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MERRY CHRISTMAS

From the CRYSTAL PEOPLE

Kitty Hawk Kites

DECEMBER 16-17, Wright Brothers 75th Anniversary Sale
Seagull service clinic
Motorized fly-in

Crystal Flight Resort

NOVEMBER 24-26, Thanks giving Turkey Fly In, Brown's Country Store, Free Flyer Feast

Whole air catalog



1978
Nov/Dec

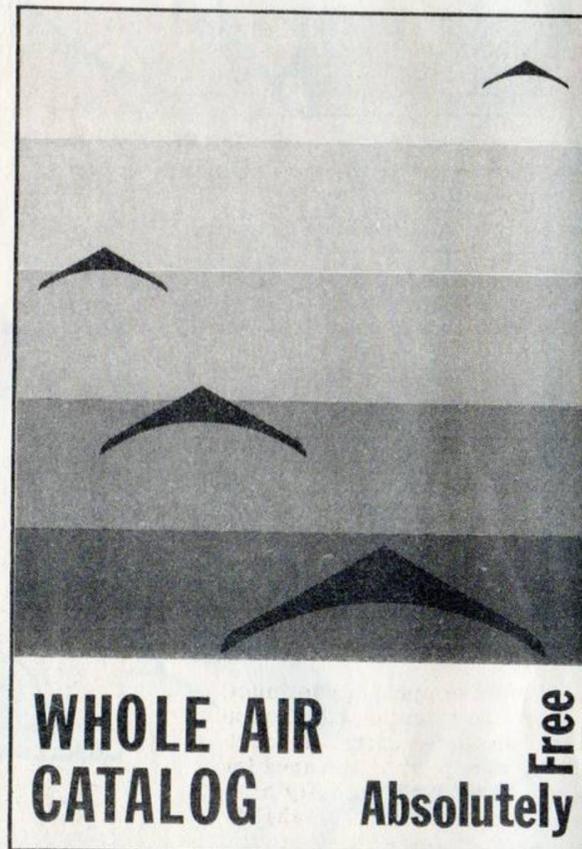
SOMETHING^{for} NOTHING

THESE DAYS it's usually "You Get What You Pay For." But what can you get that you don't have to pay for? Simple... the WHOLE AIR CATALOG.

The WHOLE AIR CATALOG is the hang glider buyer's sourcebook. We're the ones who provide the free reply mail "Reader Card Service." This way, you can get information on any of the fine products or services advertised, by barely lifting a pencil, and without touching your wallet. We receive literally thousands of requests each issue, so we KNOW pilots are enjoying and using this unique service.

But we're much more than a bunch of ads. We feature the "Used Glider Bluebook" each issue, quoting values in used flying equipment. WAC is the one with "Hang Gliding Statistics," by Dan Johnson. Nobody else can give you this HARD LOOK at what's going on in your favorite sport. Our regionalized calendar of events makes fly-vacation planning into a light wind matter. Plus we have the "Crystal Corner" Safety Tips column, and much more in store.

Okay, WHAT'S THE CATCH? Fifteen cents on an envelope supplying your name, address, and zip code is the only money you'll have to spend to get regular six times yearly service to the WHOLE AIR CATALOG. Who says you can't get SOMETHING FOR NOTHING?



WHOLE AIR CATALOG **Free Absolutely**

WRITE TODAY:

WHOLE AIR CATALOG; BOX 144; LOOKOUT MTN., TN 37350

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The Windhaven 804 gives you the lift sensing capabilities a hawk would be proud of.

And any hang glider pilot will be proud of the 804 too. That's why we built this vario to meet the special requirements that a pilot demands of his instruments.

The external requirements? Rugged, stylish, compact, light, accessible control knobs, earphone jack (enables you to

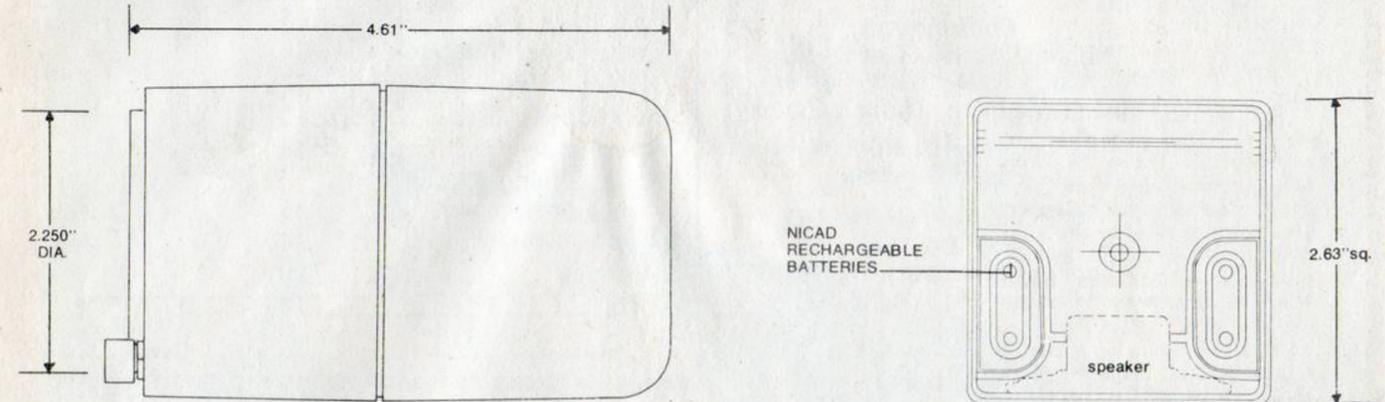
hear the audio even over engine noise), easy to read meter face and special polycarbonate case provides easy console mounting.

The internal requirements? Sensitive pressure transducer lift sensor, precision circuitry, temperature stable, audio on

up scale only, dual range, rechargeable, long battery life, and the finishing touch to the 804 vario, a fully warranted one year guarantee.

Now, if you are looking for the highest quality vario on the market, would like the next best lift sensor to a hawk brain and are proud of what you own, then the Windhaven 804 variometer is for you.

Contact your local dealer for more information or write/call Windhaven Inc., 12437 San Fernando Rd., Sylmar, CA 91342, (213) 367-1819



No one builds varios the way we build varios

WINDHAVEN

Emergency Parachutes.

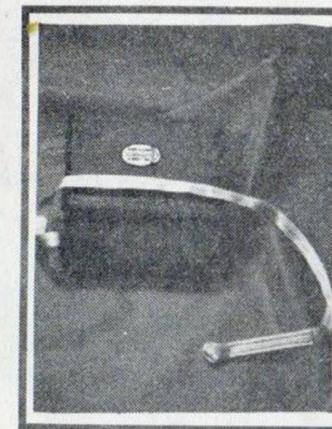
Quality Construction

Windhaven's parachute system for hang gliders has developed the reputation of having the highest quality workmanship available. Our famous parachute loft hand crafts each canopy to the exact specifications necessary to pass the, very rigorous, T.S.O. testing that was conducted on this system.

Where others stopped, we continued with extras like V tabs on the suspension lines, reinforcement tape through each panel, canopy skirt and apex for added strength, zero porosity high quality canopy material, stability slots, 3 foot apex for reduced oscillation, concentric opening bands, and high test suspension lines and bridal cord. All this added safety and the system only weighs 6.2 pounds.

Already A Lifesaver

To back our claims, the Windhaven Emergency Parachute is already a lifesaver. During inflight emergencies, pilots have successfully deployed our system and descended safely to the ground.



One pilot even had his suspension line break and as he fell away from the glider, he deployed his Windhaven chute, which was attached to his carabiner, and found himself under canopy instead of glider! It can happen. And the Windhaven system saved his life.

Mail To: **WINDHAVEN HANG GLIDING SCHOOLS, INC.**
12437 San Fernando Road
Sylmar, California 91342

Please send me your parachute manual. Enclosed is my check/money order for \$1.00

Please send me your FREE 1978 catalog with complete product line and price list.

NAME _____
ADDRESS _____
CITY _____
STATE _____ ZIP _____

Circle #1 on reader service card.



WHOLE AIR CATALOG

Publisher: Idea Graphics
Dan Johnson

Editor:
Starr Tays

Contributors:
Michael Smith, Tim Dunlap,
Merry Wall, Terry Ferrer
Butch Manning, Lydia Lehotsky

Cover Design:
Edson Campas

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CATALOG NO. 4

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PUBLISHER'S COLUMN:

One time or another, nearly everyone has a disagreement or a dissatisfaction with a product, service, company, or procedure. Perhaps you have sent a deposit, and never received your purchase. Perhaps you were sent the item, but charged wrongly or excessively. Maybe you got damaged merchandise, or had trouble getting service or warranty promises fulfilled. The list could go on, but what do you do?

Many metropolitan newspapers have tried to help similar situations become resolved to the relief of both customer and supplier. Most such unhappiness results from poor communication, and there exists no forum from which one person can release his or her complaints. Sometimes, a consumer feels he or she can be simply ignored by a large company or powerful person. But big newspapers have been rather

successful at speaking for the "little guy" as their printed word carries a large impact. Good will is a very important asset to big firms and bad press will prove most detrimental.

HANG GLIDING CONSUMER ACTION LINE

Some newspapers call it "Action Ten," or "BeeLine." The name is not important. The service is. What we want to know is, "Do hang gliding enthusiasts want this sort of service?"

While we realize that the *Whole Air Catalog* may not be able to help a consumer in all situations, just airing the problem will get communications moving. Those problems that have a common thread with the difficulties of others will be printed on our proposed "Consumer Action Line" page each issue. Also printed may be purchase

snags that hold good human interest or reader appeal.

It will take some time to get the movement of communications underway. But, we will write letters and make phone calls. We will print the letters and our results of some intriguing incidents. And we are sure that the threat of bad press will discourage those few suppliers whose intentions are less than honorable. Honest errors or failures may be more readily rectified. Both corrections will be good for the "little guy." All we want you to do is vote — yes or no on the appropriate space of our reader card. Give it some thought and make your mark. Enough positive response and we will go ahead with the service, explaining its operation in the January-February *Whole Air Catalog*.

Dan Johnson, Publisher

GLIDERS

THE WILLS WING ALPHA

PERFORMANCE AND HANDLING THAT ARE ALREADY LEGENDARY

Find out why these well known pilots are so excited about the ALPHA.



The ALPHA I flew was their largest size. Even so it impressed me with its quick response and easy handling. It was truly fun to fly."

—Tom Peghiny
Independent Designer
1977 Masters Champion

"I'm totally impressed with the ALPHA. Its combination of easy handling, stability in unusual attitudes, and excellent sink rate in tight turns makes it an exceptional thermalling glider. The quality of the workmanship and hardware is unsurpassed."

—Dick Stern
"Old Man of the Mountain"

"Thermalling was always a lot of work for me; getting thrown around and forever dumped out. My ALPHA seems to stay in thermals with so little effort. My flying skills have improved more in my ALPHA than in any glider I've ever flown. I love it!"

—Jan Case
Chandelle San Francisco

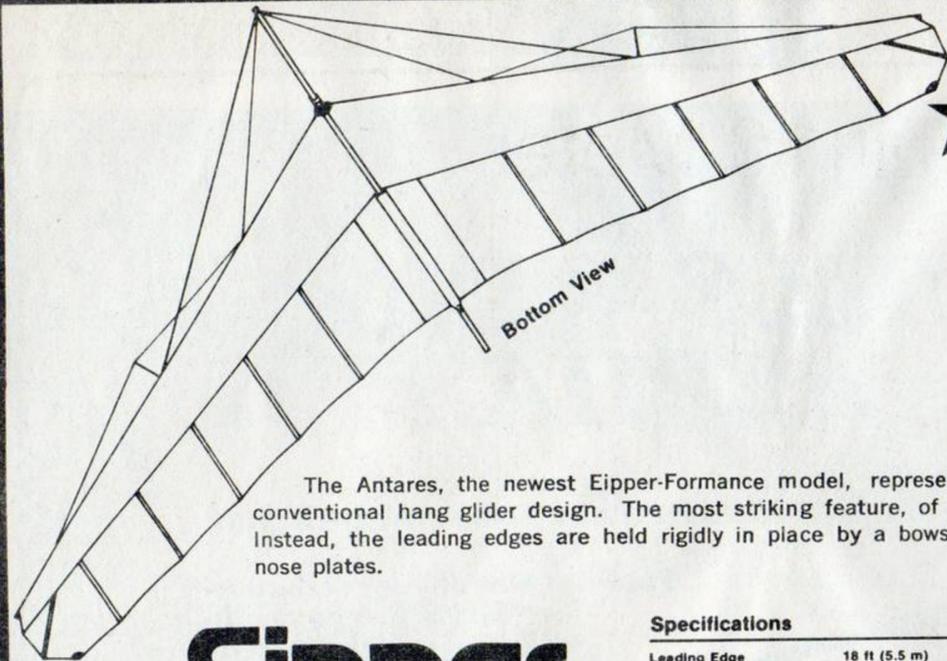
"The ALPHA is a true Supership...bar pressure in roll is definitely lighter than the Cirrus 5 or Osprey ... it feels utterly stable regardless of the bank or pitch angles...This may make the ALPHA the best thermalling glider I've written about in this series."

—Dan Johnson
Glider Rider

WILLS WING, INC.

125-111st Walnut Street, Santa Ana, California 92704 (714) 847-6444

Test fly an ALPHA today.
Three sizes — HGMA certified — \$1195 complete



ANTARES

The Antares, the newest Eipper-Formance model, represents a truly radical departure from conventional hang glider design. The most striking feature, of course, is that there is no crossbar. Instead, the leading edges are held rigidly in place by a bowsprit or extended keel in front of the nose plates.

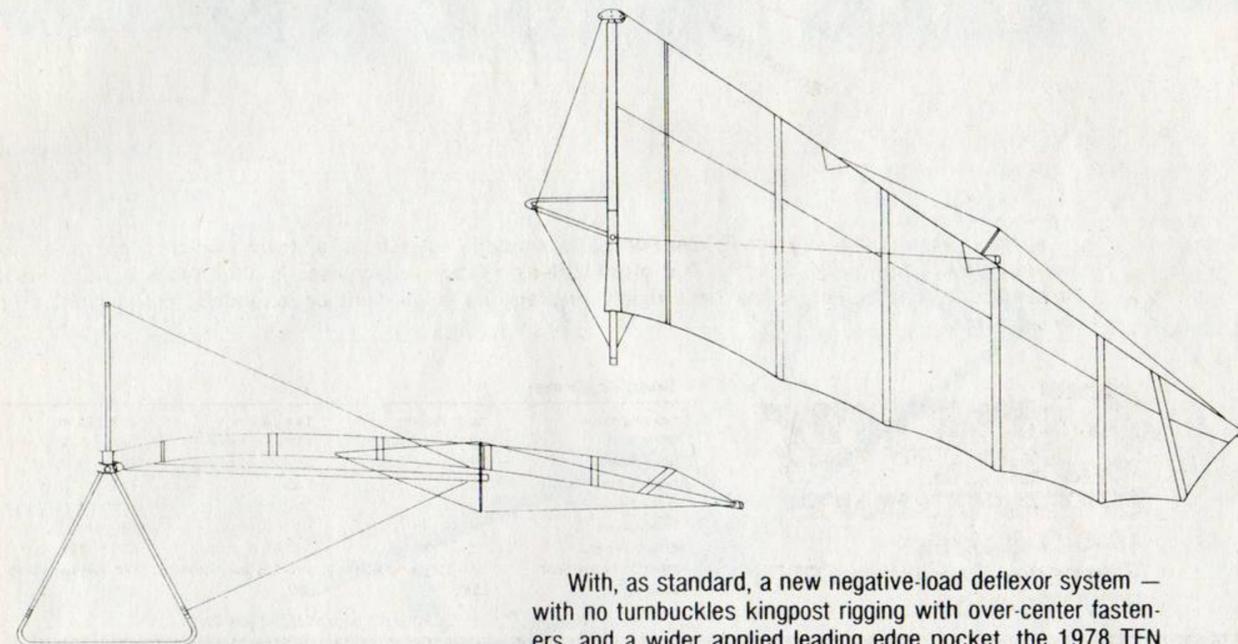
Eipper
EIPPER-FORMANCE
1840 Oak Street
Torrance, California 90501
213/ 328-9100

Specifications

	18 ft (5.5 m)	19 ft (5.8 m)	20 ft (6.1 m)
Leading Edge	18 ft (5.5 m)	19 ft (5.8 m)	20 ft (6.1 m)
Wing Area	155 sq ft (14.4 m ²)	172 sq ft (16 m ²)	190 sq ft (20.5 m ²)
Wing Span	33.5 ft (10.2 m)	35.35 ft (10.8 m)	37.2 ft (11.3 m)
Aspect Ratio	7.25	7.25	7.25
Nose Angle	130°	130°	130°
Root Chord	7 ft (2.1 m)	7.5 ft (2.3 m)	8 ft (2.4 m)
Empty Weight	53 lbs (24 kg)	55 lbs (24.9 kg)	57 lbs (25.8 kg)
Pilot Wt Range (Est)	130-165 lbs (59-75 kg)	150-185 lbs (68-84 kg)	170-210 lbs (77-95 kg)
Billow	.25°	.25°	.25°

Circle #3 on reader service card.

The Seagull 10 Meter



With, as standard, a new negative-load deflexor system — with no turnbuckles kingpost rigging with over-center fasteners, and a wider applied leading edge pocket, the 1978 TEN METER is a subtle refinement of a proven design.

10 METER

SPECIFICATIONS

	10	10.5
Leading edge length	20	21
Keel length	8.5	8.5
Nose angle	111	111
Aspect ratio	6.3	6.4
Sail billow	1/2	1/2
Stall	14	14
Top speed	47	47
Actual sail area	174	190
Span	33.1	34.8
Rec. pilot weight	130-175	170-220

At Seagull, we don't rush a design, but rather, we find a good one and stick with it.

If you're considering a supership like the TEN METER, then you've been around long enough to know that the Seagull name means quality, performance, and safety.

Quality that can best be appreciated through comparison. Walk around the landing or set-up area and take a look at the various brands of gliders — then take a look at the TEN METER. No gimmicks or flashy "here today, gone tomorrow" gadgets. Just solid aerodynamic logic gracefully incorporated into a structurally sound design. The TEN METER features superb detailing throughout with an all-anodized airframe, vinyl-coated 3/32 cables, and foam-fiberglass battens.

SEAGULL AIRCRAFT

3021 Airport Avenue, Santa Monica, California 90405

Circle #5 on reader service card.

UP CONDOR

Ultralite Products

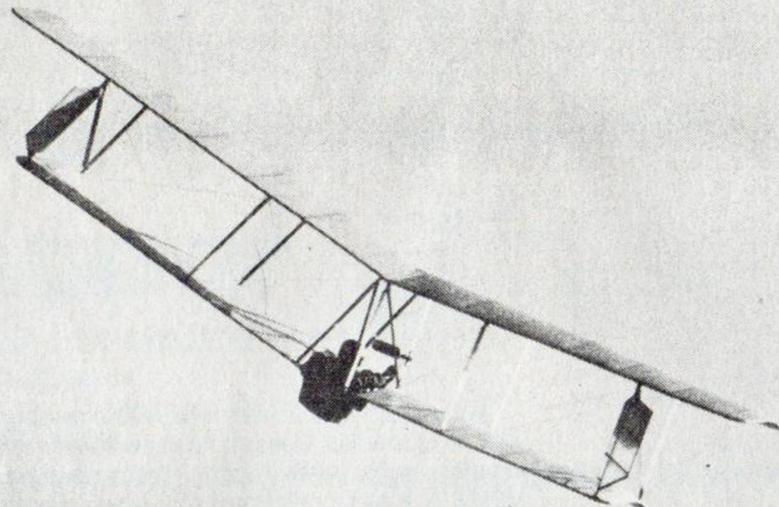
	151	178	194	224
AREA	151 Sq. Ft. (14.03 M ²)	178 Sq. Ft. (16.54 M ²)	194 Sq. Ft. (18.02 M ²)	224 Sq. Ft. (20.81 M ²)
LEADING EDGE	17' 9" (5.41 M)	19' 4" (5.89 M)	20' 3" (6.17 M)	21' 9" (6.63 M)
KEEL	11' 5 1/2" (3.5 M)	12' 0" (3.66 M)	13' 0" (3.96 M)	14' 0" (4.27 M)
NOSE ANGLE	118°	118°	118°	118°
BILLOW	.75°	.75°	.75°	.75°
WEIGHT	45 Lbs. (20.45 Kg.)	50 Lbs. (20.45 Kg.)	54 Lbs. (20.45 Kg.)	59 Lbs. (20.45 Kg.)
BATTENS	5 Per Side	6 Per Side	6 Per Side	6 Per Side
WING SPAN	30' 6" (9.3 M)	33' 3" (10.13 M)	34' 8" (10.57 M)	37' 4" (11.38 M)
ASPECT RATIO	6.2	6.2	6.2	6.2
PILOT WT. RANGE	106-175 Lbs. (48-79 Kgs.)	130-195 Lbs. (59-88 Kgs.)	145-210 Lbs. (66-95 Kgs.)	165-230 Lbs. (75-104 Lbs.)
GLIDE RATIO	9.1+	9.1+	9.1+	9.1+
MINIMUM SINK	170 Ft./Min. (.86 M/Sec.)			
SPEED RANGE	15-40 MPH (24-65 KPH)			
STALL SPEED	15 MPH (24 KPH)			
MAX. L/D SPEED	22 MPH (35 KPH)			
RETAIL PRICE	\$1280.00	\$1300.00	\$1320.00	\$1335.00

All sizes of the Condor are H.G.M.A. certified as of May 4, 1978.

Circle #4 on reader service card.

UP, Inc. (Ultralite Products) P.O. Box 582 Temecula, CA 92390 (714) 676-5652

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it all with EASY RISER!

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SANTA CLARA, CA 95050
OR CALL (408) 732-3461



Pilot: Dave Kilbourne at Mission Peak, Cal

USED GLIDER BLUEBOOK

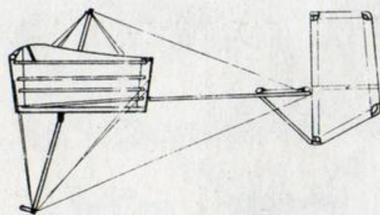
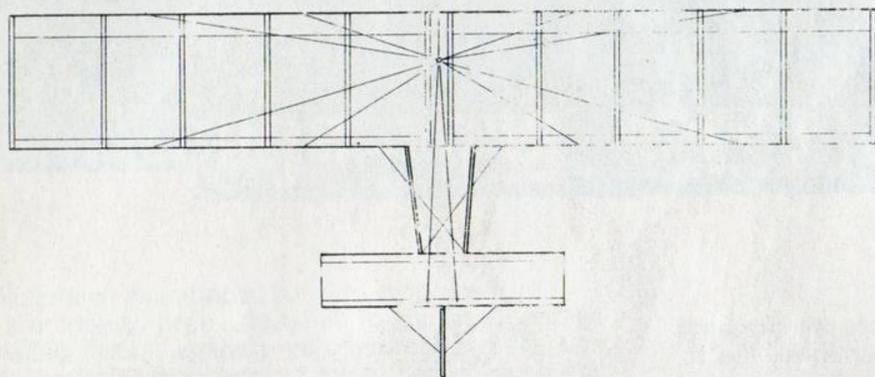
EDITION NO. 4

CONSUMER NOTE: The prices we present are not the last word in used glider value. Each craft must be closely inspected, and evaluated on its own merits. A dealer can very likely help you a lot, but, of course, some fee is then deserved, or a commission in the case of a dealer sale.

In these days of prices continually increased by the pressure of inflation, used gliders may hold great opportunity for savings. Used gliders can be examined in the air and on the ground. If they are good, it's relatively easy to see. If not, you can save your money. Student pilots may also find good use from a used glider. But care is recommended. The market is still buyer beware.

MANUFACTURER	YEAR	MODEL	SIZE	CLEAN PRICE	AVG. PRICE
ALBATROSS SAIL GLIDERS	76	ASG 20	C	700	475
	76	ASG-21	C	700	525
BENNETT DELTA WING	76	Phoenix 6B	Jr.	575	350
	76	Phoenix 6B	Reg.	575	400
	76	Phoenix 8	Reg.	650	450
	76	Phoenix 8	Reg.	600	450
	77	Phoenix 6C	Sr.	650	625
	77	Phoenix 6C	Reg.	650	675
	77	Phoenix 8	Reg.	850	575
	78	Phoenix 8 Super	Reg.	850	750
CHUCK'S GLIDER SUPPLIES	76	Falcon V	225	600	500
	76	Falcon V	185	650	450
	77	Falcon V	185	650	575
EIPPER FORMANCE	75	Flexi II	240	400	200
	75	Cumulus V	180	550	450
	76	Cumulus VB	180	450	375
	77	Flexi III	185	700	550
	77	Cumulus 10	Med.	850	675
	78	Flexi III	Lg.	750	675
ELECTRA FLYER	75	Pathfinder	20-18	200	150
	76	Nimbus	20-17	350	250
	76	Cirrus	3	550	425
	76	Cirrus	2	550	450
	77	Cirrus	3	625	475
	77	Cirrus	2	700	600
	77	Olympus	160	700	500
	78	Cirrus 5	C	800	625
	78	Cirrus 5	A	875	700

MANUFACTURER	YEAR	MODEL	SIZE	CLEAN PRICE	AVG. PRICE
MANTA PRODUCTS	75	Fledgeling	1A	700	325
	76	Fledgeling	1A	700	475
	77	Mirage	175	700	550
MOYES DELTA WING	76	Midi	220	700	600
	76	Maxi I	200	750	600
	77	Maxi I	200	800	725
SEAGULL AIRCRAFT	75	Seagull III	220	375	325
	76	Seagull III	220	425	375
	76	Seagull VII	174	600	475
	77	Seahawk	170	700	600
	77	Seahawk	190	750	650
	77	10.5 Meter	—	1000	850
	78	Seahawk	190	800	700
	78	10 Meter	—	1075	975
SKY SPORTS	76	Bobcat II	204	450	350
	76	Kestrel A	185	450	425
	76	Kestrel A	220	625	550
	76	Merlin	160	600	475
	77	Bobcat III	Lg.	800	625
	77	Sirocco I	156	800	650
	77	Sirocco I	175	775	725
	78	Osprey	175	875	775
ULTRALIGHT FLYING MACHINES	76	Easy Riser	Compl.	1125	850
ULTRALITE PRODUCTS	76	Dragonfly Mk. II	174	650	425
	77	Firefly	174	750	600
	77	Dragonfly Mk. II	196	800	625
	78	Spyder	176	900	775
WILLS WINGS	75	Swallowtail	22-20	250	175
	76	SST	90	625	400
	76	SST	100A	650	450
	76	SST	100B	650	475
	77	X-C	185	800	700
	78	Alpha	185	975	775
	78	Alpha	215	1000	800
	78	X-C	215	1025	800



Circle #7 on reader service card.

QUICKSILVER

The Eipper 'Quick,' in production since 1972, is still a sought-after glider. Safe, and proven safe.

Now preferred by many leading power manufacturers like CGS, Lone Star, Rotec, and Hang 'Em High.

Easiest to learn to fly motorized because of slow take-off speeds. Plus, simplicity of repair.

Expensive? Only \$975.00 for colored sail kit. Complete for \$1,145.00 with cover, from . . .

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S. Smith Barry Rd.
Arlington, TX 76013
(817) 469-9159

EXCLUSIVE DISTRIBUTORS FOR THE SOARMASTER QUICKSILVER UNIT.

This unique power unit balances the glider so that all of the natural handling characteristics are returned when in flight. Power on or off, the glider still handles the same. You'll be amazed with the simplicity and power this system provides.

Circle #8 on reader service card.

IF YOU'VE GOT THRUST,



PROVE IT

And that's what we did at the EAA Sun-N-Fun Fly-In in Florida. We hooked our newest design reduction drive power unit to a thrust gauge and showed everyone that we are getting a solid 90 to 95 lbs. thrust.

95 lbs. THRUST

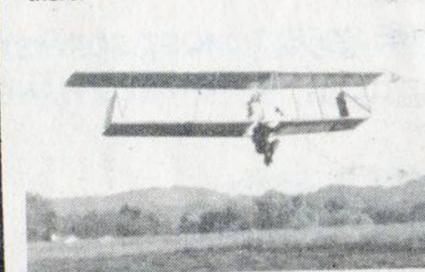
With thrust like that behind you, there's no question about taking off! Our Mo-Glider power pack is completely thrustworthy . . . and we're the only ones to prove it publicly. Being the originators of the reduction drive system for hang gliders has given us a slight advantage. We've had time to develop powered hang flight to its fullest.



Consider this when looking at power systems:

- West Bend Engines (Mac 101 conversion available)
- Large Diameter 42" Prop
- Muffler as standard equipment
- No wing amplification of sound
- Faster takeoffs and climb rate due to more efficient, large, slower turning prop
- Four bolt mounting with eight rubber mounts to isolate engine vibration from airframe
- Mounting systems for Easy Riser, Mitchell Wing, Icarus V, and Quicksilver

That and a lot more makes the CGS-Mo-Glider power pack the engine you need to get you into the air fast and keep you there.



Our new design in tricycle landing gear has made take offs and landings a lot nicer. With the steerable nose wheel, you can taxi to takeoff and land on all three, or you can be a purist and use your feet. Either way, you can count on the CGS Mo-Glider power pack to get you up and back with the greatest of ease.



The complete price of the CGS Mo-Glider (not including the glider) including engine, propeller and accessories is \$875.00.

Tricycle land gear is torsion shock absorbing which means no need for external bracing cables. Has been drop tested to 4 G's; truly aircraft design. Complete with steerable nose wheel . . . \$190.00.

CGS Power Flight Harness \$65.00.

For further details, send \$4 for a complete information package and find out how easy it can be to get into the air with Chuck's Glider Supplies.

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CHUCK'S GLIDER SUPPLIES 4252 PEARL RD. CLEVE., OH 44109 (216) 398-5272

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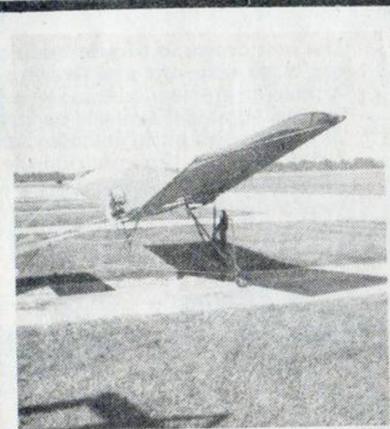
WE HAVE THE POWER YOU NEED!



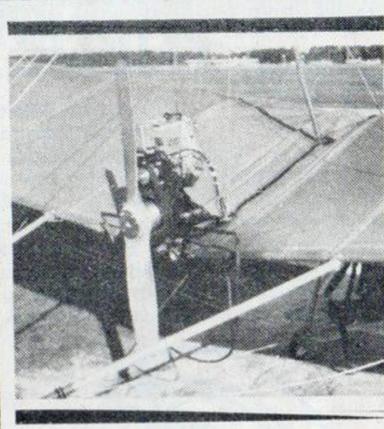
**INTRODUCING: THE HANG-EM HIGH
BELT DRIVE**

AFTER 1½ YEARS OF EXTENSIVE RESEARCH WE HAVE PERFECTED THE MOST SOPHISTICATED UNIT ON THE MARKET.

WITH OUR UNIQUE SYSTEM WE HAVE REDUCED NOISE LEVELS AND PROP SPEEDS DRASTICALLY — WHILE INCREASING PERFORMANCE BEYOND THE REALM OF IMAGINATION.



**BELT DRIVE
PERFORMANCE — QUICKSILVER C**
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 EMPTY WT./GLIDER 65 lbs.
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 CRUISE SPEED 25-30 mph
 MAX. SPEED 40 mph
 STALL SPEED 16 mph
 FUEL CONSUMPTION 0.8 gal.
 per hr.



**TRULY THE SAFEST, MOST SOPHISTICATED
MOTORIZED HANG GLIDER IN THE INDUSTRY!**

**HANG-EM
HIGH FLIGHT SYSTEMS INC.**

**4104 MERCY INDUSTRIAL COURT
ORLANDO, FLA. 32804 305/293-3104**

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HARNESSES

Soar in Comfort.



When Chris Price designed the Price Harness he developed a quality harness for pilot comfort, support and safety. Three-inch aircraft type webbing, fully padded shoulder and leg straps and a foam-filled body ensure durability and comfort while soaring.

Pilots have the option of soaring in standing, seated or prone positions. A standing position enables the pilot to plunge into an aggressive, controlled take-off run and later prepare for a final approach to landing. While in a seated position, the pilot maintains a lower center of gravity which allows greater glider control in turbulence and while thermaling. Pilots locked into prone position possess a positive relationship with the glider for maximum comfort.

The Price harness is standard in six sizes and four colors. Comes complete with adjusters, stirrup, locking carabiner and two control bar hang loops.

Custom features are also available on request.

WILLS WING, INC.

Circle #12 on reader service card.

**CHRISTMAS
SPECIAL
FROM
EIPPER**



EIPPERFORMANCE
 1840 Oak Street
 Torrance, California 90501
 213/ 328-9100

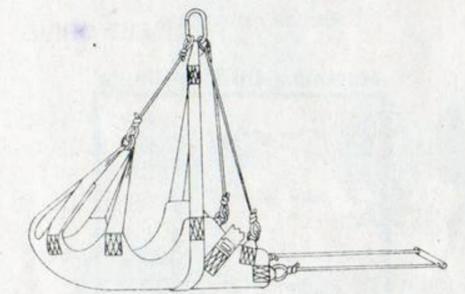
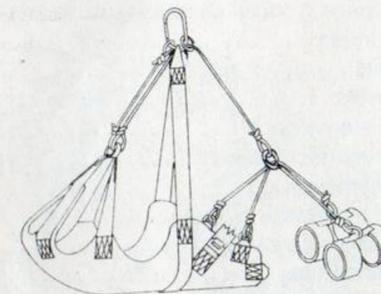
**OUR FINE
SOARING HARNESSES**

Normally \$85.00

Now . . . \$75.00

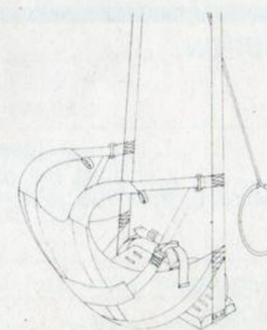
Offer expires Dec. 31, 1978

Circle #11 on reader service card.



Proven reliable body harness Complete with double knee hangers, or stirrup Both are \$5.00 extra Superior construction with space age materials Adjustable leg straps keep the harness secure for launch one size fits up to 6 ft. pilot \$69.95.

See Order Form, Page 25



Deluxe adjustable supine seat In flight adjustable back position with foot stirrup \$59.95.

**CRYSTAL
accessories**

Circle #13 on reader service card.



AERIAL TECHNIQUES

ROUTE 209 SOUTH, ELLENVILLE, NY 12428
(914) 647-3344
SALES • SERVICE • INSTRUCTION

WINTER HOURS: Closed Tuesday & Wednesday — Open Thursday - Monday, 9:00-5:00

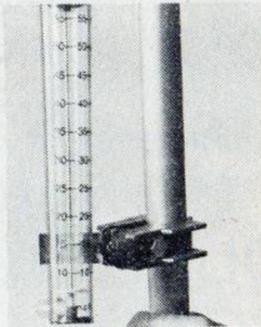
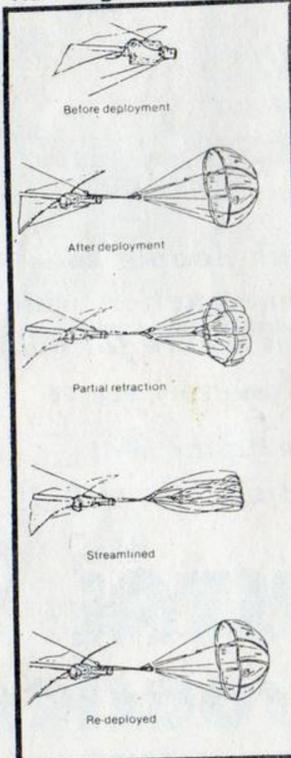
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GLIDERS IN STOCK:

*Mariah 190	\$1,100.00
*Phoenix 8 Jr.	650.00
*Phoenix 8	500.00
*Bobcat II (204)	350.00
*Phoenix 6C (180)	850.00
*Seagull 3Z	400.00
*Olympus (160)	700.00
Moyes Maxi (new)	1,250.00
Alpha (185)	1,195.00
Alpha (215)	1,195.00
*Cirrus 3	600.00
*Flexi II (205)	450.00
*Wills X-C (185)	700.00
*ASG-21 (180 & 160)	600.00
*Cirrus 5 (175)	900.00
*Easy Riser complete	900.00
*Moyes Maxi (shop demo)	1,000.00
SST 110G	1,195.00
*Phoenix 12	1,050.00
Condor 178	1,320.00

*Special Purchases

Hummingbird Drag Chute



EQUIPMENT:

Soarmaster unit	\$950.00
Hummingbird drag chutes	45.00
Litek/Hummingbird varios	145.00
Hall airspeed indicators	18.50
Prone brackets for Hall	5.50
U.P. flight bags	27.95
Hustler helmets	20.00
Bell helmets	49.50
Safety wheels	12.95
Astraltune stereo pack	195.00
Sterling silver necklaces	16.50
Colver variometers	209.00
U.P. cloud harnesses	93.00
Theotek variometers	160.00
Bennett parachutes	330.00
Odyssey parachutes	315.00
Thommen altimeters	119.00
Aircraft altimeters	99.50
Hang gliding books	
Hang gliding shirts	
Hang gliding log books	4.00
Velcro wallets	7.50

ORDER COUPON

Dear Aerial Techniques:
Please send me _____ (description)
priced as shown above \$_____. I enclose full payment
\$_____ plus 5% for handling/shipping. (New York residents, add
sales tax.)

Send to:
AERIAL TECHNIQUES
ROUTE 209, SOUTH
ELLENVILLE, NY 12428

WILLS WING, INC.

Instrument Consolidation.

By consolidating the three most important flight instruments into one streamlined lightweight deck, the new CHAD AVT™ Flight Deck allows easier viewing, faster reference and better soaring performance.

The flight deck combines the Colver Variometer (5XC), the Thommen Altimeter and an optional digital elapsed time meter.* All protected from impact in a resilient molded shell.



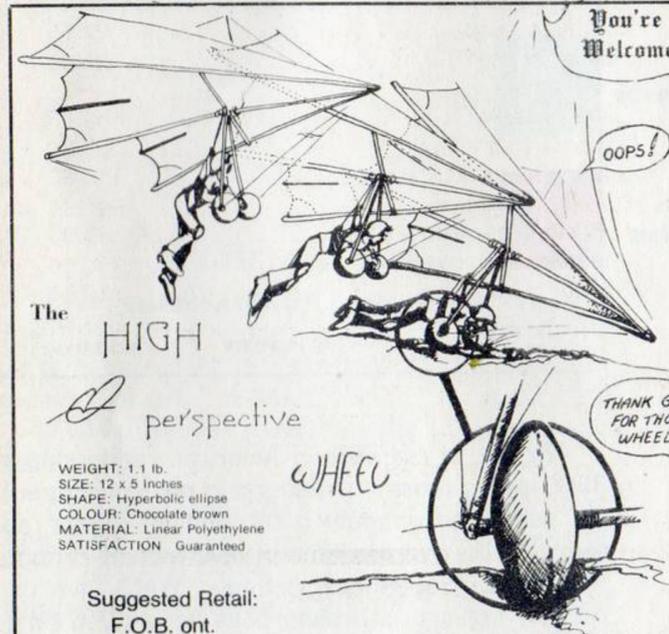
CHAD AVT™
Flight Deck

Weight of the flight deck is only 2¾ pounds — far less than the instruments in their original mountings — and its compounded curve design reduces drag.

Better soaring performance is the objective. Our accessories can help you achieve it. All are available through Wills Wing, Inc., or your local hang glider dealer. Performance like you've never experienced.

*Front panels to accommodate the Theotek and Ball Variometers and the Altimaster III are available also.

Circle #15 on reader service card.



WEIGHT: 1.1 lb.
SIZE: 12 x 5 inches
SHAPE: Hyperbolic ellipse
COLOUR: Chocolate brown
MATERIAL: Linear Polyethylene
SATISFACTION Guaranteed

Suggested Retail:
F.O.B. ont.
\$20.00 pr.

franklin mfg. co.
rd. 2 glen rock, pa u.s.a.
717 235 5512

Now available to fit 1½" curved control bars.
Please specify 1" or 1½" when ordering.

michael robertson r r 2 claremont ont canada

DEALER INQUIRIES INVITED

Circle #16 on reader service card.

VELSTRAPS!

The finest hang glider tie straps
now have a fine low price.



99c

each
minimum order — 5

Metal cinch ring
24" long by ¾" wide,

from Velcro Corporation
see order form on page 18

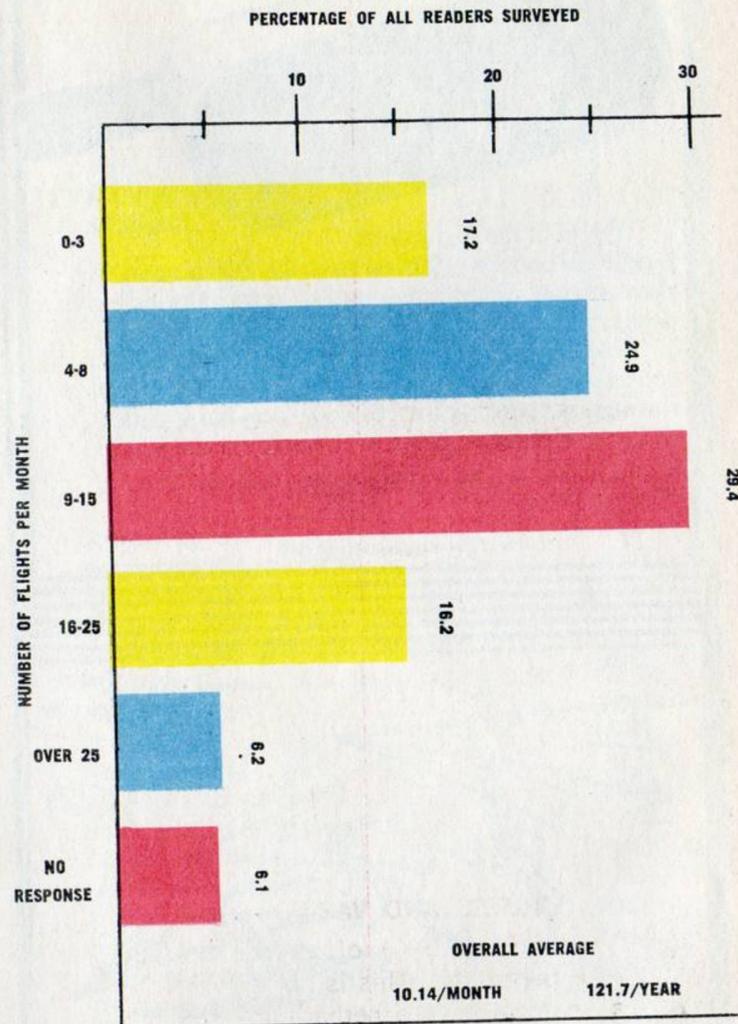
CRYSTAL accessories

Circle #17 on reader service card.

HANG GLIDING STATISTICS

By Dan Johnson

AVERAGE FLYING PER MONTH



In this third edition of "Hang Gliding Statistics," we have some brand new topics, resulting from our change of questions on the reader card.

We will give you new information as to injuries in the sport, a first, so far as we are aware. Also, we can tell you what the average rate of flying is. When combined with injuries, you can draw some hard new conclusions about the safety of hang gliding.

Do you think powered flying is growing in quantum jumps? We can educate you a bit here as well. How many pilots own 'chutes or varios? What are the most requested products for our third issue?

Of course, we have our brand survey again. This popular topic went through some major changes. Have a look.

INJURIES

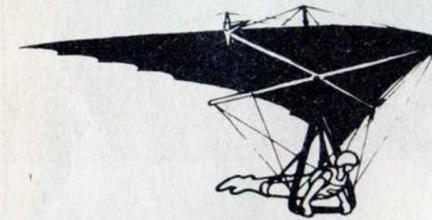
To our knowledge, no injury estimates have been made from reader/participant surveys. To begin a definition, we merely asked how many pilots had ever suffered a broken bone, and, if yes, on how many occasions. A rather large number, specifically 18½%, have broken a bone. Of those, 89% had a single mishap, 5% had two, and 6% had three or more.

By use of our certain American readership of 8500 pilots (pass on readership not considered), we see approximately 1.03 million flights per year. If the average time of involvement is about two years (September-October WAC), we can roughly estimate a broken bone occurs 7.6 times per 10,000 flights.

Please keep in mind that these estimates are coarse approximations, which would be unacceptable to most insurance companies. Much more surveying, closer definition of injuries, and finer calculations of average flying rates are required to have more dependable figures. But, at least now we have some idea, a beginning.

POWERED VS. FOOT-LAUNCHING

Though power accessories and equipment attract record high interest from pilots, only one in ten readers surveyed claim to have ever flown with power, and half of those say power provides only 0-25% of their launches. A mere 3% say power gets them up 90-100% of the time. An overwhelming 81.5% replied that 90-100% of all their flying is foot-launched.



MOST REQUESTED ADS

We had no parachute ads in the September-October WAC, so there was room for a new candidate. The new Eipper high performance entry, the Antares, swept the field with our highest response ever. It was followed by the old reliable flight resort/motel, always contending for number one or two. A tie for third happened between a glider and a dealer stocking many gliders.

1. Eipper Antares26.5%
2. Flight Resort/Motel18.5%
3. Seagull Ten Meter18.0%
- Aerial Techniques18.0%

BRAND MARKET SHARE

A lot of action in this, our regular statistics topic... as shown by current and previous rank. Do not forget, however, that we present this topic each edition as we expect change. Look for more next issue. Reader involvement was our highest yet, as our question was phrased more understandably.

RANK	MANUFACTURER	% MARKET SHARE	LAST RANK
1.	Electra Flyer	17.0	1
2.	Wills Wing	10.5	5
3.	Seagull Aircraft	8.5	2
	Eipper Formance	8.5	3
5.	Sky Sports	7.5	6
6.	Bennett Delta Wing	7.0	4
7.	Chuck's Glider Supplies	4.5	7
	Ultralight Flying Machines	4.5	7
9.	Pliable Moose	3.0	7
10.	Ultralite Products	2.5	10
	Moyes Delta Wing	2.5	none
12.	Manta Products	2.0	11
	Peregrine Aviation	2.0	none
14.	Albatross Sail Gliders	1.5	none
	No Glider Owned	6.0	

All other brands had less than 1% share each. A surprising 5% reported still flying conventional standards.

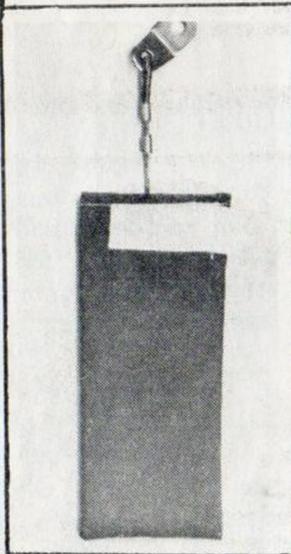
'CHUTES AND VARIOS

Over a third (35.5%) of all readers surveyed own a parachute. This is not a surprising amount as parachutes are perhaps the most requested product in hang gliding, as found both by WAC and Glider Rider (see their October issue editorial).

But 39% report they own a variometer. Perhaps getting high is of greater consequence to more pilots than the risk taken by having no parachute. Of course, parachutes sell for \$300 plus, and varios are cheaper. Still, 78% of all those owning a variometer have electric versions which cost \$150-275. Another influencing factor is that variometers have been available much longer than 'chutes.

BAGS

To Protect Your Sail



LOWER CABLE *B or C*

Put your lower wire coils in bags and you will not only protect your sail, but you won't lose safety pins or other small parts. Bags available in a dual pouch, or single pouches for coils that stay on the control bar.

\$3.00, \$4.00

KINGPOST or TENSIONER

A

Holds tensioners, or any other sharp fittings from tearing your sail. Also can fit over the kingpost top wires, covering the stop terminal nicos.

\$2.00

CRYSTAL accessories

Circle #23 on reader service card.

CARABINER

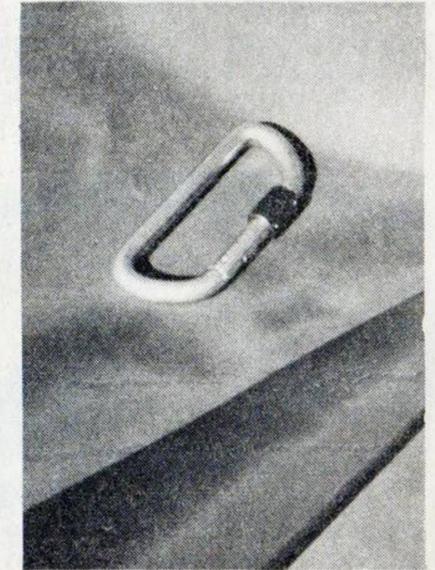
IN TIME FOR CHRISTMAS!
**MAIL ORDER
SPECIAL...**

\$4.97

Aluminum, 2500 kg, with locking gate

CRYSTAL accessories

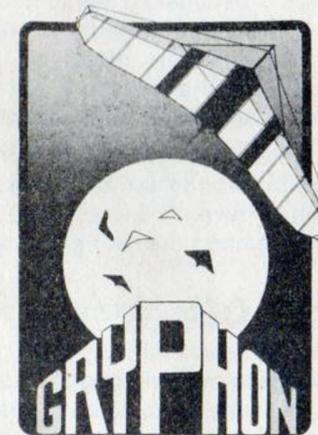
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See Order Form, Page 25

Mail Order Only
was \$7.99 ...

THE



Wasp Gryphon

Is

Coming to

CRYSTAL FLIGHT RESORT

Circle # 20 on reader service card.

A Lift in Performance

The Thommen Altimeter is designed especially for hang gliding pilots. A high degree of compensation is achieved for unequalled accuracy in temperature change conditions. And, a highly visible orange day-glo needle sported against a black face with easy-to-read white numerals of 20-foot increments to 15,000 feet provides quick and accurate viewing of soaring altitude.

Durably constructed, the Switzerland manufactured Thommen Altimeter contains nineteen jewel oil-free movement parts. Standard with a velcro wrist strap.



Thommen
Everest
Altimeter

WILLS WING, INC.

1208-H East Walnut Street,
Santa Ana, CA 92701 • (714) 547-1344

Circle #21 on reader service card.

**PILOTS! LEARN TO FLY —
SAFER, HIGHER, FURTHER**

YOU MUST KNOW THIS MATERIAL
TO FLY WELL. THERE IS NO OTHER
PUBLISHED SOURCE IN THE SPORT.



*Up-To-Date Illustrated
Information Guaranteed
To Improve Your Flying.
Written By A USHGA
Instructor.*

*** NEW ***

HANG GLIDING FOR ADVANCED PILOTS — DETAILS ON: COMPETITION * MOTORIZING * EFFICIENT TURNING * POLARS * SPEEDS TO FLY * THERMAL TECHNIQUES * DISTANCE SOARING * PERFORMANCE TUNING * DESIGN CONCEPTS * INSTRUMENTS * ADVANCED EQUIPMENT * SPOT LANDING. \$6.95 + 45¢ POSTAGE.

HANG GLIDING AND FLYING SKILLS — A COMPLETE TRAINING MANUAL — DETAILS ON: BEGINNING FLIGHT * INTERMEDIATE SKILLS * ADVANCED MANEUVERS * SIMPLE AND ADVANCED AERODYNAMICS * GLIDER DESIGN * GLIDER REPAIR * SELECTING EQUIPMENT * THERMALING * HANG GLIDING HISTORY * CROSS-COUNTRY * TANDEM FLYING * TOWING AND MUCH MORE. \$5.95 + 45¢ POSTAGE.

HANG GLIDING AND FLYING CONDITIONS — THE ROAD MAP TO THE SKY — DETAILS ON GENERAL WEATHER * TURBULENCE * ROTORS * WIND SHADOW * SEABREEZES * WIND GRADIENT * SOARING CONDITIONS * THERMALS * WAVES * WINDS ALOFT * LOCAL WINDS * CLOUD TYPES * SITE READING AND MUCH MORE. \$5.95 + 50¢ POSTAGE.

\$10.95 + 55¢ POSTAGE FOR ANY TWO
\$14.95 + 75¢ POSTAGE FOR ALL THREE.

DENNIS PAGEN, 1184 ONEIDA ST., STATE COLLEGE, PA 16801
DEALER INQUIRIES INVITED

Circle #22 on reader service card.

ORDER FORM

PLEASE PRINT NAME AND ADDRESS

Name _____
Address _____
Zip _____

Merchandise Total \$ _____
Enclose FULL payment \$ _____
Send to: DENNIS PAGEN
1184 Oneida St., State College, PA 16801

Sky Sports Parachute



Sky Sports
Incorporated
P.O. Box 507, Ellington,
Conn. 06029, U.S.A.
1 (203) 872-7317

- fast opening time
- good strength to weight ratio
- stable low rate of descent
- quality at a reasonable price

DESIGN: We chose a tri-conical "shaped gore" resulting in a low profile for less profile drag and better coefficient of lift. Because a parachute opens from the apex down, we incorporated a 12" diameter apex. This allows for minimum effect on opening time, but sufficient opening pressure relief. This small opening also reduces the rate of descent.

Also we have incorporated a triple mesh covered vent system for increase in stability and decrease the rate of descent. Located at the skirt of the canopy, it has the least effect on opening time, but greatest effect on stability.

RATE OF DESCENT at 225 lbs. is 17 ft. per second.

FABRIC: We picked a .75 oz. high sley, zero porosity ripstop fabric. This gave us the weight to strength ratio we wanted. Because it is of zero porosity it made the filling time of the canopy the fastest possible. All other materials, (tapes, suspension lines, etc.) meet military specifications.

SPECIAL CHRISTMAS SALE

— supply limited —

\$25 off the list price of \$315.

CONTACT YOUR DEALER OR SKY SPORTS NOW

Circle #23 on reader service card.

LEAF
Leading Edge Air Foils

JUNE 1978 QUANTITY PRICE LIST - ALUMINUM TUBING-SEAMLESS DRAWN
TUBING SIZES

TUBING SIZES	LENGTHS ORDERED			
	1	2-19	20-29	30 & OVER
1 1/2" x .035 wall x 12' 6061T6.....	1.00ft.	.75	.73	.70
1 1/2" x .049 wall x 12' 6061T6.....	1.50ft.	.90	.87	.85
1 1/2" x .049 wall x 12',19' 6061T6 anodised.....	1.80ft.	.99	.97	.95
1 1/2" x .058 wall x 12' 6061T6.....	1.65ft.	1.00	.97	.95
1 1/2" x .058 wall x 12' 6061T6 anodised.....	1.95ft.	1.20	1.17	1.15
1 5/8" x .058 wall x 12' 6061T6.....	1.85ft.	1.05	1.00	.97
1 5/8" x .058 wall x 12' 6063T832 bright dipped anod.....	1.80ft.	.99	.95	.92
1 3/4" x .058 wall x 12' 6061T6.....	2.10ft.	1.15	1.13	1.10
1 3/4" x .058 wall x 12' 6061T6 anodised.....	2.40ft.	1.45	1.43	1.40

Any order that exceeds ten lengths may be combined for quantity discounts: No boxing charge for orders shipped via truck; however, Air-Freight shipments add \$10.00 for each 12' shipping container.

Will cut standard lengths smaller for U.P.S. shipment - Cutting Charge .25¢ per cut.

331 South 14th St.
Colorado Springs, CO 80904
PH: (303) 632-4959

Circle #24 on reader service card.

Responsive and Sensitive.

Designed by Colver Soaring Instruments and exclusively distributed by Wills Wing, the latest Colver Variometer (5XC) offers hang gliding pilots a complete dual range audio and visual instrument to get the most out of lift conditions.

It comes equipped with a dual range switch that provides a choice of sensitivities for mild and strong lift conditions. A super sensitive audio delivers the quickest possible response to lift. And, a damped visual dial permits easy reading and a slight averaging effect.

Choice of either "continuous audio" or audio for "up only" is possible from a front panel toggle switch.

Colver Variometer (5XC)

For optimum soaring flight, the Colver (5XC) is entirely self-contained and streamlined for minimum drag.

Circle #25 on reader service card.

**THE HALL
WIND METER**

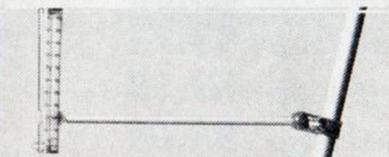
*A precision instrument
for the serious pilot.*

Rugged, dependable
and easy to read.

\$18.50 postpaid in U.S. Foreign add \$1.00. Prone bracket \$5.50. Seated bracket \$4.50.

HALL BROTHERS
Box 771
Morgan, Utah 84050

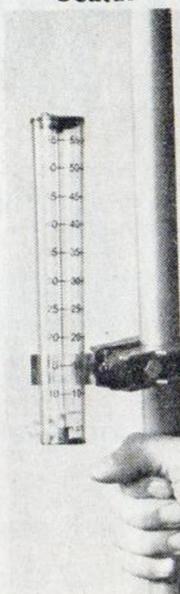
Dealer Inquiries Invited
C.O.D. Phone Orders Welcome
(801) 829-3232



Prone

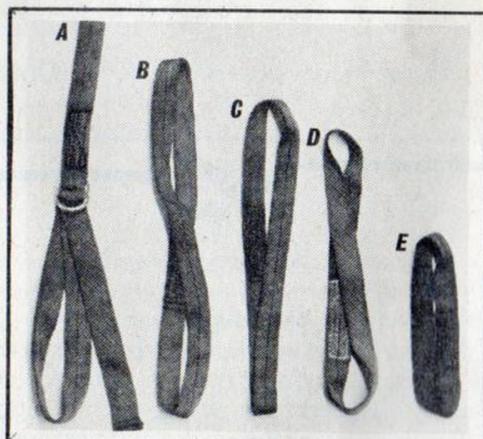
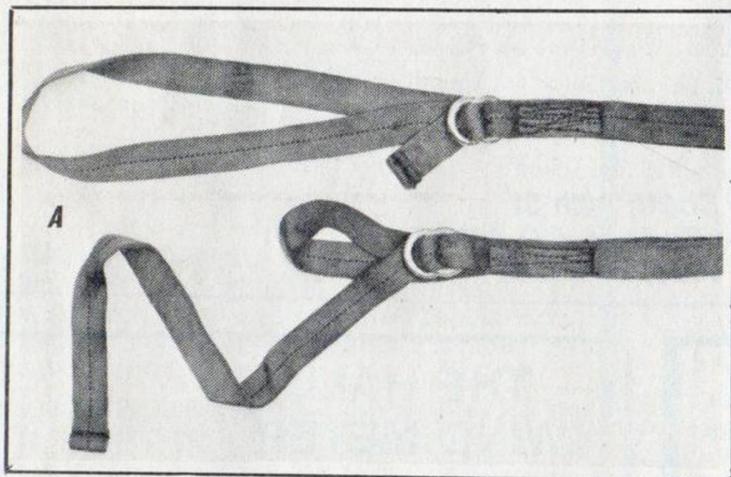
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Seated



PILOT SUSPENSION LOOPS

Tested to 20 G's!



ADJUSTALOOP®

A Deluxe adjustable loop with wide length range, positive locking.

\$7.00

- B** 18 inch standard loop **\$4.00**
- C** 15 inch standard loop **\$3.75**
- D** 12 inch standard loop **\$3.50**
- E** 9 inch standard loop **\$3.00**

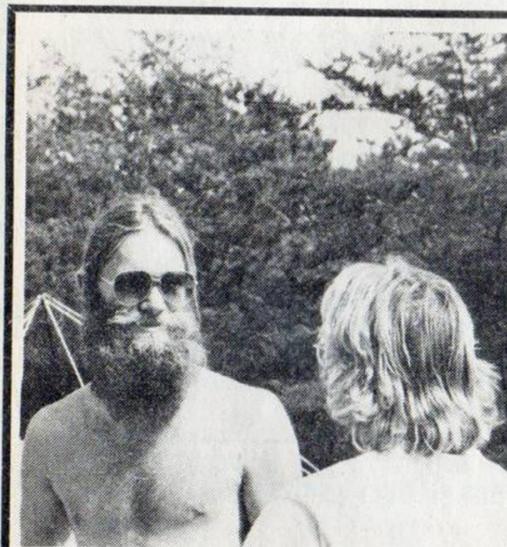
**CRYSTAL
ACCESSORIES**

Circle #27 on reader service card.

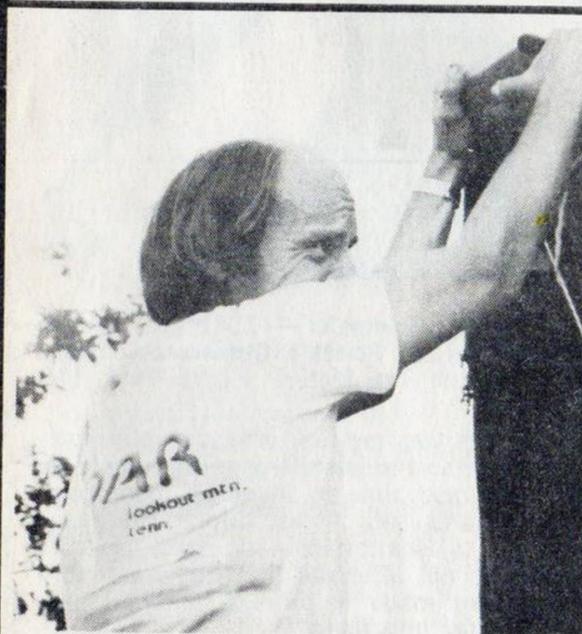
"THERE I WAS ..."



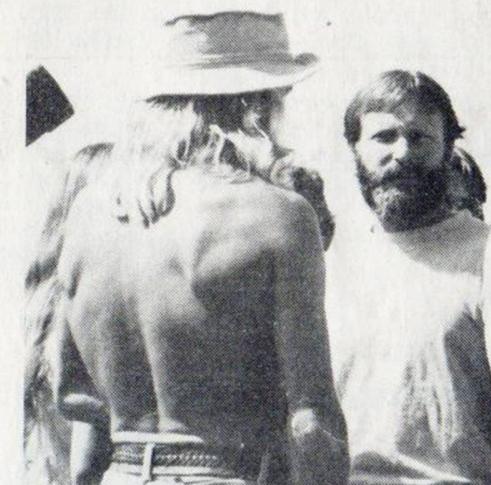
Hiding behind those dark lenses, it's Jeff Burnette, regular Grandfather Mountain pilot. To Jeff's right, Tom Peghiny speaks with Tom Price. They both hold designer positions with Electra Flyer now, as Peghiny begins as Vice President in the R & D department.



Pacific Gull's David Beardsley was in town for the ill-fated Great Race. He chats with pilots while waiting for soaring winds which never materialized.



A thoughtful Chuck Toth looks on as a pilot readies for launch. Chuck is well known to all pilots visiting Chattanooga as he operates the Crystal Air Sport Motel.



Tom Price, catching our photographer's wandering eye, as he speaks with Barry Gordon (back to camera). Tom was in Chattanooga to run the Cirrus 5 class meet with Irv Alward.

CRYSTAL

ORNER

By Starr Tays,
WAC Editor

These pilots responded to the Tennessee Tree Toppers' Cross Country Classic. By so doing, they each rank as the official First, Second, and Third Place Contenders, as of this printing. The contest continues till January 31st, 1979.

We decided to speak with them on cross country soaring, whether it took special preparation and planning. Could they give advice on knowledge you should have before attempting such a feat.



◀ **Chris Smith — 25 miles, Hinson Gap to Ooltewah, Tenn., in a Seagull Seahawk. Flight Time: 45 minutes.**

"Some special preparations should be made so that you are as comfortable as you can be. Dress for a possible thirty degree drop in temperature. Gloves are suggested.

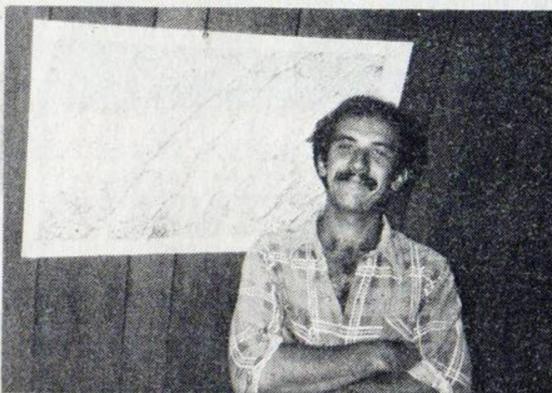
"Make sure your harness is supporting you comfortably before you leave the ground, not after you are in the air. Take all precautions that you do not have to land because of something you failed to do. Try to eliminate all the negatives."

Paul Burns — 11 miles, Hinson Gap to 2 miles short of Powell's Crossroads, Tenn., in a Ten Meter Seagull. Flight Time: 2 hours.

"A new pilot attempting a cross country flight should watch out for the gaps along a ridge, being especially careful for power lines in the gaps.

"Your altitude should be high when crossing; the higher the better, so that you are not caught by the venturi effect, with the potential danger from the horizontal air it creates.

"The way to avoid this is by launching early in the day, as conditions are just building. At this time, there is a much greater chance of high altitude gain and trouble-free soaring."



◀ **Denny Haldeman — 15 miles, Hinson Gap to beyond Powell's Crossroads, Tenn., in a Seagull Ten Meter. Flight Time: 1½ hours.**

"This was my first cross country soaring flight, so I did find things that could be changed next time to insure a more comfortable and safe flight. Make sure your harness is comfortable for long periods. Mine was not after the first hour, and consequently it made me think of landing. Also, take a parachute along.

"While I was flying, I also thought of having a strobe light attached to my kingpost for more visibility to those other aircraft that are flying in the Sequatchie Valley."



CRYSTAL accessories

HANG GLIDER ACCESSORY ORDER FORM

As advertised
in the Whole
Air Catalog

SUSPENSION LOOPS

- _____ A Deluxe Adjustable Loop\$ 7.00
- _____ B 18 inch Standard Loop\$ 4.00
- _____ C 15 inch Standard Loop\$ 3.75
- _____ D 12 inch Standard Loop\$ 3.50
- _____ E 9 inch Standard Loop\$ 3.00

BAGS

- _____ A Kingpost/Tensioner\$ 2.00
- _____ B Lower Cable (Single Pouch)\$ 3.00
- _____ C Lower Cable (Dual Pouch)\$ 4.00

VELSTRAPS

The finest hang glider tie straps
now also have a fine low price.

- _____ Number of _____ X \$0.99 each

CRYSTAL PRONE HARNESS

- _____ Stirrup, or _____ Knee Hangers\$69.95
- _____ Both Stirrup, and Knee Hangers\$74.95

CRYSTAL SUPINE SEAT/HARNESS

- _____ With Foot Stirrup\$59.95

CARABINER

- _____ Aluminum, 2500 kg, with locking gate\$ 5.95
- Mail Order Only Price \$4.97

HELMET Buco Flightmaster brand

OUT-OF-STOCK

HALL WIND/AIRSPEED METER & MAKIKI VARIOMETERS

- _____ Hall Meter, with spinning disc\$18.50
- _____ Hall Meter Prone Bracket\$ 5.50
- _____ Hall Meter Seated Bracket\$ 4.50

- _____ Complete, self-contained, pellet variometers, with mounting hardware\$50.00

REQUIRED ORDER INFORMATION

Name _____
Address _____
Zip _____

Please indicate method of payment:
_____ Check, or Money Order, or Bank Draft, in US Dollars, enclosed.

Make checks pay to: "CRYSTAL AIR SPORTS"
_____ or charge to _____ VISA/BankAmericard, or charge to _____ Master Charge.

Account number: (list all digits) _____

Expiration Date _____

Signature _____

Special Instructions: _____

Merchandise total _____

Tennessee residents, add 6.25% sales tax _____

Handling/Shipping
75¢ minimum, or
5% of total order _____

TOTAL _____
Amount Enclosed _____
COD _____
(COD orders will involve COD charges)

MAKE SURE FUNDS WILL NOT FALL OUT!

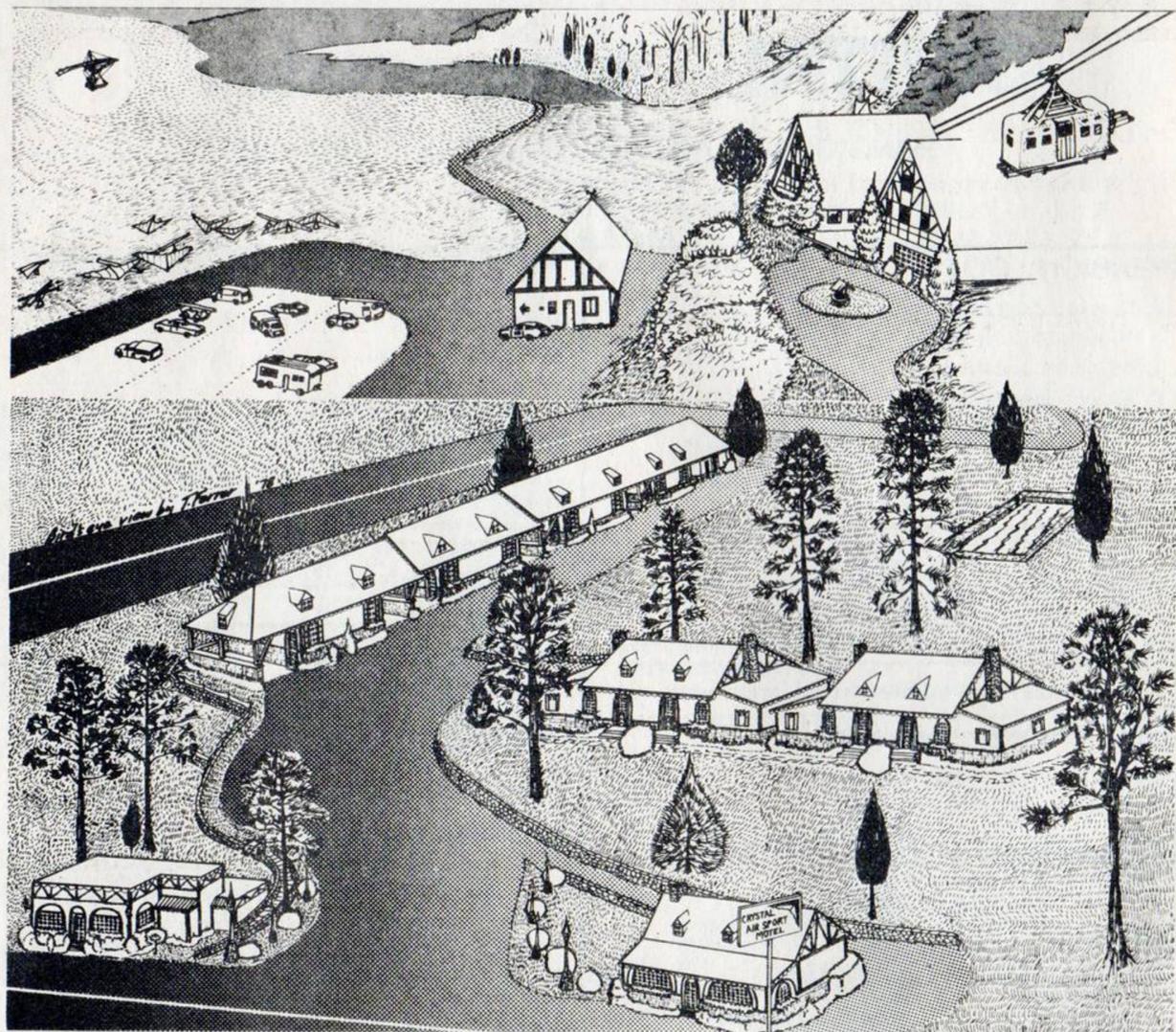
Send order form to: CRYSTAL, Box 144, Lookout Mtn., TN 37350 — No phone orders, please.

CRYSTAL

"If you need another order form,"

Circle #29 on reader service card.

SERVICES



It's No Place Like Home, At The Center of Lift!

When nearly every flyer in the East travels to Chattanooga for a hang gliding adventure, we make absolutely sure that it's no place like home.

Many of our regular customers make 600-1200 mile treks several times a year to fly at the Center of Lift. Almost all of them check in at CRYSTAL FLIGHT RESORT to see where

it's happening — which is right there at the Resort on 80% of all days. The majority are also careful to reserve rooms at the most exclusive motel in the East. CRYSTAL AIR SPORT MOTEL remains the only Motel in America maintained expressly for glider pilots and friends.

No where in the world are your

flying needs seen to with such care. And it's no wonder, 'cause we're all flyers too. We've seen the desire for hand painted tee shirts and glider gifts; we stock gliders from Sky Sports, Seagull, Eipper, Moyes and more used equipment than you can shake a deflexor rod at; munchy goodies for snacking around the Motel's fine

pool; "accessories" of every description; all levels of expert flight instruction; and more, all compactly located for your greatest convenience.

It's got to be extra special for our flying friends... but it's certainly **no place like home**... it's the Center of Lift! For information, write: CRYSTAL, Rt. 4, Cummings Hwy., Chattanooga, TN 37409



**CRYSTAL
FLIGHT
RESORT**



**CRYSTAL
AIR SPORT
MOTEL**

4328 Cummings Hwy.
Chattanooga TN 37409
821-2546

Circle #11 on reader service card.

IMPORTANT



NOTICE

On December 22nd, 1978, Crystal Flight Resort will close for the winter season. Please make your vacation plans accordingly.

Re-opening date is set at Valentine's Day, February 14th, 1979. It will again be our pleasure to serve the hang gliding community for another great year.

It's our time to visit you . . .

While Crystal Flight Resort will be closed for all services during these winter weeks, the tram may be available on a limited basis, for open flying on the "buddy system" ONLY. Please call 615/825-1995 before you come! A recorded announcement will advise you as to days of tram operation.

Crystal Air Sport Motel will remain open throughout the period. Chuck and Shari welcome all flyers with full services.

WE NEED USED GLIDERS!!

\$250.00 trade in allowance off any name brand glider C.G.S., Delta Wing, Electra Flyer, U.P., Manta, L.E.A.F. Inc., Seedwings, finished Easy Risers and others; or, \$150.00 off on C.G.S. MoGlider, Soarmaster or Easy Riser Kit. Offer good until January 1st, 1979.

Write or call:

Leading Edge Air Foils, Inc.
331 South 14th St.
Colorado Springs, CO 80904
(303) 632-4959

Circle #31 on reader service card.

Certain factors bring about the most success in training to fly hang gliders.

CONSISTENCY — Crystal Flight Resort flies nearly 80% of all days. Less days lost to poor winds, and with our eight year lease, we will be consistent for a long time.

THOROUGHNESS — We won't just train you to get off the ground. If you can stick with it, we'll have you flying off an 800 foot mountain, like 50% of our students from 1977. Many students come to

us after getting the basics from other schools.

EQUIPMENT — We use late model gliders and other equipment that were recently considered high performance. Our certified instructors (all of 'em are) can make you think you are full of natural talent.

SAFETY — Our record is superb, and we don't think we need to "knock on wood." We may be the most conservative school in the country, and we're staying that way.

LESSONS 615-825-1995

Circle #32 on reader service card.

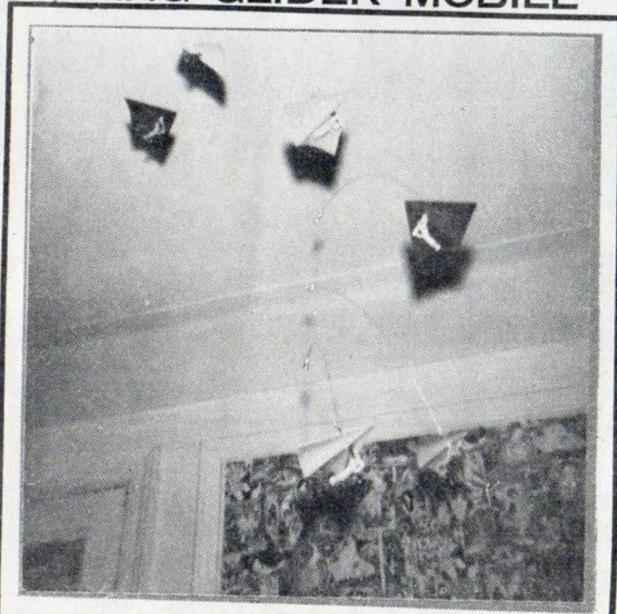
IT ALL EQUALS SUCCESS



FLY CRYSTAL

GIFTS

HANG GLIDER MOBILE



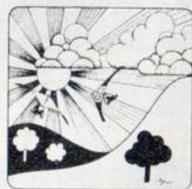
You can sit for hours and watch these 6 multicolored gliders and prone pilots. Each flies independently and is aerodynamically balanced. Each glider is over 4 inches in width and the length of the mobile is adjustable. \$10.99 includes postage and dealer inquiries are welcomed. Make great gifts and are packed well. Send check or money order to:

DENIS DUBANEVICH
809 West 177th Street
New York, N.Y. 10033

100% Guaranteed

Check #33 on reader service card.

FRAME IT!



SPECIAL, LIMITED EDITION, COLLECTOR SERIES

Unique greeting cards of our distinctive logo. These prints are from a hand carved block, printed by the artist, Hank Syjut. They are each hand numbered and signed. Card with matching envelope on premium paper for only \$9.00 plus postage.

NAME _____

ADDRESS _____

STATE _____ ZIP _____

PLEASE INCLUDE FULL PAYMENT PLUS 50c POSTAGE

Check #34 on reader service card.



BULL'S EYE



GET HIGH-FLY A KITE



SURF THE SKY



HANG GLIDING



TORREY PINES



SYLMAR

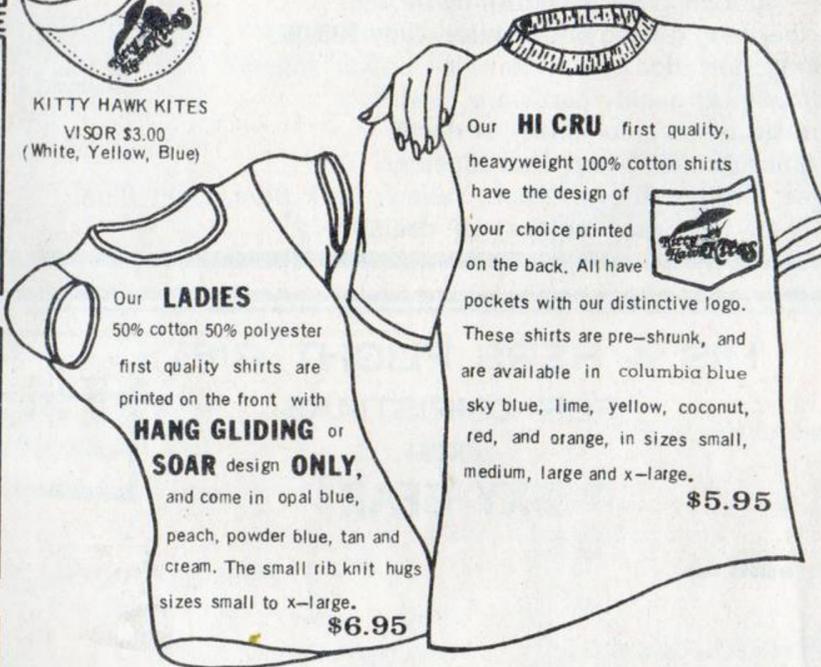
Rainbow T-SHIRTS!

FANTASTIC, CREATIVE, FIVE-COLOR DESIGNS! SELECT THE DESIGN AND COLOR SHIRT THAT'S RIGHT FOR YOU.

106 BEAUTIFUL COMBINATIONS



KITTY HAWK KITES VISOR \$3.00 (White, Yellow, Blue)

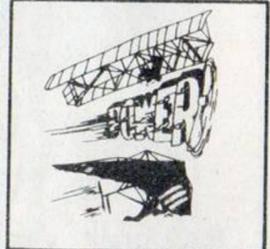


Our **LADIES** 50% cotton 50% polyester first quality shirts are printed on the front with **HANG GLIDING** or **SOAR** design **ONLY**, and come in opal blue, peach, powder blue, tan and cream. The small rib knit hugs sizes small to x-large. **\$6.95**

Our **HI CRU** first quality, heavyweight 100% cotton shirts have the design of your choice printed on the back. All have pockets with our distinctive logo. These shirts are pre-shrunk, and are available in columbia blue sky blue, lime, yellow, coconut, red, and orange, in sizes small, medium, large and x-large. **\$5.95**



FANTASY FLYER



POWER



GO FLY A KITE



SOAR



LOOKOUT MOUNTAIN



KITTY HAWK KITES

SIZE	STYLE	DESIGN	COLOR (GIVE 3 CHOICES)	PRICE EACH	SHIPPING \$1.00 / ITEM	TOTAL

PAYMENT ENCLOSED
 MASTER CHARGE VISA

ACCOUNT NO. _____

EXPIRATION DATE _____

PHONE _____

SIGNATURE _____

(Signature required for credit card orders)

NAME _____

ADDRESS _____

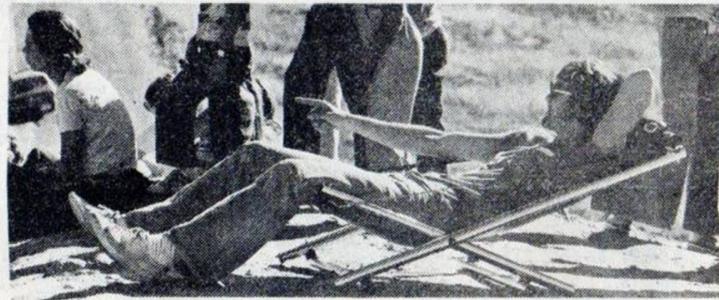
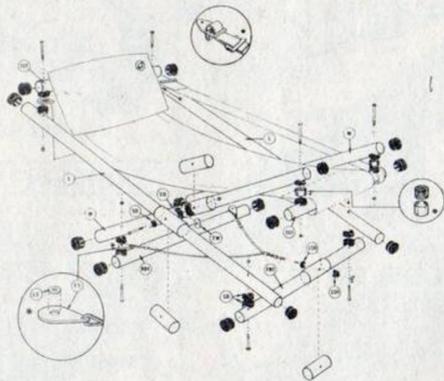
CITY _____

STATE _____ ZIP _____

SEND TO: KITTY HAWK KITES P.O. BOX 386, NAGS HEAD, N.C. 27959 (919) 441-6247

WRITE FOR DEALER INFORMATION
Check #35 on reader service card.

THE ULTRALITE CHAIR



Name _____
 Street Address _____
 Town _____ State _____ Zip _____
 Colors: Pillow _____ Sling _____
 Amount Enclosed \$ _____
 (No CODs unless \$25.00 Minimum Deposit Enclosed)
 Send to:
 "UP" Dept. W; P.O. Box 582 Rancho; Temecula CA 92390
 Or phone your order in: (714) 676-5652

The Ultralite Chair — contemporary furniture by UP, Inc.
 The perfect gift for the hang gliding enthusiast! Only \$95.00.
 Folds flat for easy transportation.
 Constructed with famous UP quality hardware.
 Your choice of colors to match your glider or decor.
 Kit comes with all holes drilled — just bolt together.
 Colors available: Red, Orange, Brown, Rust, Yellow, Dark Blue, Light Blue.
 Order direct from UP or from your nearest UP dealer.

Check #36 on reader service card.

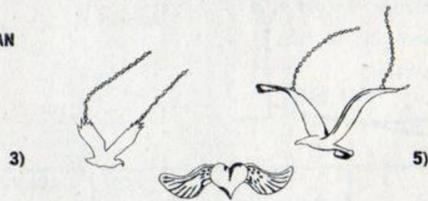
HIS & HERS FLIGHT GIFTS FOR CHRISTMAS FROM SKY GEAR

6) CHECK BOOK SIZE \$12.50

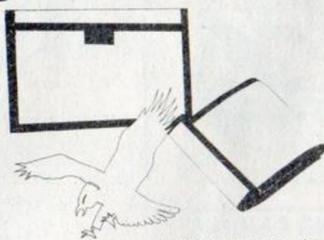
1) WINGED WOMAN



2) WINGED MAN



SILVER JEWELRY \$20.00 EA.



7) POCKET SIZE \$6.50

WALLETS
 (Ass't Colors)
 Velcro Closures
 Machine Washable

3) STANDING LIBERTY CHOKER

4) WINGED HEART PIN

5) LARGE SOARING PIN

T-SHIRT \$7.50 EA. (Ass't'd colors)

AT
CRYSTAL AIR SPORT MOTEL
 4328 Cummings Highway
 Chattanooga, TN 37409

ORDER FORM

QTY.	ITEM #	SIZE	COLOR	TOTAL
_____	_____	_____	First Choice _____	_____
_____	_____	_____	Second _____	_____
_____	_____	_____	Third _____	_____

Add \$1.00 each item for postage & insurance.
 Send 50c for catalog. Refundable with first order.

Check # 37 on reader service card.

THE WORLD'S NEWEST FLYING MACHINE!

I GOT IT, WILBUR IT'S EASY!

PUDDLE JUMPER

TRY 'N CATCH THIS ORVILLE!

EGAD! IT'S POSITIVELY AERONAUTICAL!

POLLUTION-FREE LOW MAINTENANCE



For that hang glider pilot who thought he/she had everything that flew . . .

\$1.95

Simple to construct



THERMIX Hand Launched Gliders

- TRIO \$1.75 (3 Models)
- DART \$1.75 (large model)
- "18" \$1.25 (small model)

. . . a top seller at Crystal Flight Resort

MYLAR OCTOPUS String Kite

a light wind flier that will astound you on those sled-run-only days.

\$4.00

6 feet tall

Beautiful Design, makes it a great wall hanging or display, too.



THINGS THAT FLY!

Check # 38 on reader service card.

ORDER FORM

Send me: _____ (no.) Puddlejumpers @ \$1.95
 _____ Thermix Trio @ \$1.75
 _____ Thermix Dart @ \$1.75
 _____ Thermix "18" @ \$1.25
 _____ Mylar Octopus Kite @ \$4.00

Name _____
 Address _____
 Zip _____

Merchandise Total \$ _____
 Shipping, add 75c per order \$ _____
 Tenn. residents, add 6.25% sales tax \$ _____
 Total \$ _____
 Enclose FULL payment \$ _____

Send to: THINGS THAT FLY!
 Box 144
 Lookout Mtn., TN 37350