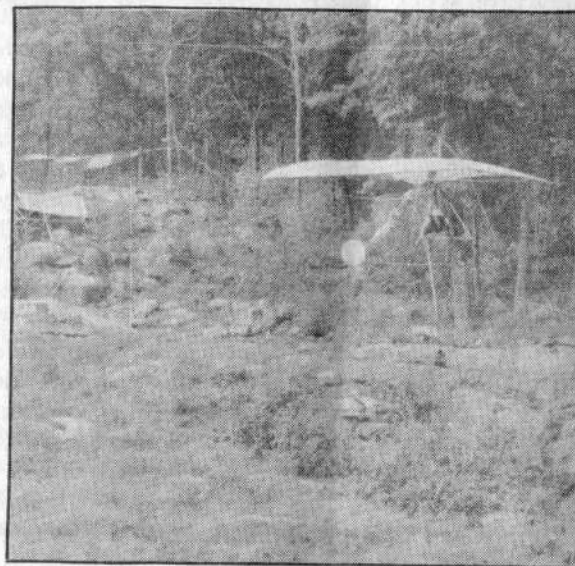
Running the Rip Cord Cable to the pilot was done exactly per the instructions. But the cable was little long and since I didn't want to cut up this test Bullet, I routed the cable in a real straight line, so that it would terminate at the proper place on the harness. We attached the cable with eight plastic ties along the keel. The testing could begin.

Except... the substitute video person

never operated a video before, no timer showed, and we had no photographer. The weather, however, was cooperative, and as I had a Simulator operator, we went ahead. Due to the absence of a timer, photographer, or an accomplished video cameraperson, we were unable to document the deployment times and details of the operation for later review and analysis.

Hand Deployment vs. the Bullet

Since I am familiar with the feeling and



the timing of hand deployments, I was amazed at the quick and strong shock experienced at full canopy. It felt much more rapid, and the full deployment more abrupt than with any of the several hand deploys I have done.

Also, while our measured [static] test pull of the rip cord was in excess of 40 pounds required (a lot, we felt), the actual pull in dynamic circumstances seemed to be much less. "Was it my adrenaline?" I wondered. In fact, the rip cord pull effort felt so low, when flying the Simulator, that I thought something had broken. I turned and looked back immediately, to view the pilot chute pulling out the main chute from its housing. Bam! The full canopy shock threw me off balance. Wow, I was impressed!

Since the chute was now out of the bullet shell, all I had to do now was get it back in and do the test again when we had a photographer available. Ha! This is easier said than done. (Ever think about

BULLET



putting toothpaste back into its tube?) One more little problem reared its ugly head: the housing cover cap had been lost. I had figured the cap would be restrained somehow, but it was not. By watching the out-of-focus video replay, we could see the cap fly off and out of the picture. After four hours of tramping around in the briars and thorns, we gave up. "No big deal," I thought. "I'll just have Bill send another one." After a suggestion that I jury-rig one, Bennett relented and sent two more



caps.

Getting the necessary entourage together proved more difficult than expected. After a couple friendly reminders from Bennett over the intervening month, I suggested to Doug Barnette, the pro photographer, that great harm would come to him if he wasn't at the hill in five days.

All set at last! It turned out to be so arable that day, and lots of people were about. I was getting everything ready, when Leon told me a load of last minute Simulator students had just arrived. Therefore I would have to pack the Bullet myself. "Great!" I thought, "the ordeal continues."

Leon is a master rigger, a former national sky diving champion, and is the operator of the High Adventure Park which leases the Simulator. I needed his great experience with parachutes—especially repacking—and I needed his operation of the Simulator.

Leon told me, "Just put the canopy into the bag and stuff the bag into the

Bullet. Easy." Right? Wrong!

Repacking the Bullet

We got it all laid out on the grass and proceeded in a logical sequence to pack the Bullet. Everything fit into the bag, except the ejector spring and pilot chute, of course. The we put (stuffed) the bag into the Bullet canister. We put it in about halfway and then proceeded to huff and puff, push and shove, grunt, sweat, groan, and moan. Ugh! It was all in, with the cap in place, after about an hour. It was

complete replaced. We had done it!

But then, still no photographer. What's the deal? Doug finally calls the flight park and begs off till the next day. I could hardly believe it. He was in the hospital with a bum knee, but would be able to stump about tomorrow. After all that effort repacking the chute, I really felt like bagging it anyway.

Saturday. Everyone is Present.

Saturday morning, good fortune abounded. Two video cameras, two photographers, and the wind was blowing straight in to the Simulator hill. We planned and rehearsed the sequence several times. Finally we were all set. Barnette had his trick Contax camera set for five frames a second exposure rate. He would start shooting when I pulled the rip cord.

After launching, I had both hands on the base tube before going for the rip cord. At the pre-determined spot, I pulled the handle from my harness, and at just over three seconds later, the glider stopped and I slowly slipped down the Simulator cable.

What a great system. I was elated! My ordeal was over and I could now get back to my normal activities.

As I was getting out of my harness, Doug came limping up to me with a tale I refused to accept. His trick camera had failed to advance the film at all. No pictures!

"What! Repack that thing again? No way," I said, as my previous helper had disappeared. I sat down, in silent disbelief.

Everyone involved was dreaming up novel ways to simulate the actual deployment sequence, just to obtain the vital pictures. Leon saw our plight, and laughingly started stuffing the whole thing into its canister once again. It didn't all fit, but would work for the pictures.

Up the hill again. In the air again. Pull the cord again. 1-2-3, Bam! Full canopy. Saved again!

Pluses and Minuses of the Bullet

The advantages proved themselves during our testing, and the disadvantages were viewed in the proper perspective. They are all minor problems for which there is compensation, or with which one can cope. They are:

- Makes Glider Tail Heavy(ier)
- Increases Glider Weight
- Difficult to Install
- Must Hook In to System
- Must Overcome Hard Static Pull
- Difficult to Repack
- Delays If Sent to Factory for

Repack

Chance for Rip Cord Jams

Hey gang, everything has its drawbacks, even hang gliding and the opposite sex. But we all learn to live with them.

This recovery system is a serious entry into the hang glider market. I feel that it would be very useful for the serious aerobatic and/or cross country pilot. And for that pilot who has to get back to the office on Monday.

For further information on the Bullet Recovery System, contact Bill Bennett at Delta Wing Gliders, P. O. Box 408, Van Nuys CA 91408, or call 818/787-6600.

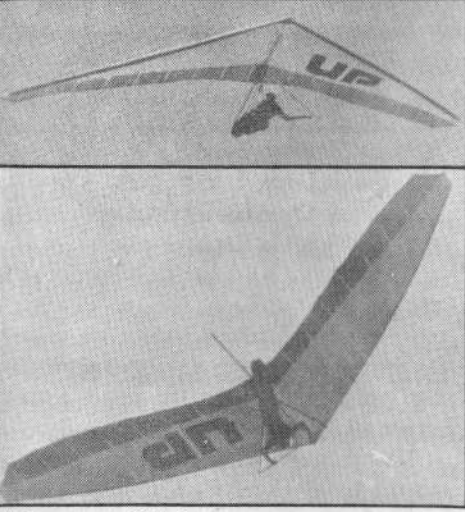


Hurst's Safaris Go
to Private Tours



Ron Hurst's
Hang Gliding Safaris

Ultralite Products GZ-E
Now Built In Europe



Airwave Gliders
Announces New "Junior"

England has two very strong manufacturers holding the lion's share of the market. Airwave Gliders (Magic IV) seems unquestionably the largest; the second being Solar Wings (Typhoon S4), now part of a larger company, Pegasus Transportation Systems, Ltd. A smaller company that is active in the United Kingdom is Aerial Arts, selling their Clubman CFX through 30 dealers.

Ron Hurst's Hang Gliding Safaris in Switzerland reports interest in group trips has declined. He will, therefore, place emphasis on catering to the special needs of individuals wishing to fly in the country of exceptional beauty and a proliferation of flying sites (Hurst reports over 70 launches within one hour of Zurich!).

His goal on these individual or private group safaris will be to make at least one launch per day, "even if we have turn Switzerland upside down." Advance scheduling is no longer required so that he can accommodate the spontaneous call, although some advance notice will aid the effort.

The high quality guide service costs about \$50 per day, plus expenses, which will include lunch, cable car fees, and fuel. Group prices will be slightly different. Hurst reports, "If it is inconvenient for you to bring your own glider, I may be able to rent you a state of the art double or single surface for \$50 per day plus damages.

For more information, contact Hurst at Im Brännli 10, CH-8152 Opfikon, Switzerland, or telephone 01/810 26 48.

Ultralite Products has a new glider for 1986. The GZE (GZ-Europe) will be made in France. The model has undergone HGMA testing and has been modified slightly to address the requirements of the American organization (see "The German/American Certification Controversy," in the May 86 issue of **WHOLE AIR**).

Pete Brock writes, "Appearance is very similar to the [American] GZ, but it's all new, using a new sail pattern and all new European frame made with trick European alloys.

"The size is somewhat larger than the 155 square foot American rendition, being a 162 square foot model. Brock claims, "The sink rate is better, the glide at minimum sink is about the same, the glide at top end is better as is the speed, and the handling is much 'nicer' (closer to the Comet than the GZ.)

"Our European company is wholly European owned and UP Inc., will only distribute... so no money [is invested in the U.S.] if we lose a lawsuit. I predict there won't be a U.S. manufacturer by 1987 and maybe severe product liability [availability and cost problems] will be the demise of all high risk sports equipment manufacturers [except for those with very large customer bases]"

Pilots or dealers interested in more information on the GZ-E may contact the company by writing UP/Europe, Att'n: Heidi Blümhuber, Zi du Bresson, 38660 Le Touvet, France, or by calling 760-8-5010.

Airwave Gliders in England announces the introduction of their Magic Junior, the first intermediate model from the successful builder of the Magic line of high performance gliders. Production of the Junior will start "this spring."

A company spokesman has related that the Junior will "feature most of the hardware of the Magic IV, but without the airfoil uprights." It is a floating crossbar glider with 30% double surface. It is not intended as a cross country glider, but has a sink rate that enables it "to stay on top of the stack with every hot X-C ship."

The Magic Junior is said to have most pleasant flying characteristics, to suit beginners as well as intermediate pilots.

(Report filed by Hans Bausenwein.)

GENERAL INTEREST NEWS

Hang Glider Computer
Bulletin Board Goes
"On-Line"

A computer bulletin board for hang gliding exchanges has been created by Silicon Valley area pilots under the direction of Karl Allmendinger. A computer bulletin board may be reached by anyone with a microcomputer plus a modem and the board phone number.

The bulletin board, which will be active 24 hours a day except when the system is being worked by the originators, will contain a message area and several files as it begins operation. Pilots anywhere in the country who have the right equipment may call in and gain or leave information. The service is believed to be the first operating exclusively for

CONTINUED on Page 30

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GENERAL INTEREST
NEWS
CONTINUED from Page 28

New FM Radio
Frequencies Allocated

hang gliding. A Special Interest Group servicing all aviation is, however, available on Compuserve.

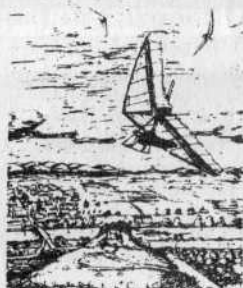
To access the board, dial 408/732-3951. The protocol is 8 bit, 1 stop bit, no parity, and can handle 300 or 1200 baud transmission rates. Just recently a 20-megabyte hard disk was added, bringing increased usefulness to the project.

Five FM frequencies for low-power output have received FCC approval under their Part 15 regulations. This will open the door further to legal use of these transceivers by hang glider pilots. The new change applies to units producing only about 1/20th of a watt maximum output. No license will be required.

The frequencies are identified by letter group on the following frequencies: A—49.830 MHz, B—49.845 MHz, C—49.860 MHz, D—49.875 MHz, and E—49.890 MHz.

Several companies make very compact units weighing as little as nine ounces, operable by vox (voice activated) systems. Cost for the radios run as low as \$30. Ranges are customarily listed as 1/4 to 1/2 miles over terrain, but can be substantially greater in the air. Power requirements are typically a 9-volt battery. Models with varying characteristics are made by Cobra (Command Call), G.E. (Voice-1), Maxon (Easy Talker), and Radio Shack (TRC-500) among others.

And Now... Hang Glider
Wine (?)
SunnySlope Soaring



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Bar For MiniComet
Made Available

Hang Gliding has received a plug from an unusual source... bottled white wine, as Weston Winery of Caldwell, Idaho begins selling its *Blanc de Blanc*, with custom hang glider label.

With generous assistance from Mike King's Treasure Valley Hang Gliders in Boise, Idaho, the winery began marketing a quality white wine with an artwork hang gliding scene on the front, and explanatory label on the rear. The company uses a very pro-hang gliding sales pitch to promote their product, emphasizing that the gentle northwestern slopes that help yield the finest grapes, also allow graceful soaring flight in hang gliders.

The verbiage speaks of great advances in hang gliders, and safety improvements while identifying the skills required. World records are quoted, instruction is encouraged, and even the USHGA got a mention.

The only flaw in this unusual but still-beneficial promotion is the mention of "half a million" participants in the sport worldwide. (Best estimates by several hang glider magazines puts the figure at about 60,000-80,000.) Of course, the proof of this pudding is more likely to be in the sipping than in a critical review of its label.

A small control bar for the littlest Comet? One is now available, or at least plans for one are.

Sharon Strickland ("America's First Lady of Aerotowing," *WHOLE AIR* March 1984), and her husband, Bones Strickland, have worked out a viable modification for use by Sharon. She stands 62 inches tall, and was rather diminutive inside the Comet 135's 63 inch equilateral control bar, making the glider difficult to ground handle. Bones did the original work on it in 1982, and besides Sharon, several Northern California pilots have logged "hundreds of hours of air time with it."

Through their company, American Windwrights (509 Umland Dr., Santa Rosa CA 95401), the Stricklands are offering the design to the public. However, they emphasize several important considerations: 1—While the bar has demonstrated a good performance record, the modification has not been HGMA certified, so making such a change invalidates that certification; 2—UP has been asked to endorse the change, and the Comet 135 is out of production; 3—The mod' is *not* designed for use on C-2s; 4—Most Comet 135s are several years old, and may be wearing out. This changes should not encourage the use of a glider that should be retired; and 5—Small gliders *are* still being produced, and perhaps those manufacturers should be supported.

With the above considerations in mind, American Windwrights encourage contact from diminutive pilots that could find good use from this offer.

REGIONAL NEWS

Morningside Publishes
"Birdseed"

"Birdseed" is a witty little newsletter done by Morningside's Jeff Nicolay emanating from the Claremont, New Hampshire hang gliding site and shop. The six-page effort is chock full of safety information and equipment mini-review. It also details happenings in Region 8 (where Morningside is located).

The newsletter, whose appearance competes with that of the better club bulletins, is

REGIONAL NEWS
CONTINUED from Page 30

New Seattle Shop—
Airplay'n Opens

totally authored by shop tycoon Nicolay. He wishes to send it to all USHGA Region 8 members and all clubs. Those who didn't get their copy are welcomed to write and be placed on their mailing list. Contact *Birdseed* or Morningside Hang Gliders by writing them at Rt. 12, RFD #2, Claremont, NH 03743, or calling 603/542-4416.

Ken Brown, director of the Airwave Gliders U.S. distribution company is opening a retail shop with flight school to serve the Seattle area. The new school will be called AIRPLAY'N.

Like other parts of the country, the Seattle area has witnessed a decrease in the number of active shops and schools, and Brown figures to do something about that. The local club—Cloudbase Country Club, 1985 and 1986 U.S. Nationals Sponsor—has offered support and help.

Brown will be assisted by his brother Rod Brown, and by USHGA Certified Instructor, Roger Hansen. These two will handle the primary chores of the new school/shop as Ken Brown continues to head up the national sales of Airwave Gliders.

Those who would like further information on the Airplay'n school may write 800 Mercer, Seattle WA 98109, or call 206/622-8132.

Valley Soaring Starts
New Shop Service

The Chattanooga flying area has a new shop called Sequatchie Valley Soaring Supplies. Owners Dennis Michels and Cliff Whitney have recently announced the opening of the retail establishment near the launch for the popular Tennessee Tree Toppers flying site of Hensen Gap.

The enterprise—abbreviated to "Valley Soaring"—is located on the bluff adjacent to Hensen Gap. Those unfamiliar with the area probably have heard about the well-known radial launch ramp that the Southeastern club erected at this club-owned site in 1982 (see *WHOLE AIR*, Nov/Dec 1982). Until the formation of Valley Soaring, no services were available at the site. Pilots who sought parts and services were required to visit Lookout Mountain Flight Park some 60 miles distant. The other shop in the area—Crystal Air Sports—closed at the end of 1984.

Valley Soaring will offer lessons on the Hang Glider Simulator (at Raccoon Mtn) as well as beginning hill and advanced mountain soaring lessons. The instruction will be done by eastern distance cross country record holder, Gary Englehardt.

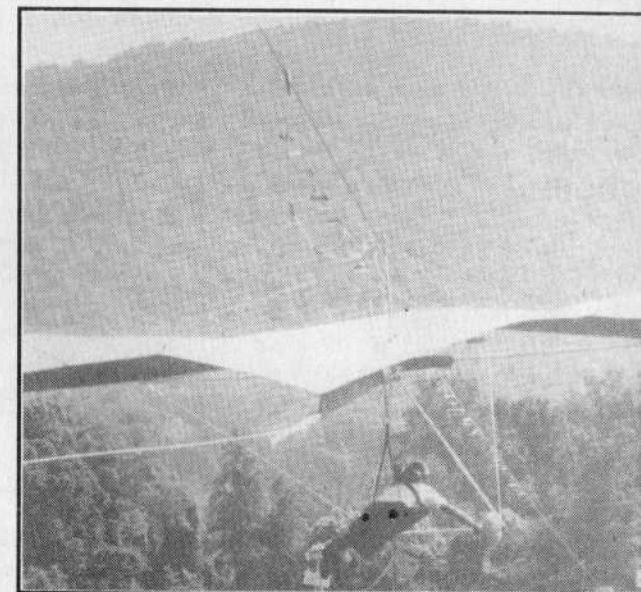
The new shop carries a growing inventory and represents Wills Wing, Seedwings, and several of the major accessory suppliers. As important parts like downtubes and hang straps are stocked, the many eastern pilots frequenting the Tennessee club sites will have these services much closer at hand.

For more information on Valley Soaring's lineup, contact them at Rt. 2, Box 210-D, Dunlap TN 37327, or call 615/949-2301 or 949-3384.

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ATTACK!

"Friend" turns foe when Jo Bathmann shows new colors to Maximilian the golden eagle / photos by the author

I ALMOST FORGOT about him, the eagle, Maximilian.

It was last year when the two of us made friends. However, to feed Max' from the air while I was flying my hang glider, still presented some problems for me.

"You have to start to feed him, to make him accustomed to your person. Try to train and tame this bird, then you will have a real airshow!" advised my friend the scuba instructor, Herwarth Voightmann. He has spent a lot of time and effort to train sharks to eat small bait fish out of his hands and even out of his mouth!

Last year I had to stop trying to tame Max because the weather was usually too poor for flying. I was feeding him with small chunks of tender beef filet, and we had become used to one another.

We were circling in the same thermal and flying side by side across the peaks of the Leogang Stone Mountains admiring each other. There I met him again and again, when I was flying along on my favorite cross country route from Kössen to Zell am See (refer to **WHOLE AIR** No. 44 for coverage of the World Meet including site and area descriptions).

Colors to Match

Max has beautiful stone-grey wings with some very tastefully and harmonically placed white feathers and a really majestic-looking head. His giant beak—which demands one's respect—shines in the sunlight, his claws hidden back underneath his feathers.

In those first flights with Max, I was flying my hang glider with the rainbow-colored double surface and a red leading edge, in a red cocoon harness which matches the glider's colors quite well. Maximilian must have liked that sail and its colors. But he definitely does not like my new glider, which I am flying today.

There is no question that it is Maximilian. I recognize him again! In the Alps, not many golden eagles of his giant size are left.

Attack!

Instead of starting to circle as usual, the two of us in the same thermal, Max rises to full size right in front of me. He shows his threatening beak. The feathers of his neck spread out to a waving collar, and the claws fearsomely point against me. He

flies around me, turns back and aims first at me and then again at the sail above me.

Instinctively I draw in my neck because it is obvious that it won't be possible to fly together in friendship anymore. Didn't he recognize me? Could it be that my new glider looks different to him, with its different colors? Is he upset by the yellow double surface or dazzled by the shiny mylar leading edge at catches glints from the brilliant sun?

I don't know and there also isn't time to deliberate. I fly a few wingovers, followed by steep and fast turns. Having lost 200 meters (over 600 feet) of altitude, I escaped the attack. Had it been successful, Max could have done serious damage to the sail.

Unfortunately a field of cirrus clouds has dampened the sunlight during the past minutes. The thermal activity is becoming weaker, the upwinds sparse and not strong enough to gain altitude again.

Not far away, I see pink smoke rising vertically from the chimney of the machinery works at Hochfilzen. "Industrial thermal..." the phrase flashes through my mind! I remember the reports of sailplane pilots of the Ruhr area (the largest industrial area in Europe, situated in the northwest of Germany). These pilots have made five-hour flights, thermalling over power plants and big chimneys.

Consequently I speed up to get there. As I arrive in the vicinity, my vario indicates 1-2 meters per second of lift (200-400 fpm). But it stinks so caustically, that I stop breathing automatically. My eyes begin to run with tears. After some coughing fits, I have to leave the trail of smoke. I gained 300 meters (almost 1,000 feet) and fly back to the slope hoping to find enough lift to be able to hold out in the ridge lift. If I can hang on long enough, perhaps the thermals will improve again.

Max Returns

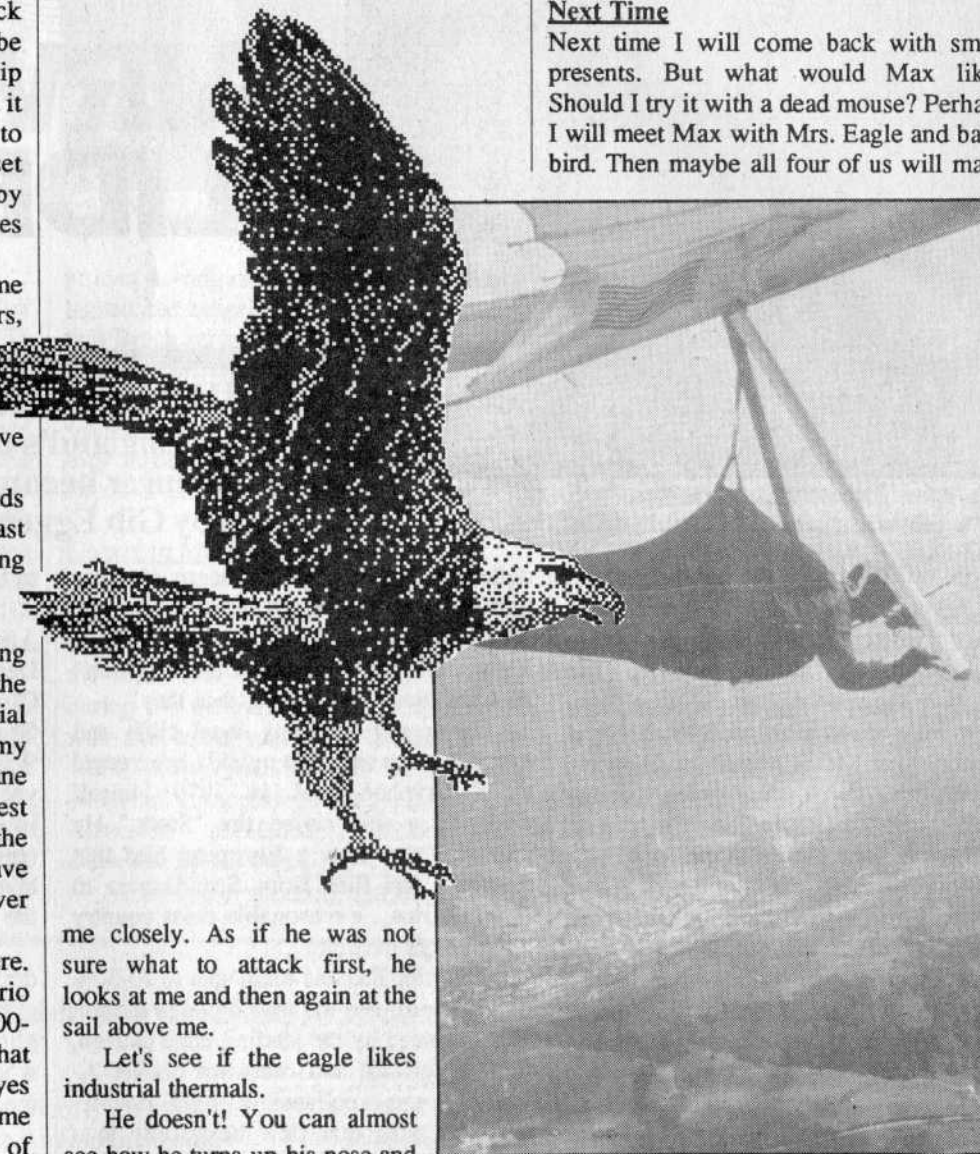
Then—I don't know where he came from—he is suddenly back again: Maximilian, the golden eagle!

He shows me his claws and that terrible beak again, then turns about to sit above me, ready to attack. I don't wish to have my new sail torn to pieces and dive away again in steep and fast turns, trying to escape. But this time the eagle follows

above me.

Next Time

Next time I will come back with small presents. But what would Max like? Should I try it with a dead mouse? Perhaps I will meet Max with Mrs. Eagle and baby bird. Then maybe all four of us will make



me closely. As if he was not sure what to attack first, he looks at me and then again at the sail above me.

Let's see if the eagle likes industrial thermals.

He doesn't! You can almost see how he turns up his nose and flies away from the smoke.

You already know what follows now: coughing, swearing, tears in the eyes, and after an altitude gain of 300 meters, back to the mountain.

This time I look out for flying companion with the bad mood. And right then, he breaks away from the big branch of a tall tree to circle in the thermal that is now growing stronger again.

He slowly comes closer from below. I center the thermal more exactly to optimize my climb rate. We are both climbing, but who climbs faster? My 200 meter advantage that I gained in the industrial thermal is enough, and I can disappear in the cloud that is forming

a familiar excursion flight.

The translation of the above text from the original German language was done by WHOLE AIR's German agent, Hans Bausenwein. As Hans also distributes the Airwave Magic glider flown by Bathmann, he can add a comment of his own on this fascinating encounter.

"I was first wondering why Jo Bathmann definitely wanted to have the same colors again on his new Magic IV 166, exactly the same as on his older Comet. After this first test flight on the IV, I don't any longer question his decision regarding sail colors."



AIRWAVE GLIDERS

TOURING AIRWAVE U.K.
How did England's largest glider manufacturer become so? Story and photos by Gib Eggen, D.O.

AS WITH MANY the famous persons who have made American Express credit card commercials over the years, not everyone knows all the movers and shakers in the sport of hang gliding. Rory Carter may be such an individual. He is the better-known principal at Airwave Gliders, one of two companies that are possible candidates to be the largest producers of hang gliders in the world.

"Rory Who...?"

Our story begins in 1976 when he learned to fly hang gliders.

He bought a kite—a Grasshopper—at a party which was made locally in his home area of England, the Isle of Wight. He taught himself through a local club and next bought a Falcon IV. It had



deflexors, and the performance increase implied by this advanced feature of the day somewhat upset his local compatriots. They felt the "young Carter upstart" shouldn't have a better kite than they!

Carter started flying local cliffs and opening more sites. He quickly progressed to a Gryphon, and in 1979 himself designed a ship called the "Stork." He named it that after a European bird that thermals and flies from Scandinavia to North Africa... a reasonable cross country by anyone's measure.

This ship had one main spar at 20-30% of the chord, and the trailing edge tension was balanced by the leading edge tension, with a forward and rearward double A-frame. It was a collapsible, 100% double-surfaced wing that flew beautifully in a straight line. It turned poorly, however, and was therefore abandoned.

That same year, he designed and built a test rig for the British Hang Gliding Association.

Carter the Yachtsman

Rory Carter learned to design flying craft by extrapolating his experience of many years as a yacht designer... catamarans, trimarans, and fast cruisers.

He had started Airwave Gliders Ltd., when he designed the Stork and built the test rig. In 1980, after hearing of the Ultralite Products Comet—without doubt the high performance pinnacle of its day—he and Graham Deegan went to the Ellenville, New York American Nationals

to talk with Peter Brock.

And Deegan the Sailmaker

Deegan was an excellent sailmaker. Every Olympic Fin sailor had one of his sails. Graham had friends in Cowes (Isle of Wight), and Carter met Deegan in the yachting circles. Graham had just been jilted out of the Moscow Olympics (sailing a one-man Fin) as New Zealand boycotted the event when Deegan was on the team.

It was an ideal match-up for two men destined to make their mark in the hang gliding business; one a boat builder turned glider designer, the other a sailmaker whose craft could be put to perfect use in the sailing flying aircraft.

Enter Pete Brock and UP

At the Ellenville Nationals, Carter and Deegan negotiated a license to build and sell Comets throughout most of Europe. Brock took a written contract back to California to have it typed up properly. Carter and Deegan began paying Brock royalties. A bank in Los Angeles apparently chose to hold on to the funds for six weeks and both parties thought they were being duped by the other.

Eventually, Ultralite Products got their money and a single glider was sent to them, "...without significant plans." Deegan went back to California and received a sail pattern. They bought parts from UP and began building gliders, doing relatively well. They had received a written

contract from Brock by now, but the authorized areas for exclusivity only enumerated the United Kingdom and Northern Ireland.

According to the pair, Brock had previously agreed on most of Europe, excluding only areas where other agents were representing UP. Deegan and Carter now felt too limited in area to support themselves.

The Birth of Airwave's Independence

In 1981, British pilots were asking Carter about an Owens Valley Racer from UP, and he had not heard of it via Brock. Taking it upon themselves, it was at this time that Carter and Deegan first departed from the basic Comet sail cut, employing many of their own ideas. Britisher Andrew Wilson took the altered design to the Owens meet and earned a sixth place finish. Carter told Brock that he took this step because he did not want his British team going to the renowned site with a glider anything less than competitive.

The company then built more Magic Comets for the British League pilots, and enjoyed several victories. More were supplied for the World Meet in Beppu, Japan. After their successes, they allege that Brock requested they pay more royalties. They desired a contract that was



The Prototype Airwave Stork in its first testing trials

written as originally agreed (they had not signed the other yet). Their story relates that Brock refused to change the contract, so Carter and Deegan decided to build their own gliders. They heard nothing more from Brock for two years. At this time they report they have no connection with Brock of Ultralite Products.

Comet to Magic

They dropped the name "Comet," and designed the Magic II with a wider nose angle and larger double surface sail area at the tips. The Magic III was designed during the autumn of 1982. Many felt it was the most successful glider in the world throughout '83 and '84, winning almost all competitions that it entered (see Airwave's published Victories List elsewhere in this article).

With such success, the Magic has

itself been copied heavily (Polaris Gamma, Solar Wings Typhoon, Bennett "Mystic," according to the Airwave). Carter and Deegan feel these gliders won't really match a Magic because copies don't know why the glider is built the way it is, especially the sail, whereas Airwave has developed and experimented with each design change. Manufacturers may claim to have an exact copy, but the Airwave directors feel this just isn't so.

Carter and Deegan feel the number of combinations and permutations is so great that a lot of room for improvements still exists, even in sail design. Deegan gave an example of two years ago. Ship sailmakers felt that sails were not going to improve much more, and yet today sails are being built that are "vastly superior" to those times.

CONTINUED on next page

Additional Notes from the Interview Session

Carter and Deegan's "Wish List"

Deegan would like to see more development of collapsible rigid wings. Carter would like to see the American market become more of a social activity, which may be more difficult as American sites are not always proximate to pubs, restaurants, or other gathering spots. In much of Europe these facilities are frequently close at hand. More international cooperation on airworthiness standards would help, they feel, and could save a lot of money and redundancy. They feel that currently these standards are used by countries to protect their own markets (though many would argue this point). Carter would like to see continued glider development, where progress is noted by designs being usable for recreational and competition pilots alike.

Profiling Graham Deegan

Graham Deegan is a New Zealand citizen and a British resident. He was making hang glider sails and ship sails for a living while trying to make the Olympic team by sailing one-man Fins. Unfortunately, after accomplishing this goal, New Zealand boycotted the Olympic Games in Moscow.

Deegan learned to hang glide in New Zealand in 1972, after buying an American hang gliding magazine and trying to build his own kites. At this time he was still in high school but was working at night in a sail loft. After school he became a full-time sailmaker. Some friends had started Pacific Kites and were making copies of Seagull IIIs. Deegan bought a Seagull III frame and cleaned up the sail with shaped seams and CYT cloth (conditioned yarn tempered). The performance difference between his and a stock model was marked.

Soon thereafter, he moved to Essex, England and was a sailmaker for Mustohyde. Here he again got involved in Fin sailing where he developed sails. A Fin is a 14 foot Olympic-class sailing dinghy. He became involved in competition and financed himself by making sails.

Returning to Cowes in England to close up old sailing business, Deegan met Carter.

They teamed up and began flying again, part of their on-going relationship. Deegan still plies the currents in a Fin, and has been invited to sail with or help teams in national competition. Presently, he admits to enjoying flying more.

Looking at the Company

Deegan and Carter get along well with each other and rarely have major differences of opinion. Deegan runs the sail loft and oversees production with Carter. Carter handles more of the business and deals with customers. They work together on research and development.

Phil Huddleston and Chris Johnson work as very competent shop managers. They've made life much easier for both Carter and Deegan.

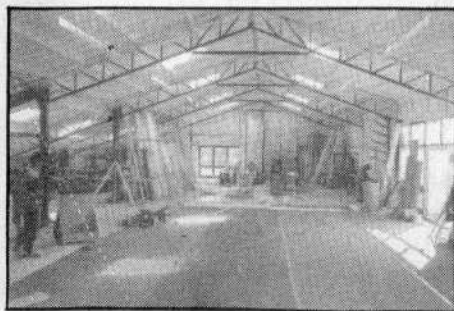
Airwave employs 25 people. At the end of 1985, they doubled their square footage by buying an eleven acre farm and converting the farm buildings. It is situated in lovely rolling hills in Shalfleet, Isle of Wight, a scant two miles from three major flying sites and offers the potential for winching just outside the factory door.

Those who know the company describe it as more of a large family than a corporate entity. They pride themselves on "looking after" everyone involved.

Rory Carter, Graham Deegan, and Patsy Carter (married to Rory) all share equal ownership in the business.



Airwave's new factory (above), and sail loft (center), with frame shop (below). Photos compliments Airwave Gliders U.K.



Official World Record Holder: JUDY LEDEN

British Hotstuff Started Slowly

She started flying in 1979, while working towards a nursing degree. It was about halfway through the program that she began flying so much that she quit the school.

Not possessing a glider of her own, Judy Leden was confined to many flights from a 300 foot hill, a physical feat that called for walks up to get those short flights. This start prevented her from having soaring flights for some six months.

Leden began running the university club in order to use their gliders for free. By working summer jobs cleaning airplanes, finally she obtained her own craft. Her chasing of the wind took her to Wales every weekend. Still, she felt she was not progressing

fast enough, so she went elsewhere, where more mountains and consistent weather were present—to Europe. She ended up in Austria for a year, flying three to four times per week. She fell in love with the country.

Having flown in the British Women's League the year before, and "not having done very well," she traveled again, to the Lariano Triangle meet in Como, Italy. There she suffered a moderate crash, but flew well earlier in the event.

World Record Setting Flight

Leden returned home in September of 1982, and was employed by her parents until going to the Owens Valley the following summer. During the competitions in Owens, she set the Women's Open Distance Record of 146 miles, launching from Horseshoe Meadows, and thermalling to a point just beyond Lining. It was a grueling seven and a half hour flight on a Duck, qualifying as the toughest effort she'd had in the sport. It was that same day that Larry Tudor was setting his famous 221.5 mile record.

Judy Leden won the British Women's League in 1983, and did her qualifying

flights to get in the National League. She got in through the Cross Country League where anyone can enter, and made her play for the prestigious National League by being in the top ten (based on hours flown).

Every year, twelve pilots are dropped

from the League and ten pilots from the Cross Country League enter, plus two others who are voted entry.

After the world record, her two goals were to be the first woman pilot in the British League, and to be the first woman pilot on a British National Team. She made the British League in 1984, and was invited to the Himalayan Competition where she placed Third. This meet had some of the best and worst points for her in hang



gliding.

Bests and Worst

The best was the vultures who flew in pairs and would "seek you out, move over in the thermals for you and fly with you, only several feet away." The worst was trying to revive a German pilot with CPR (Cardiopulmonary Resuscitation) who died with a broken neck.

She made her second goal by going to the Hungarian Nationals in July of '84 as a member of the British Team. She placed another Third.

Her British cohorts treat her as an equal and don't strike back when she beats them. Other nationalities don't always handle it as well.

Her next goal is to be on the British National Team for the European Championships in the 1986, or the World Meet in 1987.

League's Only Female

Judy is the only woman in the British League, now or ever. She feels it's easier to get sponsorship as a woman (though

CONTINUED as
Judy Leden, Page 38

Magic Gliders

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- Magic Trimmer (VG); change the geometry to suit existing conditions
- Pitchy; lighter bar pressures at speed, lower drag body position
- Spring Tips with Tip Fairings; cleaner tip area
- Half Ribs; superior high speed glide
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- 4.4 oz. Firm Dacron TE Cloth; performance stabilized dacron cloth
- Sandwich TE Cloth; the ultimate in performances, for pilots willing to sacrifice handling

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Contact: Call the dealer nearest you (page 11) for more information on how you can become a Magic glider owner. Dealer inquiries invited (see dealer ad for specific area).

1985 MAGIC WINS

South African Nationals

1st—Hugh Williams (III)
2nd, 3rd, 4th

Australian Nationals

2nd—Michel Carnet (III)
4th—John Pendry (III)

Buffalo Meet

1st—John Pendry (III)
4th—Steve Blenkinsop (III)

Marina Beach Steeplechase

1st—Chris Bulger (IV)
2nd—Dan Racanelli (IV)
3rd—Ken Brown (IV)

Fort Funston Races

1st—Chris Bulger (IV)
2nd—Ken Brown (IV)
3rd—Dan Racanelli (IV)

British National X-C League

1st - 3rd - 5th - 6th - 8th - 9th - 10th -
11th - 12th - 13th - 14th - 18th -
19th - 20th - 21st -
22nd - 23rd - 24th

World Championships Kössen, Austria

1st—John Pendry (IV)
3rd—Randy Haney (IV)

Eger Cup Hungary

1st—Steve Blenkinsop (IV)
2nd—Peter Harvey (IV)

Finnish Nationals

1st—Vesa Laitenen (III)
3rd—Bob Harrison (III)
4th—Juhani Raisenen (III)



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Judy Leden

CONTINUED from Page 36

she admits it still takes a great deal of work), and she may sometimes get more publicity or attention as a female pilot. But there is considerable resistance from some quarters as well. Physical restraints can be tough, such as the greater difficulties carrying heavy gliders, or finding gliders that fly well at her weight of 130 pounds.

Until her record 146-mile flight, she felt she was not always taken seriously. And being a female competitor can take its toll. What bothered her was not getting advice from other (male) pilots when she made mistakes as she was learning. She laments, "I didn't even get yelled at!" She had to do it herself. And felt as an outsider—which shewas in pilot groups, not being consulted or included regarding weather or conditions and the like.

Successes did come

Judy Leden received sponsorships from Lillets in 1983-84, but not 1985. She can never be embarrassed again, after flying about with Lillets and flowers all over her glider.

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CALENDAR

Calendar of Events Items:

APRIL 19-20 — Dog Mountain Frostbite Meet — Morton, WA — Dog Mtn/Cloudbase Country Club — INFO: Al Gibson @ 206/897-8436 or Ken Godwin @ 206/842-4970.

APRIL 25-27 — Monterey Bay Steeplechase — Marina, CA — Kitty Hawk Kites, West — INFO: Jim Johns @ 408/384-2622.

MAY 1-4 — 5th Annual Fort Funston Air Races — Fort Funston (San Francisco) — Fellow Feathers — INFO: Kelly Dearborn @ 415/431-6598.

MAY 9-11 — 14th Annual Hang Gliding Spectacular — Nags Head, NC — Kitty Hawk Kites, East — INFO: 919/441-4124.

MAY 10-11 — Manufacturer Demo Days — Marina, CA — Kitty Hawk Kites, West — INFO: Jim Johns @ 408/384-2622.

MAY 17 & 18 — "Girls Just Want To Have Fun" Fly-in (for women pilots) — Ed Levin Park (Milpitas, CA) — INFO: Lynda Nelson, 2141 Sunshine Dr., Concord CA 94520, or Jan Siskind, 3 Ivanhoe Rd., Worcester MA 01602.

MAY 17-19 and MAY 24-26 — Region 12 Qualifiers — Bath, NY — Finger Lakes Association of Pilots — INFO: Peter Fournia @ 716/377-0535

(evenings) or 716/427-6222 (days).

MAY 20-JUNE 10 — 5-Country European Hang Gliding Safari — Switzerland, Italy, Germany, Austria, and Lichtenstein — Santa Barbara Hang Gliding Center — INFO: Achim Hageman, 29 State St., Santa Barbara CA 93101, or @ 805/687-3119.

MAY 31-JUNE 1 — Mountain Clinic — Marina, CA — Kitty Hawk Kites, West — INFO: Jim Johns @ 408/384-2622.

JUNE 21 & 22 — 1986 Cochrane Meet — Calgary, Alberta, Canada — Muller Hang

Gliding — Vincene Muller @ 403/932-6760.

JULY 20-

AUGUST 10 — 5-

Country European

Hang Gliding Safari —

Switzerland, Italy,

Germany, Austria,

and Lichtenstein —

Santa Barbara

Hang Gliding

Center — INFO:

Achim Hageman, 29

State St., Santa

Barbara CA 93101,

or @ 805/6873119.

JUNE 28-JULY 6 — 4th Annual Owens Valley Cross Country Seminar — Lone Pine, CA — Santa Barbara Hang Gliding Center — INFO: Achim Hageman @ 805/687-3119.

AUGUST 23 & 24 — 8th Annual Can-Am Competition — Black Mtn. in Maple Falls WA — Airzone Mfg. — INFO: Jeff Bowman @ 206/293-3282 or Steve Best @ 604/985-8521.

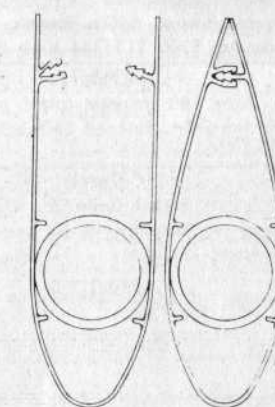
MARCH 1-OCTOBER 15 — 1986 Montana Cross Country Competition — Open Class — INFO: (and entry form) Roger Lockwood, 100 Tower St., Missoula MT 59801

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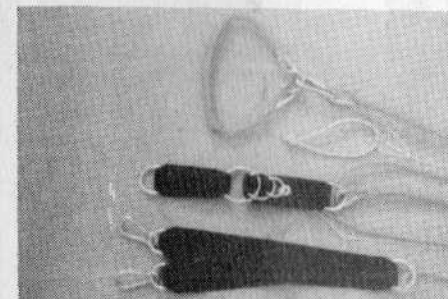
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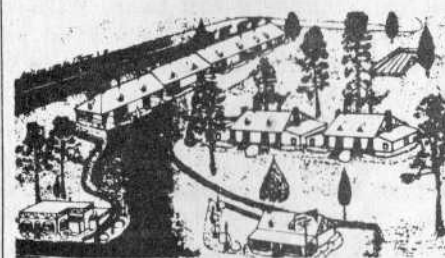
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PRODUCT LINES

TACOMA, WA — Well, for the 8th year now (or very nearly at least) you find yourself at the back of the book, in our popular column. You'll start seeing a blend of more international scuttlebutt here now that we're trying to report poop from home and abroad. But first... a big THANKS! to our guy in Germany, Hans Bausenwein, for several of the tidbits below.

So, let's start out with Firebird Hang Gliders of Germany, based near the 1983 World Meet site of Tegelberg. Firebird has begun U.S. distribution with their high performance Spirit through Mark Bailey in Midlothian, Texas, and Heiner Biesel in Salt Lake City, Utah. Initial reactions are reported good. In Germany, the Spirit sells for DM5,600 (or \$2,433 at current exchange rates). Don't know what Mark and Heiner are selling them for in America, but check one out before imports get even more expensive. Beautifully built, they are. By folks that Germany's *Drachenflieger* magazine editor calls, "likeable scoundrels." Seems the Firebird business brain boys are rather "creative" in some marketing techniques, and have rubbed the fur the wrong way more than once. Still in all, many would call them Germany's largest manufacturer.

We're trading maybe. 'Cause UP has split the good ole US of A for France (see *International News*, up front). UP is using parts obtained from La Mouette. Which isn't a bad idea, of course. Their gear is typically European-trick. It also will give buyers of the GZ-E a lot of additional sources for needed parts (like downtubes), 'cause La Mouette has a lot of European dealers. So what'll Peter Brock be doing? We wondered, too. So we asked. Pete responded, "As for my involvement in the company for the future, it will only be as a stockholder, not an officer. I will continue to work for UP. But the liability is too great to continue as an officer of the company. Most of my efforts will continue to be—as it has been for the last year—to market the Arrow. It's a really fantastic airplane. If I can put together the right type of program to build and sell it, we will. If not, well... I'll have one of the world's greatest toys." Since Pete brought up liability, we've some more bad news. It was lookin' like another liability loser was going to be the Grouse Mtn Meet (B-U-T, see the "Flash" below). Yep, the Insurance Monster has reared its ugly head in Canada as well. In fact, the Canadians may share in the USHGA's Liability Policy. That's good—for their members—but not their sites. Nope, the US-HGA's policy which will cover the pilots won't cover the sites.

FLASH!! The Grouse Mtn meet is back on! Insurance has been secured for the event and organizer Valerie Lang is planning activities once again. Interested pilots should contact her at Grouse Mtn Resorts Ltd, 6400 Nancy Greene Way, North Vancouver B.C., Canada V7R-4N4, or by calling 604/984-0661. Do recall, though, Grouse is an invitational, with a site that requires advanced skills (it's a teeny, weeny landing area).

Now, let's hop to England for some good guy talk. It centers on hot pilot Bob Calvert (4th Kössen World Meet; 3rd in the World Ultralight meet in Millau, France). Seems he would've won the famed British League, which consists of several meets in a year, all of which are pure X-C'ers. But Calvert refused to

take the trophy. On the last day of the meet, Calvert flew into a restricted air traffic zone without asking for prior permission. He wasn't alone. Fifteen others made the same violation. And even though the task was validated by the competition jury, Calvert declined the Champ's title because of the faux pas. It was sort of a disappointment for Solar Wings, whose Typhoon S4 Calvert was flying. But not totally. The 2nd Placer was another X-C ace, Graham Slater, also on a Typhoon. Not bad for the firm from Marlborough. Hey, can you imagine many American competitors refusing a victory cause of a little old transgression on some government airspace? Ha! Who're we kiddin'?

Since we're running out of room, let's do some zooming around the good ole US of A for some newsbits. In Salinas, Pacific Windcraft seems to be enjoying good early response to their new Vision Eclipse (see *Whole Air's* '85 December Newsletter). They've called back some employees since the winter doldrums from which most in-sport businesses suffer somewhat. Of course, at the low price they manage to charge, combined with nice-flying products, who's surprised? Don't know if their new East Coast facility is helping or hurting things yet. Too new to know, maybe. But one thing we're pretty sure of... easterners are likely to be endeared to PWC for the effort. It's been quite a while since the last eastern glider builder closed up shop (Sky Sports, Chuck's Glider Supplies, Moyes USA, etc.). Jean Michel's outfit may do okay based just on that factor. Wills Wing once was considering a similar move, but that was just before the industry slowdown of recent history. Meanwhile, the WW'ers winning ways with their HP, and initial response to their Sport seems good. Rob Kells was recently overheard saying that 1985 was their "best" year yet. Not from a glider volume measurement, we'd bet, but very likely due to their efficiency moves of the last couple years—and the above glider response. Bob Trampenau's Seedwings was having a good start to the year, he told us a while back. Matter of fact, he was looking for sail loft (mainly) and frame shop labor, so if you're job hunting, give 'em a buzz. We don't know if they still need help, but it can't hurt to ask, eh? Airwave distributor Ken Brown says '86 is off to a good start for him as well. Also, last year (his 2nd) he sold about 30 more divers than in 1984, and that's while dealing with much worse backlogs than in 1984. This year he's booked slots all through the heaviest part of the season, so the supply of Magic IVs will not be interrupted. Gosh! Gee whiz! Everybody's excited about '86. Delta Wing's Uncle Bill has a new model (see *Industry News*, up front), the XCEL. While his much-ballyhooed "Challenge" didn't come off, the glider is nearly ready, we understand. Plus, the Mystic, with which they done good in '85, has been lightened and tweaked here and there to produce the Lite Mystic, in the same sizes as before. Anyway, we hope all the enthusiasm we're hearing about is more substantive than just anticipation of a new season. Nothing wrong with a seasonal hopes, but our beleaguered sport needs a fresh breath of thermal air. Maybe 1986 will be it. Hope so! And now, our famous ender... Got news or opinions? Send 'em to: *Product Lines*, Box 98786, Tacoma, WA 98498-0786.

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