

# LASER 2M



Designed by Ron Vann

PRICE: \$295<sup>00</sup> + S&H

The LASER is an all new, 2 meter thermal duration sailplane designed by Ron Vann. It is recommended for the intermediate to advanced flier. Clean aerodynamics start at the tight fitting, slip-on nose cone. The one piece, epoxy/fiberglass fuselage is reinforced with Kevlar™ for rigorous competition. The LASER features an efficient double taper wing planform, a standard tail, and full flying stab. The two piece wing is joined using a 3/8" carbon fiber rod system for maximum strength and minimum weight.

The LASER is a solid thermal sailplane balanced to feel light and nimble on the sticks. Thermals and light lift are easy prey for this modified SD7037 airfoil/planform combination, which delivers especially high zoom launches and slower than usual landing speeds. Large 2.125" chord flaps, coupled with generous aileron and rudder area, make landings a dream. The full flying stabilizer is used to extract a super positive pitch response at all flying speeds.

**SPECS:**  
AIRFOIL WING SD7037 MOD & THINNED  
AIRFOIL STAB SD 8020  
PLANFORM DOUBLE TAPER  
WING AREA 565 SQ. IN.  
STAB AREA 70.6 SQ. IN.  
WING LOADING 8.8 - 9.8 OZ./SQ. FT.

The kit features include:

- Sleek new design with plug-on wings, standard tail, and full flying stab.
- Pre-sheeted and finish sanded wings & stab. Construction is obechi over foam.
- Routed servo pockets and aileron & flap hinge lines: 3/8" carbon fiber wing rod.
- Epoxy fiberglass fuselage, Kevlar™ reinforced nose to tail. Slip-on nose cone.
- Easy instructions by Bob Duke Graphics, and all hardware.

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Paul Siegel and his son, Vinuie, a father and son team, fly with the Cincinnati Soaring Society. As Contest Director at the recent 1996 Spring Intergalactic R/C Hand Launch Glider Festival in Cincinnati, Ohio, Paul is pleased that this First Annual event may signal more events to come. Event coverage on page 4.



Photo by Mike O'Donnell.

### A FATHER & SON TEAM

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## The Soaring Site

### Busy, Busy, Busy!

Where ever goes the time go? One issue no sooner goes to press than the next one is due out the door, and the last one is trying to get back in! It's the same thing every month. But every month, there are a lot of things goin' on. Everyone is busy, busy, busy! So, what's up this month?

Well, first we would like to introduce a new bi-monthly column called "Fighting Foam and Heavy Iron". For many of you, the author needs no introduction. The July issue of *Model Builder* describes him as a "wild man". We'll let you decide for yourself. Dave Sanders of Dave's Aircraft Works is ready and eager to tackle the controversial subject: Foam Combat & PSS. His address, telephone number and e-mail address are included with his column, and we even tried the numbers just to make sure that they work. And, of course, one kevlar vest is on order, just in case. Welcome aboard, Dave!

Another column on board this month is written by an electric sailplane enthusiast who also needs no introduction. Mark Nankivil of St. Louis, Missouri is a well known expert on the subject of electrics, and is looking forward to hearing from those that share his interest. Glad to have you on board, Mark!

And from the trio that are always doing something new, the Three Peas have changed their name to Three + 1/2 Peas in a Pod. The new addition to the team is Ron Adams, but don't assume that he has the "1/2" title! Just ask the #1 Pea, if you can't stand the suspense. Welcome aboard, Ron!

Is that it for this month? Nope. First, Bill and Bunny Kuhlman have constructed a Home Page on the Net that is now up and running. It is extremely well done. Take a peek and see what you think: <http://www.halcyon.com/bsquared/>. And, Paul Clark's Skypilot Home Page address has changed: <http://chaos.fullerton.edu/~jclark/skypilot>.

And events? First, Fred Mallett, our fun loving, roving Ambassador, took 3rd

place at the 1996 International Mayan Soaring Match, and then turned around and took 4th at the recent International Hand Launch Glider Festival in Southern California. Congratulations, Fred.

And, as of this writing, Fred is at the Mid-South Soaring Championships, along with Buzz Tokunaga from Japan, who took 7th at the Glider Festival event, Jerry Slates, who has the CD responsibilities for the RCSD Entry Level Design event (not to mention a few other hats to wear), Bob Sowder, MSSC event coordinator (Gotta be a better title for all the work this entails!), Lee Murray, who does the RCSD

index, and 120+ other enthusiasts too numerous to name.

In the meanwhile, off to enjoy the thrills of large, scale sailplanes, Robin Lehman, our Aerotow/U.S.A. Ambassador, has attended all the scheduled events to date, with Los Banos 1996 the subject of this month's column. And, traveling to Elmira for their event, Steve Savoie was spotted in a van with Jim Armstrong; the sign in the window read: Elmira or Bust!

With enthusiasm like this, no wonder we can't remember where the time goes!

**Happy Flying!**  
**Judy Slates**

## 1996 Spring Intergalactic Hand Launch Glider Contest

...by Paul Siegel  
Cincinnati, Ohio

The Cincinnati Soaring Society hosted the first annual "Intergalactic" H.L. glider championship the weekend of April 27 - 28. Hopes to have a true, Intergalactic competition were dashed when a last minute scratch was received from Hangar 9 at nearby Wright Patterson Air Force Base. If the enthusiasm of the contestants was any indication, this could become the premier R/C H.L. glider meet in the Midwest! Competitors traveled from as far away as Indiana, Michigan, Illinois,

Virginia, and Iowa.

Bright sunshine and plenty of thermals greeted the H.L. glider competitors on Saturday. Brisk breezes made additional ballast the order of the day to achieve "John Daley" style "drives". Several doglegs and a rolling course presented quite a challenge! Tethered helium balloons marked the "pins" and guided the approach "shots"! Mike Welch won the day flying a Monarch with a bagged composite, flattened, spoileron type 4083 wing,

*Oleg Golovidov shows good form launching his original design R/C HLG. A 10.8 oz. floater, note the free flight style construction.*

(L) Terry Hahn launches his Monarch C.

(Below) The start of a hand launch dynasty? Joe Hahn, winner of the open class with his new design, the Monarch CX. Joe's son, Terry, winner of the Junior Division with his Monarch C.



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## Spring Intergalactic R/C Hand Launch Glider Championships Hosted by Cincinnati Soaring Society



ballasted with 2 oz. of lead. The addition of ballast allowed Mike to penetrate the upwind drives, and his spoilerons allowed for precise control with pinpoint "putts".

On Sunday, five rounds of more traditional thermal duration were held. A real shootout was anticipated, with examples of most of the current state-of-the-art H.L. gliders present such as several Monarchs, Orbiter II, Wasp, Climax, Zephyr, Osprey, Pitch Moth, and Fling Thing. Overcast skies and a threat of light drizzle stressed the importance of launching high, and then flying very smoothly to achieve every last second of hang time. The 21 fliers were divided into three flight groups. Good flights were around one minute, with the longest flight of the day at just over two minutes.

Joe Hahn, co-designer of the Monarch series, came out on top with his new Monarch CX, aileron version. At 13.4 oz., the CX is heavier than earlier



Bob Massman with his seasoned Monarch. Bob placed second in open.

versions of the Monarch, but combined with about 1/8" of reflex, the extra weight allowed Joe to consistently launch higher than the competition. Joe would then dial in some camber, which seemed to allow his CX to float with the lighter wing loading ships. Joe's son, Terry, completed the Hahn family sweep by winning the Junior division with a more conventional 9.4 oz. Monarch C.

The Cincinnati Soaring Society would like to thank the following sponsors of the competition who donated merchandise for the event: MM Glider Tech, DJ Aerotech, Airtronics, Putaba, and NSP.

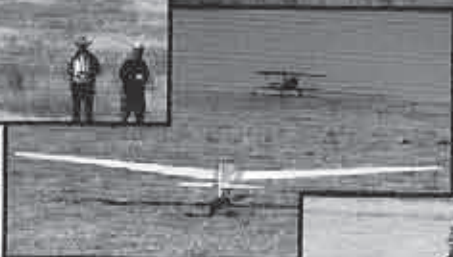
The Fall Intergalactic R/C Handlaunch Glider Championship is scheduled for October 6. For more information, call Paul Siegel, CD, (513) 561-6872. ED. ■

Round 1	Total time. Each launch after first launch incurs a 10 second penalty.
Round 2	Best 3 flights in 10 minute window, minimum flight time of 30 seconds, must have 3 flights.
Round 3	5 two minute flights.
Round 4	1, 2, 3 minute flights, any order in 10 minute window.
Round 5	5 minute max. in 10 minute window.

# The Los Banos Slope Scale Soar-In



Off they go! Note that the tow pilot and sailplane pilot stand together for good communication.



Lift Off! The first of several airtows on Sunday.

Los Banos Reservoir is 400' above the water. Several wind directions will work.



Dick Miller with his 1/4 WACO PF-7. Weighs 25 lbs., and is powered by a SAKS 3.2. Dick is an excellent pilot! He came out on Sunday to give a few tows.

On Friday, 17 May, 1996 sailplane enthusiasts began to congregate at the Los Banos Reservoir in Northern California. The site is a large, grassy slope about 400 feet high, which borders the reservoir. Usually, the winds come roaring out of the North, but the hill faces in several directions, and there is usually a place to find lift. Four hours North of Los Angeles and two hours Southeast of San Francisco,



Gray Brokow's Austria Elephant, 1/4 scale, 25' span, 30 lb.. Most realistic in the air!

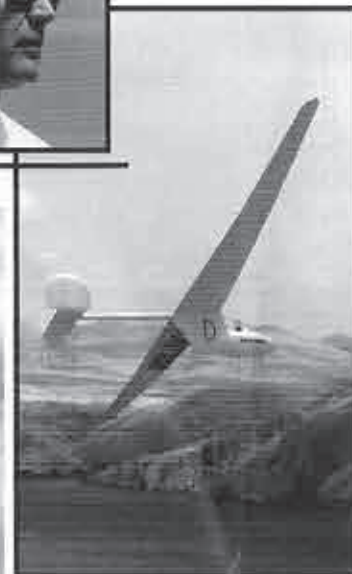
## AUSTRIA ELEPHANT

Keeping his cool, pilot Gary Brokow flies the Elephant from tree top level, way below the hill, back up to make a perfect landing on the strip! Sigh of relief! Elephants CAN fly, after all!



Getting ready to launch.

The ELEPHANT FLIES!



Great flying, Gary! You got it back up the hill!! An Elephant is too heavy to carry back up the hill!



NOT in the water, Gary!! Elephants can't swim!



OOPS! What are you doing down there, Gary??

Not in the trees either, Gary! Elephants can't climb trees!

this spot is ideally suited to draw a large number of scale enthusiasts. People came from all over California, as far North as Oregon, with one or two from Nevada, Arizona, with a couple of New Yorkers mixed in. (Dave Garwood came all the way from Syracuse, New York.)

Organized by Lynsel Miller and Sean Sharif, this event is only three years old, but is already a "classic" and is growing by leaps and bounds each year. This year, there were over sixty registered pilots, but a few more came and went on each of the flying days. There were literally hundreds of flights, mostly slope soaring, but some with winch and airtow, as well. Where else can you see all this in a single weekend?

With the enthusiastic cooperation of the Park Ranger, Lee (I didn't get his last name.), who single-handedly mowed the landing strip and parking area (enough for about a hundred cars), we were all allowed the privilege of using this lovely recreational site for a wonderful weekend of scale flying.

Lynsel and Sean, having experienced two previous get-togethers with weather problems, must have paid off the gods this time. Most people flew on all three days.

#### Friday, May 17th

It rained nearby, but not a drop fell on a scale sailplane wing! Most of the day was light air, and only the floaters could stay up on the hill. A lot of P.S.S. guys flew smaller airplanes, and a few, such as Dennis Brandt, used the winch to good advantage and specked out with his ASW 24. There were only a couple of others who managed thermal flights while waiting for the wind to blow. During this time, we sure could have used a towplane (and pilot), but in the end, patience paid off. Late in the day it started to blow, with gusts over thirty miles per hour. Everyone ran to grab their weapon of choice, and suddenly the air was filled with P.S.S. and scale sailplanes. With ten to fifteen ships up at once, unfortunately the inevitable happened and there were a couple of mid-air! The wind blew and people flew until dark.

#### Saturday, May 18th

The wind gods prevailed on Saturday, and those who wanted to fly, flew their batteries out! It blew hard all day long; many flew until dark and then some!

Because of the mid-air on Friday, Lynsel very wisely decided to separate the flying



Lynsel Miller & Canberra Target Drone.  
How can you miss?



Lynsel Miller's Canberra Bomber Target Drone  
won Best P.S.S. award. It flew very well!



Lynsel's 1/5 TG 3. It's a real floater and  
flew in the lightest of lift. Span is 13',  
and weight is 13+ lbs.



Mark Foster's 1/3 Acro Club  
Libelle takes to the air.



Mark Foster's ill fated DG  
300. It suffered a crash in  
mid-air!



Mark Foster's DG 300. Unfortunately,  
the pilot died on Sunday.

"Some things in nature are rarely caught on film. Suffice it to say, the mating ritual of the all-glass, much protected, DG 300, is one such unique occurrence. This dance of delight is followed by complete exhaustion, requiring a lengthy refractory period on a well prepared workbench.

**WARNING:** The following photo contains graphic material that may not be suitable for young people, old people, or person(s) that build and fly model aircraft."

Caption & photo from Mark Foster,  
Southern California.



of P.S.S. from large scale sailplanes for the rest of the event. Each group was allowed an hour or so to fly. It blew pretty hard all day long and the P.S.S. guys treated the rest of us to an aerial ballet of formation stall turns and near-misses, and a few hits. We all cheered them on!

When the scale ships took to the air throughout the day, we were treated to the magic of flight. The wind blew hard enough all day long so that everyone had a chance to fly. However, with so many scale ships in the air at once (sometimes eleven or more), it was necessary to institute a flight pattern (close to the hill fly left to right, far out fly right to left). With so many sailplanes up at once, it was impossible to keep track of every single one flying, and so the flight pattern really was a necessity! Unfortunately, a few pilots didn't follow the pattern and, once again, there were several mid-air.

Now, while it's true that so much air traffic in such a limited space, make mid-air almost inevitable, I did see many excellent pilots avoid each other. Most did fly the pattern and, when everybody went in the same direction, evasive maneuvers were fairly easy. However, when a few pilots were unwilling or unable to follow this pattern, everybody else became a "sitting duck"! The result: more mid-air!

Because of this, quite a few pilots waited until the air traffic thinned out and many chose not to fly at all off the slope!

#### Sunday, May 19

It dawned blue skied and calm. There



Jim Thurmond built this very nice 1/4 Fox, 3.4 meters, 11 lbs. It flew very well, not too fast. It looked very realistic in the air. Jim may produce a kit. (His phone is (541) 345-3069.)



Rick Briggs won "Best Modern" with this nicely detailed LS 4. It has a neat, scale canopy cover!

Cullen Raley checks the wind.



John Raley won "Best Scale Vintage" with his PWS 101, 1/4 scale, 14.5', 13 lbs., built from Martin Simons plans.



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Launching Brian Chan's 1/4 ASW 22. Look at them wings flex!!!



Brian Chan with one of the smallest, scale sailplanes. It's a Pilatus Porter B4.



Repairs, repairs, repairs: Get that spoiler working... Art Boysen at work. Don't let that spoiler spoil your sleep, Joe Thomas!



Willy Grundler's SG-38.



Art Boysen's ASW 27 getting airborne. Note the winglets.



A very nice ASW 20, this ship floated in the lightest of lift.



Bill Liscomb with his 1/4 Zuni-2, 3.75 meters, 9 1/2 lbs., flaps, etc. It's the first out of the mold. He may kit it [(619) 931-1438].



*Square wings and round rudder - it could only be a Schweitzer.*

was only enough wind for the very lightest floaters to stay aloft. We were told to expect some air-towing that day. We waited in anticipation until Dick Miller showed up with his orange 1/4 sized Waco PF7 (bi-plane). He is an excellent tow pilot and he gave everyone lined up at least one air-tow. Quite a few pilots had their first air-tows. Unfortunately, most did not have a second tow as Dick had to leave early. With the light wind right down the landing strip, it was a perfect day for towing, and I'm sure that he would have been towing well into the afternoon had he been able to stay.



*48" of Phoebus by Stan Sadorf.*

*Roger Hebner gets everything ready for the next day's flying. The Regency Inn didn't charge extra for 3 more bodies overnight!*



*Roger Hebner's ASH 26, 178", 11 lbs., Robbe kit, not yet flown.*



*Dennis Brandt with his 1/4 Minimoa, 13 lbs., built by Jack McLain from Chris Williams plans. This is the same as the Minimoa in the Wasserkuppe museum in Germany. Dennis says he will put a nose tow release in for next year.*



*Norm Siegenthaler with his 1/4 Discus.*



*One of the many P.S.S. ships.*



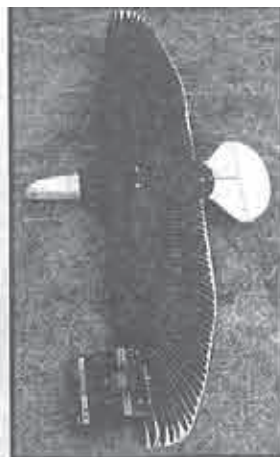
*The Russians are coming!*



*Willy Grumler's scale 1:1 Seagull flew very well.*



*Some real birds came to the Soar-In. Jim Culletton with his 1:1 Starlings.*



I am happy to report that, after seeing it done for the first time, three or four pilots might have been bitten by the air-tow bug and are now threatening to build tow planes of their own very soon.

Although there was some slope soaring every day, air-towing would have been very welcome on two of the three days. Interestingly, it would have been the preferred way to launch the larger scale gliders in calm air, as most pilots chose not to use the winch when there was not enough wind to slope soar. Let's hope that next year, three or four guys show up with suitable tow planes and help launch the scale gliders, when and if the wind doesn't cooperate!

If anything, my first visit to the Los Banos Slope Scale Soar-In emphasized the importance of air-towing as a preferred method of launching scale sailplanes at a slope event when the wind won't cooperate. Most of the pilots felt that it's much easier on the air frame than winching, and they found out first hand that it was quite easy to do (with a good tug and experienced tow pilot). And, by the way, there were no mid-air airtowing!

In a year or two, perhaps there will be enough experienced (new) tow pilots around so that, at many scale events, the flying will be possible with or without the cooperation of Mother Nature.

**Awards**

Although Los Banos was a fun fly, there were pilots choice awards given out on Sunday. Rick Briggs took Best Modern with his 1/4 size Rowing LS4. The

Vintage Award went to John Raley with his scratch built (Martin Simons plans) 1/4 PWS-101, and a very proud Lynsel Miller got the Best P.S.S. award with his very impressive Target Drone TP18 Canberra bomber. (Many aimed, but none shot him down.)

**I ain't never seen an elephant fly... Have you?**

Well we did - and fly it did - beautifully and slowly. In my opinion, the most spectacular flight was unwittingly made by Gary Brokow with his huge Austria Elephant on Saturday. I sure hope that somebody got a video of it! The flight started eventually with one of the two launchers getting boinked in the head by one of the enormous twin rudders as the Elephant went by. (Is this perhaps where it got its name - the elephant ears?) It flew slowly and majestically - it was certainly one of the most scale-like models there... until, somehow, Gary got way low - so low that he was skimming the tree tops way down by the water below, and we were all wondering where on earth he was going to land! Hopefully, not in the water! Well let me tell you, this guy kept his cool and crossed back and forth, back and forth, for five to ten minutes, until it seemed that he had gained a few feet! Then, a few feet more, until, with a collective sigh of relief, he made it back to eye level to the cheers from all of us there!

**Another amusing flight**

I remember looking up during a lull in the wind, and watching a thing come off the winch. I said to myself, "It must be quite windy up there. Strange, I can't feel it here on the ground... It's so windy up there, it's going backwards..." As it turned out, it was Stan Sadorf's Canard, which looked as though it was flying backwards!

**From vintage to modern scale**

The scale sailplanes ranged in size from two feet or less, up to the Elephant, Mark Foster's 1/3 sized Libelle, and Brian Chan's large ASW 22. There were quite a variety of aircraft types from vintage to modern (see the photos).

There were many smaller P.S.S. types there (World War II being alive and well) ranging in size from a 1/12 twenty-five inch GB by Dieter Mahlein, weighing in at a mere ten ounces, to Lynsel's impressive Canberra.

There was also a scale Seagull and a few

**PZL 35 Wilga, Frisch kit, with John Derstine.**



**1/4 Scale Frisch Wilga**

...by Robin Lehman

I finally flew the 1/4 Scale Frisch Wilga, and I have to say it was the easiest to fly, scale airplane I have ever laid hands on! It was even easier than the Telemaster, a lot bigger, and makes a perfect scale towplane. Anyone who can fly will find it a joy to fly; it's very gentle on dead stick (gliding), as well! The landing gear is rugged, functional, and forgiving, which is good for rough fields. This stable plane is very responsive on tow! ■

other fun birds!

**1997 Los Banos!**

Judging from the enthusiasm, scale soaring is alive and well on the west coast and growing. The next Los Banos (to be held at about the same time next year), no doubt will be bigger and better than ever.

Our thanks to Lynsel Miller and Sean Sharif for getting this wonderful event going!

Next year's event will definitely be worth a visit! Don't miss it! Good motels, good restaurants, and above all, a very friendly group of scale enthusiasts!

**Winter Scale Soaring Festival**

Last year, the Winter Scale Soaring Festival was held at the flying field of the Soaring Union of Los Angeles (SULA) in Southern California. The photos seen here were taken by Robin Lehman at the 1995 event.

The 1996 event is now scheduled, and is called the Southern California Scale Glider Festival. It will take place September 14 & 15 at the SULA field, Cal. State Dominguez Hills, which is at the corner of Avalon Blvd. and Victoria, in Carson, California. Everyone is, of course, invited. For additional information, contact Rick Briggs at (310) 433-6327 evenings; his e-mail address is 75754.1422@compuserve.com.

**Good flying! ■**

**Winter Scale Soaring Festival**

Bill Winan's 1/3 Ka6E ready for winch. Note the nifty, adjustable wing-leveler-tripods! This ship is a real floater, spans 5 meters and weighs in at approximately 28 lbs. It is a sister ship to mine, as seen at Elmira last year.

(Below) Bill Winans & 1/2.5 Twin Astir



(Above) Dan Troxell & 1/3 ASK 13. This is a LARGE aircraft!

(R) Towmaster, Dale Tomlinson, with modified Nolsen Trainer. Only a few ships has nose releases.

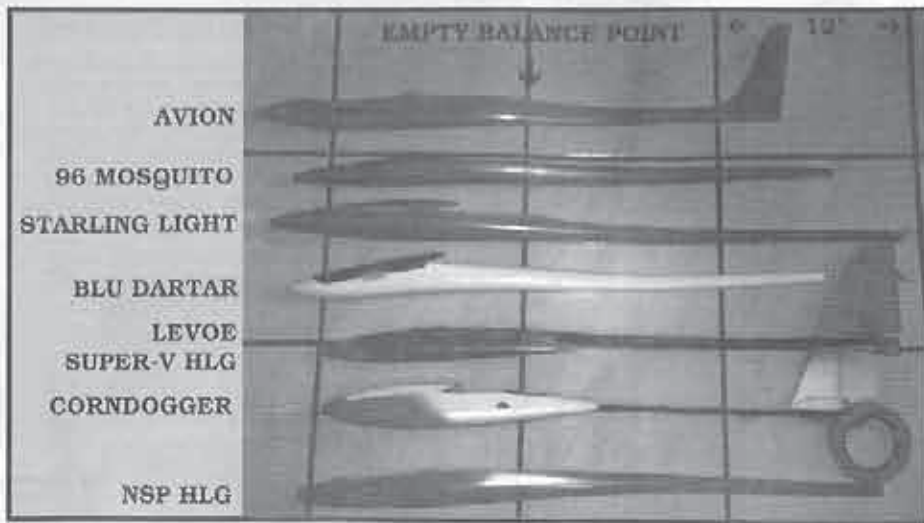
Mimosa and Dennis Brandt won "Best of Antique Scale". Expert pilot!

(R) True Love! Mark foster with his Roke ASW 17, a real floater. Note the wing tip wheel!

(L) Marty Bell checks out 1/2.5 Twin Astir before first winch flight. Marty is a superb pilot.

(R) Paul Nauck, part of the airflow team.





## This Old Plane



...by Fred Mallett  
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Corpus Christi, Texas 78412  
(512) 991-3044 (Week Days)

### Fuselage Fun

I like making HLG wings and testing different airfoils, tail volumes, and planforms. I hate making one-off HLG fuselages, as they are such a compromise between strength and weight. That is what embarked me on this article. I decided to see what a small sample of the available fuselages on the market were like. About six months ago, I started buying fuselages, and kept it up 'til I ran out of money. Towards the end, I had one given to me, but I'll not let on which one it was. The company did not know I was going to publish this, so that is fair. I did not do any testing on these fuselages for strength, so what you read is one man's opinion, and some statistics, like weight and length. The opinions are in the area of stiffness, radio installation, and finish quality. The pictures are for forming your own opinion about visual appeal.

The picture shows the names of the

various fuselages purchased. Use the names to lookup the fuse in the chart up based on the empty balance point of the fuselage. I have found that the empty balance point of the fuselage tells a lot about where you will be putting the radio gear to balance it. My tail surfaces come in between .6 and .8 oz. before attachment, and I use pull-pull spectra for controls. Based on that, and looking at the picture, all of fuselages used so far will balance with a 225ma or smaller battery. In fact, the supporting pictures show how far back the servos (under the wing) and radio/battery had to be installed in a couple fuselages to get the CG correct. So, as long as the tail is kept light, there are no CG problems with any of these fuselages. The CornDogger fuselage had exactly the nose moment needed to balance with a 110MA, and a 4 Channel Airtronics Rx (case removed) stacked on top of each other in the nose, and the two servos behind that, as far forward as I could get them.

Some other notes about the picture: the floor tiles are 12", so you can do some size speculation, but remember the fish eye look to the picture (3 ft. at the top is smaller than 3 ft. at the bottom); so, don't compare sizes from fuse to fuse directly. Oh yeah... The tape roll is in there because the Levoe Design, and CAB Designs fuselages were used for planes before I got the rest gathered up, so the throwing sticks and fins kept them from laying down flat.

	A	B	C	D	E	F	G	H	I	J
	Manufacturer	Name	Weight (oz)	Price	Material	Fuse (in)	Nose (in)	R.O.	Usable Depth Saddle (in)	Hatch (in)
1	Wright Manufacturing Co	Avion	2.8	?	K/G	32.75	9.25	H/S	1.75	2.5
2	Weston Aerodesign Co	96 Mosquito	1.1	\$50	K	33.5	8.5	S	1.375	1.5
3	Performance Composites	Starling Light	1.7 / 2.8	\$50	K/G	38	9.125	H/S	1.4	2.5
4	McBurnett Enterprises	Blu Dartar	1.7	\$50	G/C	32.5	8.75	H/S	1.375	2
5	Levoe Design	Super-V HLG	1.75	\$60	G/K	34	7.5	[H]/S	1.5	2
6	CAB Designs	CornDogger	1.6	\$50	G/K/C	32	7	H/S	1.5	2.25
7	NSP	HLG	1.9	\$55	G/K	34	7.5	H/S	1.625	2.25
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Legend:

Materials: listed from primary, to least used. K= Kevlar, G=Glass, C= Carbon

12 Materials: listed from primary, to least used. K= Kevlar, G=Glass, C= Carbon

13 Nose: This means length of nose, from LE of wing saddle.

14 R.O.: Radio Opening. S means wing saddle opening. H is hatch. [H] is optional hatch.

15 Usable depth was measured using a piece of 1/2" balsa, and how deep it would

16 fit with clearance for a servo arm to move. It measures minimum under the wing saddle,

17 and maximum under the hatch. All fuselages would fit hs-80's under the wing, but

18 some would not fit an older 8 channel RX in the nose. But then, these are HLG's;

19 go buy a 4 or 5 channel receiver!!

20 Weights were measured on an electronic postal scale; granularity was .1 OZ

After reading the chart, here are some personal observations (otherwise called opinions) about each fuselage.

### Wright Manufacturing Co. Avion

This was the heaviest fuselage tested, but also the only one with a molded in fin. It also had the nicest unpainted finish. This fuselage is a piece of art, it has a mirror smooth finish, and I could not find a pinhole. The work is near flawless. The saddle appears to be for an 8" 7037, or similar.

There is plenty of room for whatever you want to put in for radio gear. This was the heavier kevlar version, bought for a light slope plane, but David sells a couple different layups. I am not sure of the weight of those. There is an outer layer of glass for the nice (and sandable) finish. It will make a great, light wind, slope plane.

### Weston Aerodesign Co. 96 Mosquito

I bought this one after reading about his new fuse construction technique, and this 1 oz. fuse. It is made vacuum bagged between male/female mold parts; then joined with tape outside the mold. This one came in with about 20% of the tailboom tape un-joined to the sides, so the tail was very floppy. After 10 minutes with the thin C/A bottle, a piece of music wire, and wax paper, all was well again. I added about 1/10 oz. to the fuse, but ended up with an incredibly strong 1.1 oz. fuselage. Since it is bagged between mold halves, the finish is smooth, but full of pin holes (Holes are

light!). This is a 100% kevlar fuselage. It varies from 5.1 oz. (3 layers) to 1.7 oz. of cloth, and has all the strength it needs at each location. It is very stiff to the fingers under the wing saddle for throwing; no bulkheads needed. You have to install the radio through the wing saddle opening. The saddle is made for a flat bottom wing, but when I bolted my own wing on (under cambered foil), it did not rock back and forth; the kevlar pulled up to seal rather well, so no filling was needed. Now, if we could only talk Frank into using a different resin so the fuse would be a yellow color instead of "dork nose" brown.

### Performance Composites Starling Light

This is a kevlar layup with an outer layer of thin glass for a smooth finish, with a rather interesting layup schedule, including use of kevlar tow. The finish is real good, with only a few voids along the seams. This is a light layup version of the Starling slope plane, and also comes in a 2.8 oz. version. Mine came in with the tailboom crushed from shipping, and I am still waiting on the insurance deal to finalize (3 months now), so I have not built anything with this fuse, yet. Due to the diameter of the fuse, and the light layup, it has some squishy areas, but twisting and bending the fuse, it is structurally strong. Mike did some extra patches where you hold it for throwing, so the feel is stiff where needed, and appears plenty strong for a HLG. I think most of us would cut the tail boom down 4 - 5 inches, and thus lose a little weight. If you want to make a little heavier, but indestructible HLG, or a very light wind, slope fuselage, try the 2.8 oz. version of the fuse; it is gorgeous, with bright yellow kevlar threads (uses the 5.7 oz. cloth), superb finish, and very strong. But then, that size 12 boot mark on the box they came in was enough to crush the tail boom on this one, also. There is enough room in this fuselage for any radio gear or, I think, the 2.8 oz. fuse would make a great electric 05 - 7 cell plane.

### McBurnett Enterprises Blu Dartar

This is a painted-in-the-mold fuselage. It uses the nose droop shape, which

has the design goal of aligning to airflow at min. sink speeds. The hatch is huge for easy access to the radio gear. The overall diameter is smaller, and this gives a good stiff feel to the fuselage. The painted finish was real good, with only the usual seam line found unpainted in the mold fuselages. The glass work was great, nice seams throughout. The saddle was for a lower camber foil, and my wing needed a little filling to get a stable mounting. I put a 365 sq. in. wing on, with "appropriate" sized tail feathers, and ended up with the servos way back under the wing; the Rx and battery were as far back as I could get them (see the picture), with about 3.5 inches of empty fuse in the nose. If you build heavy, and often need to add nose weight, this would be a good one.

### Levoe Design Super-V HLG

This is a nicely shaped pod, and uses a unique boom. It is a very tapered glass boom. The back of the pod is shaped for the boom to fit right in. You cut a slot on top of the pod, slip the boom in, squeeze it tight, and then use thin C/A. I have a Super CornDogger wing on mine, and have been flying it for 8 months; I have had no problems with the mounting at all. Nice design. The fuse comes with a hatch, but I opted not to cut the hole in the nose, and load the radio in from under the wing. Again, the radio was kept way aft, to balance. This is with a 150 ma pack. It is about 2 in. from the nose, and the servos are aft in the under wing saddle area, so I can slip the radio in front of them. (I don't like the radio on a stick thing, and prefer to just cram in foam and radio 'til it balances, and glue the servos down.) The feel of this pod is very stiff; it has a very round cross section. The saddle is built for a 7037; the fuselage is made with yellow dye in the epoxy, and thus is pre-colored.

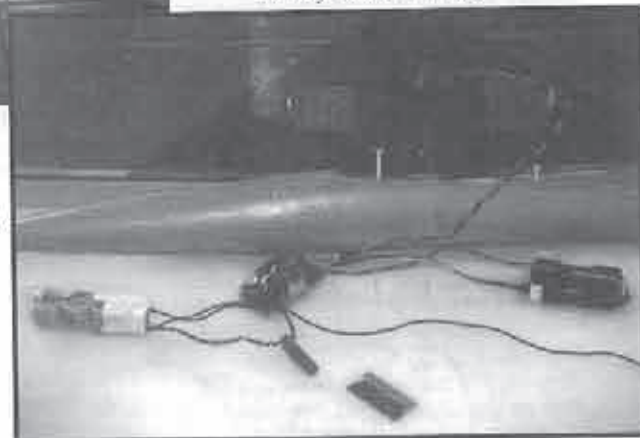
### CAB Designs CornDogger

I'm rather biased here, as my first dozen HLG wins came with one of these planes, and lately I have been using this fuselage as a test bed for different stabilizer sizes and shapes vs. performance and handling. Fun testing. The pod is glass with carbon tow reinforcements. The boom is carbon, and held in place with a former, so it was weighed with the boom installed. The picture is



(L) Blu Dartar fuselage. Note radio location. (R) Weston Aerodesign Co. fuselage. Both planes are set up to use my Epsilon wings.

This shows the approximate locations of the 225ma battery, Rx, and joined servos using my Epsilon wing (4 oz.). The 4 servo plane came in at 10.5 oz. The crinkle in the fuselage and wing was from a radio failure at launch.



of the old style; the newer one has a similar side profile, but with a much nicer cross section, more rounded, and nicely shaped hatch cover for an overall, sleeker look. They are pre-painted in the mold. It is a glass layup, with carbon along the edges, and a kevlar band down the side. The plane is designed to take a 275ma pack, but if you have a larger chord wing, you will probably have to go to a smaller battery, or move the radio gear aft (assuming a light tail). The saddle is designed for a heavily, under cambered foil (Goe 432 like), so don't plan on putting a 3021 on this one! It is appropriate for a S4083, FX60-100, or any of the free-flight looking foils that are now becoming popular for HLG. Oh yes, it also fits the foil of the wing it was designed for: CornDogger.

### NSP HLG

The classic design, this one has been around since before I got into RC. My first HLG's used this design, and I used to have to put lead in the nose. My latest plane using this fuse has a 150ma pack in the nose, and the Rx is back under the wing. It is still a bit nose heavy. Shows to go ya, that there was nothing wrong with the earlier fuselages, just something wrong with my building technique (Like too much glue and heavy tails!). I found this fuselage to have a weak spot under the wing saddle, so now I add a strip of carbon tow right along the edge, for no

measurable weight gain, and it prevents the problem. I forgot to put the hatch on in the picture, but with the hatch it has super nice looking lines from nose to tail. Depending on how you throw, you might need to put in a former where you hold it. The wing saddle is built for a 7037. The new version of this fuselage is done with fluorescent yellow dye in the epoxy.

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Levoe Design, 510 Fairview Ave., Sierra Madre, CA 91024, (818) 355-2992

McBurnett Enterprises, 7506 Legend Point Drive, San Antonio, TX 78244, (21) 662-9503

Performance Composites, P.O. Box 6843, Napa, CA 94581, (707) 253-8029, perfcomp@community.net



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## KOMETES!

Our aviation book collection keeps growing, mainly due to our love of used book stores. A recent trip to San Diego, California netted "Rocket Fighter", by William Green, a book which describes many of the world's rocket powered fighter aircraft and is part of Ballantine's Illustrated History of World War II series. In looking through Green's book, we came to realize the significant number of swept wing tailless aircraft which were a part of the Messerschmitt Me 163 Komet development program.

Then, while placing our new acquisition on the library shelf, we found ourselves looking at several other books focused on the Komet, and World War Two aircraft in general. And for some reason, we suddenly realized that each of the Komet project prototypes was first flown without power. In fact, all five versions were towed to altitude for at least their initial flight. As PSS subjects, all five would do well, and in fact, the Me 163 B has been kitted by several manufacturers, both as a PSS model and for conventional piston engine power.

The DFS 194, the real pioneer in what was to become the Komet series, is somewhat lacking so far as streamlining is concerned. But the original had a fairly good glide ratio, and a thermalling model may not be out of the question. The Me 163 A is in the same general class.

The popularity of the Me 163 B is understandable, but we feel the good looks of the Me 163 C have been overlooked for too long. Perhaps this is because people have been under the mistaken impression that it did not fly.

Both the Me 163 C and Me 263 did, in fact, fly as gliders.

We hope that presenting this information along with the accompanying three-views will stimulate readers to try their hand at producing models of these great aircraft.

It should be noted the information for the various designations was gathered from several sources, with sometimes conflicting information. There are hopefully no inaccuracies.

### DFS 194

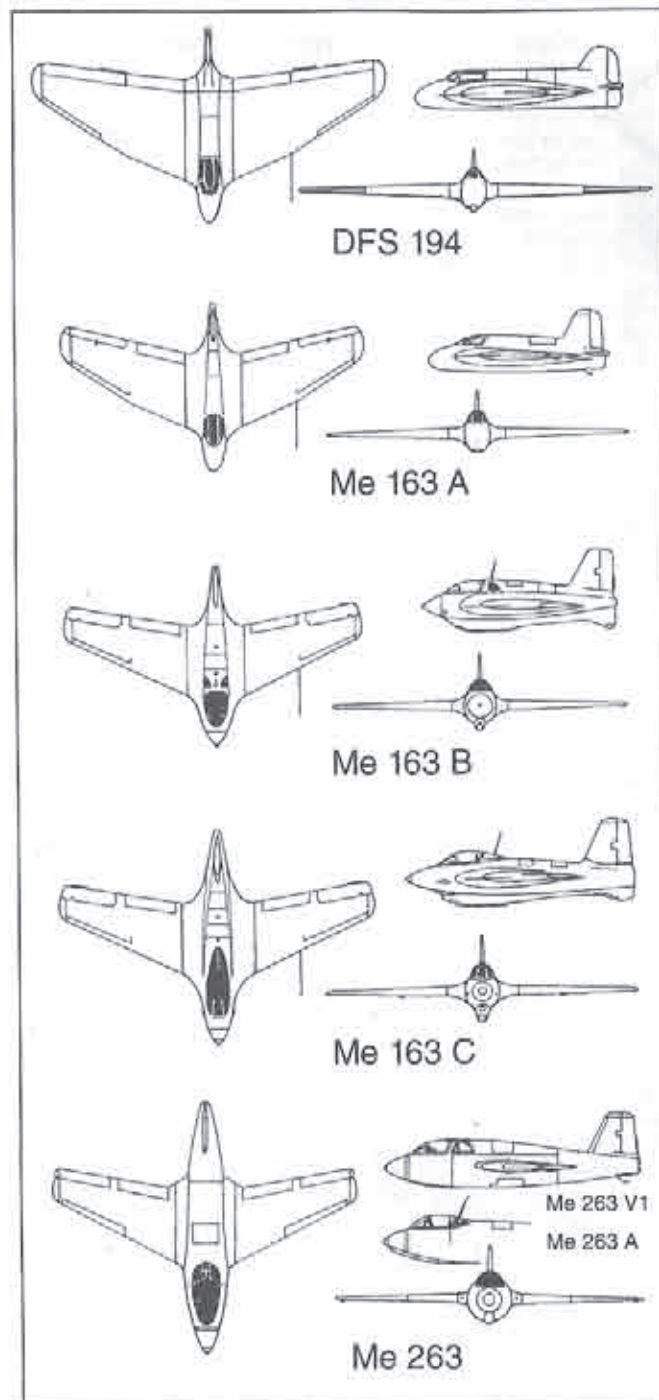
The Deutschen Forschungsinstitut für Segelflug (German Research Institute for Sailplanes) DFS 194 was originally designed to be powered by a pusher propeller and conventional gasoline engine, but served instead as the testbed for the first of the Walter "cold" powerplants. As a glider, it had a glide ratio of better than 20 to 1. Under rocket power, with 882 pounds of thrust, it reached 342 m.p.h., even though stressed for only 190 m.p.h. maximum speed.

### Me 163 A

First flown as a glider on February 13, 1941, and with rocket power (1653 pounds of thrust) on August 13 of that year. Despite its relatively low aspect ratio of 1:4.4 and rather bulbous fuselage, the Me 163 A had a sink rate of just 5 ft./sec. at 137 m.p.h. The performance of the Me 163 A as a glider was very impressive; Ernst Udet witnessed one of the gliding flights, with speeds of over 400 m.p.h., and was astounded to learn the aircraft was not powered. Early trials showed the airframe easily capable of 550 m.p.h., and by the first part of October the Me 163 A had exceeded 1000 k.p.h. or 623.85 m.p.h. (Mach 0.85). Compressibility effects near the wing tips had a detrimental effect on stability, and this led to a change in wing sweep angle and amount of washout for the B model. A number of glider only airframes, designated Me 163 A-0, were constructed by the Wolf Hirth firm for use in later pilot training.

### Me 163 B

This model, dubbed "Komet", became an operational fighter in May of 1944, with first delivery to



Jagdgeschwader 400. The "hot" rocket motor produced 3750 pounds of thrust for six minutes. The fuselage was of light alloy, while the wings, with a spar at about 25% chord, were of wood.

Control surfaces were fabric covered. Altitudes of over 39,000 ft. could be reached in just 3.5 minutes! On July 6, 1944, Rudolph Opitz flew the

Me 163 B V18, equipped with a second smaller combustion chamber for greater cruise duration, to a speed of 702 m.p.h. during climb calibration trials.

### Me 163 C

The Me 163 C was designed to make use of a refined powerplant with greater duration. Three of the C versions were built, only one was flown, and never under power. Because of the failure of the new motor to provide the additional duration, further development was dropped in favor of the Me 163 D, and all three of the C models were destroyed a short time later, at the end of the war.

### Me 163 D/Ju 248/Me 263

This Me 163 D was somewhat larger than the Me 163 C, and had a retractable tricycle landing gear. Plans included both

a pressurized cabin and an advanced powerplant with an auxiliary cruise combustion chamber. Production models were to have a bubble canopy. Designed by Messerschmitt, but to be produced by Junkers, hence the Ju 248 designation; Messerschmitt successfully petitioned to have the designation prefix changed back to Me following successful initial trials. The Me263 was flown as both a glider and under power but, because of the end of the war, tooling was not completed and it was never put into production.

Within the references noted below, the two books by Green contain some very fine 3-views of the various Komet models, while the two Schiffer publications present several paint schemes. The Späte book contains some color photographs, the emblem of the Jagdgeschwader 400, and reproductions of factory drawings. Wooldridge's "Winged Wonders" integrates the Komet program into the overall history of tailless aircraft development.

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**"SHORT CUTS"**

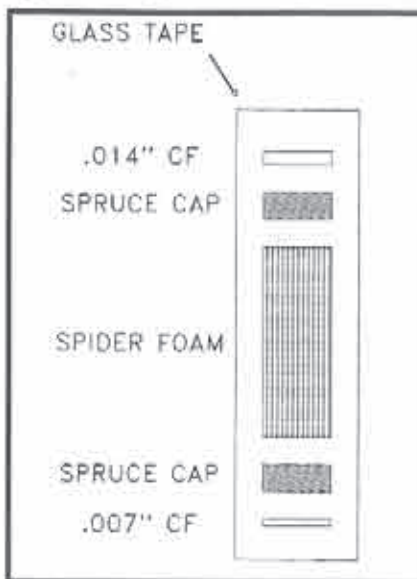
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**Spars & Stuff**

This month's installment of "Short Cuts" consists of a couple short subjects, because I just got back from the 1st Annual Northeast Aerotowing Fly-In at Elmira, N.Y., and Judy's deadline is approaching. Prior to that, all my free time was consumed with building a 1/4 scale ASW 24 for the Fly-In.

**Spars**

Does anyone out there enjoy building spars? Well, I don't, and I remember building 4 of them for my Catalina X-C. I recently had to build a set of light weight, medium strength spars for my OLY II wing, and decided to use composite materials and building techniques to quicken the construction. The shear webbing usually takes a lot of building time, so I decided to use some left over spyder foam for the shears. The spars were 3/8" wide, so the shears were cut slightly over 3/8" in width; their height was cut exactly to size. I used 3/8" x 1/8" spruce spar caps on the top and bottoms, with .014"



and .007" carbon fiber caps. The .014" was used on the top and .007" on the bottom. The following explains how it was all assembled.

The spruce spar caps were wet out with West Epoxy, and assembled onto the spyder foam, shear webs. I then laid wax paper over a piece of angle aluminum, and positioned the assembled spar against the angle. The entire assembly was vacuum bagged for 24 hours. The vacuum bag clamps the assembled components firmly against the straight angle. The next step was to wet out the carbon cap strips and bag the assembled spar, again. Once cured, the entire spar was sanded smooth and the oversized (width) spyder shears were also sanded smooth with the sides of the spar caps. I then wet out 48" of 2" wide, lightweight glass tape. I did this on wax paper, and used a credit card to scrape all the excess resin out of the glass. The spar was then tightly wrapped with the glass tape, laid on wax paper and, once again, bagged against the angle aluminum under vacuum.

Last, but not least, the roots were tightly wrapped with Kevlar tow. The wraps were progressively opened towards the mid-span to reduce the possibility of inducing a stress riser. Tubes to receive the wing rod were later inserted, with spruce wedges and a mix of microballons and epoxy. These are not gorilla spars, but they are light at 1 5/8 oz. (32" length), and were quick, easy, and very straight.

**Syringes**

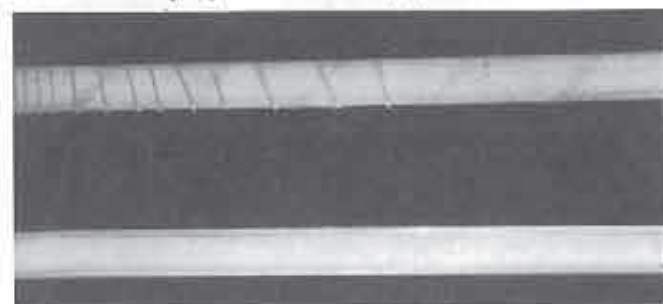
A good friend of mine (Jim Armstrong) recently shared a tip for accurately mixing small quantities of epoxy. Since most of us use either West Epoxy or E-Z Lam for bagging, we always have it at hand, but never mix it in small quantities due to

the 1:5 or 1:2 mixing ratios. Small quantities are sometimes tough to accurately measure. Jim purchased a set of all purpose glue syringe that come in a pack of three. The sizes are 30cc, 15cc, and 6cc.



Notice the ratios, 6cc:30cc = 1:5 which is ideal for West. Plus 15cc:30cc = 1:2 which is the mixing ration for E-Z lam. What Jim did was to mark off the length of the clear plastic syringes into ten equal divisions. The next step is to remove the plunger and add resin to the large syringe and hardener to the smaller one. The tips have snap on caps that keep the contents inside the syringes until needed. To use just the syringes, remove the caps, depress the plungers equal amounts using the reference marks, and you'll have a perfect mix ratio. Thanks for the idea Jim.

The syringes are carried by most Wood Worker's Supply stores. ■



Top spar finished.  
Bottom spar -  
spruce and spyder  
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**THREE + 1/2  
PEAS IN  
A POD**

Mike Deckman 1154 Strawberry Lane Glendora, CA 91740 (818) 914-0311	Paul Ikona 1010 N. Citrus Covina, CA 91722 (818) 966-7915
Curt Nehring 764 S. Knollwood Lane San Dimas, CA 91773 (909) 592-2105	Ron Adams 1010 N. Citrus Covina, CA 91722 (818) 966-7915

**The Condor**

**Curt:** Mike and I are probably a bit spoiled because of our association with Paul (No. 1 Pea), and his hobby shop, California Soaring Products. If it's new, he gets it, our master builder, Glenn Clifton, puts it together, and all we have to do is show up at the field and test fly it. Many finished products don't live up to our expectations and find a resting place dangling from CSP's ceiling with a price tag taped to the LE. Kit bashing is always difficult, because we know most of these guys and the dedication they have to producing a quality design at an affordable price. But, let's face it; sometimes, what looks good on paper, just doesn't work. And then, sometimes, what looks good at the field doesn't look that great when your wife opens the Visa bill at the end of the month.

As contest flyers, we regularly beat up and abuse our gliders during a normal season of competition. I've always

been hard pressed to find a sailplane more adaptable to this kind of punishment than the original MAKO by Ben Clerx; it is probably not the most attractive ship on the market, but it is certainly a functional workhorse that is forgiving, efficient, and provides the pilot with a substantial return in performance at a minimal initial investment. In other words, you don't need a molded glass slipper to win contests.

Enter the Condor...

By now, you've probably seen the ad. Heck, you can't miss it. I think there are about 100 words in the first 15 lines. There are close to 80 lines, which take up the entire page of *RCSD*. The opposite page is a simple, but eye-catching, photograph with the specs. But, only 3 words caught my eye: Allen, Vann, and Hug. Mark Allen's designs are timeless; the most well known and successful are probably the Falcon, Thermal Eagle, and F3B Eagle. And while I can't say enough about Ron Vann's meticulous craftsmanship of obechi wings, I continue to be impressed with everything this guy manufactures through his company, Spectrum Enterprises. Steve Hug's kevlar-reinforced fuselages are absolutely gorgeous and extremely durable. Steve's company, Fuse

Works, firmly stands behind their product and even provides their telephone number on a label glassed to an inside wall of the fuselage, just below the canopy.

So, where's the winch?!

The Condor was rock-solid on tow and didn't even seem to flinch when I full-pedaled it over the top and through a pretty hefty zoom off some snappy monofilament. Ho hum... In the sky, and with the exception of its double-tapered wing, the Condor looked and flew like a MAKO on Slim Fast. This 112" bird is a graceful full-house floater at 66 oz., but in reflex, it skips effortlessly through the sink. The Condor's 7037 wing signals left better than most, often times it literally jumps up several feet. The plane is easy to read and doesn't need a lot of camber to work the lift. I poked it into the wind several times, with the flaps in full-down position, and it just hung there with no apparent forward motion. Clean the wing up, and it really moves out. I tried to tip stall it more than once, with no success.

On the ground, the Condor appears to be a grown-up Falcon that's been pumping weights; it has the fuse the F3B Eagle should have had from the start. But, that's only my opinion. Although it is a little too Peregrine-ish for my tastes, who cares about generics if the numbers work? As an example, Airtronic's new Sapphire, which was still unavailable the last I checked, looks very similar to a MAKO; but similarities are over-looked and bound to happen when designers are all shooting for the same parameters and performance standards in order to stay competitive, meet consumer demands, and still turn a buck. With the Condor, somebody's been doing their homework because the price is right (less than \$400), the quality and engineering is obvious, and the glider just flat-out does everything we expect an open class bird to do. As it stands, the Condor is a real winner for Slegers International, but I would sure like to see a V-tailed 118" version with a slip-off nosecone. How 'bout it, Ed?

**Paul:** What's my opinion of the Condor? Well, the fuselage is, indeed, a work of art. When I first opened the

kit, I saw the beautiful, obechi covered, double tapered wings. The quality, I feel, is exceptional, as are the stabs.

The fuselage seems to fit in between other Mark Allen designed sailplanes. Where the Thermal Eagle was extremely narrow, and the Falcon 800-880 was very wide, the Condor is between the two.

The assembly itself is very straight forward; the only deviation was our addition of carbon arrow shafts for push rods. We also installed a titanium wing rod.

The final finishing of the wings was done with 3 coats of varathane, and Ultra Coat Plus for the trim. The fuselage was painted with Krylon white spray paint.

We used an Airtronics Vision radio with Airtronics FM receiver; the battery was an 800mah; JR 341 type servos were used in the fuselage and ailerons, and JR 351 metal gear servos were used in the flaps. All the wing wiring was done using Dean Y pin connectors.

As for flying? Well, we'll let the new Pea, Ron Adams, tell you about that! Well, Ron, you're on!

**Ron:** It was just another lousy day at SWSA field, and I had just finished another ho-hum flight with my favorite plane - a 2 meter Super V. Actually, the opposite is true of both of the above statements. We seem to always have good days at the field, except possibly on contest days. Also, I always get a kick out of flying the Super V.

One thing that makes me nervous, however, is flying someone else's plane, especially a new one. This is where my story begins.

As I was returning from my flight and landing attempt, I saw Paul and Glenn Clifton holding the newly finished California Condor; they asked if I wanted to fly it. At first I said, "No!!" However, they asked me again about a minute later and I reconsidered.

The plane had been flown by Paul, Glenn, Mike and others very well and was "dialed in", so I figured on having a normal flight; a safe landing of the plane was foremost in my mind. That



wasn't going to happen. The launch, horrors - was a pop-off! Oh well... I leveled off, got the

launch flaps off, turned towards the landing area, and set up for a long final. Upon starting my downwind leg turn, she started climbing from an altitude of about 75 feet. Paul noticed this and asked me to circle and see if it was a thermal. After a couple of circles, the Condor appeared to be gently climbing, at which time Paul starts the stopwatch on my neck and

remarks, "I'll bet you a beer that you can't get your 1/2 hour LSF flight!" (Yea, right! Give me a break!)

The watch had already been set, as I had been attempting this flight with the Super V. I had done one of the flights the previous weekend, barely achieving the 1/2 hour. Anyway, the watch was running; I figured that I could afford a beer, and better yet, the plane continued to climb. I went for it.

Continuing to make the flattest possible turns that I could manage, what with all the shaking going on, I noticed how well the Condor was flying. There was no tendency to tip stall. She was flying very smoothly in spite of me. The next thing I knew, the Condor was specked out and I was about halfway through the challenge. Then it happened; I (we) lost sight of the plane! We looked for it for what seemed forever in the same area of the sky in which it had disappeared. We finally found it, diving at about 45 degrees, quite a bit lower and a lot faster than the last time I saw it. Trying to stay cool, I pulled back on the stick, hoping I would not blow the wings off. She stopped diving,

climbed up at about 20 degrees until the excess speed was gone, and I leveled out and started to circle again.

OK, now I'm shaking more than ever, about to call it quits and just land the plane safely. This might not be an option as I had lost the thermal and was gradually descending. Eight minutes to go! Then we noticed that a hand launch was doing well about 300 feet to my left. By the time I got there, I was at or below his altitude. I started circling with him and was able to climb back up, even passing the hand launch.

Still, it seemed like those eight minutes took forever. Finally, the watch ticked down; I had done it! What a relief! All I had to do now was to land it. I entered the downwind leg and the Condor wanted to go back up. Like I said before, just another lousy day at SWSA field. Well, I went back around, entered the leg again, and this time, with landing flaps, I came on around through the pattern and landed. Big relief!

In summary, I cannot remember flying a more stable, easy to fly and forgiving plane. P.S.: I got the beer.

**Mike:** I was the first to fly the California Condor and, right from the start, I thought it was a winner! It launched great and required very little fine tuning from the original settings. The Condor will make a great, first aileron ship, and in the hands of an experienced pilot, should prove to be a real winner!

I'm currently flying a plane utilizing a Thermal Eagle fuselage, with a set of 7037 Ben Matsumoto bagged wings. The reason I mention this, is because of the size of the Thermal Eagle fuselage; or, should I say, the lack of size in the nose area. This fuselage requires some real planning for the layout of the electronics to make it all happen! The Condor fuselage size is midway between the Thermal Eagle and Falcon 880 fuselages and, in my opinion, is the ideal size for stuffing all those electronics up front. This fuselage is a real beauty!

**'til Next Month!!  
Boomers! ■**

### Just Looking for a Catchy Name!

**Curt:** About three or four months ago, Paul called me at work one morning (Pacific Bell Fraud Center - my job), pretty charged up. He said, "I want to design our own California Soaring Products' glider!"

Now, this sounds a bit like an old "Six Million Dollar Man" episode. So, I said, "Why not! We have the technology! We can build it!" But, unfortunately, it wasn't that easy.

We immediately needed more time than we had, and a lot of help. We ran into our first stumbling block: the exorbitant cost of manufacturing the fuselages. And tougher yet, was trying to convince someone to do it. It seems that, even if you're willing to pay the price, they can't guarantee they'll have the time. Well, we temporarily set that problem aside, and then focused on the design. Paul hashed over the parameters with Mike and me; then he enlisted the help of experienced wing man, Ben Matsumoto, who has done more than his fair share of prototype configurations for many world-class fliers and their sponsors.

We all agreed on a 118 - 122" Spyder foam, obechi-sheated, triple-tapered, 7037 planform, with at least 960 square inches. Ron Vann had already delivered two sets of wings and stabs, and I might add, they are absolutely gorgeous. Paul put together a deal on the fuselages with Mark Allen; CSP's master builder, Glenn Clifton, is already hard at work assembling two test models.

Paul doesn't like to take any short cuts, so you can bet that this is going to be a very complete, high quality kit at more than a respectable price.

We're still searching for a catchy name, so give us a call or drop something in the mail. We'd love to hear from you, and I'm sure Paul will cut the winner a deal on just about anything you need from his shop! So, stay tuned; these 3 1/2 Peas will keep you up to date on our progress!



### Jer's Workbench

Jerry Slates  
P.O. Box 2108  
Wylie, TX 75098-2108  
(214) 442-3910

### AC Vacuum Switch & Accura Cutter

Well, I haven't got much to offer this month. Between working in the shop, laying up fiberglass fuselages, and making a couple of molds, I also found myself mixing 323 sacks of cement for the greenhouse floor. Now that it is done, I can get back to doing some model related stuff.

I'm glad to hear that some folks follow my monthly ramblings. I have received a couple of phone calls asking where and how to find the AC vacuum switch, which I'm using in my vacuum pump system. Well, the switch is a 2-pole, pressure control, type 155BV01, Model 1003, and is manufactured by Penn Controls, Inc. Check out the yellow pages of your phone book; depending on the size and layout, it will vary as to where the listings can be found. Start by looking under electric, vacuum, and valves.

There is another item that will go well with a vacuum pump system. If you haven't got a foam cutter, but would like to build your own, Bob Harman of Basic Aircraft Technology in Utah, has put together a set of drawings and a list of the parts required in order to build a foam cutter called The Accura. It is a hands-off type, very much like the one that I am using, but Bob has added a couple of tricks that I have not used, yet.

If you are the type of person that likes to check out the shelves at the local hardware stores and lumber yards, you will probably enjoy building this cutter. For more information, Bob Harman can be reached at 10424 Golden Willow Dr., Sandy, UT 84070; (801) 571-6406. The Accura Cutter plans and foam cutting booklet is \$5.00.

## ElectroSlot 400

### A Great Way To Try Electrics

Mark Nankivil  
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(314) 781-9175

Before I talk about ElectroSlot 400, I just want to point out an article which was in the June issue of *RCSD*. Written by Gordy Stahl, it is a great article on Ni-Cads, with useful information on cell sizes and weights. Be sure to go back and look it up! And, on to this month's subject!

There are many out there in thermal country who have passed up electrics either on the grounds of cost or the idea that electrics are overweight and anemic when it comes to spinning a propeller and motivating your model into the sky. As with any technology, there was a day that all of that was true of electrics, but those days are long gone and the capabilities of electrics will "shock" you!

I will focus on what I consider the premier way for someone to get into electrics, especially for those of you who are coming from the soaring portion of this great hobby. Speed 400 size motors have come on strong in Europe in the past few years and with the minute sizes of speed controllers, on-off switches, servos and receivers that are available today, these 40-50 watt motors are the basis of a great, entry level class of electrics called ElectroSlot 400. The contest rules for this class are simple and are as follows:

Model - 60" wingspan limit - restricted to geared or direct drive Speed 400 size motors only, with a 7 cell limit on the motor battery pack.

Flights - A minimum of three (3) rounds flown with a target time of 10 minutes (which includes the motor run time), and an in/out circle worth 25 points.

A little background history is in order here. A few years ago, Graupner, Robbe, Aeronaut and possibly a few others started to market that Graupner calls "Speed 400" size motors. These motors are 40 to 50 watts in output, and come in 4.8v, 6v, and 7.2 volt windings. The 6 and 7.2 volt motors are used to the greatest extent, and I'll refer to them from here on out. These motors are quite

small and light; with the very small speed controllers, servos, and receivers available today, the overall weight of the model can be kept quite low. I presently fly a Mini-Challenger fuselage with a Climmax wing, powered by SpeedGear 400 geared motor using a Graupner 11x8 CAM folding prop. All up weight is at 20.8 oz. when using a 7 cell 500AR motor pack.

Speaking of sizes and weights, a typical electric "package" is:

Speed 400 motor: 1-1/2" long x 1-3/32" diameter; weight - 2.5 oz.

Speed 400 geared motor: weight - 3.4 oz. typical

Speed Controller: size varies - typical weight of .75 oz. to 1.5 oz.

Motor Packs (weights of 7 cell packs):

N-500AR - 4.9 oz.

N-600AA - 6.1 oz.

N-600AE - 5.4 oz.

N-600SCR - 7.3 oz.

So, you're looking at a weight range of 8.15 oz. to 12.2 ounces for the motor pack.

A source for the hard to find, Sanyo 500AR, nicad cells, is Hobby Specialties, #3 Castle Drive, Florissant, MO, 63034; tel. (314) 831-5031.

Kits available in the U.S. today are somewhat limited, but there are some goods ones available. DJ AeroTech has come out with an electric version of their excellent Monarch HLG called the Monarch E. I'll be reviewing this kit very shortly. Also available is the DARE Beginaire, a 72" span model for motors of this class that can easily be cropped down to the 60" span. Also available are the simple Klingberg Thermal Thing and Thermal Fling, both all balsa kits that are very easy to build. There are two other kits that are no longer in production, but you might still be able to find them in your local hobby shops: the Top Flite Phasoar and the Astro Flight Mini Challenger. The Phasoar was originally designed for the Astroflight Cobalt 035 motor but it can easily be converted and lightened for Speed 400 motors. The Mini Challenger was also designed for the Cobalt 035 motor, but is readily adaptable to Speed 400 motors - both direct and gear drive. The Mini Challenger is also very easy to scratch build if you can find a set of plans. You can also convert a number of HLG kits that are available. The Vertigo, Flinger, and Chuperosa have been converted by club members and have



Club member, Pete George, with his Vertigo E model. The standard HLG model w/ fiberglass fuselage was converted to electric with a Graupner Speed 400 direct drive, Robbe 7 x 3.5 folding prop, Robbe on/off switch, and 7 - Sanyo 500AR motor pack. Great flier!

worked out quite well. Plans and parts for two designs, the ES-400 and the Defiant 430, are available from Modelair-Tech, as well. You can always design your own!

In summary, this is a wonderful class of electrics for modelers. In future columns, we'll look at the Monarch E and some of the other models that are available. I'll be happy to hear from those of you out there who are flying electrics and Speed 400 gliders.

### Book Review

#### The Art of Thermaling - A User-Friendly Guide to Finding and Using Thermals and Thermal Streets Written by Bob Wander

I came across this 56 page book while perusing the latest issue of "SOARING", the monthly magazine of the Soaring Society of America. Even though it is meant for full size sailplanes and soaring, I ordered the book in the hope that there would be information that would give added insight to what is going on in the skies we all fly in. When the book arrived, I was not disappointed in the least! With chapters on Soaring, Speculation & Decision Making, Thermal Structure, How To Search For Thermals, Entering & Centering Thermals, and Thermal Streets, there is information here that can be gleaned and used to improve your knowledge of the air we fly in. I think that those who fly cross country models would especially benefit from the information in the book. The better one can understand the air we fly our models in, the more likely you'll get the max you're looking for!

The book is written in an easy to follow style that isn't too technical. You'll get a smile from the author finding thermals by

smell such as pizza and wet laundry! He tells of finding lift down low by the smell of wet laundry over a commercial laundromat. Not all thermals need to be solar generated!

The book is available for \$10.95 plus \$4.25 S&H from the Soaring Society of America, P.O. Box E, Hobbs, NM 88241; telephone: (505) 392-1177. ■

'Til next time!

Good Health and Good Lift!! ■

### About Mark Nankivil

Mark bought his first radio in 1980, just fresh out of college, as he had some "\$\$\$ burning a hole in his pocket".

He bought an Oly 650 at a local hobby shop, finishing it in two evenings. The radio had not even been delivered, yet!

Once together, Mark says, "It was off to a small slope to teach myself how to fly. Later in the year, I discovered the local glider clubs, Mississippi Valley Soaring Association and the St. Louis Eagles, with kindred spirits I could fly with. The following spring found me at my first contest, and I was totally hooked! Since then, sailplanes, and later electrics, have been my passion; just ask my wife!! In 1986, I went to the 1st F3E World Champs in Lommel, Belgium, as Cal Eitel had convinced a number of us that we could host the '88 World Champs. We learned a lot, and proceeded to put on a great '88 World Champs here in St. Louis."

"I have kept a deep interest in electrics, even though other business and family priorities have limited my competitive participation in such events as F3E (now F5B). There is a lot going on in electrics, today, but many folks are not aware of what is happening, or perhaps they still think that there isn't much performance available. My goal is to let people know what is going on out there, from Speed 400 to F5B, and to realize that this is a great facet of modeling to partake of!" ■



Dave & Shelby Sanders at Los Banos, 1996. Photos by Dave Garwood.



want to show you a world you may have never experienced before and take you all to a place where you can have some real, light-hearted fun, and maybe even fly historic airplanes that you've only dreamed of in the past. Let me tell you a little bit about myself first, though.

I'm 29 years old, married to a great gal, Shelby, and am the proud father of two boys, Ian (7) and Trevor (5), all three of which are fellow model aviation enthusiasts. I've been an aero-modeler for

about 20 years and have tried everything from static plastic models to free-flights to power planes and, of course, PSS slope and combat flying. I also do some handlaunch flying, although most of you reading this could probably out-thermal me even on one of your bad days; heh, heh. I've been freelance writing for a little less than two years now, am the editor of the Laguna Niguel Slope Soaring Guild's bi-monthly newsletter and now do this column; my first permanent gig! You

may also know my company, Dave's Aircraft Works. We make those pesky little foam and balsa warbirds and offer plan packages for some bigger stuff. I've included a photo of one of my favorite toys in this installment so you can see my work. It's a P-51D, from one of my own kits, flying the colors of the 319th FS, 325th FG, Lesina, Italy circa 1944. So, introductions done, let's get on to the good stuff...

#### Slope Etiquette

Okay, you sailplane, F3B and HLG guys, this is why I didn't want you to march off to Jerry's or Gordon Jones' excellent columns (I read those, too!), before you gave me a chance!

One of the biggest complaints I hear about PSS and Combat fliers is that we go out and "dominate the slope all day



Jim Babcock's very unusual V1 flying bomb. Co-designed and built with Lorne Tucker, Chico, California.

long". I gotta tell ya' boys, I've found this to be true on quite a few occasions. When we're pumping inches off the ridgeline down the front, then pulling 200 foot zoomies at the ends, or wringing it out and chasing each other right into the best lift, it makes it REALLY HARD for guys flying 120 inch open class or scale sailplanes to avoid collisions with our relatively small, hard-as-a-mortar-shell, little PSS'ers, and still stay in enough lift to wait for the next thermal to blow through. Some of these guys (and gals), have spent big money on their equipment. Those big white scale jobs can cost over \$1,500 bucks! Only very gutsy (or rich) pilots would dare throw out into our crowded gaggle of 80 to 100 MPH slope killers. So, what do they do? They wait. And wait. And wait some more. Finally, after they're good and frustrated 'cause we won't take a break, they say something. Usually they're polite, but sometimes they're a little curt, too. Here's why...

Put yourself in this guy's shoes. You've been working all week in what is likely a high-pressure job (that's how you make enough bread to spend one and a half G's a crack on air-planes), and you just want to relax with a little mild-mannered cruising in your ASW or Club Libelle. You come out to the field and there's PSS'ers or foamy combaters zooming all over the place. You probably think, "Hmmm, do I want to just go for it and spend every night for the next two weeks repairing this plane, or be prudent and

wait for this insanity to stop?" Usually, being less aggressive types, they opt for the latter. Here's the point; I know how intense it is when you're out there flying good and hard, and you lose track of time, but be sensitive to the big birds, too. One thing I can't say enough about is that those pilots are just like you in many ways. They're dedicated devotees of R/C modeling and derive the same vicarious joy we do from building and flying. Most of them are well educated, diplomatically adept people in their regular lives, and if

you show them some courtesy, you may be surprised how many good buddies you'll gain. Most of them I meet are great people. Sure, there's a few that are just "too cool", but even those will let their guard down if you persist in showing interest in their stuff once in a while, and you may even find yourself drooling over one of those neat Salto acrobatic ships after a spell. I make a special effort to be warm and cordial to these folks so they'll come away saying, "Hey, those PSS and combat guys are alright!"

Now, you "white wingers" are probably thinking, "What the heck is with these PSS guys?! They're nuts! They're insane! They're knuckle dragging, blood thirsty Neanderthals!" Well, yeah, maybe (Calm down, I'm just kidding!). Here's what we REALLY are, and I think this is pretty accurate for the majority, but correct me if I'm wrong.

Most of us are working class folks, very middle class. Most of us are not Harvard graduates and work at pretty average jobs. A good percentage work pretty long hours during the week, and a good many are actually self employed (Read, "Work twice as hard for half the money and pay incredible taxes."), and don't work well in big corporate situations. We're natural renegades. We fly PSS and combat to blow off steam in a safe and inexpensive way, for the most part. There's a certain out-of-body experience you have flying our planes, and it really

## FIGHTING FOAM & HEAVY IRON

### Volume 1, Number 1

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#### TALLY HO!

Welcome to the first edition of "Fighting Foam & Heavy Iron". As the title implies, this is the place to sound off on all your Foam Combat and PSS topics. My name's Dave Sanders, and it's a pleasure to meet you all. Now, now, now, you "white wing" fliers, don't flip to the next page just yet! I



My checker-tail P-51D. Loves to FLY, not sit!



distracts you from your everyday cares. These planes are not real "easy" to fly, are generally small, and require constant attention at the controls. Looking at your watch for even a fraction of a second is absolutely out of the question! We like to fly in packs because it's fun to tap wing tips with your pals (to us, at least). We're not out street-sweeping sky just to make people angry. The kits we buy are a lot less expensive than the stuff you big guys go for, and the real price paid for our planes is labor. I spent around sixty hours on my Mustang you see here, and every single one of those checker-board squares was a little tiny piece of masking tape painstakingly stuck on before a shot from the airbrush (there's over 200 squares there). Every panel line was inked in, one by one. I see work like this by other guys all the time. I don't want to see her go in, but it's certain to happen some day; maybe next week, maybe 10 years from now. Us PSS and combat guys are sort of fatalistic like that, and THAT is what gets our adrenaline pumping so hard. We're not stupid, just a little over-confident in our flying skills! Not only that, but at the speeds we're flying it's hard to be looking more than about 50 feet in front of the plane, and at say 60 MPH, 50 feet gets used up quick! Probably, most of us are military history buffs, too, and that's why you'll mostly see military aircraft; remember, wars are won and lost by a society's less erudite citizens, and we sort of feel a little kinship there. I think; ordinary guys doing extraordi-

nary things. Many of our Granddads, Fathers or Uncles were dodging flack over Schweinfurt or Guadalcanal in WWII, and some of them were slugging it out in Korea or Vietnam themselves during those dark years. I think most of us feel we're honoring the men and women who made this country secure for democracy by modeling their, and their opponent's, hardware; that's certainly true for myself.

So what does this all mean? Talk to each other. Sit down and arrange some informal, friendly protocols at your flying site. I was at Los Banos this year and Lynsel Miller had the good sense to break up the "scale" and "PSS" guys' flying into "rounds". He gave the hill to each in alternating sequences of about 45 minutes each, and I think it was really effective at reducing accidents. Everyone seemed to have a good time, and the two camps ended up getting along really great! When we poked fun at each other, nearly everyone laughed and hardly anyone grumbled. This could happen at your hill, too. You say there was only a little lift available this weekend? You didn't get a chance to fly the day's primo air? Then see if everybody will agree to a little shorter rounds on days when the lift is cycling, or take turns launching into alternating gusts as they come. Explain these arrangements to new guys, too. Make it a continuing effort at friendly cooperation. If you see the lift is marginal for your 30 oz. per square foot PSS plane, and you know the big birds could be hangin' fine, take a break, holler over to the pits and say, "Hey, you guys, the lift's a little light for us, so grab your lighter loaded planes over there and get some stick time!" Two or three fellows will probably pick up their planes and launch, and say, "Hey, thanks! This air's perfect for us." Let them get in on the tasty air, too. When you hear whoever's keeping track say, "Time to switch", then land right away and clear

the slope for them. Ask them about some less expensive scale kits and you could fly with them, too. Sometimes, it's nice to fly a cruiser. They probably wouldn't object to a HLG flying with them, either. Most of their planes would go right through one and that never bothered you much before anyway, right? Another rule to follow, especially you combaters, is NEVER engage somebody unless you've asked them if it's okay, and reach an understanding that either of you could experience a fiery death and it will be expected that either or both walk away with a smile.

It's incumbent upon us (the PSS'ers and combaters) to try to cooperate because we are the new kids on the block, here. Wouldn't it be more fun this weekend if we all walked out as "Big Friends" and "Little Friends" instead of griping at each other? I think so. Try it, you may see a new wave of camaraderie sweep across your home field and make some new buddies, as well as learning each others' secrets and techniques.

#### Readers Rides

In every edition of Fighting Foam & Heavy Iron, I'd like to present a reader's work, so take some pictures of those beautiful aircraft I know you're all building. Remember, PSS and Combat stuff only; I've seen some really fine scale jobs, but we've got to maintain our focus here. This month, we have one that's really unusual, so read on...

#### Run for Cover!

From Chico, California comes this gem built by Jim Babcock and Lorne Tucker, a 50" span V1 "buzzbomb". She weighs in at 32 oz. and uses an Eppler 660 airfoil. Lorne says he and Jim loosely based the little plane's geometry on the venerable Ridge Rat, and the tail surfaces are the same as an Anabat's. Jim bought out the stock from a hobby shop that was going out of business in his town and ended up with more balsa planks than he knew what to do with. He laminated 1/2" pieces, then HAND CARVED the little missile's supine fuselage and pulse jet nacelle! Lorne created the wing cores from blue foam, and they're sheeted

with balsa. The ailerons are 2 inches wide. Wow! Must have a killer roll rate! He says performance is great and it's as stable in the air as his Gentle Lady, owing to its "barn door" rectangular wing, no doubt. The "pulse jet" nacelle is fixed with silicone adhesive so that, in the event of a bad landing, it can break away without totally destroying the plane. (There's lots of leverage at the end of those mounting pylons.) Covering is Monokote, olive drab on top and light blue on the bottom. Nice work, guys! These two are real experimenters, so maybe we'll get to see more of their stuff in the future. Thanks to both for their contribution here.

Some of you may recognize Jim's name from some of the full-scale, warbird magazines where he does some writing and photography. Jim also has an extensive collection of WWII artifacts including a piston and connecting rod from a Kamikaze Zero that crashed into the aircraft carrier U.S.S. Benjamin Franklin during the war. Lorne told me the rod is twisted like a piece of taffy! What would you give to have that piece of history on the shelf in your library?

#### Final Approach

Thanks for reading, and please feel free to write or E-mail. I don't know how much correspondence I'll get yet, so I won't promise to answer every one, but I do promise to read every one and be responsive here. This is your forum; you can shape it. Don't forget, I want to see what you're all working on, so keep those pictures of your projects coming, especially in-flight shots! ■



ZIKA

## TIDBITS & BITS

### Appleton Sailplane 96

The following event announcement is from Lee Murray of Appleton, Wisconsin.

"Appleton Sailplane 96 will be held on Sunday, August 11 at Anderson Sod Farm on County BB, 7 miles west of US 41, in Wisconsin. Pilots meeting will be at 9:30 a.m., with flying between 10 a.m. and about 3 p.m. for: Sportsman, 2M and Unlimited Classes. Winches with retrievers will be provided. Pilots will select which TD max. time to reach while in the air. Tasks will include 3, 5 and 7 minutes of simple duration with 30 second grace period. Three large landing circles will contribute 25 points to score."

Lee Murray is the contest director, and can be reached at (414) 731-4848.

### 14th Annual R/C HL Soaring Contest

Robert Cavazos of the Inland Soaring Society in Riverside, California is announcing their 14th Annual R/C HL Soaring Contest.

"This is the only HL contest that has been around for 14 years. It will be held in Riverside, California on July 21, 1996.

"Each year, our contest has attracted the best of the hand launch enthusiasts. Some of these pilots are also proficient at thermal flying, slope flying, or electric flight. Also attending are manufacturers, designers, world champions and, most of all, lots of press. These pilots are competing for the prizes provided by the club and our sponsors. As before, we are appealing for donations of prizes to be awarded the participants, which will be offered to the pilots throughout the day through a random drawing; they are not used for any sort of raffle."

Robert Cavazos can be reached at (909) 485-9413, or RC.AV@aol.com.

### I.G.G. Internet Address

If you are interested in large scale gliders and the European I.G.G. format, the English translation of the rules appears on the Internet. Robin Lehman of New York kindly sent a copy of the rules and Jack Kagi, of Switzerland, provided the Internet address through Robin.

<http://www.interconnect.ch/customers/igg/>

Needless to say, we accessed the Page, and found that the rule translation was not the only information in English. There are linkages to other Home pages such as the U.S. Airforce Museum. We browsed through a few things, such as the Early Year's Gallery, and quickly left for home, having numerous other things to do that

took precedent! In other words, if you have the time, browse and enjoy!

### Sailplane Homebuilder's Association (SHA)

A couple of announcements were received from Dan Armstrong in Tehachapi, California, the Secretary-Treasurer for the Sailplane Homebuilder's Association. For those of you not familiar with the SHA, it is a division of the Soaring Society of America (SSA), who are the full-size folks.

The purpose of the SHA is to stimulate interest in full-size sailplane design and construction by homebuilders. They disseminate information relating to building techniques, materials, theory, and related topics. Dan has also been doing the newsletter editing, and he does a very professional job on it, we might add.

So, what has that got to do with the R/C folks? Well, if you're interested in design and construction techniques, there are two seminars coming up, and you don't need to be a member (SSA, SHA, or VSA) to attend, although it will cost you a bit more. The first seminar is called the SHA - 1996 Eastern Workshop and will be held at the National Soaring Museum in Elmira, New York on July 26, 27, and 28. The workshop event "will coincide with the opening of NSM's Culver/Maupin Designer/Builder Exhibit". "The exhibit will feature the Culver/Maupin Carbon Dragon, which is a "plans build" Ultralight Sailplane. The workshop will also focus on the Carbon Dragon Design, as well as materials and techniques associated with this light class of sailplane building. There will be a seven foot scale model of the aircraft included in the exhibit."

The second event is the 1996 SHA Western Workshop which will take place at Mountain Valley Airport, Tehachapi, California on August 31 through September 2. There are both lectures and demonstrations; Theme A covers "expanding soaring through cost reduction and alternate flight training methods" with numerous speakers listed such as Wayne Spari, who's subject is listed as "15 Meter Version of Sinbad the Sailor Tow-line Glider Model". Theme B is "expanding soaring technology and utilization through low sinking speed, light sailplane development to enhance micro lift and weak, small thermal soaring". Once again, several speakers are listed here, one being Gary Osoba, for "Micro Lift Exploitation". Bruce Carmichael provided the workshop preview.

For Tehachapi information, Dan Armstrong can be reached at 21100 Angel Street, Tehachapi, CA 93561; (805) 822-8852. Event information for Elmira is: (301) 779-7984.

## TULSOAR Presents

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15th ANNUAL

"LAST FLING OF SUMMER"  
September 20 - 22, 1996

Blue Springs Sod Farm  
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Friday, 2 pm: Class A - HL  
Saturday, 8 am: Class B - 2 Meter  
Saturday, 11 am: Class D - Unlimited  
Sunday, 8 am: Class D - Unlimited  
Sunday, 3 pm: Awards  
**FIRST FLIGHT @ 9 AM EACH DAY!**

### AWARDS:

1st Overall (Man-on-Man Fly-Off)  
5 Places - Open, 3 Places - Sportsman & HL

\$20 - one class \*\* \$15 - second class  
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**PREPAID ENTRY BY SEPTEMBER.**

Task T1 - International Duration  
Landing L4 Or L6 (Modified)

### Dale Nutter, Contest Director

7935 S. New Haven St.  
Tulsa, OK 74136  
(918) 492-3760

**DEN\_DKN@AOL.COM**

Mike Teague, Assistant CD, (918) 747-1245  
3172 Woodward Blvd., Tulsa, OK 74105

### ENTRY FORM

Date \_\_\_ Freq./HL \_\_\_ 2M \_\_\_ UNL \_\_\_  
Name \_\_\_\_\_  
Phone \_\_\_\_\_  
Address \_\_\_\_\_  
OPEN \_\_\_ SPMAN \_\_\_ AMT

## Scale Kit Announcement

...from Mark Foster

"I'm privileged to say, I can now release a limited number of Thermofligel kits. These highly pre-fabricated kits include a gleaming white, seamless fuselage with thick obechi skinned wings. Available at 3.5m are the Pilatus B-4, Ka-6, and ASK 23. Price is approximately \$435. Also available is the very popular 1/4 size DG-300 and the performance loaded DG-600 - 3.8m span with wing tip extensions for 4.4m. Don't worry about flying old out-dated airfoils. These machines include specially modified, multiple Ritz or Eppler airfoils for excellent flight characteristics."

Call Mark Foster, (213) 257-4573, after 5 P.M., PST, for orders and questions. Shipping extra on all orders. ■

## NASF Retriever

...from David Godfrey

"Designed to meet the needs of the North Alabama Silent flyers and used exclusively at the Mid-South Soaring Championships for the last three years, the NASF retriever is now available for individual and club use. The prototype, powered by a Ford long shaft motor, has been used without a mechanical failure for four years. The three piece CNC machined, 6061-T651 aluminum drum fits into a counter-bore in the backplate to prevent line tangles in case of winch or retriever line breakage. The aluminum frame is T.I.G. welded to aerospace standards. The take up hub is CNC machined from 6061-T6 bar stock and features replaceable, sealed bearings. The line guide employs a built in slide hammer for easy and convenient use.

"The NASF retriever, ideally suited for contest use, is designed to be the last retriever you will buy. No gimmicks, bicycle parts, or complicated mechanisms; just a high quality, durable piece of flight line equipment. When used in conjunction with a B.A.T. winch (available from Bob Harman @ Basic Aircraft Technology - (801) 571-6406), or similar winch with a V-belt braking system, up to three launches per minute are possible.

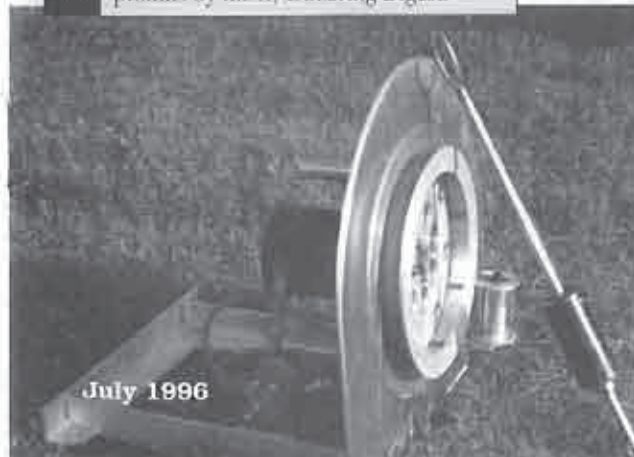
"The NASF retriever is available as a kit or a complete unit, ready to go to the flight line. Also available is a complete line of ball bearing swivels, winch and retriever line, parachutes, and streamers."

For more information, contact David Godfrey at (205) 534-0251 or Bob Harman at (801) 571-6406. ■

New Products

## NEW PRODUCTS

The information in this column has been derived from manufacturers press releases or other material submitted by a manufacturer about their product. The appearance of any product in this column does not constitute an endorsement of the product by the R/C Soaring Digest.



3rd Annual

# Southern California Scale Glider Festival

## September 14 & 15

To be held at the S.U.L.A. Field at the campus of  
Cal. State Dominguez Hills  
corner of Avalon Blvd. and Victoria, Carson California

Awards for:

Vintage (1908-1945) 1st, 2nd, 3rd  
Modern (1945-1996) 1st thru 5th

Cash awards for:

Best of 4, scale landing attempts  
Best of 4, longest flight

### Aerotowing and winch launching

Events:

Saturday, 8:30 to 9:00 check-in, 9:00 pilots meeting, 9:30 to 3:00 open flying  
10:00 static judging  
Sunday, 9:00 pilots meeting, 9:30 to 2:00 open flying  
2:00 awards presentation, 3:00 see you next year !!

### Public Invited !

See, Full size vintage and modern gliders, Hot air balloon & Hotdogs



All model industry vendors welcome !

Entry fee \$25.00 All entrants must have a current AMA card ! (no exceptions!!)

For information call: Rick Briggs 310-433-6327 w/o, fax 310-434-0155  
Email Rick Briggs 75754.1422@compuserve.com  
Dennis Brandt 714-821-4181 or

### Sailplane Homebuilders Association (SHA)

A Division of the Soaring Society of America



The purpose of the Sailplane Homebuilders Association is to stimulate interest in full-size sailplane design and construction by homebuilders. To establish classes, standards, categories, where applicable. To disseminate information relating to construction techniques, materials, theory and related topics. To give recognition for noteworthy designs and accomplishments.

SHA publishes the monthly *Sailplane Builder* newsletter. Membership cost: \$15 U.S. Student (3rd Class Mail), \$21 U.S. Regular Membership (3rd Class Mail), \$30 U.S. Regular Membership (1st Class Mail), \$29 for All Other Countries (Surface Mail).

Sailplane Homebuilders Association  
Dan Armstrong, Sec./Treas.  
21100 Angel Street  
Tehachapi, CA 93561 U.S.A.



### The Vintage Sailplane Association

Soaring from the past and into the future! The VSA is dedicated to the preservation and flying of vintage and classic sailplanes. Members include modelers, historians, collectors, soaring veterans, and enthusiasts from around the world. Vintage sailplane meets are held each year. VSA publishes the quarterly BUNGEE CORD newsletter. Sample issue: \$1.00. Membership is \$15.00 per year. For more information, write to the:

Vintage Sailplane Association  
Route 1, Box 239  
Lovettsville, VA 22080



### A NEWSLETTER FOR F3J ENTHUSIASTS WITH EUROPEAN F3J LEAGUE NEWS

*Thermal Talk* is an unofficial publication designed to act as a forum to discuss, educate, and exchange information concerning FAI Class F3J. Subscription Rates: £5.00 UK, £8.00 Continental Europe, \$11.00 North America, £8.00 Rest of World.

#### Thermal Talk

Jack Sile (Editor)  
21 Bures Close  
Stowmarket, Suffolk  
England IP 14 2PL

Telephone: 01449-675190  
e-mail: Jack Sile 100307522 (CompuServe)  
Or e-mail: Jack Termtalk@demon.co.uk

### T.W.I.T.T.

#### (The Wing Is The Thing)

T.W.I.T.T. is a non-profit organization whose membership seeks to promote the research and development of flying wings and other tailless aircraft by providing a forum for the exchange of ideas and experiences on an international basis. T.W.I.T.T. is affiliated with The Hunsaker Foundation which is dedicated to furthering education and research in a variety of disciplines. Full information package including one back issue of newsletter is \$2.50 US (\$3.00 foreign). Subscription rates are \$18.00 (US) or \$22.00 (Foreign) per year for twelve issues.

T.W.I.T.T., P.O. Box 20430  
El Cajon, CA 92021

### LSF



The League of Silent Flight (LSF) is an international fraternity of RC Soaring pilots who have earned the right to become members by achieving specific goals in soaring flight. There are no dues. Once you qualify for membership you are in for life.

The LSF program consists of five "Achievement Levels". These levels contain specific soaring tasks to be completed prior to advancement to the next level.

League of Silent Flight  
10173 St. Joe Rd.  
Ft. Wayne, IN 46835



## 20<sup>th</sup> Annual Northwest Championship Soaring Tournament

September 14 & 15, 1996  
Tri-Cities, Washington

- ◆ 1 1/2 days qualifying rounds
- ◆ 1/2 day final flyoffs
- ◆ two team competitions
- ◆ Saturday night banquet



Northwest Soaring Society

CD - Tom Culmsee, (509) 375-1587

## R/C Soaring Resources

These contacts have volunteered to answer questions on soaring sites or contests in their area.

### Contacts & Soaring Groups - U.S.A.

Alabama - North Alabama Silent Flyers, Ron Swinehart, 8733 Edgehill Dr. SE, Huntsville, AL 35802; (205) 883-7831.

Alabama - Central Alabama Soaring Society, Ron Richardson (Tres.), 381 Stonebridge Rd., Birmingham, AL 35210; (205) 956-4744, e-mail: lamerat@ix.netcom.com.

Alabama - Southern Alabama & NW Florida Aerotow, Asher Carmichael, (334) 626-9141, or Rusty Rood, (904) 432-3743.

Arizona - Central Arizona Soaring League, Iain Clithero, (602) 839-1733.

Arizona - Southern Arizona Glider Enthusiasts, Bill Melcher (contact), 14260 N. Silwind Way, Tucson, AZ 85737; (602) 325-2729. SAGE welcomes all level of flyers!

Arkansas - Northwest Arkansas Soaring Society, Tom Tapp (President), RT 2 Box 306, Huntsville, AR 72740; (501) 665-2210, eve.

California - California Slope Racers, John Dvorak, 1063 Glen Echo Ave., San Jose, CA 95125; (408) 259-4205.

California - Desert Union of Sailplane Thermalists, Buzz Waltz, 3390 Paseo Barbara RD, Palm Springs, CA 92262; (619) 327-1775.

California - Inland Soaring Society, Robert Cavazos, 12901 Forman Ave., Moreno Valley, CA 92553, RCAV@aol.com.

California - Northern California Soaring League, Mike Clancy, 2018 El Dorado Ct, Novato, CA 94947; (415) 897-2917.

California - South Bay Soaring Society, Dave Burwell, P.O. Box 2012, Sunnyvale, CA 94087; ticedoff@ix.netcom.com.

California - Southern Calif. Electric Flyers, John Raley (President), 1375 Logan Ave., Costa Mesa, CA 92626; (714) 641-1776 (D), (714) 962-4961 (E), e-mail: E-Flyer@ix.netcom.com.

California - Torrey Pines Gulls, Ron Scharck, 7319 Olivetas Ave., La Jolla, CA 92037; (619) 454-4900.

Colorado - Rocky Mountain Soaring Assn., Phil Weigle, 1290 Salem St., Aurora, CO 80011; (303) 341-9256 eve.

Eastern Soaring League (VA, MD, DE, PA, NJ, NY, CT, RI, MA), Jack Cush (President), (301) 898-3297, e-mail: BadIdeas@aol.com; Bill Miller (Sec./Tres.), (609) 989-7991, e-mail: JerseyBill@aol.com; Michael Lachowski (Editor), 448 County Rt 579, Milford, NJ 08848, e-mail: mikel@airage.com.

Florida - Florida Soaring Society, Ray Alonzo (President), 3903 Blue Maidencane PL, Valrico, FL 33594; (813) 654-3075 H, (813) 681-1122 W.

Georgia - North Atlanta Soaring Association, Tim Foster, (770) 446-5938 or Tom Long, (770) 449-1968 (anytime).

Hawaii - Maui Island Slope Soaring Operation, MISO, Hank Vendola, 10-C Al St., Makawao Maui, HI 96768; (808) 572-5283.

Illinois (Chicago Area) - Silent Order of Aeromodelling by Radio (S.O.A.R.), Jim McIntyre (contact), 23546 W. Fern St., Plainfield, IL 60544-2324; (815) 436-2744. Bill Christian (contact), 1604 N. Chestnut Ave., Arlington Heights, IL 60004; (708) 259-4617.

Illinois (Northwest) - Valley Hawks R/C Soaring Club, Jeff Kennedy (President), 414 Webster St., Algonquin, IL 60102, (708) 658-0755, eve. or msg.

Iowa - Eastern Iowa Soaring Society (Iowa, Illinois, Wisconsin, Minnesota), Bob Baker (Editor), 1408 62nd St., Des Moines, IA 50311, (515) 277-5258.

Indiana - Bob Steele, 10173 ST Joe Rd., Fort Wayne, IN 46835; (219) 485-1145.

Kansas - Wichita Area Soaring Association, Pat McCleave (Contact), 11621 Nantucket, Wichita, KS 67212; (316) 721-5647.

Kentucky - Bluegrass Soaring Society, Frank Foster (President), 4939 Hartland Pkwy., Lexington, KY 40515; (606) 273-1817.

Maine - DownEast Soaring Club (New England area), Steve Savoie (Contact), RR#3 Box 569, Gorham, ME 04038; (207) 929-6639. InterNet e-mail <Jim.Armstrong@acornbbs.com>.

Maryland - Baltimore Area Soaring Society, Russell Bennett (President), 30 Maple Ave., Baltimore, MD 21228; (410) 744-2093.

Maryland & Northern Virginia - Capital Area Soaring Association (MD, DC, & Northern VA), Steven Lorentz (Coordinator), 12504 Circle Drive, Rockville, MD 20850; (301) 845-4386.

Michigan - Great Lakes 1.5m R/C Soaring League & "Wings" Flight Achievement Program & Instruction, Ray Hayes, 58030 Cyrenus Lane, Washington, MI 48094; (810) 781-7018.

Minnesota - Minnesota R/C Soaring Society, Tom Rent (Contact), 17540 Kodiak Ave., Lakeville, MN 55044; (612) 435-2792.

Missouri - Independence Soaring Club (Kansas City area, Western Missouri), Edwin Ley (Contact), 12904 E 36 Terrace, Independence, MO 64055; (813) 833-1553, eve.

Missouri - Mississippi Valley Soaring Assoc. (St. Louis area), Ken Trudeau, 3033 Plum Creek Dr., St. Charles, MO 63303; (314) 926-3537.

Nebraska - B.F.P.L. Slopers, Steve Loudon (contact), RR2 Box 149 El, Lexington, NE 68850; (308) 324-3451/5139.

Nebraska - S.W.I.F.T., Christopher Knowles (Contact), 12821 Jackson St., Omaha, NE 68154-2934; (402) 330-5335.

Nevada - Las Vegas Soaring Club, Jim Allen (President), 7117 Caprock Cir., Las Vegas, NV 89129, ph (702) 658-2363, fax (702) 658-1998.

New Jersey - Vintage Sailplane R/C Association, Richard G. Tanis (President/Founder), 391 Central Ave., Hawthorne, NJ 07506; (201) 427-4773.

New York, aerotowing Long Island Area, Robin Lehman, (212) 744-0405.

New York, aerotowing Rochester area, Jim Blum and Robin Lehman, (716) 367-2911.

New York - (Buffalo/Niagara Falls area) - Clarence Sailplane Society, Lyn Perry (President), (716) 655-0775; e-mail: perry@staff.sunyerie.edu; Jim Roller (Competition Coordinator), (716) 937-6427.

New York - Long Island Silent Flyers, Stillwell Nature Preserve, Syosset, NY, Joe Coppola (President), (516) 798-1479, or Taylor Fiedlerlein (VP), (516) 922-1336.

New York - Syracuse area, Central NY Sailplane Group, Dave Zintek, Minoa, NY, (315) 656-7103, e-mail: Zintek@aol.com.

North Carolina - Aerotowing, Wayne Parrish, (919) 362-7150.

Northwest Soaring Society (Oregon, Washington, Idaho, Montana, Alaska, British Columbia, Alberta), Roger Breedlove (Editor), 6680 S.W. Wisteria Pl, Beaverton, OR 97005; (503) 646-1695 (H) (503) 297-7691 (O).

Ohio - Cincinnati Soaring Society, Chuck Lohre, 3015 Beaver Ave., Cincinnati, OH 45213; (513) 731-3429, lohre@iac.net, http://www.iac.net/~lohre.

Ohio - Dayton Area Thermal Soarers (D.A.R.T.S.), Walt Schumoll, 3513 Pobst Dr., Kettering, OH 45420, (513) 299-1758.

Ohio - Mid Ohio Soaring Society (MOSS), Hugh Rogers, 888 Kennet Ct., Columbus, OH 43220; (614) 451-5189, e-mail: tomnagel@freenet.columbus.oh.us, http://chaos.fullerton.edu/~jcclark/skypilot.

Oklahoma - Central Oklahoma Soaring, George Voss, (405) 692-1122.

Oregon - Southern Oregon Soaring Society, Jerry Miller, 3431 S. Pacific Hwy, TRLR 64, Medford, OR 97501, e-mail: jmill@cdsnet.net, ph/fax (541) 535-4410.

Tennessee - Memphis Area Soaring Society, Bob Sowder, 1610 Saddle Glen Cove, Cordova, TN 38018, (901) 751-7252, FAX (901) 758-1842.

Tennessee - Tullahoma (Southern Middle Area), Coffee Airfoilers, Craig Logan, 147 Stillwood Dr., Manchester, TN 37355, (615) 728-5446, jclagan@edge.net.

Tennessee - Soaring Union of Nashville, Terry Silberman, PO Box 17946, Nashville, TN 37217-0946, (615) 399-0846.

Texas - Texas Soaring Conference (Texas, Oklahoma, New Mexico, Louisiana, Arkansas), Gordon Jones, 214 Sunflower Drive, Garland, Tx 75041; (214) 271-5334.

Utah - Intermountain Silent Flyers, Bob Harman, (801) 571-6406. "Come Fly With Us!"

Virginia - Appalachian Soaring Association, Virginia's Southwest (Bristol area), Greg Finney, 266 Plumb Alley West, Abingdon, VA 24210; (540) 628-4469 (H), (540) 676-3788 (W), (540) 676-3094 (fax).

Virginia - Tidewater Model Soaring Society, Herk Stokely, (804) 428-8064, email: herkstok@aol.com.

Washington - Seattle Area Soaring Society, Waid Reynolds (Editor), 12448 83rd Avenue South, Seattle, WA 98178; (206) 772-0291.

### Outside U.S.A.

Australia - Southern Soaring League, Inc. (SSL), Mike O'Reilly, Model Flight, 47 Maple Ave., Keswick SA 5035, Australia. Phones: ISD+(08) 293-3674. ISD+(08) 297-7349. ISD+(018) 082-156 (Mobile). FAX: ISD+(08) 371-0659.

Canada - Greater Niagara Area Thermal Soarers (GNATS), Flat Field Soaring & Aerotowing, Gerry Krught, (905) 934-7451 or Don Smith, (905) 934-3815.

Canada - MAAC Men Gliding Club, Jim Holland, 168 Verona Dr., Winupeg, Manitoba, Canada R2P 2R8; (204) 697-1297.

Canada - Southern Ontario Glider Group, "Wings" Programme, dedicated instructors, Fred Freeman, (905) 627-9090, or Bill Woodward, (516) 653-4251.

England (Thermal Talk & Europe), Jack Sile (Editor), 21 Bures Close, Stowmarket, Suffolk, IP14 2PL, England; Tele. # 0449-675190.

England (southwest) - Sean Walbank, Woolcombe Hays, Melbury Bubb, Dorchester, Dorset, DT2 0NJ, phone 01935-83316.

Hong Kong - Robert Yan, 90 Robinson Road, 4th Floor, Hong Kong; (852) 25228083, FAX (852) 28450497, yan@hkstar.com.

Japan - Dr. Paul "Sky Pilot" Clark, 2-35 Suikoen Cho, Hirakata Shi 573, Osaka Fu, Japan; IAC+(81) 720-41-2934, fax: IAC+(81) 6-954-4144, e-mail: 76055.3546@compuserve.com, http://chaos.fullerton.edu/~jcclark/skypilot.

Scotland - Ron Russell, 25 Napier Place, South Parks, Glenrothes, Fife, Scotland KY6 1DX; Tele. # 01592 753689.

### BBS/Internet

Internet - Email list/resource of RC soaring related folks, including US and international club contacts, vendors, kit manufacturers/distributors, software, equipment and supplies. Also a resource for aeromodelling related WEB sites on the Internet. Contact Manny Tau at taucom@kaiwan.com, or on CompuServe: 73617,1731.

Internet soaring mailing listserve linking hundreds of soaring pilots worldwide. Send a msg. containing just the word "subscribe" to soaring-request@airage.com. The "digestified" version that combines all the msgs. each day into one msg. is recommended for dial-up users on the Internet, AOL, CIS, etc. Subscribe using soaring-digest-request@airage.com. Post msgs. to soaring@airage.com. For more info., contact Michael Lachowski at mike@airage.com.

The Frequent Flier's Info. Hot Line, San Francisco Bay Area - Box 1 (lost & found airplanes, helpful tips, upcoming events), Box 2 (questions), Larry Levstik, (415) 924-4490.

### Seminars & Workshops

Free instruction for beginners on construction & flight techniques, week-ends (excl. contest days), "AJ" Angelo, South Bay Soaring Society (San Jose area), (415) 321-8583.

## GULF COAST SCALE/AEROTOW MEET

October 5 & 6, 1996

**SITE 8  
Pensacola, Florida**

For further information, contact:  
Asher Carmichael, (334) 626-9141  
ACarmic985@aol.com  
Rusty Flood, (904) 432-3743

The Pensacola Aeromodelers is pleased to announce the 1st Annual Gulf Coast Scale/Aerotow Meet. This event promises to be an outstanding opportunity for pilots from around the southeast to meet, exchange ideas, and improve our skills. With interest in scale sailplanes & airtowing growing rapidly, this is a chance to experience this wonderful aspect of soaring first hand.

Site 8, located in beautiful Pensacola, Florida, is a 640 acre U.S. Navy practice field, grass covered and fully maintained. This premier site is used regularly by local fliers for thermal duration, scale/aerotow, and free flight activities.

For those who have not tried aerotow or scale soaring, come and experience the thrill. There will be one or two sailplanes available for those who want to give it a try. Or, you can equip your own open class, alleron ship with a tow release and bring it along. We'll get you some air time if you are an experienced R/C sailplane pilot. Towplanes are welcome, if you have one.

Robin Lehman of Sailplanes Unlimited, LTD., will be on hand to teach and coach us along. His input and expertise will offer something for the beginner & expert alike.

While this first meet is a fun fly, there will be trophies: Pilot's Choice (Vintage & Modern), & Longest Duration Flight. Rules & competition format will be announced at the Pilot's Meeting. AMA insurance & membership is required; this is a sanctioned event. A \$10.00 per pilot entry fee will be charged the day of registration.

Pensacola has much in the way of entertainment for the family; beautiful beaches, a great zoo, and wonderful shopping are close to the flying field. Gambling casinos along the Mississippi gulf coast are 1 1/2 hours away, and the Naval Aviation Museum is an unmatched, 3 dimensional journey: the beginnings of aviation, present day and beyond.

### Reference Material

Still a few copies available of some issues of the printed transcripts of talks given on RC Soaring at the Previous Annual National Sailplane Symposium. Prices reduced to clear out stock. Talks were on thermal meteorology, flying techniques, hand launch, cross-country, plane design, airfoil selection, vacuum bagging, plastic coverings, flying wings, etc., etc. Send SASE or call for flyer giving details. Many copies of most recent (1992) transcript left. Clubs have found them good for raffle prizes, gifts, etc. Al Scidmore, 5013 Dorsett Drive, Madison, WI 53711; (608) 271-5500.

"Summary of Low-Speed Airfoil Data - Volume 1". Michael Selig wind tunnel testing results. \$25 USA (includes postage), \$29 surface outside USA, \$31 air Western Hemisphere, \$38 air Europe, \$42 air all other countries. Computer disk, ascii text files (no narrative or illustrations), is \$15 in USA, \$16 outside USA. Source for all "SoarTech" publications, also. Contact Herk Stokely, 1504 N. Horseshoe Cir., Virginia Beach, VA 23451. Phone (804) 428-8064, email: herkstok@aol.com.

### Classified Note

Please note that the cut-off date for classified & display ads is the 1st of the month.

### THE GREATER NIAGARA AREA THERMAL SOARERS (GNATS)

Will Host a  
**SCALE FUN FLY** for  
**SAILPLANES & MOTORGLIDERS**  
**SEPTEMBER 21 & 22, 1996**  
Approx. 30 Miles West of Buffalo/Ft. Erie  
Niagara Peninsula, Canada

Emphasis will be on aerotowing, although winches will be available for those wishing to launch smaller size sailplanes. Bring your 3M (118") or larger sailplane with releasable nose hook and allerons. Enjoy the thrill of being launched behind a skilled tug pilot; join the growing aerotow movement. 1996 MAAC and/or AMA membership required. \$6 pilot registration fee.

We are expecting Robin Lehman, Sailplanes Unlimited, Ltd., and Jim Blum to be on hand, with their 1/3 and 1/2 scale gliders & lugs, to demonstrate and instruct in the art of aerotowing.

For additional information contact:

**Gerry Knight**, 360 Bunting Rd.,  
St. Catharines, Ontario, Canada L2M 7L6  
(905) 934-7451

**Don Smith**, 998 Lakeshore Rd., Niagara-on-the-Lake, Ontario, Canada L0S 1J0  
(905) 934-3815

### Schedule of Special Events

Date	Event	Location	Contact
July 13-14	SOAR 96 (Unl., 2M)	Redmond, WA	Jim Thomas, (206) 488-2524
July 13-14	Flatland Open	Hillsdale, KS	Richard Kohout, (913) 897-3104
July 16-21	Canadian R/C	Ottawa, Ontario	
Soaring Nationals - Write: SOAR NATS 96, 18C Arnold Dr., Nepean, Ontario, Canada K1A 0K2			
July 20-21	Large Airplanes w/ Airtow (Gliders & Motor) - Airfield Erbach	Ulm, Germany	Dieter Bulling, 011-49-7305 21359 fax: 011-49-7305-24162
July 20-21	XC & Pig Roast	Omaha, NE	Christopher Knowles, (402) 330-5335
July 21	HL Contest	Riverside, CA	Robert Cavazos, (909) 485-9413
July 26-28	SHA Eastern Workshop	Elmira, NY	Information, (301) 779-7984
July 27	Wasatch Thermal Contest	Salt Lake City, UT	Bob Harman, (801) 571-6406
Aug. 3-4	2m, Unl.	W. Palm Beach, FL	Jim McCudden, (407) 967-8909
Aug. 3-4	Unlimited Soaring	Kirkville, NY	Dave Zintec, (315) 656-7103
Aug. 6-13	Viking Race	Hvolsvöllur, Iceland	Jón V. Gíslason, + 354 587 6789
Aug. 10-11	Std & Unl	Lexington, KY	Jack Young, (606) 873-5589
Aug. 10-11	Thermal Grabber (Unl., 2M)	Redmond, WA	Jim Thomas, (206) 488-2524
Aug. 11	Appleton Sailplane 96	Appleton, WI	Lee Murray, (414) 731-4848
Aug. 24-25	I.G.C. Annual Scale	Adelboder, Switzerland	Jack Kagi, 011-41-01-926-2187
Slope Soaring Festival-Swiss Alps			
Aug. 30-Sept 2	2m, Unl., Fun, XC	Williston, FL	Ken Goodwin, (904) 528-3744
Aug. 30-Sept 1	T.N.T.	Dallas, TX	Henry Bostick, (214) 279-8337
Aug. 31-Sept 2	SHA Western Workshop	Tehachapi, CA	Dan Armstrong, (805) 822-8852
Aug. 31	SASS HL #2	Redmond, WA	Jim Thomas, (206) 488-2524
Sept. 13-15	Scale Airtow Meeting	Röttingen, Germany	Local Model Club or Hobby Shop
Sept. 14-15	Airtow Fly-in - Plettenberg	Plettenberg, Germany	Local Model Club or Hobby Shop
Sept. 14-15	20th Annual NW Championship Soaring Tournament	Tri-Cities, WA	Tom Culmsee, (509) 375-1587
Sept. 14-15	Southern California Scale Glider Festival - Cal. State Dominguez Hills	Carson, CA	Rick Briggs, (310) 433-6327 75754.1422@compuserve.com
Sept. 15	2M Postal	Everywhere	Steen Hoej Rasmussen, Denmark (Contact RCSD for forms.)
Alternate: Sept. 29			
Sept. 20-22	Last Fling of Summer	Broken Arrow, OK	Dale Nutter, (918) 492-3760
Sept. 21-22	Scale Fun Fly	St. Catharines, Ontario, Canada	Gerry Knight, (905) 934-7451
Sept. 21-22	2m, Unl.	Orlando, FL	Don Smith, (905) 934-3815
Sept. 21-22	Fall Thermal Soaring	Tullahoma, TN	Hank McDaniel, (407) 831-3688
Oct. 4-6	Aerotow Fly-In	Pensacola, FL	Chuck Anderson, (615) 455-6430 Asher Carmichael, (334) 626-9141 Rusty Flood, (904) 432-3743 Paul Siegel, (513) 561-6872
Oct. 6	Fall "Intergalactic" RCHLG Championship	Cincinnati, OH	Chuck Lore, (513) 731-3429
Oct. 19-20	CSS STD & UNL (Sanct.)	Williston, FL	Bob Wargo, (813) 938-6582
Oct. 19-20	2m, Unl.	Orlando, FL	Ed White, (407) 321-1863
Nov. 29-1	Tangerine	Orlando, FL	
Various*	1.5m Hi Start Contests	Washington, MI	Ray Hayes, (810) 781-7018
*July 20 & Aug. 10, 24, 31			



## 14TH ANNUAL HAND LAUNCH CONTEST

Riverside California

Inland Soaring Society July 21st 1996  
CD - Robert Cavazos (909) 485-9413

**THANK-YOU FOR  
KEEPING  
YOUR  
LISTINGS  
UP TO  
DATE!!**

### Classified Advertising Policy

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Personal ads are run for one month and are then deleted automatically. However, if you have items that might be hard to sell, you may run the ad for two months consecutively.

### For Sale - Business

**GLIDER RETRACTS** - high quality, 1/5, 1/4, 1/3 scale made in U.S.A. 1/4 are standard or heavy duty. Contact Bill Liscomb, 7034 Fern Place, Carlsbad, CA 92009; (619) 931-1438.

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**PRECISION AMAP WING CUTTER**, replacement parts, and service. AMAP Model Products, 2943 Broadway, Oakland, CA 94611. Butch Hollidge, (510) 451-6129, or FAX (510) 834-0349.

**A.M.P. Aerial Model Products**, sport, slope, race prototypes - all airfoils. 60" Del Valle Snake, 94" H&K Cobra, AMAP Flair, Kevin Cutler's full house Davenport Monitor. All race tested. Butch Hollidge, (510) 680-0589, eve, California.

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**PARACHUTES: \$10.** Dale King, 1111 Highridge Drive, Wylie, TX 75098; (214) 475-8093.

### For Sale - Personal

Immaculate, F3B, 117" Spectrum, built by Ron Vann, Futaba 5102 servo flaps / JR 3021 elevator-rudder / Air: 401 ailerons. Hollow core wing set-up w/ top skin hinge and wiper sealed control surfaces. RG-15 foil, 5/8" carbon rod, blue bottom, white top, never been crashed or scratched... Hans Wiederkehr, (516) 696-3361, New York.

Scale: Rhombussard, 1/5 scale (1933), 112.5 w.s., flown twice, scratch built, contest winner 1994; GO-1 Wolf, 1/4 scale (1935), 130" w.s., scratch built, never flown; DFS Reiber, 1/6 scale (1937), 120" w.s., never flown, 1989 kit w/ fiberglass fuse. All of these gliders are close to museum quality. Reducing inventory. To be sold as a package (3): \$1300.00 w/ o servos, or \$1600.00 w/ servos. Greg Weatherford, (619) 568-2224, California.

RnR Synergy III SE, latest production, all molded, white w/ black bottoms, includes extras, NIB... \$565.00. Rob, (619) 930-0616, So. California.

Alcyone kit, 3m, fiberglass fuselage... \$140.00. JR347 radio w/ 4 micro 341 servos, brand new, in the box, never used... \$350.00. John, (219) 436-1677, Indiana.

Super V 106" Triad w/ 2 piece tails and 6-341's... \$750.00 or w/ o servos... \$500.00; Super V 2m, 2 piece wing, extra tails, 4-341's, 2 hs80... \$500.00 or w/ o servos... \$275.00; Super V 110", extra tails, 3 wings (110"-7037, 112"-7012, 118"-mod. 7037), w/ 4 341's, 2 141's... \$700.00; Monarch, full house w/ 2 501's... \$125.00; Levoe Design Varmint speed 400 pylon racer w/ motor and 1 hs80... \$125.00; JR388 w/ all stuff... \$375.00; JR347... \$275.00; Air Traveler (glass) travel case from Skip Miller... \$150.00. OR, \$2400.00 takes 'em all! Shipping negotiable. Pictures available via the net. David Beardsley, (206) 419-8083, Washington, dbeardsl@oz.net.

Graupner Ventus C-NIB glass fuse, pre-sheeted 3.4 - 3.7m wings, includes Graupner retract and Graupner double tech spoilers... \$350.00 + shipping; Robbe Arcus, electric or slope, NIB plus fuse w/ pre-sheeted wing... \$100.00 + shipping; Probe, NIB, CNC molded, 129" E-214, 6 servos... \$750.00 + shipping; Super V, 100", factory ARF, NIB w/ fiberglass shipping container... \$580.00 + shipping; Jeff, (303) 696-8654, after 4pm, MST, Colorado, or jBurg@aol.com.



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R/C Soaring Digest

### Hobby Shops that Carry RCSD

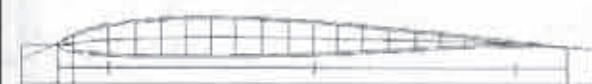
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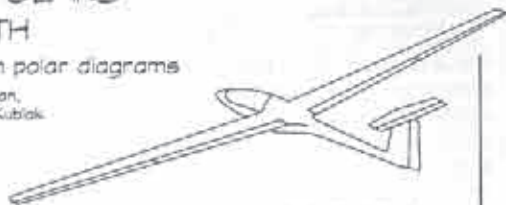
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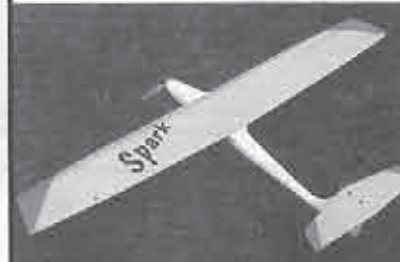
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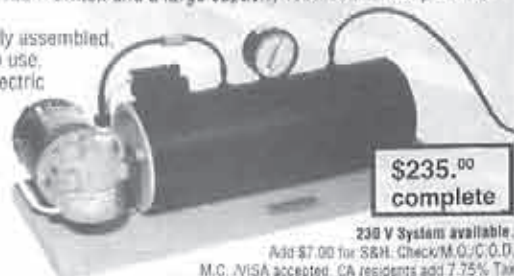
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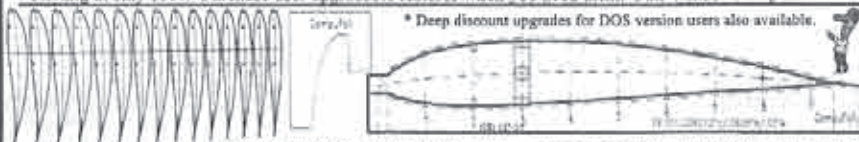
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Wingspan : 2 800 mm  
 Airfoil : RG12  
 Length : 1 230 mm  
 Wing area : 54 dm<sup>2</sup>  
 Airframe weight : 1 300 g (Glider);  
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 Functions : ailerons, rudder,  
 elevator, airbrakes  
 Power : 10-12 cells (Elektro version)

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- Complete accessory pack.

Wingspan : 3 600 mm  
 Airfoil : RG8  
 Length : 1 400 mm  
 Wing area : 69 dm<sup>2</sup>  
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 Airfoil : RG15  
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 1 050 mm (glider); 950 mm  
 (Elektro)  
 Wing area : 34,5 dm<sup>2</sup>  
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- Complete accessory pack.

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 Length : 1 420 mm  
 Wing area : 63 dm<sup>2</sup>  
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- Rainbow airbrush design on wing and stab.
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 Airfoil : RG15 8,5%  
 Length : 980 mm  
 Wing area : 33,5 dm<sup>2</sup>  
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 Power : 7-16 cells

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- Fiberglass/epoxy moulded T stab.
- Pre-hinged ailerons and elevator.
- Complete accessory pack.

Wingspan : 1 690 mm  
 Airfoil : RG15 8,5% mod  
 Length : 985 mm  
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 Airframe weight : 595 g  
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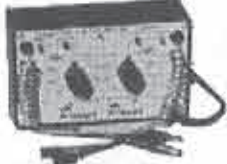
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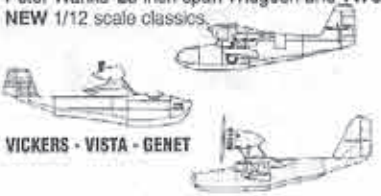
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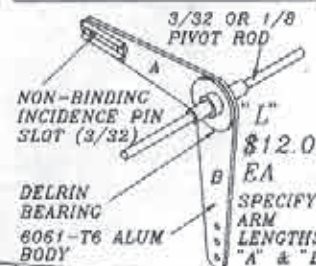


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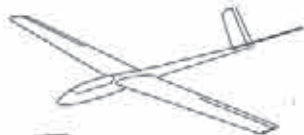
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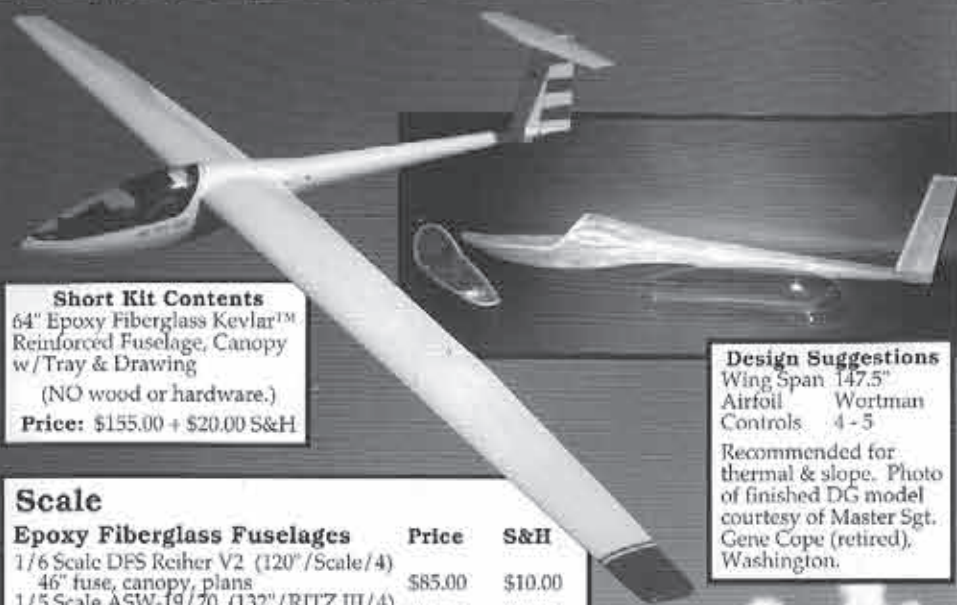
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Epoxy Fiberglass Fuselages	Price	S&H
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54" fuse, canopy, plans	\$85.00	\$10.00
1/5 Scale Nimbus (159"/Wortman/4-5)		
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40" fuse, plans	\$80.00	\$10.00
1/5 Scale ASW-17 (135"/Mod. Eppler/4-5)		
49" fuse, canopy, tray, dwg.	\$90.00	\$10.00
1/5 Scale Orlice (135"/E392/3-4)		
49" fuse, canopy, tray, dwg.	\$80.00	\$10.00
1/5 Scale Ornith (142"/E392/3-4)		
49" fuse, canopy, tray, dwg.	\$90.00	\$10.00
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42" fuse, canopy, plan	\$80.00	\$10.00
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58.5" fuse, canopy, frame	\$155.00	\$20.00
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51" fuse, plans	\$80.00	\$10.00
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# THE CONDOR

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BY MODELERS, FOR MODELERS

SPECS:  
WING SPAN  
918 SQ. IN.  
AIRFOIL  
SD7037  
WEIGHT  
62-66 OZ.  
WING LOADING  
9.7 - 10.3 OZ./SQ. FT.

★ VISA ★ MASTERCARD ★ AMERICAN EXPRESS ★ DISCOVER ★

The Condor is designed by Mark Allen, who is considered one of the best model sailplane designers in the United States, if not the world. Mark has taken all of his previous experience in competition thermal duration flying, plus all the knowledge he has gained from his earlier contest and sport designs, to design the Condor. Mark Allen's previous planes, to name only a few, are: Falcon 880 and 800, Falcon 600 Swift, Thermal Eagle, Vulcan, Night Hawk, Sky Hawk, Electric Hawk, Falcon 550E, Rocket, Pocket Rocket and, of course, the molded, world championship F3B Eagle. By taking the best of these designs and the new construction techniques available today, Mark has come up with what we feel, is the absolute best open-class sailplane available.

The wings are made in America by Ron Vann, owner of Spectrum Enterprises. Ron is also an avid competitor fier, and is considered to be one of the best wing manufacturers in the industry. Taking his years of experience in manufacturing wings, Ron has produced wings and stabs for the Condor that we feel are world class. Starting with the spar that Mark Allen designed, Ron uses only the best and most accurately cut foam cores available. He then uses hand-picked beech from Kennedy Composites, which is applied with West Systems epoxy.

## CONDOR Tomorrow's Sailplane, Technology Today

This is after he has first reinforced the wing with carbon fiber and fiberglass. The servo wells are routed out, as are the flaps and ailerons. What this means for the sailplane enthusiast is a minimum amount of work before getting the sailplane into the air. The wing is light but strong enough to take "podal to the metal" launches. Also available as an option is Ron's unique internal capped hinge-line. This means even less work for the modeler.

The fuselage is made by Steve Hug, owner of the Fuse Works. Steve is another master at what he does. Fuse Works makes what we consider to be the best fuselage in the business. Steve uses only the best fiberglass and Kevlar™ available. All fuselages are manufactured using the West Systems epoxy. Steve's fuselages have the least amount of pinholes, if any, that we have seen. In fact, the fuselage is so pretty that many people do not paint it. The fuselage is extremely light and yet strong enough for very aggressive flying and landing. For those with very little

building time, and those who don't like to paint, there is an optional pre-painted, in the mold, fuselage which includes a unique carbon fiber canopy.

All kitting is done at Slegers International's new and larger manufacturing facilities. We have spared no time or expense with supplying the modeler with the best materials available. The kit contains pre-sheathed wings and stabs by Ron Vann, fiberglass and Kevlar™ reinforced fuselage by Steve Hug, 3/8" diameter titanium wing rod from Kennedy Composites, optional 3/8" diameter steel wing rod by Squires Model Products, control horns and tow hook by Ziegelmeyer Enterprises, pushrods by Sullivan, or optional one piece steel rods. All wood is custom cut. Specially cut basswood of 60" is supplied to eliminate splices in leading edge, flaps and aileron capping. All balsa is hand picked, light to medium, to ensure light weight wing tips, stab tips, and rudder. Aircraft ply is used for the pre-fit servo tray and towhook block. A comprehensive instruction manual is included.

The Condor, designed by Mark Allen, wings by Ron Vann, fuselage by Steve Hug, and kitted by Slegers International, we feel is the best open-class, thermal duration sailplane available, at an affordable price of \$395.00 plus S&H.

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