

Skydiving™

Volume 1, Number 12

June 1980

\$2.00

Season runs until October 31

Park Service Authorizes Jumps From El Capitan.

After two years of confrontation, discussion, and compromise, it is legal to make parachute jumps from El Capitan.

The last step in the long dispute took place on July 1, when eight skydivers leaped from the mountain under the watchful eye of National Park Service (NPS) and Fish & Wildlife Department officials, who viewed the jumps in order to determine the effects of cliff jumping on the peregrine falcons nesting on the cliff face (see story, Issue #11).

Joe Svec, Scott Hamilton, B.J. Worth, Larry Bagley, Nick Kingery, Rolayne Matson, John Noak, and Carl Boenish were the jumpers who made the historic dive, the first ever with Park Service approval.

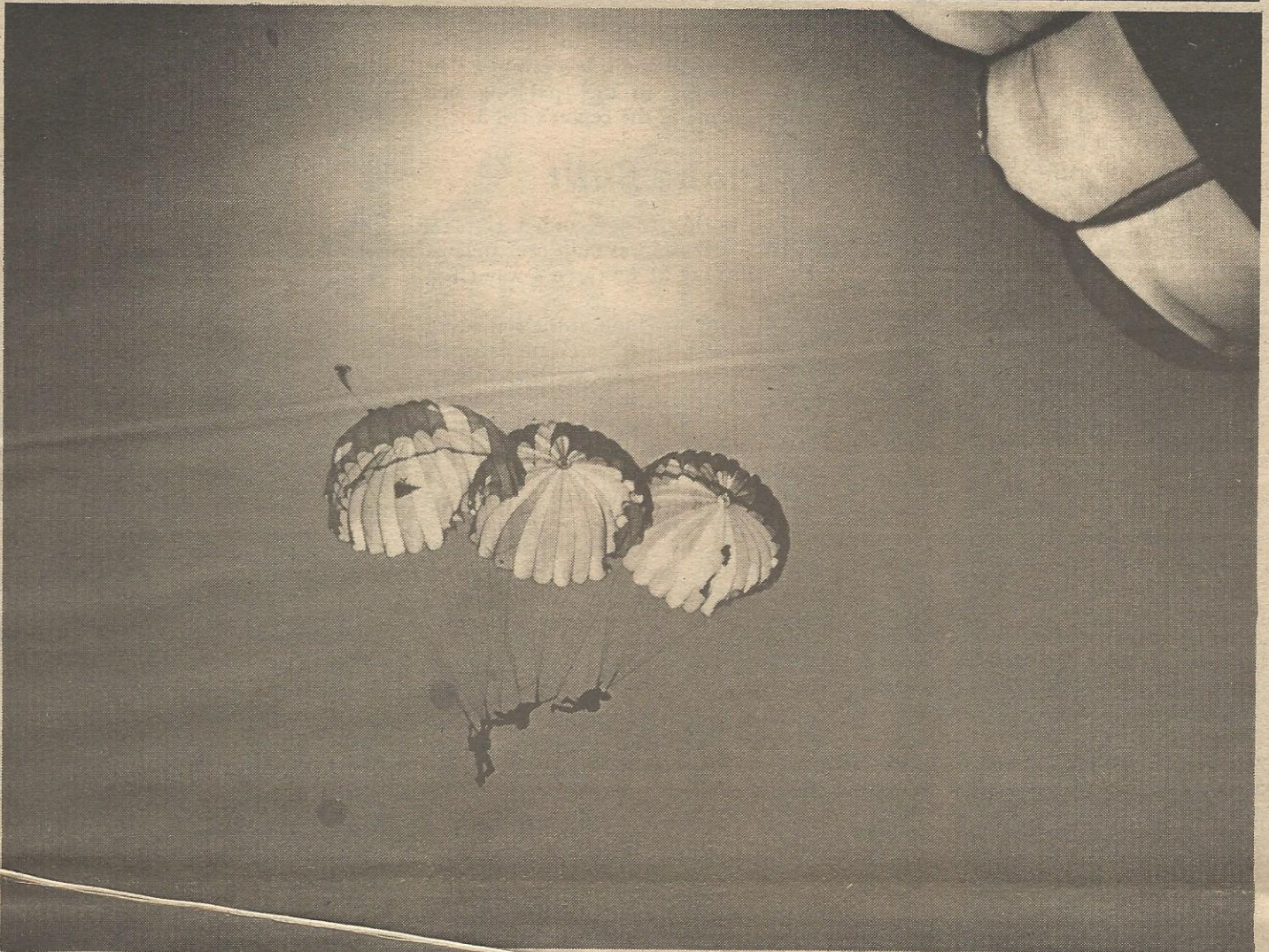
"It was sure nice to land in El Cap Meadow and have a ranger come up and shake your hand," said Svec, who made the jump illegally last summer. "That beats the hell out of having them arrest you."

Svec spoke at length of the new program and the steps leading to its implementation at a meeting on July 2, at the USPA Nationals boogie in Richmond, Ind. He described the hike to the summit as the hardest part of the whole trip and suggested any skydiver planning to make the jump be in good physical condition. The climb covers more than seven miles and takes six to eight hours with a 45-pound pack, according to NPS officials.

Svec was emphatic in discouraging jumpers from skydiving the mountain illegally, now that there is a legal arrangement.

"If the illegal jumps continue, it can make problems for the whole program,"

(continued on page 14)



A 3-plane built by Al Boger, Jack Gregory and Mike Lewis over the Sod Farm DZ near Tampa last June. The three exited from 7,500 and built the formation "basically by running into each other and then getting squared away." Photo by Al Ramsey.

West Coast teams dominate poorly attended meet

Visions Triumphs in 8- and 10-Way; Desert Heat Wins 4-Way Event at U.S. Nationals

Teams from the West Coast dominated the RW portion of the 1980 U.S. National Parachuting Championships. Visions from Perris Valley, Calif., won both the 8- and 10-way events and

Desert Heat from Coolidge, Ariz., placed first in 4-way.

Compared to recent years, the meet was lightly attended. And, as in the past two years, Indiana's summer weather frequently grounded the meet and frustrated competitors and officials alike.

In spite of the weather, the meet as a whole went smoothly. The light turnout made it easy to complete the meet

within the allocated time; in fact, it was over two days early. And because most competitors viewed 1980 as an off year, they were less critical of the conduct of the meet than they were in 1979 and probably will be next year. (The winners of the 8- and 4-way events in 1981 will form the U.S. parachute team and compete in the world championships in Zephyrhills, Fla., in October 1981. In 1980, however, the U.S. team is formed

(continued on page 12)

Stearns is U.S. Individual Champion

The style and accuracy competition at the 1980 nationals was completed with little fuss and even fewer surprises, as the weather held steady and the people expected to win did.

Maurice Fernandez, a member of the U.S. Army Parachute Team, took first place in men's style with a 7.05 average over eight rounds, bettering his 1979 winning mark by .14 seconds.

In men's accuracy, Matt O'Gwynn bested a field of 45 by dead-centering out the first time. A 0.00 score has never been posted in competition with an electronic scoring pad.

Cheryl Stearns won women's style and accuracy again this year, finishing the meet with a 7.15 style average and .05 centimeter distance for accuracy.

Stearns was also the overall champion marking the first time a woman has been crowned absolute overall national champion (last Year, USPA rules prevented her from receiving that award, even though she out scored all competitors in all events.).

Matt O'Gwynn was second overall with an 8.4 style average and a perfect accuracy score, followed by last year's

(continued on page 22)

INSIDE Skydiving

Zephyrhills Readies for CRW World Cup; Turkey Meet 2
Details provided on events, rules, schedule

Tips on Using Kevlar Line 4
Rigger Sean Collins tells what he knows

Final Results, U.S. Parachuting Championships 20
Complete standings of all five events

Calendar...8

Letters...24

Classifieds...26

Zephyrhills Readies for CRW World Cup and 12th Annual Turkey Meet

Jim Hooper, owner of the Zephyrhills Parachute Center in Florida, has announced details of the two major competitions his center is hosting this fall.

The CRW World Cup, the first international CRW meet, will be run from October 25 through November 2, with competition to begin at dawn on October 26. The meet will consist of two events, 4-way rotational CRW and 8-way speed stacks. Both events will be run according to the so-called "Z-hills rules," a set of guidelines and procedures written last year by competitors and judges at a CRW meet at the parachute center. (The rules were published in Issue #6 of Skydiving.)

Hooper said 8-way CRW will be run out of DC-3s and four-place Cessnas will probably be used for 4-way. Gordie Laing of Great Britain will be chief judge.

CRW competition will start each morning at dawn and be run until turbulence or clouds make it unsafe. Non-competitors are welcome to make fun jumps during weather holds.

The Zephyrhills Turkey Meet is scheduled from November 20-30 and will consist of four different RW events. Hooper hasn't yet decided on a firm schedule for the meet, although in the past, 16-way was run first followed by 20-way, 8-way and 10-way with competition starting the Monday after the first weekend of the meet. Fun jumps will be allowed during the entire eleven days including the competition.

Hooper has changed the 16-way event by turning it into a sequential event (in the past, it was a "speed formation" contest). The sequences will be selected sometime in late August, Hooper said.

The 20-way event is straight forward: 20-way round stars for time.

The 8-way event will be a sequential event run in accordance with the FAI rules. The rounds will be drawn right before the meet begins.

The meet's most popular event has historically been 10-way speed stars. The rules require a "no show, anything goes" exit, meaning that the entire team must be completely inside the aircraft before exit although it can leave hooked-up. The 16- and 20-way events will also have "no show" exits, while

there are no restrictions on the exit in 8-way.

Hooper hoped to have a video unit help judge the meet.

Hooper and his staff have been working hard preparing for the two meets this fall and the world RW championships in October 1981. He is not too busy, however, to enthusiastically invite skydivers everywhere to his center. "Come to Zhills and ride a rainbow," he says, referring to the sparkling new paint scheme of the center's DC-3.

12-Plane Built

The world's first recorded 12-plane CRW formation was built over Deland, Fla., on May 31 by three 4-way CRW teams.

The jump was built at the conclusion of a Florida Parachute Council meet and was filmed with a video recorder.

Participants included, in order of entry, James Lacey, Paul Bliss, Ross McFadyen, Frank Cater, Cliff Dobson, Al Ramsey, Mike Lewis, Al Boger, Jack Gregory, Doug Summers, Cary Troxel and Tom Parsons.

The 12-plane was not held for at least one minute, the minimum time required to accomplish an unofficial CRW record. But the 11-plane was held for well over that time.

The CRW teams involved included The Plane Old Folks, Them Toad Suckers and Quadzmodo, all from Florida. They had competed in the 4-way rotation event conducted by the council.

Comparative Safety Figures

The National Safety Council recently published a study that compares the safety of several transportation modes including general aviation.

The study reported on the number of deaths per 100 million passenger miles of travel in 1979. Airline travel was the safest at 0.01, followed by rail travel at 0.13 and buses at 1.30. The council said automobile travel resulted in 1.3 deaths per 100 million passenger miles, while the rate for general aviation was 16. Motorcycles came in last, at 20.

Elsinore Paracenter Plans SCR Scrambles

Elsinore (Calif.) Paracenter recently announced plans for the 1980 SCR Scrambles Meet which will be held Labor Day weekend, August 30-September 1.

The SCR Scrambles is a traditional meet that has been popular with West Coast jumpers for years. Its name refers to the way teams are formed for the competition: all entrants names are put "in a hat" and drawn randomly. This increases the competitiveness of the meet by helping make the teams equally talented. It also helps create new friendships and exchange ideas on technique.

The meet will consist of three jumps from 10,500', although more details of the events hadn't been released at press time. Entrants are required to have an SCR number certifying their participation in an 8-way star, and be a member of the USPA. DC-3s will be used.

A tracking contest will also be held. The aircraft will fly parallel to a road at

10,500 feet while the competitors exit one by one and attempt to track the farthest lateral distance before reaching opening altitude. The winner usually receives a substantial prize and sore muscles for flying as rigidly as possible for a minute or more.

A spokeswoman for the center said a pig roast will be held Sunday evening, the day before the Labor Day holiday.

Jumpers who don't enter the meet will be allowed to make fun jumps during the competition out of the center's several aircraft, which includes a DC-3, Twin Beech and Cessna 182.

Elsinore Paracenter moved several months ago when heavy rains in the Los Angeles area flooded the drop zone. The water completely inundated the center and will probably not recede for several years. Leo Orloski, who had just assumed control of the long-established center, moved the operation to Murrieta, about eight miles to the southeast.



Alan Levinson repacks after a jump at the USPA Boogie in Richmond last July. More on boogie in the next issue. Photo by Jan Reich.

Plans for Herd Boogie Announced

The United Parachute Club recently announced details of its annual Labor Day Boogie, scheduled for three days beginning August 30 at Limerick Airport in Pottstown, Penn. According to club spokesman Walt Schneider, this year's event — called the Herd Boogie — will feature two DeHavilland Twin Otters and two Douglas DC-3s, providing the capability to put about

120 jumpers in the air at one time.

The Previous Herd Boogies have attracted well over 500 jumpers who were drawn from all over the U.S. to the grassy airport in eastern Pennsylvania. The club's members pitch in to run the event in an efficient, friendly manner.

Schneider said the club is charging a \$10 entry fee to defray the cost of ferrying the twin-engine aircraft to Limerick and to pay for the party scheduled for Saturday night. He said camping is allowed, and hot showers will be available. USPA membership is required.

FXC Europe Opens

FXC Corporation and Parachutes de France have joined forces to open FXC Europe in Paris. The new division of FXC will market and support the products of the company's two other divisions, FXC Aerospace, which manufactures a variety of automatic parachute openers, and Guardian Parachute, which primarily builds sport parachutes.

Parachutes de France is a leading French parachute supplier, according to Frank Chevrier, FXC president.

"Surprise" Demo Made

The California Aerial Circus parachute team made a "surprise" demonstration jump in Malibu, Calif., July 4 into the birthday party of Jim Pankow, a member of the rock band, Chicago.

The 700 guests, which included members of Chicago and other bands including the Eagles and the Doobie Brothers, were surprised to see the team drop in according to plan as dinner was being served.

Pat Moorehead, Len Zak, Dick Pedley and Sandra Doyle made the jump.

Skydiving

Parachuting's Newsmagazine

Skydiving is published monthly by Michael Truffer, 2439 Otis Avenue, Deltona, Florida, 32725. Second Class postage paid at Orange City, Florida, and additional mailing offices. Entire contents copyright 1980 by M. Truffer; all rights reserved. ISSN 0912-7361.

Subscription rates: \$12.50 one year, \$20 two years, \$28 three years. Add \$4 per year for Canada or Mexico, \$5 per year (cash payment in U.S. currently only) for countries outside the U.S. and possessions. Add \$25 per year for Airmail postage. Address all subscription correspondence to Post Office Box 189, Deltona, FL 32725. Please allow six weeks for change of address; include both the old and new address.

Contributions to *Skydiving* are welcome. Although reasonable care will be taken in handling all material received, the publisher cannot guarantee its safety.

Postmaster: Send Form 3597 to *Skydiving*, P.O. Box 189, Deltona, FL 32725.

Over budget by \$32,000; situation should improve

U.S. Parachute Association in the Red

The United State Parachute Association is spending more money than it is taking in, according to the financial statement for the first half of 1980. According to Executive Director William Ottley, expenses have exceeded income by over \$32,000 and the association has reduced expenses in several areas to try to recover.

"We're economizing everywhere we can," Ottley told *Skydiving*. The staff has been reduced in size, he said, and color covers have been dropped from the last several issues of its magazine, *Parachutist*, to keep printing costs down. Even the members of the board of directors are feeling the pinch, as they will have to pay their own travel and lodging expenses at their upcoming meeting in Seattle.

Ottley had no ready explanation for the budget deficit, saying that "inflation has been hurting us" and "membership income is down."

He expects the situation to improve in the next several months, however, since this is parachuting's busiest part of the year and the association expects to recruit more new jumpers as members. Also, the USPA recently increased its dues and will raise the price of issuing parachuting licenses this Fall.

The USPA has always struggled with finances as periods of prosperity would be followed by cash flow problems. Because the size of its membership has been relatively static for the last five years or so, the association has become particularly susceptible to damage by inflation or extraordinary expenses.

Relative Workshop Plans Para-Ski Meet

Bill Booth, president of the Relative Workshop in Deland, Fla., has announced the 2nd Annual Relative Workshop Para-Ski Meet. The competition will combine accuracy jumping and water skiing and will be held October 4 and 5 at Lake Winnemissett in Deland. Trophies and merchandise will be awarded to the winners.

The accuracy event is divided into two categories. A competitor with less than 200 ram-air jumps will make one accuracy jump into the lake, but a competitor with more than 200 ram-air jumps will be required to make two jumps into Booth's front yard. Stand-up landings are required.

A jumper may enter the advanced category in one event and the novice category in the other. Prizes will include a Wonderhog, a Sky Supplies Silly Suit, A SSE Altimaster 2 and a SSE Paralert.

Booth mentioned that jumpers who don't enter the competition will be able to skydive out of Deland Air Sports' DC-3 at the airport.

Competitors can save five dollars by registering early for the meet. More information and registration forms are available from the Relative Workshop, 1050 Fliteline Blvd., Deland, FL 32720, (904) 736-7589.

PERRIS VALLEY BOOGIE

THE ONLY THING HAPPENING ON THE WEST COAST THAT WEEKEND

- AUGUST 30 — SEPTEMBER 1
- 6-WAY & 16-WAY COMPETITION
- Free Beer & Parties
- Good Vibes, Good Times
- \$5.00 Registration Fee
- USPA required
- Films each evening by top notch skydiving photographers!

• For more information phone Dick Giarrusso evenings (213) 437-7738 or Perris Valley Paracenter anytime (714) 657-3904 or 657-8727

PERRIS VALLEY PARACENTER
2091 Goetz Road ☆ Perris, CA 92370

FLIGHT MACHINES

FROM DAR ENTERPRISES INC

GOOD FLYING STARTS WITH A GOOD JUMPSUIT: HERE ARE FOUR TO PICK FROM

THE WORKS SUIT



This is the only true FLIGHT SUIT. It's design increases the fast fall capacity and still gives the jumper tremendous salvage power. Because of some of its unique features, such as plastic stiffeners (battens) and the two-stage swoop cords that are in the wing area, this FLIGHT SUIT gives you a greater controlled speed range without giving you the uncontrolled buffeting a large wing jumpsuit does. The legs are equipped with plastic thrust pads, which gives you greater forward speed without an increase in loss of altitude.

The WORKS FLIGHT SUIT is a must for today's demanding skydiver who is serious about sequential relative work.

Available in standard or custom sizes.

All Acrylic Lots of colors \$120.00

DAR-VADER I

A very popular one-piece jumpsuit. Single zipper step-in. Adjustable waist band, arms and leg cuffs bloused for greater efficiency. Wings may be ordered Small, Medium, Large, or HUMUNGUS. Available in standard or custom sizes.

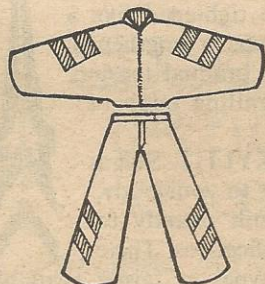
All Acrylic Lots of colors \$95.00



DAR-VADER II

Same as DAR-VADER I except this jumpsuit is two-piece. An excellent jumpsuit for those jumpers who prefer to wear their leg straps under their jumpsuit pants. (Gives better lift and balance). Available in standard or custom sizes.

All Acrylic Lots of colors \$95.00

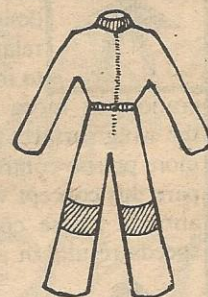


THE NOVICE

Excellent for novice jumpers or CRW freaks. Non-restricting, easy to fly, very comfortable and costs so little. Single-zipper step-in, adjustable waist band for maximum comfort.

NOTICE: Drop zone operators: This is the perfect student jumpsuit. It adds a lot of class to your operation. All students will be uniform. Discounts available for quantity orders.

Lots and lots of colors
Cotton/Polyester \$38.00



Write or call for ordering information:

DAR
ENTERPRISES, Inc.

P.O. BOX 3044
Newport Beach, CA 92663
(714) 642-7881

Rigger discusses considerations of using controversial line

Tips on Using Kevlar Line Offered

As published in Issue #10 of *Skydiving*, the subject of Kevlar suspension lines is being widely debated by both jumpers and canopy manufacturers. Kevlar, a synthetic fiber that is used in tires, race car bodies and a growing number of other places, is much stronger than Nylon or Dacron on a pound-for-pound basis. (A 400-lb. test suspension line is not much thicker than pencil lead.)

GQ Security Parachute Co., of San Leandro, Calif., for instance, discourages customers from ordering canopies with Kevlar lines, even though the company used to be much more enthusiastic about the lines' weight and bulk savings. Pioneer Parachute Company shelved plans to offer the line as an option on its canopies when prototype

canopies in the field began to break lines for no apparent reason.

Sean Collins, a rigger in Moscow, Id., runs a small company called Northern Lite that installs Kevlar lines on canopies supplied by its customers. He has done considerable research on Kevlar in addition to installing it on a variety of canopies. He is a proponent of Kevlar, and recently sent a long letter to *Skydiving* outlining his experience and recommendations. Here are excerpts:

There still seems to be some misunderstanding and confusion on the subject. Here is what I've found out:

Durability

Research by the U.S. Air Force indicates Kevlar has a useful life that exceeds the expected life based on

laboratory data. (That data is published in a report that may be ordered from AFWAL, Wright-Patterson AFB, OH 45433. Request document AFWAL-TR-80-1004.)

The Air Force tested Kevlar tapes, webbing and braided cord by rubbing it against itself and abrasive sanding cloth. (This would simulate deployment and being dragged behind a landing aircraft, since Kevlar parachutes are used in some drogue parachutes that help stop jets during landing rollout.)

The results were compared against Nylon components of an equal rated strength:

At higher speeds and/or contact pressures, Kevlar would hold because of its superior thermal stability. Heat caused by friction caused the Nylon

counterpart to fail because of melting, sometimes instantly.

The bottom line of this report is that Kevlar does not deserve the reputation in the sport for poor abrasion resistance.

Stretch

A common misconception is that the ultimate elongation of a line (how much it will stretch when loaded) depends only on the properties of the raw fiber. That's not true; elongation is also affected by how the line is constructed. For instance, there is a Kevlar line used by the construction industry that is built in such a way that it can stretch to over 60% of its original length. (It's designed that way to absorb a lot of energy.)

The 400-lb. test Kevlar line we use has a 7% elongation, and I have measured some samples at 9.3%. The 800-lb. we use averages about 10% elongation. Compare that to the 13-14% elongation of the 750-lb. Dacron line that is commonly used on sport canopies today. So it's not accurate to say that Kevlar has "zero stretch."

Finger Trapping

Kevlar is not difficult to finger trap, and Kevlar thread is available to sew such junctions. The manufacturer of the line we use recommends a finger trap.

Kevlar has only about a 35% knot efficiency, while Nylon rates at 45-50%. We terminate suspension lines at the connector links and cascades with a finger trap and use just a French overhand knot at the canopy.

Problems in the Field

The greatest problem of using Kevlar on sport parachutes is line breakage. Usually the break occurs at a knot; if straight finger trapping is used, most line breakage problems shouldn't happen.

But some lines break in the free length of the line, where there are no knots or stitching. According to several commercial braiders (who make line from Kevlar yarn), the 400-lb test line used by some sport canopy manufacturers does not meet strength standards because of the way it is braided.

The second complaint is one of abrasion damage. Again, the small-diameter 400-lb. Kevlar is usually the object of such complaints. Because the line is so small and the fibers comparatively coarse, any snagging or abrading can have a significant effect.

The solution to the above two problems is to simply use a heavier line that is proven to be of quality construction and guaranteed strength.

Using 800-lb. test Kevlar instead of 450-lb. Dacron on a typical ram-air canopy reduces the line weight and bulk by about 50 percent each.

It also helps to check the grommets of the canopy's slider very often, preferably every jump, unless the slider usually has to be "pumped" down after opening.

Using a slider with smaller grommets is a good idea because smaller grommets are less likely to be damaged by the connector links. Smaller grommets require finger-trapped cascades.

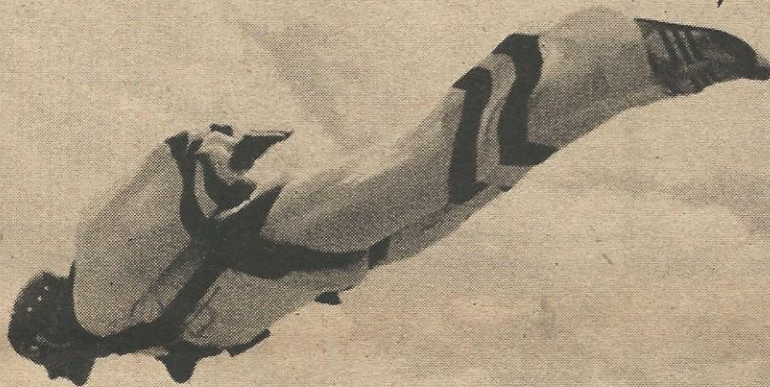
Lower Control Lines

Dacron is the superior fiber for the lower steering lines of a ram-air. It's possible to design a decent Kevlar system for brake locks, but Dacron is still the better choice.

(continued on page 6)

fly clean

SKYLITE Jumpsuits



This suit was selected by the first place 8 and 10 man teams at the 1980 Nationals.



SKYLITE Jumpsuits were originally designed by sequential relative work teams to increase their acceleration, as more air flowing over the wing surfaces resulted in faster more precise control. You can compare this concept with a slow flying aircraft whose controls at slower speeds results in a mushy or sluggish response,



while the same aircraft flying at faster speeds has a very crisp response. As this design developed, competitors realized that the "fall fast/fly clean" design could be used for non-competitive or fun dives by trimming up the non-lift surfaces of the jumpsuit, and adding a little larger wing. This concept directed

more air over the control surfaces of the suit and gave it the same advantages as the team model but with more lift. The cleaner wing also allows for better vision, as you have an unobstructed view

of the area around you, for side shots and back-ins.

The new adjustable swoop cords "Trim Locks" are also a first in clean controlled flying as this light weight system conforms to your particular flying style. It can be tightened like a solid swoop, or lengthened to receive gradual tension on the trailing edge of the wing.

The SKYLITE Suit is custom fit to your body, and is built exactly to your specifications. There are two types of fabric available,



super-blend, which is 70% polyester, 25% cotton, 5% nylon, or tri-lite which is 60% polyester, 40% cotton. Every suit comes with your choice of trim like chevrons, hash marks, stripes, or an exclusive split-star design. Other features include hidden sure grips, double arm and knee bands, acrylic collars, nylon zippers, standard pocket and bloused or open bells.

For more information or to order your custom suit, call or write SKYLITE AEROSPORTS.

a clean way to fly.

Dealer inquiries welcome!



SKYLITE AEROSPORTS 15475 Lincoln, Lake Elsinore Calif. 92330 (714) 678-4137

Bruettes Sky Supplies La. (318) 625-5769

Larry Kelly Ore. (503) 665-8269

Robin Heid Colo. (303) 861-4239

4/Skydiving, June 1980

If your last rig came in more than one box...

... you didn't buy it
from the
right place.

There is more to buying a new rig than just buying parachutes. Because when it's skydiving time, it's not the time to be hunting for a rigger. Or finding out you're short a pilot chute bridle. Or that you paid for something you didn't want. Or discovering your new main has the wrong risers. It's happened to us, in fact, that's one of the reasons we started the Jump Shack.

That's why there's more to delivering a rig than just selling parachutes. This is the time we do our job, because it all has to fit together. The reserve has to fit the reserve container. The main has to fit its container. The harness has to fit you. All the components *must* be compatible — that's the law.

When you call the Jump Shack, our staff of expert skydivers and parachute technicians goes to work. We make sure everything you ordered is there. We make sure everything fits. We pack and seal your reserve. We even assemble your main.

We not only sell complete rigs — we also sell components and accessories. We have something for all

your skydiving needs. We have, for instance, the largest stock of jumpsuits in the world.

At the Jump Shack we do more than just sell parachutes and accessories. We try to provide the best service possible. From a hook knife to a complete rig, we try to put everything together for you.

Call us or any Jump Shack dealer around the world. (If there isn't a Jump Shack dealer near you, call us direct.)

The Jump Shack

Jump Shack
29706 Grand River
Farmington Hills, MI 48024
(313) 478-6066

Jump Shack South
715 Fifth Ave.
Zephyrhills, FL 33599
(813) 788-2748

Connector Links

The loop that passes around the connector link should be fairly tight to prevent one loop from slipping under another and getting pinched and possibly damaged during an opening. This situation can be prevented by bundling the lines together as a unit just above the link. Tacking works quite well.

The suspension line that extends to each of the four corners of a ram-air receives a lot of wear, especially from the slider. This line should be carefully inspected, especially where it loops around the connector link.

Sunlight

Kevlar has slightly less resistance to ultraviolet light damage, even though it is "self screening" like Nylon and

Dacron (the outer fibers protect the inner core of the line from sunlight exposure). But Kevlar's small diameter means that more of a line is exposed. That's another reason to use the heavier 800-lb. line.

Summary

More development work is needed before Kevlar components are ready for widespread use in sport parachutes. But it is suitable for suspension lines if these precautions are taken:

1. Use a line of quality manufacture.
2. Use a line of guaranteed strength.
3. Use proper construction and assembly techniques taking into account Kevlar's properties and not those of Dacron or Nylon.
4. Test the assembly before releasing it to the public.

Comparative Physical Properties

	Kevlar	Nylon	Dacron
Tensile Strength (PSI)	400,000	143,000	162,000
Elongation: %	3-4	16-28	12-16
Density, gm/cc	1.4	1.1	1.4
Temperature Resistance	inherently flame resistant	flammable	flammable
	does not melt carbonizes at 850°.)	melts at 473°	melts at 473°
UV Stability	Kevlar, Nylon and Dacron all exhibit approximately the same resistance to ultra violet light (sunlight).		
Abrasion	fair, when resin treated	good	fair

Meet the SAC (Security AeroConical)

The Round Reserve, engineered to meet the specific requirements of today's active skydiver!

5.7 lbs. of SECURITY

WHAT IS IT? The smallest high profile, parabolic round canopy in the world.

WHAT IS IT MADE OF? 1.1 oz. Ripstop "O" porosity (F-111) nylon fabric, dupont high tenacity 330 yarn, heat and ultra violet resistant (flouorocarbon finish).

HOW IS IT MADE? Bias constructed, mesh covered tri-vent, diaper controlled deployment.

GENERAL SPECIFICATIONS

Opening Time—1.4 seconds
Rate of Descent—14-16 F.P.S. w/170 lbs.
360° Turn—4-5 seconds
Forward Speed! apprx. 10 M.P.H.

COMPATABILITY

Security System/PN 79A 1684-SAC.
SST Racer, Model-O51
Wonderhog II-P Designated
Classifier

Suggested Retail
\$365.00

Available now from our worldwide network of dealers.
GQ Security Parachutes, Inc.
PO Box 3096
San Leandro, CA 94578
(415) 357-4730

U.S. Patent No. 3758056
TSO C-23b, In Standard Category

Army Jumper Killed

A veteran member of the U.S. Army's Golden Knights parachute team was killed June 15 after failing to activate his reserve in time after a main canopy malfunction.

Tom Johnson, 33, was performing before an air show crowd in Fredericksburg, VA., when the accident occurred. According to sources on the team, one stowed loop of this mechanical-advantage reefing system bridle cord wrapped around and locked off on the side flap of his Strong Enterprises Eagle main container. This caused the pilot chute to snap free from the fouled portion of the bridle cord, rendering the main undeployable. Witnesses said Johnson attempted to clear the problem for several seconds, deploying his reserve at approximately 100 feet.

Johnson, who had over 5,200 jumps, is only the third member of the Army team to die in a parachuting accident in the team's 20-year history.

Pat Works Injured

Pat Works, author of several books on parachuting, and relative work instructor at Perris Valley, Calif., was seriously injured in an automobile accident on July 4 during the Nationals boogie at Richmond, Ind. Works suffered a fractured vertebra in his back and experienced paralysis from the chest down for approximately 24 hours. Doctors at the Indiana University Hospital in Indianapolis say Works is making tremendous progress, and most have been surprised at the rapidity of his recovery.

"This type of injury results in permanent paralysis in 95 percent of the cases we've seen," said a spokesman for the hospital, "and for an individual to regain motor control and feeling from such an injury within 24 hours is just short of miraculous."

Works has returned to California. It's too early to determine if he'll be able to jump again.

Another passenger in the vehicle, which was driven by John Tierney of Southern California, was also seriously injured. Jennifer Hartl, of Honolulu, suffered head injuries and facial lacerations. She was in critical condition for two days, but is now recovering satisfactorily, according to officials at Methodist Hospital in Indianapolis. Tierney was not injured in the mishap, which occurred when he failed to negotiate a curve near the camping area several miles from the airport.

Grin when you're in.

Especially if you're jumping a Wonderhog.

After all, a Wonderhog gives you so much to be happy about.

You probably already know the Wonderhog features the Hand Deploy Pilot Chute* and the 3-Ring Release†. We invented both to enhance safety during two critical phases of a jump: deployment and the occasional breakaway. Literally hundreds of thousands of jumps have been made using each system. (We

introduced the world to Hand Deploy in 1975, while the 3-Ring Release was first offered in 1976.) Such extensive use has proven the reliability of each system.

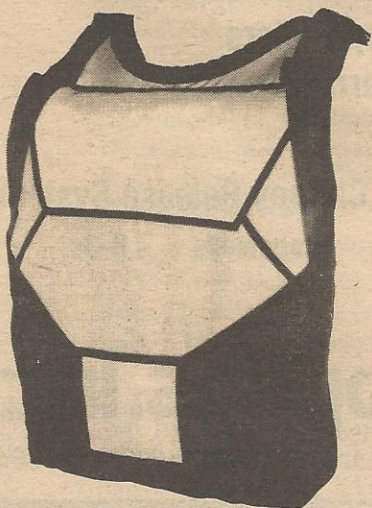
Of course there are more reasons to be happy about jumping a Wonderhog. Order yours from the Relative Workshop and it's custom built for you, according to your size, color, fabric, and canopy specifications. So it fits you comfortably yet snugly. And so it will accept your choice of main and reserve perfectly. Our workmanship? Nothing short of superb — we **do** care.

We can go on: The Wonderhog has a curved locking pin (for a trim, flat pro-

file), adjustable diagonals (for the right fit), all new materials (no recycled hardware for us), a seamless exterior (for appearance), double parapack construction (for durability), minimum weight (so you'll fly better), and much more. We can even build yours without a belly band, if that's what you want.

So it's easy to see why thousands of jumpers are so pleased with their Wonderhogs. It's really the most sought after rig in the world.

Join our satisfied ranks by ordering yours today. A phone call or letter is all it takes.



Relative Workshop

1050 Fliteline Blvd. • DeLand, FL 32720 • (904) 736-7589

Factory Services: Wonderhog owners may take advantage of several services: **3-Ring Conversion.** Replaces the Capewell releases on older Wonderhogs with the single-point 3-Ring System. \$75 includes installation, risers, and two release handles. **Safety-Flyer Conversions.** Modifies the harness and reserve container to accept the Safety-Flyer. (Both conversions are done on an appointment basis — please call before sending your rig.) **New Gear:** The Relative Workshop is a dealer for most major equipment manufacturers. Let us help you pick the complete system that is best for you — and deliver your Wonderhog attached to the new main and reserve canopy of your choice. *patented †patent pending

Skydiving, June 27, 1979/7

CALENDAR

August 30-Sept. 1, WSCR Meet, La-Grange, Georgia. No competitive events, no entry fee. Aircraft include DC-3 and C-180. Special rates before noon. Camping on DZ. FFI: George Galloway, P.O. Box 303, Signal Mtn., Tenn. 37377. Home (615) 886-1010; Airport (404) 882-2522.

August 30-Sept. 1, Herd Boogie, New Hanover, Penn.

Sept. 6-7, Liberty Meet, Liberty, N.C. Style, Accuracy, 4-way Sequential and 4-way Speed Formation. FFI: Jo Matthews, 308 Elaine St., Spring Lake, N.C. 28390. 497-6962.

Sept. 19-21, Georgia Parachute Council Fall Meet, Green County Parachute Center, Atlanta, Ga., Locust Grove exit off I-75 south. 4-way RW, 10 way speed, CRW, Accuracy, Novice hit & run. Cost: \$15 non-members, \$10 members. Logbooks and seals required. Motels and camping. FFI: Steve Chalfant, (404) 755-4814.

Sept. 20-21, DC-3 Weekend, La-Grange, Georgia. Aircraft include C-

180 and DC-3. Fun jumping. Camping on DZ; dogs must be on leash. FFI: George Galloway, P.O. Box 303, Signal Mtn., Tenn. 37377. (617) 886-1010.

Oct. 11-12, DC-3 Weekend, La-Grange, Georgia. Aircraft include C-180 and DC-3. Fun jumping. Camping on DZ; dogs must be on leash. FFI: George Galloway, P.O. Box 303, Signal Mtn., Tenn. 37377. (617) 886-1010.



(214) 557-0310
or 557-0311

3509 Peach Tree Rd. • Balch Springs, TX 75180

"The Catalyst"

- Converts easily in the field from ripcord to hand deploy
- Special women's size harness as well as three standard sizes
- Reserve container accepts square and round reserves up to 26' Navy Conical

Many other features available — call or write for more information.

26' LOPO SALE

FULL LINE DEALER OF PARACHUTING GEAR

Fulltime Rigging

Manufacturer of our exclusive line of
CAMO-WEAR
Gear & accessories made from the finest camouflage-pattern fabric

Slick Jumpsuits
RW Jumpsuits
Kit Bags
Wallets
... plus more

Dealer inquiries invited

Master Charge and Visa welcome

"The Catalyst" is HERE

South African Records Established

South Africa became the third country in the world to build an 8-stack, when eight skydivers built the formation over the Pietermaritzburg drop zone several months ago.

The accomplishment was the result of a series of five attempts, and every jump yielded at least a 6-stack. Participants, in order of entry were Peter Lawson, Mike Snoyman, Chris Dales, Don Bodley, Hughie Newman, John Fales, Gavin Aspden and Phil Pass.

And as of February 10, 1980, Gail Merry closed last on a quadraplane to become the first woman to dock fourth or later on a CRW formation. The jump was made over the Klerksdorp DZ.

A third accomplishment by South African jumpers was a smooth 20-way pentawedge built over Westonia. Max Braude organized the load, which consisted of members of the local parachute club. For thirteen of the jumpers, it was the first time they had been in a formation this large.

★ ZEPHYRHILLS ★

You probably know that Z-Hills is the scene of the world's largest meets and boogies. But you may not know that we're also open year around, seven days a week.

We have a 4-place Cessna and a big DC-3. We offer a first jump course and an RW Instruction Program to help the intermediate jumper progress faster. There are plenty of local skydivers to keep things moving.

Facilities at Z-Hills include a loft for repairs and repacks, equipment sales, a covered packing area, and hot showers. Town is close by and camping is available.

All this — plus our great Florida weather and competitive rates — make Z-Hills the place for year-around skydiving.

Zephyrhills Parachute Center
P.O. Box 1101 • Zephyrhills, Florida 33599 U.S.A. • (813) 782-2918

Site of the
1981 World Meet



Rapid Transit System

The new rig that has it all: clean design, trim size and custom quality

All standard options at no extra cost.

Main Deployment System

Pull-Out Pilot Chute
(side mounted on main left webbing)

Hand Deploy Pilot Chute
(leg strap or back pack mounted)

Ripcord

Choice of Colors

17 Container colors

11 Tape colors

10 Harness colors

Main Canopy Release Systems

3-Ring Capewells R-3s

\$375

complete

No bag; deduct \$10

Visa and Mastercharge accepted

write or call today:

Sky Supplies, Inc.

Route 1, Box 894A • DeLand, FL 32720 • (904) 734-9641

FAA TSO-C23B approved

GETTING OFF STUDENT STATUS DOESN'T MEAN YOU HAVE TO GIVE UP THE SAFETY OF A SENTINEL MK 2000.™

Most likely a Sentinel MK 2000 automatic opener rode with you when you made your first few jumps. Many parachute centers and instructors insist that novices wear Sentinel MK 2000s on their reserves. These lightweight, reliable units have stepped in and saved hundreds of lives in a variety of situations.

But many jumpers seem to think automatic openers are for students only. Some say that experienced jumpers don't need the protection, or that the devices are more trouble than they're worth.

If that's the line you've been hearing, don't believe it. Here are the facts:

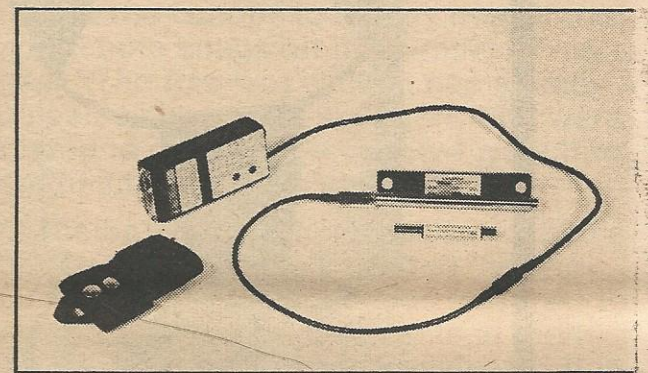
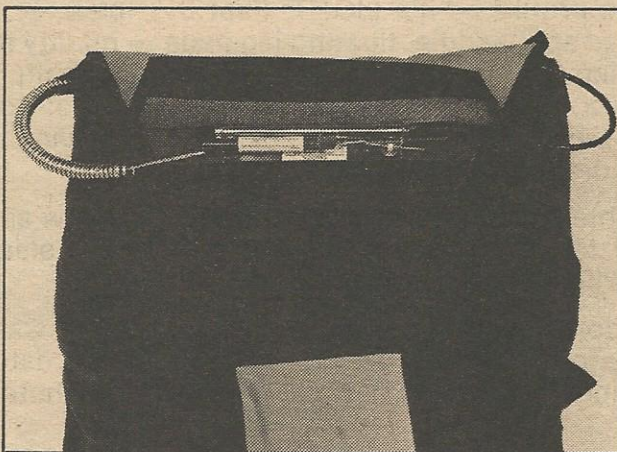
The Sentinel MK 2000 has been in widespread use for nearly a decade. Ten years of use have proven how reliable the MK 2000 is: it has saved hundreds of lives. We have the letters and reports of these "saves" in our files.

The Sentinel MK 2000 is easy to use. The wearer calibrates it on the ground and forgets about it.

But during the jump, the Sentinel automatically monitors the jumper's altitude and rate of descent. If he descends below 1,000 AGL at a high rate, the Sentinel will pull the reserve ripcord.

And the Sentinel MK 2000 is compatible with most modern piggyback containers. Your rigger can install one quickly and easily. The entire system weighs but a few ounces and can be mounted so it is protected even during the most vigorous exit.

And more and more experienced jumpers are wearing MK 2000s.



Check the jumpers on a typical load at a big meet: you'll probably be surprised by the number of MK 2000s you'll see. (But look carefully, because the entire assembly is so small that it's hard to spot.)

The Sentinel MK 2000 can help an experienced jumper cope with situations that novices never have to face. Situations such as freefall collisions or striking the aircraft during exit.

Those are the facts. Don't believe that talk that the Sentinel MK 2000 is for novices only. It was designed for *skydivers* — regardless of their experience. Think about it and make your own decision.



SSE INCORPORATED

5801 Magnolia Avenue • Pennsauken, NJ 08109 • (609) 663-2234

MANUFACTURERS OF ALTIMASTER ALTIMETERS, SENTINEL RIPCORD RELEASES, AND THE PARALERT AUDIBLE ALTIMETER

From the Loft

This column is written by Bob Stroud, a Master Parachute Rigger and DPRE from Edmond, Okla., who has extensive sport parachute rigging — and jumping experience. Bob will be happy to answer your equipment and rigging questions. Address them to Bob Stroud, c/o Skydiving, P.O. Box 189, Deltona, Fla. 32725.

Inspecting Main Canopies

Frequently a rigger will be asked to inspect a brand new canopy. The new owner wants to be sure his new para-

chute has been assembled correctly. Here's one inspection procedure that works, although the individual rigger may want to devise his own method:

Lay the canopy out in a clean, shaded area and straighten the lines. This procedure starts at the risers and works toward the pilot chute, so connect the risers to the harness and start the inspection there.

Check the riser releases to be sure the riser fittings are compatible with those on the harness. This especially important with "Capewell" type releases be-

cause they have been built in several models. But check a 3-ring release system, too, as some manufacturers have delivered defective risers recently.

Then move up to the steering line guide ring/toggle/brake lock assembly. Look for missed bartacks. Set the brakes on both sides to be sure the brake lock loops are of the right size. (We recently found a Pioneer Kestrel that had one brake lock loop that was finger trapped into the steering line but not sewn. The brake lock failed on opening.)

Then check the connector links. French rapid links should be tightened securely, but don't overtighten them and strip the threads in the locking barrel.

The slider is inspected next. Insure the grommets are set correctly; if they aren't, there's a good chance they'll pull out of the slider after several jumps,

possibly resulting in a very hard opening.

Inspect the suspension lines. Check every junction to be sure its sewn and not just finger trapped. Check the line continuity carefully, one line at a time. Not only might they be out of sequence, but they might be attached to the canopy in the wrong place.

Be sure the suspension lines and steering lines are of proper length. Earlier this month we found a GQ Security Unit that was delivered with one steering line that measured about 10" longer from trailing edge to brake lock than the other. The owner couldn't figure out why the canopy wouldn't fly straight.

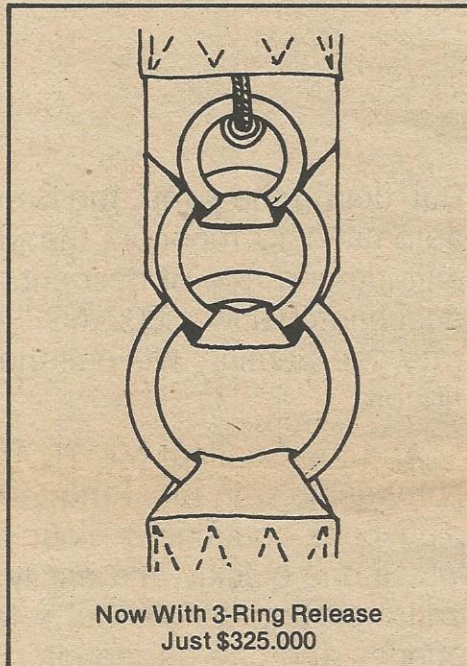
Then inspect the deployment device, pilot chute and pilot chute bridle. A failure of any of these three components can result in nasty malfunctions that are hard to cope with.

And if you should discover any problems, get the serial number of the canopy and report it to the manufacturer. They appreciate such information.

Condor II



THE RIG



Now With 3-Ring Release
Just \$325.000

THE RELEASE

North American Aerodynamics offers you the best rig on the market!

THE BASICS: A clean, aerodynamic profile — it's LIGHT, (just 6½ lbs.!) — designed for your comfort with a padded split-saddle, floating leg pads — quality materials, workmanship and construction techniques — our unique padded main ripcord handle that can never be lost or thrown away — six standard colors: Solid Black, Red, Blue, Gold, Orange, and Kelly Green (all with Black trim and a splash of White) — four container sizes to accommodate any size canopy.

THE EXTRAS: Custom colors available for both container & harness at a low additional price — your choice of either 1½ Shot Capewells or 3 Ring Circus Release at NO extra charge — Hand Deploy Pilot Chute available as a custom feature.

PRICING INFORMATION: The Condor II is a standard color with 1½ Shot Capewells or 3 Ring Circus \$325.00. Custom container fabric — add \$15.00. Custom container fabric, harness, and binding — add \$30.00. Hand Deploy Pilot Chute in 36" or 40" — add \$25.00.

NOW YOU KNOW THE FACTS — GIVE US A CALL!



THE CHUTE SHOP
HIGHWAY 202, FLEMINGTON, N.J. 08822
(201) 782-5758

Testing Workshop

The U.S. Air Force has extended an open invitation for participation in a testing capabilities workshop to be held at Edwards AFB, Calif., on October 6 and 7, 1980. The purpose of the workshop is to "provide a medium for the technical interchange of information in parachute and balloon testing," according to the letter sent to Skydiving.

The format of the workshop will be a series of relatively informal presentation and discussion periods. It is being sponsored by the American Institute of Aeronautics and Astronautics, an association concerned with aeronautical research and technology.

Readers who are interested in attending should contact Henry Hunter, 6510 Test Wing, TEEES, Stop 239, Edwards AFB, CA 93523.

Insurance and Financial Services for the Professional and Business Owner

Business owners and self-employed professionals have particular insurance and financial needs. Lewis D. Jacobs & Associates is a consulting and brokerage firm that specializes in offering a broad range of plans and services to meet your specific needs perfectly.

And because our company is run by a skydiver with an MBA in Finance & Accounting (with additional study in Federal Tax Law), we really understand the requirements of jumpers and parachuting-related businesses.

Here is brief list of the services we offer. Please call collect to discuss how we may be of service.

Employee Benefit Group Plans — Health, Life, Disability and Dental

Business Insurance

- Key Person Insurance
- Business Continuity Plans — Corporate Stock Redemption; Partnership Continuation
- Estate Planning Coordination

Executive Compensation Plans — Deferred Compensation; Salary Continuation

Retirement Plans — Profit Sharing; Pensions; KEOGH Plans

Lewis D. Jacobs
& Associates
ONE WASHINGTON MALL
BOSTON, MASS. 02108
(617) 723-4000

Engineers call it "high aspect ratio."

You'll call it "high performance."

All wings aren't created equal. Subtle differences in shape and proportion can have a substantial effect on the performance of a wing. It makes no difference if the wing carries an airliner, a bird or you: certain designs work better than others.

Long, slender wings glide better than short stubby ones. That's why gliders of all sorts (from sailplanes to eagles) have long narrow wings: to cover the most distance with the least loss of altitude. Engineers explain that narrow wings have a "high aspect ratio." They can show that a wing with a high aspect ratio produces less lift-robbing drag.

The flight performance of a ram-air parachute is affected by aspect ratio, too. If two canopies have the same airfoil and surface area, the one with the narrower shape will glide farther. It's a principle of aerodynamics.

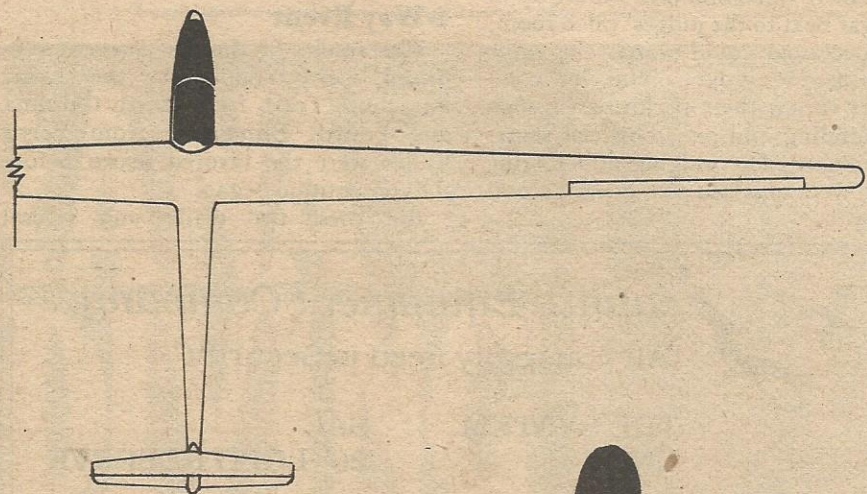
That's why the Pioneer Merlin has the highest aspect ratio of any canopy you can jump. Our engineers developed its narrow shape to meet the needs of the relative worker, a jumper who frequently must cope with bad spots.

We've flown the Merlin side-by-side with other canopies. It outflew them all, with a high forward speed and very flat glide. (No matter what performance figures are claimed, a side-by-side test will show which canopy will fly best.)

The Merlin is the ideal canopy if you're looking for the smallest packing and longest gliding 7-cell possible. And with a proper flare, the Merlin will land you softly, even in no wind.

You don't have to understand the aerodynamics of a high aspect ratio wing to enjoy the benefits of flying one. It's enough to know you can't use the stubby wings of a turkey if you want to soar with the eagles.

Check out the great performance of the Merlin by contacting your Pioneer dealer today. Happy flying.



Manufactured by:
Pioneer Parachute Co., Inc.
Pioneer Industrial Park
Manchester, Connecticut 06040



© 1980 Pioneer Parachute Co.

RW Nationals

(continued from page 1)

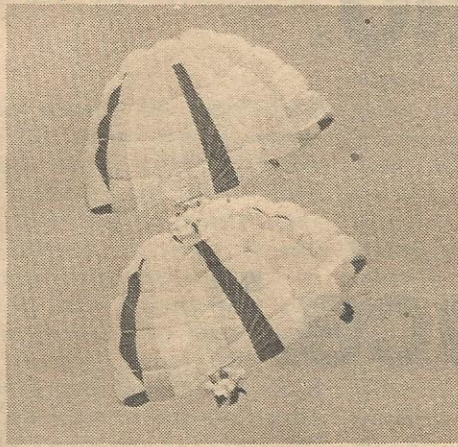
from style and accuracy competitors.)

The competitors, for the most part, seemed perfectly happy with USPA's rather casual approach. There was however, a hassle in the 4-way event that involved several protests that took two days to resolve.

Joe Svec, a USPA conference director, served as meet director for the RW portion, although he kept a low profile as he was jumping with several teams. Bob Branch, chief pilot, effectively ran the meet on the hour-to-hour basis by consulting with Svec and other USPA officials when necessary.

As in 1979, ground-to-air video recording equipment served as an important judge's tool. Except for the problem with one round of 4-way, most teams accepted their scores without question. A video monitor was set up in a hangar next to the judges' video room, and spectators could watch the same image as the judges. This let competitors review their performance soon after landing and get unofficial scores very quickly. The judging and scoring section were quick to post official scores anyway.

These video systems were provided by the Army Parachute Team and Ed Mosher of Brand X in nearby Dayton, Ohio. Mosher said the USPA paid him \$1,000 to rent his system, although he provided the operator and all support equipment.



4-Way Event

The results of the 4-way event surprised many people, as the Army Parachute Team from North Carolina and Fourth Dimension from Perris Valley were the favored teams before the competition began.

But these two teams and several

others ran into trouble in the very first round of the six-round event. The round was set sequence number five of the international rules, a dive that requires flying two side-bodies around and docking in different ways. The interim maneuvers usually require that one or both of the side-bodies complete a 180- or 360-degree turn.

As the scores went up for the first round, so did the amazement of the competitors. The judges gave at least five teams only two points for the round, and some of these teams had competed at least seven maneuvers within the 35 seconds of working time. Video reviews were purchased and eventually protests were filed as the infighting began.

The judges basically ruled the "zapped" teams had not correctly completed the interim maneuver after the second formation of the sequence. Although the matter quickly became quite complicated, the judges said the teams had undershot the turns — one or both of the subgroups had not made complete 180- or 360-degree rotations in the air. Although several of the affected teams did perform the maneuver so the relative heading of the two subgroups changed by 180 or 360 degrees, the subgroups did not rotate that much relative to their starting points.

The problem partially resulted from a statement made by a misinformed judge at the competitor's briefing the night before. He said such turns must be made in reference to the ground.

Although this statement made many competitors exchange startled looks, since this was the first time "ground reference" had ever been read into the sequential rules, the judge's statement wasn't challenged. Although the jury overruled the judge's interpretation the next day, it did not change the scores of the teams which had performed that first round incorrectly.

Some competitors said they wished the rules wouldn't be changed so much each year. The International Aeronautic Federation changes the sequential rules every year several months before the U.S. holds its nationals, and ambiguities or even mistakes in the rules are sometimes not discovered until competition begins.

But the hassle over that first round was not the reason Desert Heat won. Although it avoided that pitfall and received a good score for round one, it also skydived extremely well throughout the event. The scores show that.

Desert Heat made about 55 practice jumps before the meet, although three of the four of its members had many more jumps together than this. Desert Heat jumped from Cessna 182s, although about one third of the 27 4-way teams used DC-3s during the meet. Desert Heat wore fairly small jumpsuits built by Flite Suit in Pope Valley, Calif. The suit has modest wings and small bells and is constructed from a blended fabric that is much lighter than the cot-

(continued on page 18)



jeanni's Equipment Company
"All you really need is Security."

THE SYSTEM
UNIT

SAC
26' LOPO RESERVE

Call or write jeanni McCombs, 833 Baker, San Francisco, CA 94115. (415) 922-1003. Answering machine days and weekends.

Get into the

OZONE

Quality Custom

JUMPSUITS

Cotton or Acrylic



Try our swooper, the "Crystal Cruiser," or our sequential model, the "Quark." All available in one or two piece. All are custom built for "flyability."



Prices start at \$89.00 for the two-color Crystal Cruiser.

Ozone Aerosport Company

P.O. Box 576 • Green Cove Springs, Fla. 32043
(904) 284-0523

CPI Twin Otter Weekend a Success

Connecticut Parachutists, Inc., a club that jumps at a small airport at Ellington, Conn., hosted a Twin Otter weekend on August 3. The event, attracted about 100 jumpers who made a total of 21 loads from the twin-turboprop aircraft.

Club President Jim Mowrey told Skydiving the club charged \$10 to 12,500 feet and \$12 to 15,000 feet "and still came out O.K. in spite of poot weather which curtailed jumping on Saturday." The Twin Otter had to fly to another airport located eight miles away to refuel, and Mowrey reported that the extra flight time involved cost his club about \$115 for each round trip. He said

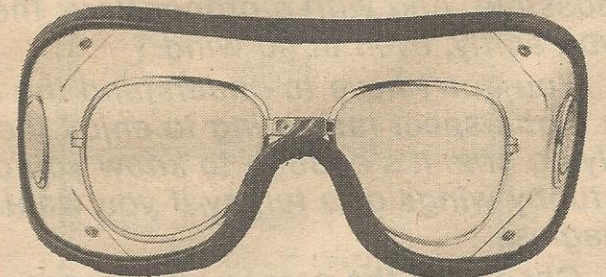
the club is considering buying a fuel tank for the Ellington airport to eliminate such costs and help keep jump rates down.

Mowrey also said that six members of the United Parachute Club, also known as the Herd, traveled from Pennsylvania just to jump the Twin Otter on Saturday. "That's a long drive just for a few jumps, and we appreciated their support." The Herd hosts a big boogie every Labor Day at New Hanover, Penn.

The Connecticut Club will host another Twin Otter weekend this fall, although dates have yet to be announced.

sky-eyes

New
Improved
Design



Now Available!

PRESCRIPTION SKY DIVING LENSES

DEVELOPED AND TESTED AFTER MORE THAN 100 SKY DIVES BY DR. J. MATTHEW HUNTER

FEATURES:

- Safety Hardened Lenses
- Designed to easily snap in and out of the popular Kroop Goggle
- Unlimited peripheral vision
- Endorsed by Jim Hooper of Z-Hills drop zone
- Available in clear, smoke, amber, green, and blue colors

Only \$55⁰⁰ Plus \$1.50 Postage
And Handling

(Extra strong prescriptions . . . add \$5.00)

Send Check or M.O. and your prescription with P.D. and color choice to:

SKY EYES

DR. J. MATTHEW HUNTER

P.O. BOX 3243

HOLIDAY, FL 33590

Allow 4-6 weeks delivery

Tight Demo.



If you're making demonstration jumps for money — big money — you don't cut corners. You jump the best gear you can find, regardless of the cost.

A malfunction on any jump is no fun, but a malfunction on a tight demo can be a disaster. If you have to cut your main away, it might be recovered by a spectator who decides to take it home. Or you might find yourself drifting under a reserve over a crowded stadium or parking lot, trying to pick a spot to land. And when it's all over, you find yourself trying to explain to the sponsor why the demo failed.

That's why Arch Deal, leader of the Budweiser Sky Diving Team, jumps Para-Flite parachutes. "We have been using over a dozen lightweight Strato-Clouds for a total of nearly 1,000 jumps. There's been no malfunctions, no damage and no noticeable wear."

Para-Flite's complete line of ram-air parachutes includes the Lightweight Strato-Cloud, XL Cloud, and Cruisair main canopies, and the Safety-Flyer and Safety-Star reserve parachutes. ©1980 Para-Flite, Inc.

And Deal's teams makes some difficult demo jumps. Consider this one into Busch Stadium in downtown St. Louis — at night in below-freezing weather.

His team backs up the Lightweight Strato-Clouds with our Safety-Flyer ram-air reserves. "It's a real comfort to have a Safety-Flyer. I've used the reserve once, when the U.S. flag wrapped up in an older Strato-Cloud during a demo. In spite of the 12-knot ground winds, I landed on target, standing up."

Professional parachutists such as Arch Deal have the money and the need to skydive with the best canopies on the market. They rely on their gear to make their jumps a success and

put food on their tables. That's why Para-Flite parachutes are the choice of so many fulltime jumpers.

Para-Flite has spent over ten years developing, perfecting and manufacturing ram-air parachutes. We know skydivers want canopies that pack small, open well, fly fast, turn quickly and land softly, for jump after jump. So we build those qualities into every parachute we make.

Arch Deal put it this way: "The quality, reliability and durability of Para-Flite products is unmatched."

Parachutes by Para-Flite are available from leading equipment dealers around the world.



PARA-FLITE Incorporated

5801 Magnolia Ave. • Pennsauken, NJ 08109 USA • (609) 663-1275 • Telex 831355

El Capitan

(continued from page 1)

he said. "There's no defense for it whatsoever. The Park Service is planning to prosecute to the full extent of the law from now on, and I've assured them that USPA will assist them in prosecution. We can't let a few selfish people jeopardize what the rest of us worked so hard for."

Illegal cliff jumps won't be counted in the numbering system from now on either, because USPA took over the awards program from Carl Boenish on July 1, and the organization will not issue numbers for unsanctioned jumps.

The peregrine falcon problem of last month turned out to be a blessing in disguise for jumpers wanting to skydive El Capitan. The July 1 dives confirmed NPS fears that jumping disturbed the graceful birds of prey, which are an endangered species, so they were forced to move the opening date of the "skydiving season" to August 1. Park officials had wanted the season to coincide with the Memorial Day-to-Labor Day season of the hang glider pilots. The new schedule, however, which runs until Oc-

tober 31, works out better for jumpers because less snow is on the mountain.

"You can get lost up there in June or July," said one jumper. "There were several spots where the trail was obscured by snow when we made our jumps."

Jumpers wishing to make the El Capitan trip must send a letter of request, with primary and alternate dates, along with a photocopy of their USPA membership card and D license to Chief Ranger Charles W. Wendt, National Park Service, Box 577, Yosemite National Park, CA 95389.

In about two weeks, a packet will be mailed with a permission/waiver document (that must be signed and returned at least one week prior to the jump,) a map of the area and a copy of Park Service regulations pertaining to El Capitan — a document identical to USPA's Part 122.

Jumpers should get their requests in far enough in advance to avoid bureaucratic problems, and are cautioned to consider the logistics of the dive when planning for it.

"Yosemite is a remote location, and it's hard to get to, so you need to plan on

spending a day to get there, another day to hike up, and one more day to get back home," Svec said.

"Additionally, you must have a person in the valley with radio communication or panels. And if you're carrying more gear up the mountain than you can stuff in your jumpsuit for the trip down, you better take someone with you to pack it out. The Park Service has informed me that one of the fastest ways to get this program shut down is for skydivers to leave piles of garbage and gear behind them when they jump off."

Georgia Council Announces Meet

The Georgia Parachute Council has announced details of its Fall Meet, the third competition it has sponsored this year. The council has scheduled 4-, 8- and 10-way RW events, 4-way CRW and accuracy for the Fall Meet, which will be held September 20 and 21 and Greene County Atlanta Parachute Center near Locust Grove.

The 4-way RW event is offered in three categories based on the total number of jumps of the individuals on the team. There will be one class of 8-way sequential run according to FAI rules, one class of 10-way speed stars out of the center's Twin Beech and three classes of accuracy. The so-called "Zhills rules" will be used to conduct the

Airliner Misses a Tad

Delta Air Lines Flight 604, cleared for a visual approach to Tampa International Airport, landed June 20 at MacDill Air Force Base, situated eight miles to the south. The FAA said the pilot mistook MacDill for Tampa International.

The FAA suspended the certificates of both the pilot and the co-pilot as a result of the mistake.

rotational CRW event.

The sequential rounds will be drawn on the evening of Friday, September 19. Entry fee is \$15 plus the cost of the jumps at normal center rates. More information is available from the meet director Steve Chalfant. His telephone is (404) 755-4814.

Symbiosis Wins Award

Symbiosis, British 4-way team which placed second at the 1979 World Parachuting Championships, was awarded the Prince of Wales Cup by the British government for "being great sporting aviation ambassadors for our country."

Dane Kenny, Rob Colpus, Geoff Sanders and Will Grut formed the team in 1977 and have dominated 4-way in England since then. The team trained in Pope Valley, Calif., during the summer of 1979 to prepare for the world meet, and traveled to Zephyrhills, Fla., last year to form the nucleus of a team that won the 8-way event at the Turkey Meet.

Jackie Smith, the current women's world accuracy champion, is Symbiosis' alternate. She trained with the team, frequently filming their jumps with a freefall Polavision movie camera.

Abbotsford Schedules DC-3

Abbotsford Parachute Center, Vancouver, B.C., reports that it will have a DC-3 on Labor Day, August 30 — September 1.

Plane Crash Kills Two

Two Colorado skydivers were killed in mid-June when the Cessna 210 they were performing aerobatics in came apart under the stress and crashed.

Brian Beedy, 35, and John Johnson, 33, both of Steamboat Springs, had been drinking heavily the night of June 5, when they decided to "go out to the airport and do a few rolls," according to the friend of one of the men. The pair then went to the Steamboat Springs Municipal Airport around 2 a.m. Saturday and took off in a plane belonging to another local resident. Sometime during the flight one wing was sheared from the Cessna during a maneuver. The fuselage and wing landed more than a mile apart.



ABBOTSFORD

sport parachute center
HORIZON AERO SPORTS

Open Daily • Early Bird Rates
Full Student Facilities
Camping & Showers on D.Z.

Contact: Horizon Aero-Sports, 1359 Kingsway,
Vancouver, B.C., Canada. Phone: 604-873-2727 or
604-853-9866.

★ JOE SMITH ★

Parachute Sales and Service

★ ★ We're ★ ★

★ EXPEDITIOUS ★

★ speedy ★ Quick ★

★ In Advance ★

★ of the ★

★ Standard ★

★ FAST ★

★ Call us, write us or visit our big showroom — it makes no difference. You'll find your next rig, canopy, jumpsuit, or accessory waiting for you in our shelves. Joe Smith has a huge inventory of today's popular gear, so we can (and do) ship fast.

★ Joe Smith Parachute has been supplying skydivers with the gear they want for over 15 years. We're a full service loft too, so we do expert repairs, repacks, and rigging.

★ The secret of our success has been to stock what jumpers want so it can be delivered in a hurry at a fair price.

★ Call or write us today.

★ **JOE SMITH PARACHUTES** ★

★ P.O. Box 39 ★

★ Front St. ★

★ Lewisberry, PA 17339 ★

★ (717) 938-5330 ★

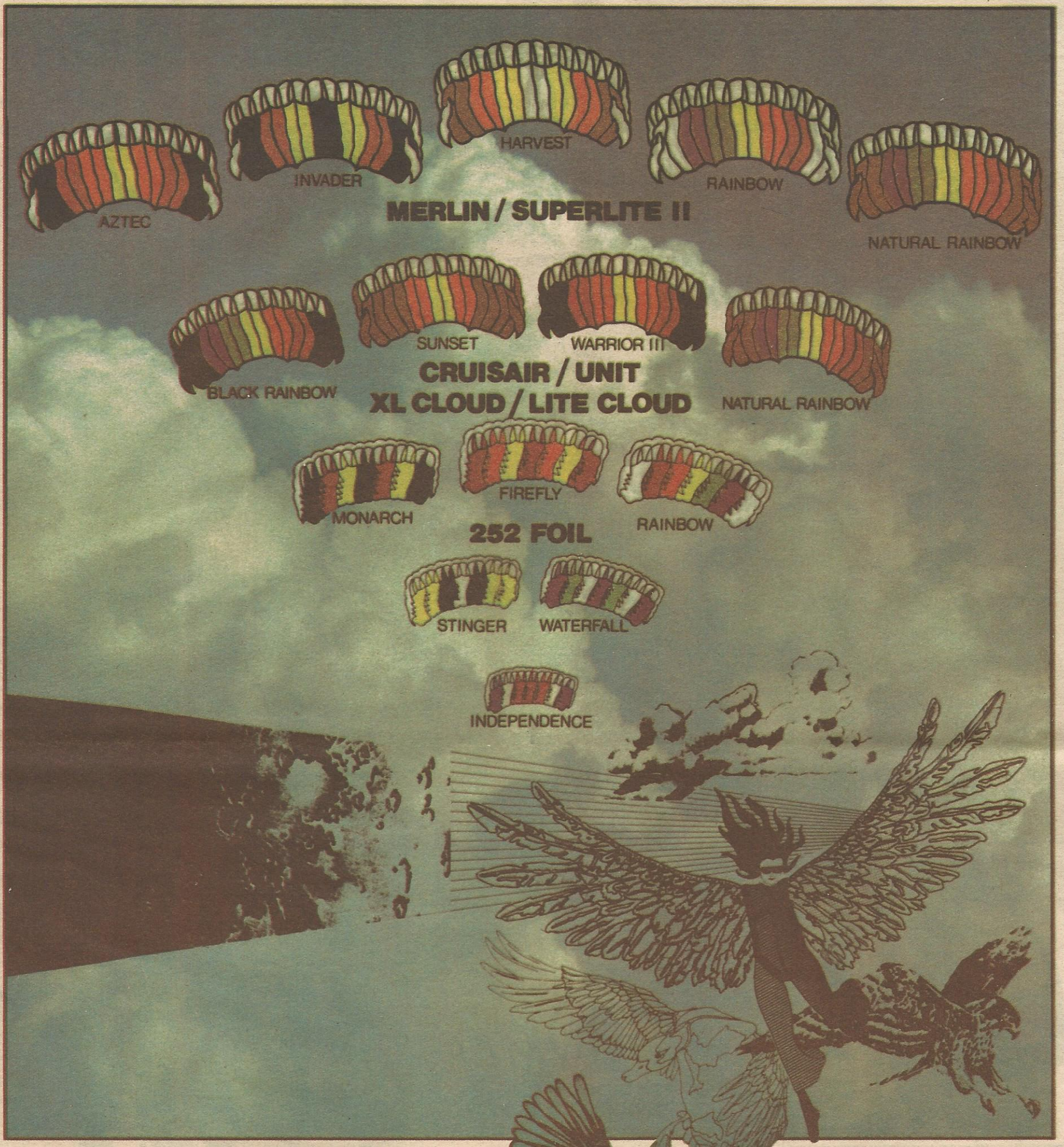
★ (717) 766-3570 ★

Parachute Equipment Industry Association

Supports Sport Parachuting

Your support of the following member companies helps to provide safer and more reliable equipment.

<ul style="list-style-type: none"> • Advanced Air Sports • The Altitude Shop, Inc. • Butler Parachute Systems • Centaurus Corporation • The Chute Shop • Continental Air Sports, Inc. • D. J. Associates, Inc. • G. Q. Security Parachutes, • Guardian Parachute • George G. Harris Corporation • Joe Smith Parachute Sales & Service • The Jump Shack, Inc. • Lincoln Parachute Loft • McElfish Parachute Service 	<ul style="list-style-type: none"> • Midwest Parachute • National Parachute Supply, Inc. • Parachuting Publications • Para-Flite, Inc. • Para-Gear Equipment Company • Para-Innovators • Parachute Associates, Inc. • Relative Workshop, Inc. • The R. W. Shop • Shoobi Systems, Body Flight, Inc. • Stewart Systems • Strong Enterprises • Westgaard Parachute Enterprises, Inc.
--	--



sooner or later, all who fly must land.



MC ELFISH
PARACHUTE SERVICE



CALL TOLL FREE — 1-800-527-7530
2615 Love Field Drive Dallas, Texas 75235 • 214/351-5343
Send for our catalog \$1.00 U.S., \$5.00 Foreign (Refundable on first \$10.00 order.)



RELIABILITY • COMFORT • LIGHTWEIGHT

This "State of the Art" container system was designed for our new FEATHER-LITE reserve canopy and the very small and lightweight main canopies on the market today. This is a total racing machine, with no cost spared for comfort, reliability and lightweight.



PARA

INNOVATORS

171 E. 1ST ST.
PERRIS, CALIF. 92370

Illegal El Cap Jumps Net Four Arrests, Two Citations and One Injury

Illegal jumps netted four arrests, two citations, and one injury.

One skydiver was seriously injured and several others cited for illegal jumping when they skydived from El Capitan on the evening of June 28.

Cheryl Creson of Vallejo, Calif., made the jump at dusk and, upon opening, experienced severe line twists and collided with the wall. Cindy Frueh jumped some minutes later and landed in the valley without incident. Unable to find her companion, she contacted the rangers and a search party was sent out. Creson was found three hours later at the base of the cliff. She had been unconscious for the major portion of the search and had sustained a compression fracture of her back.

While the rangers were collecting Creson, four Arizona jumpers went off the cliff at midnight, scaring park officials at the base who thought the large black spots hurdling toward them were falling boulders. The rangers regained their composure quickly, however, and arrested Bob Engstrom, Charlie Hancock, Tim Yeary, and Mark Tharp when they landed in the valley. Also apprehended was Tharp's wife Karen, who had been acting as ground crew for the group.

Frueh and Creson were cited for illegal jumping, but weren't jailed. Chief ranger Bill Wendt said none of the jumpers would be charged with violating the endangered species ordinances, though, because he felt the word had not been passed to jumpers regarding the increased seriousness of the charges now that an endangered species — the peregrine falcon — was involved.

Surplus Gear for Sale

Harold Petzold has located a quantity of military surplus T-10 harness, containers and deployment bags. He's selling them in a variety of configurations, including modified for sport use as well as "stock."

Petzold may be contacted at West 192 North 4944, One mile Road, Menomonee Falls, WI 53051, (414) 544-0754 or 781-6538.

Creson's mishap was the first recorded incident of line twists resulting in collision with the wall. Three days later, B.J. Worth nearly hit the cliff face when he opened with twisted lines during the first legal jumps off the mountain. Worth estimated his clearance margin at two meters, and Ranger Wendt agreed.

"I took photographs of him, and his shadow's awfully close to him in the picture."

The possibility of line twists is perhaps the most hazardous aspect of jumps from El Capitan, and jumpers who have made the dive suggest a careful pack job, along with a discussion with a rigger on the subject before making the jump.

Learn advanced relative work by reading

UNITED WE FALL

by Pat and Jan Works

United We Fall brings you 366 information-packed pages on every aspect of relative work: skydancing, sequential, competition, CRW, gear and more. Pat and Jan Works, the authors of *The Art of Freefall Relative Work*, have compiled the best work of 20 writers-sky divers into one volume. Not only does *United We Fall* contain useful "how to" information, it provides for many hours of entertaining, thoughtful reading. Profusely illustrated throughout.

"... *United We Fall* is something to throw into your kitbag and carry everywhere. For every jumper interested in the attainment of freefall excellence..." Robin Heid, Editor, Parachutist



Please rush me my copy of *United We Fall*. My check or money order for \$12.75 is enclosed. (\$11.95 plus 80¢ shipping). I understand I may return the book within 10 days of receipt if I am not completely satisfied.

RW Underground Publications
1656 Beechwood Avenue
Fullerton, CA 92635

USE THIS COUPON TO ORDER TODAY

Name _____
Street _____
City, State, ZIP _____
Country _____

SATISFACTION GUARANTEED

MARANA SKYDIVING CENTER

THE WORLD'S NICEST PLACE TO LEARN THE WORLD'S MOST EXCITING SPORT



PHOTO: BILL SUTTON



During the past two and a half years, Marana Skydiving Center has developed a tremendous reputation for being the perfect place to learn our sport. Perfect weather, beautiful facilities, excellent equipment, the most innovative teaching methods, and a wonderful staff combine to make Marana a Parachutist's paradise whether you have one jump or thousands.

So whether you want to train for a world meet or get on freefall, we would love to help make it easier.

Call or write us today:

MARANA SKYDIVING CENTER

A Division of B&F Enterprises

Marana Airpark
Marana, Arizona 85238
(602) 682-4441

HOTEL, POOL, PARACHUTE LOFT, SNACK BAR, RESTAURANT AND LOUNGE all available on Marana Airport

SUMMER CLEARANCE SALE

We're cleaning out our stockroom and can offer some exceptional values on new and used equipment:

- Sierra Piggyback: \$90
- Wonderhog (double shorty): \$185.
- Papillon (used, great shape): \$125.
- Stylemaster conventional rig, with reserve container: \$75.
- 28" chest reserve, modified, complete: \$85.
- Rod's Rebel conventional rig for a Strato-Star, with Pop-Top: \$150.
- 24" reserve canopies, each: \$60.
- French Paraboos, sz. 7½: \$25.
- Rumor reserve container and risers: \$25.
- Patch 6 canopy with sleeve: \$100.

Great gear at great prices.
Call or write today.

Dave DeWolf
26 W. Bainbridge St.
Elizabethtown, Pa. 17022
(717) 367-0808 evenings

(continued from page 14)

ton or acrylic that is used for most jumpsuits.

The Golden Knights placed second and Divisions were third. Divisions was formed by four members of the Visions 8-way team and had only a few 4-way practice jumps prior to Richmond.

The Golden Knights had been practicing hard for the 1980 nationals for nearly a year. With the exception of scoring only two points in the controversial first round, the Knights performed extremely well. They also wore conservative jumpsuits, ones built by a division of National Parachute Supply in Flemington, N.J.

Fourth Dimension finished fourth and the team also had trouble with round one. The team arrived in Richmond amidst rumors of consistent double-digit scores, but its performance even after the first round didn't support those rumors.

There were many new faces in the 4-way event and several new teams demonstrated real dedication. Spirit from Issaquah, Wash., was one such team, as was Banana Bunch from Palatka, Fla.

Last year's champions, Tesseract from Athol, Id., did not attend the meet.

8-Way

The 8-way seemed less competitive than either the 4- or 10-way events. Visions, which had tied for third with the Army in 8-way last year, rolled through the 1980 meet and were never really challenged. Synergy placed second, four points behind.

Visions had been together for two years and it shows. The team made about 180 practice jumps from last year's nationals and made heavy use of air-to-air color video to help the team's progress. Visions even took Cameraman

Ken Crabtree along during the six rounds of competition.

The team admits that its sights are set mainly on next year. Visions' aerial performance is impressive and consistent, although not especially innovative or flashy.

The team wears jumpsuits built by the Skylite in Southern California, a company owned by team member Mike Parnell. The suit is lightweight, conservative in design.

Visions jumped special Double Keel Dactyl main canopies built by Advanced Air Sports of Elsinore, Calif. A variation of the Rogallo single-surface gliding parachute, the canopy had a fairly large surface area and Kevlar lines. Pack volume wasn't all that small, and its descent rate was very slow — it seemed to hover at times. But the Dactyl's low forward speed resulted in frequent off-airport landings, and the models jumped by Visions were unreliable. It seemed that at least one member of the team used his reserve on half the jumps the team made at Richmond.

Skydiving was told the team jumped the canopies mostly to take advantage of the slow descent rate. The team's small jumpsuits resulted in a comparative high terminal velocity that in turn resulted in team pulling low after 50 seconds of working time. The Dactyls supposedly helped prevent the team for being reprimanded for low pulls based on time under canopy. But at this year's nationals, Visions seemed to open well above the 1800-foot minimum altitude.

Synergy is a reorganization of last

year's Unity 8-way team. The team made about 100 practice jumps this year from a variety of aircraft. The team also favored smaller jumpsuits.

Third place went to Fresh Produce, formed by combining the Army 4-way team and its alternate with three civilian jumpers. The team only had a few practice jumps, but still did well. It was the first time in years that Army jumpers were authorized to jump with civilians while on duty at a parachute meet. It is a good idea, because it allows the team to be exposed to different jumping techniques and provides the opportunity to demonstrate theirs.

Last year's 8-way champions, Mirror Image, didn't enter the meet, nor did the second place Slots. But several of the nine teams were new, such as Merging Traffic, West Point, Virginia's first 8-way team to compete in the nationals.

10-Way

In spite of the fact that 10-way is an "orphan event," because it is no longer included in the world meet, competition in Richmond was keen. This event provided about the only suspense of the entire RW portion of the nationals.


Magic, also from Perris Valley, arrived in Richmond amid reliable reports that they had been turning very fast 10-mans; several of their practice jumps were said to be in the high eight-second range. Magic started the year as an 8-way team but quickly decided to emphasize 10-way and then spent about 60 jumps perfecting their approach.

Magic showed that indeed was a good team when it turned a 9.4-second star in the first round at Richmond and backed it up with a 9.1 in round two. It was the first time a team had scored in the nines at the U.S. nationals, even back in 1975 and 1976 when 10-way was the premier event.

But Magic didn't win the 10-way event. Visions did for the second year in a row. Although Magic was fast, it was also inconsistent and received 13- and 14-second scores for round three and round four. Visions, on the other hand, was quick and consistent and was able to pull into first place after four rounds. Still, after Visions made its sixth and final 10-way jump, Magic could have won by turning a 9.5-second star on its last jump, a performance within its ability.

(continued on page 20)

THE BEST BOOKS ON THE SPORT



PARACHUTING, The Skydivers' Handbook is hot off the press with a fresh up-to-date look at our sport. In 179 pages and 350 photos and drawings, this new book takes over where Gunby left off in the 60's. Meant as an easy reading training text for novice and intermediate parachutists, it is enjoyed by both jumpers and whuffos. This book is about you and what you do — skydive! \$5.95 pp soft cover, \$11.95 pp hardcover.

PARACHUTE RIGGING COURSE, A course of study for the FAA senior rigger certificate. 16 lessons and 60 large workbook type pages filled with assignments explanations, projects, sample questions and detailed referenced answers. Designed to help you pass the FAA written, oral and practical tests. \$9.95 pp.

THE PARACHUTE MANUAL, a technical treatise on the parachute. An expanded, updated, completely revised second edition of this well known, authoritative work. Over 500 large 8 1/2 x 11 pages and 2000 illustrations. Known as the "Bible" to parachute riggers everywhere. Improved, more durable binding. \$29.95 pp.

I/E COURSE, a program of home study for parachuting Instructor/Examiner candidates. The workbook consists of lessons which parallel the written I/E test sections; each one has an assignment, explanation, sample questions and detailed, referenced answers. New, 3rd revised edition. \$9.95 pp.

PARACHUTING MANUAL W/LOG. A compact, yet complete basic instruction manual for the novice. A wealth of parachuting knowledge in a handy, easy-to-carry pocket sized format. New, expanded revised edition. \$1.50 pp.

All prices include postage. Californians add 6% sales tax. Satisfaction guaranteed.

**DAN POYNTER, P.O. Box 4232-2
SANTA BARBARA, CA 93103**

FREE DESCRIPTIVE BROCHURE

PRESERVE III
by Advanced Air Sports

The extra lightweight, extra compact conical reserve with superb reliability, drive and descent characteristics. Many jumpers feel this is the finest reserve you can own. \$350.


We have Preserve III's in stock. Call or write us today.

Visa and Mastercharge honored.

Sky Supplies, Inc.
Rt. 1, Box 894A, DeLand, FL 32720
(904) 734-9641

EAGLE

SKYDIVING JUMPSUITS
QUALITY ONE OR TWO PIECE JUMPSUITS



100% acrylic fabric. Both the arm & leg bloused and closed with velcro cuffs. Extra large wings area and leg bells make for a balanced jumpsuit - to allow for smooth swoops, floatability and excellent stopping power. Super quality & workmanship offered in a rainbow of colors make the EAGLE one hot skydiving jumpsuit.

FEATURES

Eagle Step-In. One piece single zipper design eliminates zipper failure. Large wings with built in swoop cords (fixed or shock cord) standard. Leg/hook knife pocket. Plenty of fabric from the waist down for balanced flying. Medium & Large.

Eagle Two-Piece. Two piece design with heavy duty YKK jacket zipper. Large extended wing area with built in swoop cords (fixed or shock cord.) Adjustable jacket hold down stapes and waist band. Pant openings for inside harness wearing. Leg/hook knife pocket. Medium and large.

\$89.00 for house colors, Custom color size **\$10.00** additional.
Colors: white, black blue, red, lt. blue, tan, brown, yellow, orange, green.

Contact your local dealer or call us.

Manufactured by **THE RW SHOP**

THE RW SHOP
ROUTE 13 • BROOKLINE, NH 03033 • (603) 673-5867

HERD LABOR DAY BOOGIE

Aug 30 - Sept 1
Limerick airport
— Pottstown, PA

- Twin Otters
- DC-3's
- Mega loads
- Fun jumps
- Beer-Band Boogie (Herd style)
- Free camping
- Showers
- USPA membership required
- Cash or travelers checks only

FMI:
Walt Schneider (201) 689-4649 days
(201) 453-3388 nights

Meet the only reserve that's as good as
a Safety-Flyer:

Safety-Star™



New from Para-Flite.

The Safety-Star is the latest addition to Para-Flite's line of advanced ram-air canopies. It has more surface area than our Safety-Flyer reserve, but it packs into containers of the same size. An improved air foil gives a flatter glide and softer landings, while new materials and construction methods keep the weight and bulk to a minimum.

The Safety-Star has the same proven features as the Safety-Flyer. It has Para-Flite's exclusive free bag system that allows the canopy to deploy even if the pilot chute snags on the jumper or his gear. (The free bag system has already helped save several skydivers who were forced to deploy their Safety-Flyers into malfunctioned main canopies.)

The Safety-Star had to pass the same rigorous testing program that "wrung out" the Safety-Flyer. It was strapped to heavy dummies for drop tests at high speeds. Our test jumpers evaluated it in a variety of conditions to prove the superiority of its opening, flying and landing characteristics.

The testing program showed the Safety-Star has the performance, reliability and durability that only a ram-air from Para-Flite can provide. It can deploy in nasty situations when round parachute can't. It has a 3:1 glide ratio and a 20-30 mph forward speed to get you back to the drop zone when a round canopy would let you down in the trees. It can help you handle high winds that would make any round canopy back up.

There's only one canopy that offers the performance, reliability and durability of a Safety-Flyer: the new Safety-Star. The Safety-Star gives you all three — plus softer landings — with no increase in weight or bulk.

The Safety-Star is available now from Para-Flite dealers around the world.

Para-Flite, Inc. manufactures
the Cruisair, Strato-Cloud,
XL Cloud, Safety-Flyer and
Safety-Star canopies.
©1980 Para-Flite, Inc.



PARA-FLITE Incorporated

5801 Magnolia Ave. • Pennsauken, NJ 08109 USA • (609) 663-1275

RW Nationals

(continued from page 18)

But Magic choked and someone lost a grip while the star was building. The time for the jump was in the 17s.

Magic had a fairly conventional line-up in the aircraft, with one jumper in the door facing inside the cabin and the rest in a compact straight line aimed at the door. Grips were complicated, with a jumper sometimes holding on to a teammate several slots away. The team would line up, get grips, settle down to clear the top of the door, rock back a bit and squirt out the door as a unit. The initial formation was a 3-man with four jumpers holding on. From the ground, an observer usually saw a clean 7-man drift from under the tail of the DC-3 several seconds after exit.

Synergy's 10-man squad placed third. The team had two stars in the elevens; good times.

Most of new equipment at the 1980 nationals was evolutionary; nothing really new was unveiled. Except for the Dactyls jumped by Visions, ram-air canopies were the rule. GQ Security Units were by far the most popular canopies with the competitors, although every manufacturer was represented.

The SST Racer seemed to be the mostly broadly popular rig, although West Coast teams favored the gear built in their part of the country: Advanced Air Sports Handbury Rigs, Para-Innovator Streamlites and Embury Sky Systems Pygmies, a rig with Australian origins. Synergy jumped GQ Security Systems.

There were, however, a bunch of Relative Workshop Wonderhogs and surprising number of Sky Supplies Rapid Transit Systems, a relatively new rig.


And, looking around the cabin of a DC-3 filled with 40 competitors, it appeared as if the SSE Paralert was as nearly as popular as a conventional altimeter. The Paralert is an audible altimeter that emits a tone at a preselected altitude.

Visions introduced the ear plug to RW competition this year. Several members of the team stuffed one into each ear during the climb to altitude before each jump. The idea was to reduce distractions and let the wearer concentrate on the upcoming jump.

There were several freefall and ground-based video units. One compact unit was used by Fourth Dimension. Advanced Air Sports had built a special piggyback where the video recorder fits between the reserve container and the back pad. The result is a bulky rig with clean lines that is easy to put on and jump.

Officials and competitors discussed

JUMP DeLAND!
Home of Mr. Douglas



DC-3 • Camping • Showers • Motels
Close to Fla.'s Attractions

(904) 734-5867
Box 1657, DeLand, Florida 32720

DeLand Air Sports

The World's Best Parachutes



MANUFACTURING
SPECIAL MATERIALS
& HARDWARE
COMPETITIVE PRICES

ESS™
Embury Sky Systems
33330 Westlong Street
Lake Elsinore, Calif. 92530 U.S.A.
714-678-2174

1980 U.S. Nationals — Results

4-Way Relative Work

Standing	Team & Origin	Rd. 1	Rd. 2	Rd. 3	Rd. 4	Rd. 5	Rd. 6	Total	Ave.
1	Desert Heat — Arizona, Wash. D.C. Tom Piras, Mike Raible, Dan Peters, Irving Callahan	7	6	9	8	8	8	46	7.7
2	Golden Knights — North Carolina Pat Vin Bibber, Andy Gerber, Bob Finn, Glen Bangs	2	7	8	9	8	9	43	7.0
3	Division — California Kent Lane, Steve Parker, Vic Dyers, Mike Sheerin	6	6	5	7	6	8	38	6.3
4	Fourth Dimension — California Pat Davis, John Downing, Brian Johnson, Paul Stromberg	2	6	7	8	6	8	37	6.1
5	Venom — Florida Mike Truffer, Carl Daugherty, Mike Cerasoli, Ron Johnson	5	5	5	7	6	7	35	5.9
6	Center Point — Conn., Mt., Ca., Oh. Roger Ponce de Leon, B.J. Worth, Craig Fonk, Ed Mosher	2	6	8	7	8	2	33(t)	5.5
6	Alabama Boys — Alabama Mike Morauske, Jack Cunningham, Dan Graves, Willian Selig	5	4	5	6	6	7	33(t)	5.5
8	Spirit — Washington Steve Savage, Ed Savage, Bill Johnson, Larry Wolfe	7	5	2	7	5	6	32	5.3
9	Green County Kentucky — Tennessee, Kentucky Bill Rhodes, Pat Stallard, Curt Houston, Bill McMurray	4	2	6	6	6	7	31	5.1
10	No Passing — Virginia Terry Queijo, Lex Nuckols, Bart Rodier, Brian Jasperse	6	1	6	6	4	7	30	5.0
11	Junior Birdmen — California Al Krueger, Mike Parnell, Jim Edwards, Scott Meek	2	5	3	5	5	7	27(t)	4.5
11	Air Strike — Texas Phillip Chapline, Philip Smith, Lee McMillan, Kathy Chapline	3	4	5	5	6	4	27(t)	4.5
13	Everybody — California Ray Hebert, Dan O'Brian, James Vener, Mike Kostka	2	6	6	6	6	0	26	4.3
14	Terry Phobia — California Hank Bungay, Mike Swan, Craig Gallan, Dennis Ray	3	4	4	4	4	6	25	4.1
15	Second Wind — Texas Sherry Parker, Gary Scarborough, Gary Boyd, Eric Pehrson	4	0	5	3	6	6	24	4.0
16	Rainbow Flyers — Virginia, Michigan Sam Brown, Rocky Evans, Royce Wolfe, Connie Bushey	4	1	5	6	2	5	23(t)	3.9
16	Nobody — California Jim Reilly, Tom Mele, Bob Bonitz, Bungee Wallace	4	1	5	7	6	0	23(t)	3.9
16	Delusion — Maryland, Virginia Scott Gillis, Dan Edney, Randy Jacobs, Mike Ewalt	4	5	1	4	4	5	23(t)	3.9
19	Esad — California Robert Waltzer, Bill Dennis, Perry Stone, Robert Satterfield	2	0	5	4	4	6	21(t)	3.5
19	All American Parachute Team — North Carolina Paul Sternac, Dave Bullun, Vincent Torres, Mike Deveault	1	3	1	6	5	5	21(t)	3.5
21	Four Swell Guys — Connecticut, Virginia Tom McLaughlin, Robert Bonadies, Al King, Jim Mowrey	3	2	5	4	1	4	19(t)	3.1

(Scores continue on page 23)

1980 U.S. Nationals — Results

8-Way Relative Work

Final Standing	Team & Origin	Rd. 1	Rd. 2	Rd. 3	Rd. 4	Rd. 5	Rd. 6	Total	Ave.
1	Visions — California Al Krueger, Mike Sheerin, Kent Lane, Steve Parker, Mike Parnell, Vic Ayers, Jim Edwards, Dave Wilds	7	5	7	6	6	6	37	6.2
2	Synergy — California Dan O'Brien, Tom Mele, Bungee Williams, Jim Reilly, Bob Bonitz, Mike Kotska, Ray Hebert, Jim Vener	5	4	6	6	6	6	33	5.5
3	Fresh Produce — Conn., Fla., N.C., Wash. Craig Fronk, Roger Ponce de Leon, Allen Gencarelle, Robert Finn, Glen Bangs, Andy Gerber, Pat Van Bibber, Craig Van Camp	5	3	6	4	6	4	28	4.7
4	Repercussions — Az., Wash. D.C., Calif. Tom Piras, Mike Raible, Dan Peters, Irving Callahan, John Downing, Jerry Swovelin, Paul Stromberg, Brian Johnson	4	2	4	3	5	4	22	3.7
5	Rewind — Ohio, Fla., Ind., Mich., Minn. Jay Augenstein, Mike Cerasoli, Carl Daugherty, Vicki Christensen, Mike Johnston, Ron Johnson, Mike Truffer, Joan Murphy	4	1	1	3	5	0	14	2.3
6	Magic — California Bob Butt, Richard Brune, Ron Delmazzo, Peter Hammond, Joe Morgan, Al Navarro, Dennis Ray, Bobby Smith	1	2	3	4	3	0	13(t)	2.2
6	Merging Traffic — Virginia Dave Sothcott, Brian Jasperse, Bart Rodier, Carol Clay, Terry Queijo, Lex Nuckols, Dorie Jasperse, Bruce Johnson	1	2	2	3	3	2	13(t)	2.2
8	Alabama Boys — Alabama, Kentucky Mike Morauske, John Cunningham, Dan Graves, William Selig, Curt Houston, Bill McMurry, Bill Rhodes, Pat Stallard	1	1	2	3	3	2	12	2
9	Terminal Research — California Al Frisby, Keith Hendrieks, Don (Doc) Johnson, Charlie Start, Joe Svec, Richard Hayden, Chuck Dodson, Jimmy Davis	2	1	1	0	1	0	5	0.8

10-Way Relative Work

Final Standing	Team & Origin	Rd. 1	Rd. 2	Rd. 3	Rd. 4	Rd. 5	Rd. 6	Total	Time
1	Visions — California Ken Crabtree, Vic Ayers, Jim Edwards, Kent Lane, Al Krueger, Mike Sheerin, Steve Parker, Mike Parnell, Dave Wilds	11.6	11.9	10.3	10.3	13.6	10.1	60/67.8	
2	Magic — California Robert Butt, Richard Brune, Ron Delmazzo, Peter Hammond, Jerry Swovelin, Joe Morgan, Al Navarro, Dennis Ray, Allen Richter, Bobby Smith	9.4	9.1	14.5	13.7	11.4	17.1	60/75.2	
3	Synergy — California Tom Finnigan, B.J. Worth, Dan O'Brien, Tom Mele, Bungee Wallace, Jim Reilly, Bob Bonitz, Mike Kotska, Ray Hebert, Jim Vener	11.6	12.0	17.6	13.8	11.7	15.5	60/82.2	
4	Fast Forward — Fla., Ohio, Ind., Mich., Minn. Jay Augenstein, Ed Mosher, Mike Cerasoli, Carl Daugherty, Mike Johnston, Ron Johnson, Craig Fronk, Roger Ponce de Leon, Mike Truffer, Roger Nelson, Mike Arbour	12.4	10.3	26.3	12.3	14.4	13.7	60/89.4	
5	Merging Traffic — Virginia Joe Pacquin, David Sothcott, Jimmy Rodier, Brian Jasperse, Dorcie Jasperse, Charlie Brown, Carol Clay, Terry Queijo, Bruce Little	21.4	22.5	19.1	17.3	17.5	24.8	60/122.6	
6	No Cause for Practice — Ct., Fl., N.C. Wash.D.C Alex Perez, Jim Mowrey, Fred Wenger, Mike Mount, Allen Gencarelle, Robert Finn, Glen Bangs, Andy Gerber, Pat Van Bibber, Craig Van Camp	19.3	15.3	30.0	18.8	13.3	13.3	59/110	

several ways to improve the nationals. One idea was to move the meet to September when Midstream weather is a little cooler and reportedly much clearer. Although it was generally pleasant this year, clouds and haze resulted in poor spots, re-jumps and many weather holds. The DC-3s and Cessna 182s were sent up several times only to be called down again with teams still on board because of clouds or haze. Such aborted jumps cost the USPA — and ultimately the competitor — money.

Another suggestion was to abandon Richmond for Texas, Oklahoma, Arizona or some other state where the jump weather is better. But finding a community and drop zone willing to host the nationals has always been difficult.

Next year USPA will have to pay closer attention to the rules, including those pertaining to qualifying. Under the present rules, a team must qualify at least several weeks before the competition begins, and it's a burden on teams who don't have access to qualified judges to observe their performance and certify their ability.

One suggestion is to allow teams to qualify during official practice. The idea seems logical, since the judges are there. Such a procedure would allow "throw together" teams to compete, and the reduced attendance at recent championships indicates it's doubtful the meet would be flooded with teams.

On-site qualification, which is common in many sports, would also relieve USPA conference directors of the responsibility of running conference meets in regions where there is little interest.

One longtime competitor also suggested that the RW and individual portions of the nationals be recombined, as was the arrangement in the early 1970s. Currently the USPA runs two separate meets back to back, an arrangement of dubious wisdom since only about 45 competitors enter the style and accuracy portion, a meet that requires over 40 paid staff members. Combining the two portions, according to one person, would not only significantly reduce entry fees, but it would allow a competitor to enter both individual and team events without missing at least three weeks of work. ●

UNIT SALE

tan
lt. blue
black
tan
black
lt. blue
tan

\$699

Reg. price: \$725.

(Prices good only for a limited time, so call today.)

lt. blue
brown
tan
royal blue
green
yellow
orange

Sky Supplies, Inc.

Rt. 1, Box 894A • DeLand, FL 32720
(904) 734-9641

SKY SUPPLIES IS A FULL-LINE DEALER OF PARACHUTE EQPT.

S & A Nationals

(continued from page 1)

overall champion Dwight Reynolds with a 8.5 average and 0.06 distance.

Style scores were significantly lower this year than in past nationals. In 1979, many competitors turned style sets in the low sevens, but this year only a few broke the eight-second mark.

"The judges were extremely critical this year," said Stearns. "I turned every round in the sixes, but I picked up a minor penalty or two on every jump. In one round, my 6.2 time became a 7.4 after gigs.

Dwight Reynolds agreed.

"This year's scores were the worst I've seen in a long time. The judges were supercritical. That happened to us at the World Meet in 1978, though, I guess we'll just have to adjust our training techniques to accommodate video judging."

Participants described the style and accuracy meet as a "real nice affair,"

citing good weather and a relaxed attitude, coupled with a high skill level among the competitors as main reasons for the meet's pleasant atmosphere. There were almost as many staff members as competitors, as only 44 jumpers entered the meet.

The top finishers in the style and accuracy competition are now training hard at Raeford, N.C., for the World Meet in Bulgaria, to be held August 17-27.

O'Gwynn, Reynolds, Fernandez, Cliff Jones, Mark Jones, and Mark Limond make up the men's team, with Tom Schapanski as alternate. For the women, Stearns, Raylene Wilson, Chris Kataubla, Terri Bennett, and Amy Marquette will be representing the United States.

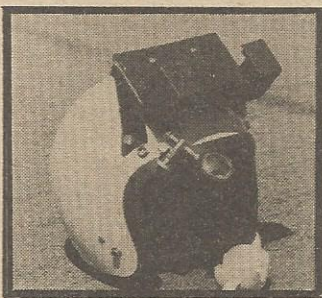
Prospects for the team aren't particularly bright this year. The team will be going up against stiff competition in both divisions from Eastern Bloc nations. The women in particular, will

(continued on page 23)

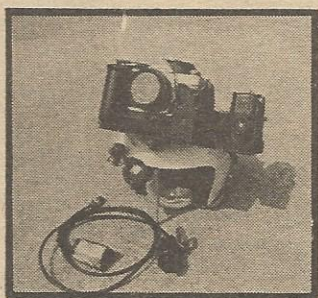
1980 U.S. Nationals Style & Accuracy

	Accuracy Total Dist.	Standing	Style Ave. Time	Standing	Combined Score	Overall Standing
Women						
Cheryl Stearns	0.05	1	7.18	1	2	1
Terry Bennett	1.22	2	8.49	2	4	2
Chris Cataldo	1.25	3	9.51	3	6	3
Raylene Wilson	3.87	4	10.29	4	8	4
Amy Market	11.86	5	10.97	5	10	5
Men						
Senior						
Chas. Baierski	0.11	2	8.53	3	5	1(t)
Gene Koehler	0.20	3	8.45	2	5	1(t)
Kevin Silva	0.81	7	9.05	5	12	3
Edward Harrington	1.36	8	8.71	4	12	4
Dennis Murphy	0.08	1	10.30	11	12	5
Chuck Schmutz	2.56	12	8.22	1	13	6
Richard Paoliello	0.49	5	9.80	9	14	7
Richard Todd	1.96	10	9.46	7	17	8
Drew Riffle	0.22	4	11.57	14	18	9
Marty Jones	1.53	9	10.07	10	19	10
Jerry Marklin	9.06	15	9.06	6	21	11
Bill Deguenther	0.75	6	14.28	16	22	12
Thurmond Capps	10.83	16	9.49	8	24	13
Ted Strong	2.91	13	10.93	12	25	14
William Ottley	2.21	11	13.24	15	26	15
Johnny Higgins	5.55	14	11.37	13	27	16
Master						
Matt O'Gynn	0.00	1	8.08	3	4	1
Dwight Reynolds	0.06	3	8.50	6	9	2
Clifford Jones	0.08(t)	5	8.28	5	10	3
Mark Jones	0.07	4	8.59	7	11	4
Mark Limond	0.24	10	7.64	2	11	5
Tony Fugit	0.08(t)	5	9.19	11	16	6
Tom Schapanski	0.51	13	8.21	4	17	7
Phil Munden	0.04	2	9.72	16	18	8
Victor Deveau	0.11	7	9.31	12	19	9
Jimmy Davis	0.44	12	8.70	8	20	10
Bill Hayes	0.19	9	9.49	13	22	11
Maurice Fernandez	3.14	22	7.04	1	23	12
Al King	0.53	14	8.82	10	24	13
Michael Steele	1.40	16	8.74	9	25	14
Gary Finlen	0.36	11	9.74	17	28	15
Bill Beaudreau	0.82	15	9.60	15	30	16
Jimmy Hayhurst	0.12	8	14.39	23	31	17
Gary Lewis	26.71	23	9.58	14	37	18
Pat Quaschnick	1.80	19	10.43	19	38	19
Tom Grindle	1.57	18	11.03	20	38	20(t)
Rick Kuhns	2.30	21	11.37	22	41	20(t)

CAMERA MOUNTS



Custom built from 6061-T6 aircraft aluminum alloy. Heli-arc welded and finished with black wrinkle paint.



Also, we offer a mount for the Chinon Pocket 8 Super 8mm movie camera: \$70 ppd.

Free quotes given on mounts for other cameras. Write or call with camera model and helmet type. These mounts are thoughtfully designed and built to be rugged. Satisfaction guaranteed.

Standard Models for these 35 mm SLRs:

- Olympus OM series with winder
- Canon A series with winder
- Konica FS-1
- Pentax M series with winder

All models convertible for horizontal or vertical format. Price: \$65 includes shipping to U.S. addresses.

Freefall Sights also available. Details on request.

Bill Sutton • Rt. 5, Box 1265 • DeLand, FL 32720 • (904) 736-1024

'SKYSHIRTS'

a sky sports II product ®



Please use this Order Form

Name: _____
Address: _____
City: _____ State: _____ Zip: _____

Quantity	Design #	Color	Size
			S M L
			S M L
			S M L
			S M L
			S M L

\$7.00 PER SHIRT
Total amount of money order, please, no checks,

Make payable to - Sky Sports II Inc.

SEND M.O. TO:

Sky Sports II SKYSHIRT
Sunflower Airbase
Rte # 2
Hutchinson, Kans. 67501

Allow 3 weeks for delivery. Most orders filled within 7 days.

Choose from these 4 colors - black/yellow-T, red/white-T, gold/black-T, white/brown-T

Skydiving BELT BUCKLE



Cast from metal, these hefty buckles fit standard 1 1/2" belts. Available in two finishes. Perfect gifts. **Satisfaction guaranteed** — return your order within 30 days for a full refund. Prompt shipment.

SKYDIVING NEWSMAGAZINE
P.O. Box 139 • Deltona, FL 32725 USA

Please send me _____ Skydiving buckles as checked below.

- Steel finish: \$8.95 ppd.
- Copper finish: \$9.95 ppd.

Name _____
Address _____
City _____ State _____ Zip _____

Foreign residents please add \$1 per buckle for postage. Florida residents add 4% sales tax.

(continued from page 22)

face a tremendous challenge, for, with the exception of Stearns, only Raylene Wilson has ever been to a national competition. None but Stearns have competed internationally. This doesn't deter Dwight Reynolds, though. He is convinced the American jumpers are better than the scores seem to indicate.

"Our women are really good," he said, "better than their experience level indicates. They're all good in accuracy, and that means a lot, because accuracy counts very heavily in international scoring.

"The men are going to have a tough time of it, however. The Russians and East Germans are very competitive and highly trained. They're also great athletes.

"But we have the capability, the potential to win. This could be a dark horse year for the U.S. Team."

Stearns now has two U.S. titles to her credit, along with a Pan American championship and other lesser titles. When asked whether she would out score all the male competitors in the world, as she's done in the western hemisphere, Reynolds observed:

"It will be a hard job. She's got an excellent chance to beat all the women, but I don't know about the men. There is going to be some very heavy competition in that division. She's certainly capable of it, though."

Stearns, herself didn't get into the details, but her calm voice was ample testament to her aspirations.

"I put a lot of dedication and work into my training. And I want to win. I guess that's really it, just really wanting to be the best, and willing to put forth the effort to get there. Besides, I really love it."

21	Being There — Michigan Mark Edmondson, Kurt Koseck, John Lash, Bob Trachout	3	1	5	3	2	5	19(t)	3.1
21	Banana Bunch — Florida Gordon Hardage, Mike Maguire, Janice Oliva- Barchie, Art Barchie	1	1	4	2	4	7	19(t)	3.1
24	In-N-Out — Ga., Calif. Greg Hackett, Wendy Newstrip, Tom Finnegan, Bonnie Chalfant	2	3	4	1	4	4	18	3.0
24	TR4 — California Chuck Dodson, Donald Johnson, Keith Hendricks, Richard Hayden	3	2	3	3	4	3	18	3.0
26	Cheap Sunglasses — Illinois Herbert Imhoff, Gary Blachette, Ray Schneider, Bruce Bradshaw	2	4	2	4	2	3	17	2.7
27	Metropolitan Connection — Ca., Tex., Wash.D.C Bill Dause, Bill Ottley, Joe Svec, Robert Williams	2	2	1	4	2	1	12	2.0

The PIGMEES Are Here



PIGMEE II ripcord
Freefall model

PIGMEE IIS static line
Training model



The PIGMEES have
come a long way . . . !

PIGMEE II hand deploy
Advanced SCR model



ESS has the Australian PIGMEE in stock. The U.S. Pigmee will be produced in all models. Static line & Freefall systems are priority, the advanced model will be soon to follow.

PIGMEE is the only system you can jump from static line to your SCR. *Simply update the main canopy.*

The PIGMEE has been in use in Australia for over two years, now its your turn.

Compatible with all popular reserves, round or square.

Advanced Model \$380.00

W/Static line & ripcord \$395.00

Your choice of colors. Instruction movie & manuals available.

for further information, call or write;

Embury Sky Systems
33330 Westlong Street
Lake Elsinore, Calif. 92330 U.S.A.
714-678-2174



Central Florida Parachute Center
Mid-Florida Airport,
State Road 44B,
PARAGATORS INC. F.A.A. Loft 708-17.
Jump, Flight, Rigger, Training. Rigger
Examiner. Bunkhouse. Camping. Twin
Beech; Cessnas. No Dogs. Jimmy Godwin
D-126, Star Route Box 498 A, Eustis, FL.
32726. 904/357-7800.

KELLYGEAR
Parachute Distributors
SERVING THE LOS ANGELES — SAN DIEGO
AREAS AT ELSINORE!
TOP BRAND NEW & USED GEAR!
We will sell your gear on consignment.
Rigging Service
★ We specialize in ★
Honest and friendly service.
Max and Diane Kelly (714)
16585 Marshall 674-5380
Lake Elsinore, California 92330

BACK ISSUES
Find out what you've missed and
complete your collection of
parachuting's newsmagazine.
Copies of all issues of Skydiving are
available for \$2 each postpaid for 1-5 copies
or \$1.50 each for 6 or more copies. To order,
specify issue(s) wanted by number and in-
clude your name and address. (Since stocks
of some issues are running low, your money
will be refunded if the issue(s) you order is
no longer available.) Mail your order with
cash, check or money order to:
SKYDIVING BACK ISSUES
P.O. Box 189 • Deltona, FL 32725 USA

BUCKLE MANIA

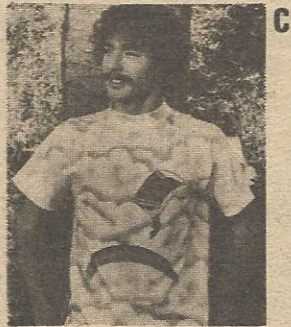
presents

CUSTOM AIRBRUSHED T-SHIRTS

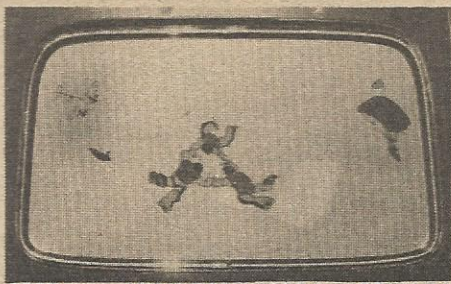
Mail us a color photograph of your 5- or 7-cell square canopy, and we'll send you a hand painted copy of it in any of the five scenes shown.

All shirts are airbrushed front and back (specify which side you want your square to appear on).

Men's shirts are 100% heavyweight preshrunk cotton. Women's shirts are 50/50 cotton/polyester, French cut fashion T's.



CUSTOM SKYDIVING AUTO SUN SCREENS



#655 sm 18" X 64" #655 lg 27" X 64"



#606 18" X 22"



#602 18" X 22"

- ★ Keeps your car's interior cool.
- ★ Reflects sun's rays, reduces glare.
- ★ Easy installation.

Mail us a color photo of your 5- or 7-cell square canopy, and we'll send you a hand painted copy of it in scene #655. Scenes #602 & #606 are not custom and can be mixed.

Sun screens work best on flat windows and are illegal in some states.

BUCKLE MANIA

BOX 118 • TEMPE, AZ • 85281 • (602) 966-4407

T-Shirts

circle choice

Men's: S M L X-Lg... \$11.95

Women's: S M L... \$12.95

Design: A B C D E

Sun Screens

#655 sm... 18" high X 64" wide... \$14.95

#655 lg... 27" high X 64" wide... \$17.95

#602 (1 pair)... 18" high X 22" wide... \$11.95

#606 (1 pair)... 18" high X 22" wide... \$11.95

mixed pair (1 each of #602 & #606)... \$11.95

please print neatly

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____

Add \$1.00 for shipping AZ residents add 5% sales tax Dealer inquiries welcome

LETTERS.....

Pope Valley

Your recent article on Pope Valley, (*Skydiving*, Issue #11) presented a onesided view of what happened there. While the opinions expressed are certainly valid, they do not represent a cross section of the regular jumpers who jumped there. Where is the opinion of the competition jumper? Where is the opinion of those who were not dissatisfied with the latterday Pope Valley? Let me present one more opinion which, I hope, shows a different perspective.

I started jumping at Pope Valley just as the Skratz Garrison phase was getting into full swing and continued jumping there until the last sunset load in May of this year. During that time I did not witness the decline of Pope Valley, but rather changes in the DZ. At different times emphasis was placed on different aspects of skydiving, but there was always innovation going on.

Yes, there were special vibes or "magic" felt during one phase of Pope Valley's history that weren't there at the end. But that was a very special time, a unique moment in history. Those who were there feel thankful for having been lucky enough to experience such a unique happening.

But you know what? During that time most "skygods" didn't jump with intermediates or novices, hard core competition was going on (Sierra in '75, All the President's Men in '76, Mirror Image in '77, etc.), and there were a lot of takers ripping off Curtis. The Johns backed up then, as they did at the end, and we ran out of water frequently. The food was good, but the restaurant lost money.

Curtis called a meeting of the hard core regulars to try and save the DZ. He painted a pretty dismal picture — two of his Cessnas had crashed, the runway was deteriorating from the DC-3, the Beech was on its last legs and he bought a lemon to replace it, the compressor blew up, people were stealing from the restaurant and not paying for the rooms, thirty-nine people were drawing unemployment against him, and on and on. He asked us to help, but I think we all knew the end was only a matter of time. That fall Curtis closed up shop.

Enter Bill Dause. Bill ran a more austere operation. One, in many ways, more suitable for jumpers. He even dropped the prices. Yes, he threw some people off the DZ for pretty flimsy reasons and created some bad vibes, but many of us still continued to jump and try new things in the air. After all, you can create your own vibes regardless of what's going on around you.

Skratz left. The Dirt Divers arrived. More of us turned to competition sequential as an area to explore in more depth. Skydance — I like it, it's not difficult to understand, but I chose to put emphasis on competition sequential. To me it was an interesting area that I wanted to learn more about. Innovation and creativity were still going on at Pope Valley, but in different areas. Some jumpers were doing skydance, some were doing competition, some were doing CRW, some were doing 3D, and some were doing some or all of the above. Let's say Pope Valley was more diversified.

Yes, the skydiving was serious and some people did find it hard to get on "hot" loads, but those "serious" jumpers were having the time of their life

performing maneuvers previously only dreamed of. For those who weren't having fun I say, "It sounds like a personal problem to me." During the magical days the intermediate jumpers didn't worry about getting on, "hot" loads. They made their own and they also jumped with novices.

There was some friction between the intermediate jumpers and the serious team-oriented ones. But it was minor and usually just a few people bitchin' about not being invited on loads. Some of those bitches should take a look in the mirror and ask themselves when was the last time they took up some novices and taught them something?

Then the end came. Swiftly. Not a gradual decline. Due to circumstances beyond our control. Right up till the end Pope Valley was a great place to skydive. But the spirit of Pope Valley lives on for all of those jumpers touched by its magic. After all, this is just another phase Pope Valley is going through.

Bob Bonitz
Mountain View, Calif.

Accuses Heid of Bias

After reading your newspaper article on Pope Valley, I didn't even have to guess at the byline.

I am almost beginning to wonder about your magazine and Robin Heid's directed bias against DZ operators. Agreeing that some of us, myself included, are often hard to understand and to get along with. I think that the jumping community should bear in mind that without us there would be no place to jump.

As to the allegations in your article that Bill Dause ran Pope Valley down, I only know what I know, that almost three years ago I received word that Pope was out of money and out of business. That was when Bill Dause took over. Now I do not know much about toilets, but I do know about his two DC-3s, his Beech and his Cessnas. A lot of skydives had to be made from those planes to keep them there and running. Skydives made by skydivers probably not aware of how fortunate they were to have that kind of equipment available and how much it all costs. No. I am no expert on trash collection but I do understand business, and I understand a businessman's frustrations when two hundred thousand dollars worth of equipment sits idle while people kick a bean bag. Sure a lot of us go overboard and push too hard and piss people off.

I wish your magazine would take a good long look at its attitude toward DZ operators. Perhaps you're just calling as you see it, but I for one feel Mr. Heid's lenses may be slightly tinted.

Tony Frost
B & F Enterprises
Marana, Ariz.

A Comment on Issue #10

This is a bitch and moan letter. As one of the first subscribers to *Skydiving*, I looked forward to an additional mag on the sport. Great! Then some changes

(continued on the next page)

started happening, such as the change in the printing schedule. I let this slide because the mag is pretty good, but geez louise, the April issue is terrible.

Why am I getting the April issue in June? Why are there no page numbers? Why is the page order all screwed up? Why are there no letters, or calendar or "From the Loft"?

Come on, get your act together.

Ross Gallichotte
Woodland Hills, Calif.

Our staff is to blame for the loose schedule, and we teamed up with the printer to shuffle the April issue into total confusion. I can't blame you for "bitching and moaning."
— Ed.

Needs Publications

I am constructing a massive 8x12-foot display on skydiving which will promote the books available through our statewide library program. I need donated catalogs, books and magazines in any condition that I can cut up to work with. Anything that shows any kind of picture of parachuting is great. Please ask your readers to send them to 301 Troy Drive, S.O.T.U., Madison, WI 53704.

Lester B. Hansen
Madison, Wisc.

Bridge Jump a Fraud

Burton Ervin of Cowen, West Virginia, did not spend four months planning for the bridge jump because Burton is a fraud and the jump was never performed. ("Skydiver Leaps Off West Virginia Bridge," Issue #11.)

I know for a fact that the bridge has never been jumped from.

Some friends of Burton's were with him on the evening of August 17, 1979, when the supposed event took place, and helped him pull off the scam.

As it was related to me from an inside source and fellow skydiver, Burton threw his canopy into the water beneath the bridge and then jumped in himself to get wet.

Then Burton and his cohorts went to a TV and radio station claiming the feat with his friends substantiating the claim. There are no pictures or films of the event since the jump was never performed.

I personally have jumped with Burton and know that he had retired from jumping quite a while before the alleged stunt took place. Burton wouldn't have a career total of 50 jumps, if that many.

A friend of mine knows firsthand that the jump was never performed. he insists that Burton tried to get him to take part in the scheme.

Skydivers are a special breed to be sure. Burton is special in the fact that he has jumped from a "perfectly good airplane." But I feel that he diminished from that stature and from parachuting as a whole claiming a feat he never really did.

Phil Fogleman
Orlando, Fla.

Skydiving's "Letters" column is the place to publish your tips, suggestions, announcements, observations, corrections and amplifications.

Send your letters to Skydiving, P.O. Box 189, Deltona, Fla. 32725. Generally, letters cannot be acknowledged or returned. Skydiving reserves the privilege of editing a letter to meet space requirements.

WANTED

28' and 35' Surplus Canopies

Contact:

HORIZON AERO SPORTS LTD.

1359 Kingsway, Vancouver
British Columbia, Canada
873-2727 or 853-9866

ELSINORE'S SCR SCRAMBLES



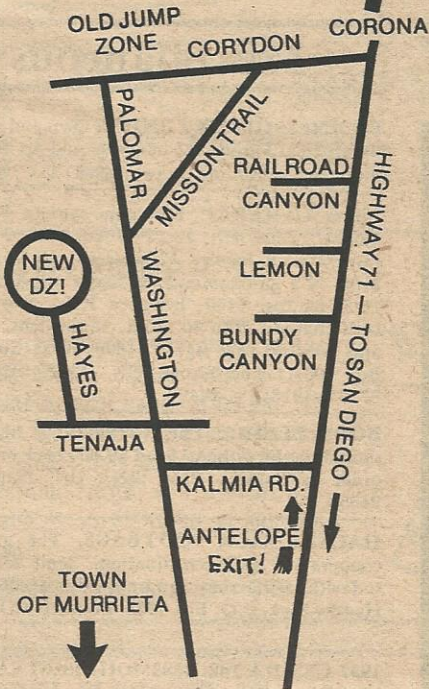
DC-3's, CESSNA,
TWIN BEECH,
PIG ROAST,
AWARDS,
DOOR PRIZES
SKYDIVE MOVIES,
BANANA & WATERMELON
EATING CONTESTS,
TRACKING CONTEST
WET T-SHIRT CONTEST
AND THE HOTTEST
SKYDIVING ANYWHERE!

THINGS ARE JUMPING
AT THOMPSON'S AIRPORT,
DON'T MISS OUT!
(714)

674-2141

Elsinore Parachute Center

DIRECTIONS: 91 Frwy towards Riverside, at Corona take 71 (I-15) south towards San Diego, past Elsinore to Murrieta. Exit Antelope Rd. right to Washington, right to Tenaja, left to Hayes, right to DZ.



CLASSIFIED ADS

For Sale

STRATO-STAR, blue & gold, 30 jumps, excellent condition, short-lined, with slider, TSO'd harness and container for \$400. Write or call Lorenz, Hitchings Road, LaFayette, NY 13084 (315) 677-3217. (13)

SIERRA main canopy in Minisystem backpack. Blue & white checkerboard. Mint cond., low number of jumps. Call Jim Maryland, (301) 997-0611, evenings. (14)

WONDERHOG: black, blue & green. Strato-Star: blue, white & black. 300 jumps. 24 ft. 4-line reserve. Complete rig: \$575. Call Tom (609) 428-2000. (12)

COMPLETE RIG, exc. condition: Wonderhog double shorty, 16" harness, red & black, new custom flaps. Strato-Star, black with red & white stripes, strap pack or new bag if preferred. 23' rip-stop tricon reserve, diaper deployed, Hot Dog. All for \$775. Custom matching Silly Suit: \$60. Well cared for. Connie Simpson, (305) 298-0506 days, 886-5764 eves. (14)

WONDERHOG 2, blue and black with 5-cell Mini-Foil. Good condition, asking \$650. Medium Silly Suit, 2-piece: \$40. Pam (305) 321-0527. (14)

STRATO-FLYER, white with black trim, excellent condition, flies well. \$125 ppd. Terry Queijo, 137 Airport Drive, Highland Springs, VA 23075. (804) 737-3866 Eves. (1)

SOUTH BAY WINGS & SALES: East Bay Area new gear and used gear. Don't delay, call today. Lowest prices, fast delivery. Call Bill, (415) 490-2250. (14)

RAPID TRANSITS, Preserve III's, Units, order in any color. 10% discount, FFI: Jimmy Godwin (904) 357-7800. (1)

WONDERHOG I with Strato-Cloud and National Lopo. Good condition, one reserve ride, both canopies diaper deployed. \$850. Call Bill, (904) 734-9641 work or (904) 736-1024. (1)

MK 1 PARA-COMMANDER, red, white and blue, some patches. Hot Dog pilot chute, 26' Security Lopo, with 4-line release, Top Secret tandem rig with R-3s, red and gold: All for \$500. North Star 10,000-foot altimeter with chest mount: \$50. 28' Surplus reserve with T modification: \$50. Walt Taylor, 2346 Bohannon Dr., Santa Clara, CA 95050. (408) 244-7215. (13)

UNIT, solid white, 300 jumps. Call Steve Chalfant, (404) 755-4814. (15)

STRATO-STAR with Hot Dog pilot chute, red, black, & gold. Excellent cond., Z-toggles. \$275. Call Mike Newchurch (504) 643-9839 or (504) 863-7054. (13)

PIGLET 23', red & white, 51 jumps, excellent, \$325. 26' Navy conical, 4-line release, excellent, \$175. David Teague, 5420 Meadowlake Drive South #3, Memphis, TN 38118. (901) 794-5561. (23)

COMPLETE RIG: Classifier, 26' Navy (new) 3-hole, Para-Plane Cloud with new lines and slider. Excellent condition, quit jumping, less than 50 jumps. \$750. Jim Cone, (716) 872-5580 eves., (716) 872-3905 days. (14)

PARA-FOIL. 5-cell standard weight, excellent condition. No reasonable offer refused, proceeds to Freakbrother #1's book. Contact West at Para-Gear: (312) 679-5905. (1)

WONDERHOG SPRINT, red, orange, gold w/matching custom Cruisair. 130 jumps, like new. Super 22 reserve never jumped. \$1,200, firm. Patti Ruiz, 3655 Bahomes Drive, Miami, Fla. 33133. (305) 759-3483 (12)

CONDOR 2 w/3-ring & hand deploy, green/black, w/green, gold, white 252-Lite, & National Lopo, w/hot dog pilot chute, less than 100 jumps. \$1,050. **5-CELL FOIL**, black, gold, red; new lines, \$300. **TRI-CONICAL RESERVE**, good condition, \$175. **PW-PC**, blue, good condition, \$250. **BABY PARAPLANE CANOPY**, gold & red, all tape removed, new lines, strato-star trim, slider, \$250. Call Jerry MacDonald (716) 632-4491. (12)

WONDERHOG 2 for TALL skydivers! Black w/red trim White UNIT w/black & red block PIGLETT II. Red w/black Silly Suit. Complete \$925. Call Charlie nights (904) 985-5373. (12)

STRATO-STAR Red w/white stabilizers, 50 jumps. \$275. Call Dave Forsyth, (208) 726-8102, Box 2041, Ketchum, ID 83340. (12)

DEALERS WISHING TO SELL SUPER COLORS and other things are welcome to contact PAI for details. (Refer to fullpage color ad in this issue.) (1)

MINI SYSTEM: red with black trim. PC: black with green keyhole with POD and Grabber. 150 jumps: \$250. Call Tom (201) 287-4437 (weekdays). (12)

PARA-PLANE CLOUD, blue and gold. 24' reserve. Sell separately or both for \$350. Doreen Rein, 145 Erie Station Road, W. Henriette, NY 14586. (716) 334-4020 days or (716) 334-7220 eves. (12)

26' SECURITY LOPO, 4-line release, new, unused: \$250. Classifier rig, Cruisair size, new, unused: \$250. Jim Cone, (716) 872-3905 or (716) 872-5580. (12)

BRAND NEW COLOR-COORDINATED RIG. Wonderhog 2, RWPC (8 jumps), Strong Lopo reserve, Eagle RW Jumpsuit, Altimaster 2, Flotation gear, packing accessories, carrying bag. Call Grant Behrman (617) 367-7171, or write 65 East India Rd., Apt 24C, Boston, MA 02110. (12)

SUNRISE PARACHUTE SALES, New and used equipment in stock below list prices. Club and quantity discounts and new dealerships available. Leanne Heggen Eckstein, 2401 Pendleton Road, Oak Grove, KY 42262. (615) 431-4820 anytime. (12)

Rigging Services

FAA DESIGNATED PARACHUTE RIGGER EXAMINER for back, chest and seat types. FAA Loft No. 701-62, P.O. Box 68, Nelson, Ga. 30151 (404) 291-2341. (12)

METAL MARTIN-BAKER RIPCORD HANDLE AND IDIOT-PROOF RIPCORD POCKET for Wonderhogs originally equipped with blast handle. Installs in minutes without sewing or replacing ripcord housing or opening reserve. \$25 outright or \$15 exchange with your ripcord. Handle only on your ripcord: \$9. Pocket only: \$6. Add \$1 postage; add 5% tax in Texas. The Swoop Shop, 401 E. Fawnridge Dr., Austin, TX 78753. (512) 251-3803. (13)

PARA-CRAFT, INC. Complete line of new equipment, also many used canopies, harnesses/container, etc. Fulltime Master and Senior Riggers. Finest quality square and round canopy repair. Very reasonable prices. 1324 Fraser Dr., Fayetteville, N.C. 28303 (919) 864-5390 (19)

Miscellaneous

BUSINESS OPPORTUNITY: Own and operate Beech 18 at Florida DZ in winter and up North in summer. Call Jimmy Godwin, (904) 357-7800. (1)

16mm CAMERAS: N-6 gun camera with C-mount, 17mm lens, 12-24-48 fps: \$150. N-6 gun camera with factory 17mm lens, 16-32-64 fps: \$100. N-9 gun camera, 50' maga. ne, C-mount, 16-32-64 fps: \$400. Beaulieu R-1, two nicads with charger, 20to 80 zoom, 12mm lens, helmet and Newton ring sight: \$1200. Mike Sisemore, Box 305, Locust Grove, OK 74352. (918) 479-8750 or (918) 434-2449. (13)

BODY FLYING The Textbook, a book you should not be without! Send \$9.00 check or money order to Paraski, 2156 Stern Dr., Napa, CA 94558. (14)

HACKEY SACK FOOTBAGS. The game of cooperation and coordination. Send for yours today! Satisfaction guaranteed. \$6.00 ppd. Hackey Sack, P.O. Box 422S, Boulder, CO 80306. (13)

1957 CESSNA 182. 480SMOH, 2850TTAF, MK 12 ADF, inflight door setup for jumping. Excellent Imron paint. SKYDIVE painted under wings. (318) 343-6018 (15)

1956 CESSNA 182. Disassembling parts: Engine, wings, frame. Call Franco Rossi, (716) 482-1257 or write 136 Charwood Cir., Rochester, NY. (12)

COMPLETE GUIDE TO EXOTIC SPORTS. Every unusual, exciting sport covered. Beautifully illustrated book. What's happening in each sport; how to get involved. Latest info on hottest sports. Send \$3.50 (money-back guaranteed) to: Baronbrook Publishing, 2311 Pontius Ave., Suite A-946, Los Angeles, CA 90064 Dealer inquiries invited. (12)

CUSTOM EMBROIDERED PATCHES. Quantities from one piece. Made to suit your design, any size, shape or colors. Send 28¢ postage for prices and ordering information. Hein Specialties, Dept. D223, 4202 N Drake, Chicago, Illinois 60619. (23)

Wanted

FULL-CHARGE CENTER DIRECTOR. Minimum qualifications: USPA Instructor Rating, FAA Senior Rigger Certificate, and business management ability. Send resume of qualifications and salary desired. Antioch Sport Parachute Center, Inc., P.O. Box 865, Antioch, CA 94509. (12)

BOOTS. We need serviceable leather boots for our student program. New or used. Call with sizes, price, quantity. Palatka Paracenter, Norm Ross (904) 325-9381. (12)

COM. PILOT to fly jumpers in winter at Florida DZ. Rigger's license and Jumpmaster rating preferred. Call Jimmy Godwin (904) 357-7800. (1)

WANT TO BUY: Worldwide insignias, Skydiver, Airborne, Special Forces, Rangers, Parachutist Wings. Will exchange Skydiver, Hang glider magazines for insignias. Tony Peralta, 2125-7 Ave., Yuma, AZ 85364. (13)

Drop Zones

LET US PLAN YOUR VACATION. Skydiving, hang gliding, kayaking, rock climbing, spelunking. Skydiving instruction with safest and most advanced equipment. No static line or ripcords. Single point emergency handle. Harness hold jumps. High Adventure Sports, Inc., 4065 Cummings Hwy., Chattanooga, TN 37409. (615) 825-0444. (1)

PALATKA PARACENTER. Twin Beech, two Cessna 182s. Tuesday through Sunday, dawn to dusk. Master and Senior riggers, 1/E and memorable parties. Hot skydives in the warm sun. FFI: Norm Ross, (904) 325-9381. Altitude South, Inc., Box 1880J, Kay Larkin Airport, Palatka, FL 32077. (1)

When in Minneapolis-St. Paul, Minnesota, skydive at **St. Croix Valley**. 40 miles from St. Paul, Osceola, Wisc. Cessna 180 and 182. 10 AM to dark, weekends. (715) 294-2433/2793. (1)

Too Late To Classify

RW PC, blue and white, 125 jumps: \$250. Security 26' Lopo: \$225. Condor, red and black, with R-3s, hand deploy: \$225. Total: \$625. Rich Mosuoni, (201) 631-6869 days or (201) 874-4395 eves. (13)

SENIOR RIGGER'S COURSE. Includes chest and back during two very full weekends in January at the FAA-certificated loft of Dave DeWolf. FFI: Dave DeWolf, 26 W. Bainbridge St., Elizabethtown, PA 17022. (717) 367-0808. (14)

OLD MAGAZINES. Current, extinct, US/FOREIGN, PARACHUTING/aviation, buy/sell. Write: Jim Vallendar, 8989 Pierce Road, Free-land, MI 48623. (14)

CLASSIFLYER RIG: Fits 26' reserves. Main size for PC or Cloud: \$200. Jim Cone, (716) 872-5580 eves., (716) 872-3905 days. (14)

SURPLUS MA-1s: \$10; M-18 Smoke: \$7; Water Gear: \$14; New trim tabs: \$15; Zoo Toggles: \$15; 36" H/D pilot chutes: \$20; sliders: \$15; deployment bags: \$20; hook knives: \$5; 3-ring risers: \$22; large gear bags: \$20; packing mats: \$8; wallets: \$7.50; organizers: \$12.50. Custom colors on most items. Complete line of new, surplus and used gear at low prices. Complete rigging services. Gravitee Shop, 13001 Belcher Rd. So. #C-19, Largo, FL 33540. (813) 536-7697 (Dennis). (13)

SENTINELS, complete: \$160. 24' reserves, w/container: \$85; 26' Navy conicals, new: \$165. Strato-Star, Clark rig, with 3-ring and hand deploy, 26' conical: \$500. 24' reserves in Pop-Top chest mount: \$110. Dennis Foster, 10 AM-6 PM: (813) 536-7697. Evenings: (813) 522-3579. (13)

YOU WON'T SELL IT UNLESS YOU ADVERTISE IT.

Skydiving's Classified Ad page is an easy, inexpensive and effective way to reach over 5,000 jumpers with your message. It's the place to buy or sell gear, or promote your business.

Take a moment to send Skydiving your ad.

INSTRUCTIONS:

1. Neatly print your message on a separate piece of paper. Double check it for accuracy.
2. Figure the cost by counting the words. (Groups of letters such as "Mk-2" or "182B" count as one word. Count your name and address as three words.) Multiply the word count by 20¢ per word.
3. Decide how many issues you want your ad to appear in. All first-time ads will be run in two consecutive issues for the one-issue charge, so if you want the ad to run in three issues, you only have to pay for two issues.
4. Specify the heading under which your ad is to appear (For Sale, Wanted, Drop Zones, etc.)
5. Mail the ad, your check and your name and address to P.O. Box 189, Deltona, FL 32725 U.S.A. (All classified ads are run on a prepaid basis only.)

Skydiving

P.O. Box 189 Deltona, Florida 32725

NEW 1980 CANOPIES

...in stock now at National

XL Cloud™ The newest addition to the National line, the XL Cloud has seven cells, and 260 sq. ft. of surface area. This big canopy descends slowly and lands softly under all conditions. Forward speed is high and response is excellent, due to the sophisticated Lissaman 7808 airfoil. Because of new construction methods, the XL Cloud weighs the same as the smaller Strato-Cloud, about 11 lbs. In stock now **\$849.00**

Strato-Cloud™ Lite The all-around canopy that is popular with skydivers everywhere. The Strato-Cloud's great stability and crisp performance have made it the choice for accuracy, CRW and relative work for many years. It has seven cells, 230 sq. ft. for soft landings and weighs about 11 lbs. In stock now **\$825.00**

Cruisair™ A fast, responsive canopy designed around the Lissaman 7808 airfoil. Constructed with fabric and lines to fit the smallest containers, the cruisair is the choice of many relative work jumpers. It has seven cells, 200 sq. ft. and weighs about 10 lbs. In stock now **\$749.00**

World's Largest Selection
For custom design
add \$50.00



VULCAN II



HELIOS



CIRRUS II



APOLLO



plus solid red, white, blue, black or gold. ZEUS

The new 1980 patterns from National are designed to be lighter, brighter and more attractive. White tops allow maximum illumination and minimum weight.

Call TOLL FREE
800-526-5946.

Visa and Master Charge welcome
Dealer inquiries invited

National Parachute Supply, Inc.



P.O. Box 1000, 47 East Main Street/Flemington, NJ 08822 USA/(201) 782-1646

NEWS IMPROVED!

P.A.I.

PRESENTS

"EXCITING"

"DIFFERENT"

SUPERCOLORS!

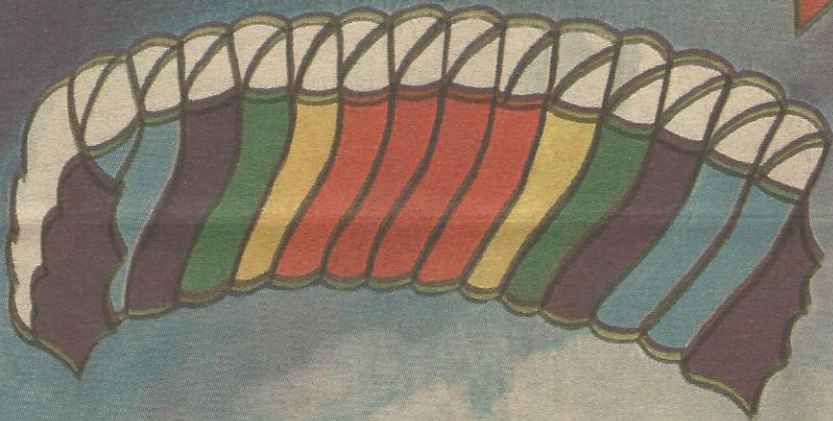
Quality Canopies by
PARA FLITE
IN STOCK NOW AT P.A.I.

© C.Y. C.Y.

HELLO, I'M CALLED SANDALWOOD. I'M A STRONG QUIET COLOR BLEND. P.A.I. CREATED ME TO BE INTERESTING & NOBODY ELSE HAS ME. SKYDIVE ME - THE DIGNIFIED SUPERCOLOR, SANDALWOOD.



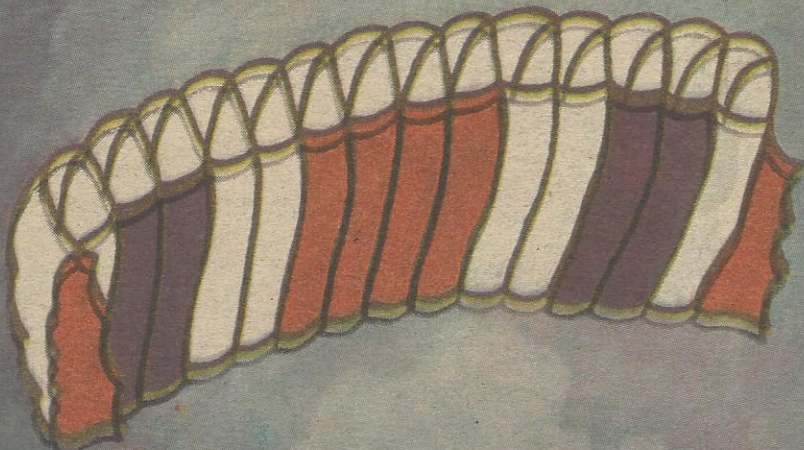
I'M SHOWCASE & DON'T BUY ME IF YOU WANT QUIET DIGNITY. I'M THE BRIGHTEST ONE IN THE SKY! I'M AVAILABLE IN XL CLOUD, STRATO CLOUD LITE & CRUISAIR.



SOLID SPECTRUM HERE. DON'T LET WHITE TOP CHATTER FOOL YOU. ALL 5 P.A.I. SUPERCOLORS COME IN XL, CLOUDLITE & CRUISAIR BUT I'M THE BRIGHTEST. FLY BRIGHTLY IN FULL COLOR WITH ME.



SPRIT IS THE NAME I'M AN INTERNATIONAL P.A.I. CREATION. MANY COUNTRIES USE FLIES MADE ONLY FROM MY COLORS. BUT YOU DON'T HAVE TO LIVE IN ONE TO PUT SPRIT IN YOUR SKYDIVING!



I'M SKYHAWK - THE SUPERPOWER IN SUPERCOLOR.



P.A.I.
145 OCEAN AVE. PO. BOX 811
LAKEWOOD, N.J. 08701 U.S.A.
PHONE: 201 387-7773
TELEX/TWX: 710 723 8324 PAI UNDB
• VISA MASTERCARD •