

FLYSWAPPER

CLASSIFIED ADVERTISING:

RC Soaring Digest will take classified advertising from both individuals and from businesses. The INDIVIDUAL RATE will be 10¢ per word; the BUSINESS RATE will be 25¢ per word. Addresses free. Count only the words in the main ad. Copy must be typewritten and prepayment by check is required. Please submit all advertising copy before the second week of the prior month. For example, February issue ads must be in before January 15th. Checks payable to RCSD.

DISPLAY ADVERTISING:

RC Soaring Digest will take display advertising. The rate will depend upon the number of issues in which your ad is to appear, and the following schedule is based on frequency of appearance in RCSD. We suggest, to start, that all ads be typeset and ready for camera. Ad sizes and formats are as shown in the table below, with the requested dimensions and formats. Full-page, half-page, quarter-page, and eighth-page sizes are available.

Note: All ads, classified or display, will be half price to all clubs and not-for-profit organizations. Ads received too late for publication in the desired issue will be held for the subsequent issue, unless requested otherwise by the advertiser. Publisher takes no responsibility for the accuracy, truthfulness, or credibility of offered merchandise.

1 issue	3 issues	6 issues	9 issues	12 issues	Sz.	1/4	1/8
\$19	\$9	\$8	\$7	\$6	1/8		
\$20	\$18	\$16	\$14	\$12	1/4	1/2	
\$40	\$36	\$32	\$28	\$24	1/2		
\$80	\$72	\$64	\$56	\$48	1		

Note: Dimensions of ads - 1/8th page - 1/4th-page - 1/2-page

Full: 12"H x 7"W 3"H x 3.5"W 6"H x 3.5"W 6"H x 7"W

RC Soaring Digest
P.O. Box 186
Peterborough, N.H.
03458

POSTMASTER: ADDRESS CORRECTION REQUESTED

Soaring RC Digest

VOLUME 1 NO. 2

FEBRUARY 1984

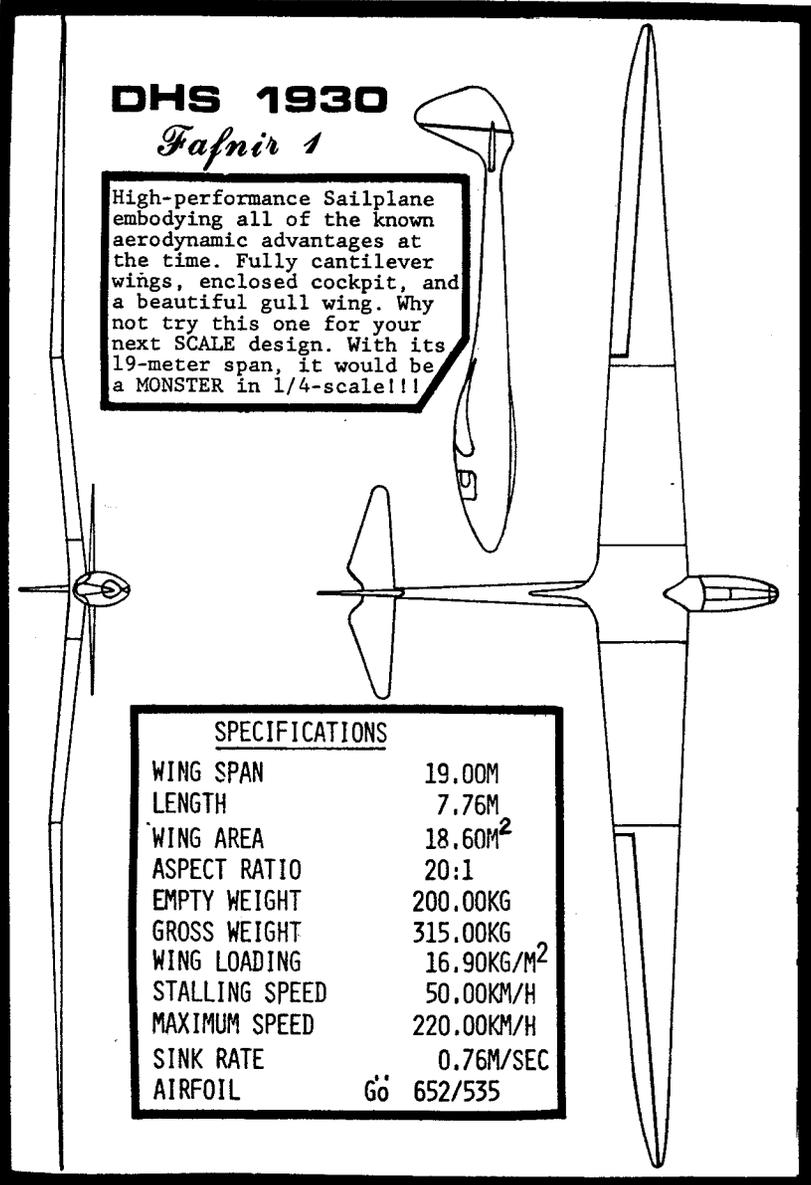
DHS 1930

Fafnir 1

High-performance Sailplane embodying all of the known aerodynamic advantages at the time. Fully cantilever wings, enclosed cockpit, and a beautiful gull wing. Why not try this one for your next SCALE design. With its 19-meter span, it would be a MONSTER in 1/4-scale!!!

SPECIFICATIONS

WING SPAN	19.00M
LENGTH	7.76M
WING AREA	18.60M ²
ASPECT RATIO	20:1
EMPTY WEIGHT	200.00KG
GROSS WEIGHT	315.00KG
WING LOADING	16.90KG/M ²
STALLING SPEED	50.00KM/H
MAXIMUM SPEED	220.00KM/H
SINK RATE	0.76M/SEC
AIRFOIL	Gö 652/535



It doesn't seem possible, but here it is 'February' already, and issue No. 2 of RC Soaring Digest is being prepared. Today is New Year's Day - 1984, and what a beautiful day it is! Sunny, blue skies, and relatively warm-for the Northeast, that is- with temperatures hovering between 25 and 30 F. I went to the airport today, looking to see if anyone was flying...and, of course, they were; lots of them up there shooting landings, doing take-offs, practicing touch-and-goes, and just sight-seeing. The wind is calm to light, and less than 10 mph; in other words, an ideal day. The ground is covered with about a foot of snow, and the snow has been rained on and subsequently frozen to make a rock-hard, slippery, and very uneven surface. That doesn't seem to bother the cross-country skiers or the sled riders because they are out in numbers. The only problem is that the glider field where I fly is impossible ... and impassable; so here I am, thinking about soaring, but not doing any. Well, what the heck, I'll write about it then.

THE GREATEST SHOW ON EARTH? Well, maybe not quite, but it's surely a GREAT SHOW by any standards. Am I referring to Ringling Brothers, Barnum and Bailey? No - not by a long shot - but the show I'm referring to is still an extravaganza, complete with sideshow, main ring, lights, color and action. It is, as you may have anticipated THE WRAMS SHOW, being held February 25th and 26th at the convention center in White Plains, New York. If you can possibly arrange to attend that show, do so because it's a modeler's paradise. You'll see all the latest designs, the most recent gadgets and improvements, the best of covering materials and paints, and literally thousands of planes of all sizes, ranging from the Peanut Scale size all the way to 1/4-scale sailplanes. You'll see your friends there too, mingling with the great, the near-great and the ordinary. A fun time for all and the harbinger of spring for most of us in the frozen north. I'll see you there!

Happy Soaring,

Jim
Jim Gray, Editor & Publisher

WINGTIPS

3

Red Costlow of Higginville, MO sent in the following helpful hints.

Clogging CA bottles. Well, my solution is this: I use 2-oz. Jet or Super Jet because of the spout. I clip off the end and put vaseline (a thin coat) all around the spout. After awhile, the tip will finally clog. All I do is take a pair of pliers and lightly squeeze the top. The dry CA will slip right off. Then, apply another coat of vaseline. Do this until the bottle is empty. At the end, the bottle is clean and as good as new. I use the empties to store Titebond, RC-56 (great for canopies) or any other glue. It works great, and - surprisingly - you don't have to put the vaseline on very often. Once in a great while the tip clogs. All I do then is screw the cap off and push a piece of music wire through the plugged hole, and - presto- good as new. I must have a dozen good-as-new CA bottles, ready for whatever I want to put into them. Try it, you'll like it.

*** **

Laying out an airfoil. I lay out a grid 20" long, carefully inked. I put this on a light table with tracing paper over it. (For those without a light table, use a window, and tape the grid and tracing paper to the glass. It's not as convenient, but it works - ed.). I then place the ordinates on the tracing paper as a series of dots...and then connect the dots using a pencil or pen and a curve. Because of the size, the airfoil is fairly easy to lay out on a 20" grid. Then, I use our "stat" machine to reduce it to the proper size, and I get a very accurate airfoil. I've also put the inked tracing on a copy stand and photographed it. Then, when the negative is developed, I can put it in an enlarger and make a print of the exact size I want. By varying the enlargement from the negative, I can print all of the wing rib sizes I need. Now, for a final trick: I use the "cutout" or negative rib at the nose to glue to a piece of plywood, which I cut out to make a template for shaping the leading edge to the proper airfoil shape. BY THE WAY, does anyone out there have a really good way to accurately shape a leading edge to the exact profile needed? What I would like to see is a "how to" on matching the nose radius from about the "0" point back to about the 1.25% point of the chord.

*** **

(Well, Red, I'm certainly no expert, but what I have done is to cut the desired nose radius in negative form, using the exact rib outline, into a block of balsa, making it about 3" or 4" thick. Then, I line the cut-out with sandpaper, gluing it in place with a suitable adhesive, like rubber cement or spray-on adhesive. I use this to final-sand the leading edge. In a pinch, I use a block of foam, which seems to work just as well. Usually, this works ok for wings that are not greatly tapered in thickness from root to tip. It's perfect, of course, for 'plank' wings where the nose radius stays the same all the way to the tip...ed.)

*** **

Foam Cutting. Does anyone out there have any neat ideas for cutting foam wing cores alone, without a partner? If so, please let me know how it can be done easily and accurately. - ed.

*** **

SOARCES

Don Goughnour of Red Lion, PA has a nice line of winches, line, wing rods, and other goodies for the needy ... like spoilers of the European kind. RFD#2, Box 112, Red Lion, PA 17356 will do it.

Eastern Soaring Supplies is an excellent source for the many things you will need. Bob McLinden can furnish all the details. Write him at Box 437, Lemont, PA 16851.

Mike Waters, Progressive Models, 20740 Warfield, Gaithersburg, MD 20879 wrote me some time ago, mentioning that he was going to have some kits and supplies. I haven't heard from him lately. Maybe you could check this out and let me know.

Ted Davey, Davey Systems, Inc., One Wood Lane, Malvern, PA 19355 has a line of winches and retrievers that are expensive but very, very high quality...the sort of thing for a club or for a serious group of competitors. He also has line, reels, and various-sized knick-knacks to go with all the other stuff to round out a system.

SOARCES (Continued)...

Archaeopteryx Avion Associates c/o Jim Ealy (much easier to spell Ealy - ed.) P.O. Box 120, Pottstown, PA 19464 has a wide variety of things ranging from hi-starts through accessories to kits of all kinds...mostly scale. He can get you plans of almost any sailplane ever made, and can make up kits for quite a few. He will have fiberglass fuselages, too.

Jerry Slates, 2026 Spring Lake Drive, Martinez, CA 94553 has bought out the Viking line from England, and expects to have things going by early summer. Basically, Jerry does foam cores, handles a few English kits, and has drawings for scale sailplane builders. With luck, he will have about 50 different fiberglass fuselages available soon. These will cover thermal, F3B, slope and scale ships. First, though, the molds have to arrive from England by boat.

Don't forget to ask these suppliers for their catalogs. \$2.50 will do it for Slates, and \$2.00 for the rest. You will be surprised at the amount of material available through the catalogs.

*** **

PROGNOSTICATIONS

What of the future? Where are we going with RC Soaring? What kind of planes, or tasks, will we be flying? My crystal ball isn't much clearer than yours...but it's closer...so let's take a look to see what might be found in its depths. Hmm...a bit clearer now. Here it comes into focus. Aha! SCALE. Yup, that's No. 3 according to the ball (which is never wrong, of course). What's that I see, -following scale? Oh, no...not ELECTRIC. That's almost sacrilege to purists like us! You, sir, in the back; your question? Oh, F3B... let me ask the ball. Nope, no F3B in there yet. Kinda cloudy now... and there's a big - no, wait a minute, a BIG cumulus cloud..and... and...underneath it, a HUGE THERMAL AND CROSS-COUNTRY SAILPLANE. What's that, ball? Are you sure?(ball says it is always sure). Number 1 is...Thermal what? THERMAL DURATION! Okay, ball; that makes your predictions: Thermal duration in first place; cross-country in the number two spot catching up fast; scale in number three and electric ties with F3B in fourth place. There you have it, guys and gals. The crystal ball is changing now, swirling vapors of cloud...and it's clearing again...we see a gaggle of large and small sailplanes. Two-meter and open class ships seem about equally represented...and standard class seems to be on a par with straight-wing, aileron types for F3B. More and more places around the land are being found for long-distance soaring, and for goal-and-return tasks ... and here's one being shown now. It's Florida...and where is that location there?

In Eastern Soaring Lines, edited by Gordon Stratton, the ball picked up this information: AN EXCELLENT LEVEL V GOAL & RETURN SITE..

"Walt Good suggested that the Cape Coral site (not far from Fort Meyers) might be of interest to some of us who are struggling with the Level V Goal, and Return. This flying site measures 3 miles by 7 miles; is flat as far as the eye can see; has roads (unused) layed-out in a grid every mile; and obviously has lots of good (no pun originally intended) thermal activity. I spoke to Frank Collins (an active local sailplaner, as my #1 designer, Joe Ruth) at Walt's suggestion, and Frank confirmed the willingness of local people to co-operate with those of us who might wish to travel to Cape Coral for goal work. These are a few of his comments...

- * Saturdays for sailplanes, Sundays for power. The site is used during the week, but local people will reserve frequencies for us, if we clear everything in advance. Be sure to do this, since it could take at least a week of trying (some pretty good fliers have needed years).
- * The temperature this time of year (spring) is around 80 degrees. It will soon be in the 90s. There is usually very little wind (under 10 mph). Although the hurricane season extends from June to November, the last hurricane passed through the area 10 years ago. There is no cover anywhere, so you must wear a good hat and take **LOTS** of drinks. (Frank says even then you will never have to go to the bathroom--the liquid will all be consumed through perspiration).
- * It is off-season for the motel operators, so motel rooms are cheap (Walt's room cost him \$23).
- * You will be 200 miles from Disney World, in case you want to take the family along, and leave them there while you get down to some serious flying.

If any of this sounds interesting to you, you may contact Frank Collins at...443 S.E. 13th Ave., Cape Coral, FL 33904. His telephone number is... 542-6015."

MORE SOARCES...

Once again, ESL comes to our assistance, with "The Tout's Corner" bearing Gordon's inimitable stamp:

"While a few of you may consider this improper free advertising, this is a slow time of year, and you all know the quality of Terry's work (and how little he makes on it) so I am going to give him a plug as a service to **YOU**. First, Terry expects to make that quarter-scale ASW 20 fuselage, which he brought to the ESL dinner, available. While I cannot remember the raw weight, Terry says that his ship balances properly without any nose weight when the radio is installed (it does carry an 8-oz. 1200 mil battery). If you have ever built a scale ship, you will know that that fuselage has a lot of fiberglass in the nose (where it is needed) and not too much in the tail (where the weight kills you). More on this later.

"Terry has also gotten the Obechi -- as much as you need. With the considerable shipping cost figured in, Terry is selling sheets as large as 16 x 113 inches (smaller, if you wish) for \$6. Although you must use low temperature films because the .025" Obechi does not offer a sufficient heat barrier for Monokote (and you will melt the foam underneath unless you are **VERY** careful). Terry says Obechi's weight is a very constant 0.7 oz. per square foot (his 12-foot ASW 20 wings weigh 12 oz. each, with a 3-oz. spar installed (but no servos yet) To achieve the same weight with 1/16th-inch sheet, you would have to use 4-Oz. contest balsa, which would not be nearly as strong.

"Now all you have to do is contact Mike Bame for the foam cores, and you will be knee-deep in the latest technology. (As long as I appear to be giving free plugs, Mike's telephone number is (213) 828-1726, and his address is: 830 26th Street, Santa Monica, CA 90403). Mike does the best job of cutting sailplane cores that I have seen anywhere (he cuts cores for the San Fernando Valley Silent Flyers, including Alex Bowen's F3B ship). You have to provide him with templates and a layout of the wing (or stab -- I am using his stabs on three airplanes). Contact Mike for further details."

*** **

By the way, you should know that the TERRY mentioned in the above excerpt from ESL, is Terry Luckenbach, and his address is: 5460 Colony Drive, Bethlehem, PA 18017.

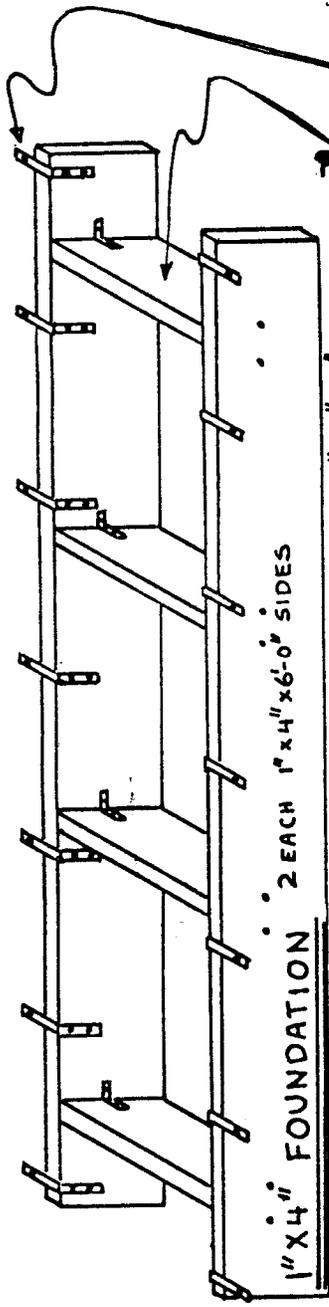
CENTERSPREAD FEATURE THIS MONTH (Roy Anderson's Building Board)

No matter how well you fly, you need a sailplane that is true, from tip to tip and from nose to tail... a ship that can be 'tuned' to conform to its very best possible potential...so you must start with one that is straight and free of warps. Everyone who builds from scratch or from a kit needs a building board...a board that is likewise true and straight; otherwise, you can't build a ship that is true to plan. Here's what Roy Anderson of the Northwest Soaring Society, out on the Pacific Coast has to say about it:

"I am one of those enthusiasts who would rather fly than build. Consequently, my planes are thrown together rather hurriedly so I can get out to fly. I suffered with the common dilemma of warped and twisted wings until about 1975. I was really trying to do a good job on a TODI (Bob Dodgson design) when the wings turned out so terrible that I had to give them away to the kids next door. In earnest, I put together "Roy's Building Board." Magically, ever since then every single one of my wings has turned out absolutely true and flat. The Austrians would be proud! Some of the wings still sit in my basement after five years, without a warp or a twist...and they have had some HARD use. I truly believe that a good building board is the most important tool in the shop. Without one, those beautiful and precision kits are doomed to failure and disappointment. The poor kit designer gets all the blame. Building true, flat wings is within the realm of the everyday Sunday flier, if he has the proper tools. The MOST IMPORTANT of these is an absolutely FLAT building board. A cure-all? YOU BET!

Roy's Building Board

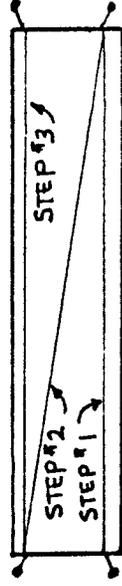
Roy Anderson



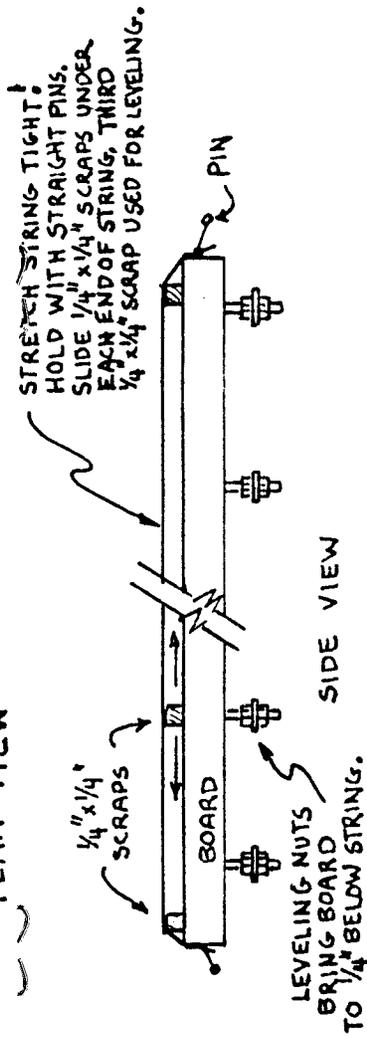
4 EACH 1" x 4" x 9" CROSS PIECES.
ATTACH TO SIDES
WITH 1" x 1" x 1/2" CORNER BRACES.
USE 4 BRACES PER CROSSPIECE
WITH BOLTS.

STRINGLINE LEVELING PROCEDURE

2 1/2" x 2 1/2" x 5/8" CORNER BRACES
HELD BY TWO SCREWS EACH
INTO FOUNDATION. BRACES
AT 12" CENTERS SUPPORT
BUILDING BOARD.



PLAN VIEW



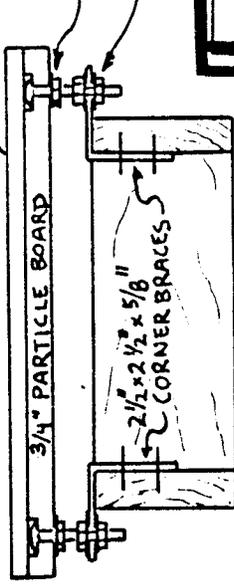
STRETCH STRING TIGHT!
HOLD WITH STRAIGHT PINS.
SLIDE 1/4" x 1/4" SCRAPs UNDER
EACH END OF STRING, THIRD
1/4" x 1/4" SCRAP USED FOR LEVELING.

SIDE VIEW

1/2" INSULATION BOARD
GLUED TO PARTICLE
BOARD AFTER ASSEMBLY
BELOW IS COMPLETE.

NUT AND WASHER SECURES
1/4" CARRIAGE BOLT TO PARTICLE BOARD.
2 NUT AND WASHER ASSEMBLIES
MOVE BOARD UP OR DOWN
AND LOCK IT IN POSITION.

BOARD DIMENSIONS
ARE 6'-0" BY 1'-3"



COMPLETED BOARD CROSS SECTION

"A MAN IS KNOWN BY HIS WORKS"
ROY ANDERSON is a perpetual competitor
for RC soaring honors in the NWSS -
the Northwest Soaring Society. He's
also a top-notch builder. Here's why.

DOING THE LSF EIGHT-HOUR SLOPE FLIGHT

by PETER CARR

THERE IS PROBABLY NO TRUTH TO THE RUMOR that it was the Devil himself who suggested the addition of the 8-Hour Slope as part of Level V of the LSF Achievement Program. However, it would do the Ol' Boy proud to witness the efforts of those few who have undergone this most physically and technically demanding of the Level V tasks.

The 8 hours can be either somewhat difficult or nearly impossible in proportion to the amount of advance preparation on the pilot's part. This task is made up of about equal parts of on-slope skills and hangar prep. The needed equipment breaks down into four parts, each of which needs special attention. They are: the aircraft, the airborne radio, the transmitter, and the pilot himself. Let's look at each and see what care and modification they will need to hang together.

THE AIRCRAFT: Some slope sites have lift so smooth that the pilot can fly for long periods of time on trims alone. From all accounts these sites are nowhere near the Northeast...our sites are so choppy that, for bending spars, no "Gorilla" winch ever built could load the wings like that air. The ship you plan to fly must be strong, easy to fly, and be able to carry the weight of the airborne gear and ballast. Ballast will smooth the flight path of the ship and require less steering on your part. This will stretch the battery life and reduce the strain on the pilot. Large ships are a good choice as they ride out gusts better and will carry the load, yet ships much over 3 meters span will make the servos and battery work needlessly hard. Floater types do not penetrate well in slope winds, while cleaner ships - like the Aquila Grande will run upwind with little difficulty. Above all, know the plane and how it handles in wind with a load before going out to do the task.

THE AIRBORNE RADIO is the hardest-working of the four parts of this pilot-plane system. It must work perfectly for 8 hours on one battery supply, with no maintenance, testing, tinkering, or other help. It will need a very reliable receiver with servo/power plugs and wiring in first-class condition. The servos should be just as reliable, and rated for output torque to handle the flight loads of the ship. Remember: a small servo in a large sailplane will actually draw more current than a large servo under the same conditions, since the loads will be closer to stalling the servo motor. The battery must fuel the whole operation and still have enough reserve power left to keep the flight controls tight and responsive...right to the evening landing.

I've measured several receiver/2-servo/battery systems, and at rest- they draw about 40 milliamperes of current. That figure rises quickly when the servos move, and rises even more when they work into a (physical) resistance. Taking an average of 120 Ma. current draw, it would appear that when fed from a 1.2 Ampere-Hour "C"-cell Nicad pack, the maximum flight time would be 10 hours. However this neglects temperature, control drag, and an adequate safety margin. In actual fact, the max flight time would be about five hours...perfect for Level IV, but no good for Level V.

In comparing the capacity of Nicads versus dry batteries of the same physical size, it appears that Alkaline cells offer a little over twice the current reserve of the Nicads! Weight is about equal, but the voltage of four alkaline dry cells will be 6.0 volts instead of 4.8 to 5.2 volts of the rechargeables. Most modern radios will operate satisfactorily and normally on 6 volts with no instability, but be sure to test-fly your ship with the alkaline batteries first, to be sure that there are no abnormal responses or other problems.

Given these nominal conditions, it would appear that a C-cell alkaline battery will last out the day. When choosing individual cells to make up the four-battery pack, try to be sure that they are as fresh as possible by buying them from a supplier who has volume sales and a high stock turnover.

THE TRANSMITTER will be a 6 - to - 7 pound load in your hands or around your neck for a long time, so consider what mods will lighten the load. Start by removing the frequency flag from the antenna, along with the sun shield. These all add wind resistance which will get to your wrists in short order. An external battery pack will be needed, and this is best hung from your belt or from a shoulder strap, and plugged into the transmitter by means of a cord and plug to a matching socket. Modify the transmitter power system by cutting the RED (positive) wire from the battery pack to the power switch. Run the RED wire that you have severed to a 1/8th-inch diameter earphone jack (to the terminals which will be shorted with no plug inserted; the jack being a shorting type). The external pack will be plugged into the jack, and will operate the transmitter, while the internal battery is disconnected and fully charged, ready for use. (Make sure that you lead an extra piece of red wire -you will have to provide this yourself- from the other side of the earphone jack, back to the switch where you clipped the red wire in the first place...Ed. In other words, the external supply will parallel the internal supply, by means of the plug...Ed.) Should you develop problems with the external battery, simply pull the plug and the internal pack will pick up the load, giving you about 2 hours to get recharged, repaired, and back in service on the external pack. No glitches have been noted when switching between batteries, as the circuitry seems to retain power in its components during the changeover.

When using a shoulder or belt battery system, it is wise to install a 22 millihenry, wire-wound choke in each of the power wires. This prevents transmitter r.f. energy from being fed back into the battery system through the wires. (These chokes are available from several sources, and are to be soldered in place-Ed.)

Most transmitters of average power draw a constant 100 - 200 milliamperes of current. They will accept a modest over-voltage of about 10.5 volts with no visible effect, which means that 8 "D"-cell dry batteries connected in series would serve out the 8 hours with no help from the internal transmitter batteries. Again, alkaline batteries are the best choice for long duration flights.

THE LAST PART OF THE SYSTEM IS THE PILOT, and his care and feeding are all-important to the success of the operation. Select clothing to stay warm and dry, but also clothing that is easy to take off and put on with minimum time away from the transmitter controls. Select foods with the same condition in mind. Big sandwiches like hoagies, subs, and heros really need two hands, and hot drinks steam the sunglasses and hurt like heck if spilled! If possible, arrange for a windbreak which will let you see the ship while shielding you from the blast. A weather radio should be kept tuned to local conditions so that approaching rain, snow, or whatever will find you prepared - not surprised. Also, large amounts of money will be needed, as you will be expected to pay for the evening's VICTORY celebration!

There, that wasn't so tough, was it? Well, you can see that by spending some hangar time looking at parts of this puzzle, it is easier to succeed at a task. Experience is a great teacher, so if possible, corner someone who has made the task, ask him what it was like...and listen. If you are working on Level IV and have the option of doing the four-hour slope, do it! Forgetting the bug spray or failing to answer the "call of nature" before take-off is less serious if you have to hold it for only four hours!

Good luck to you and may your air be fit for trims-only flying.

*** **

LSF NEWS (From Short Lines, Fall'83)

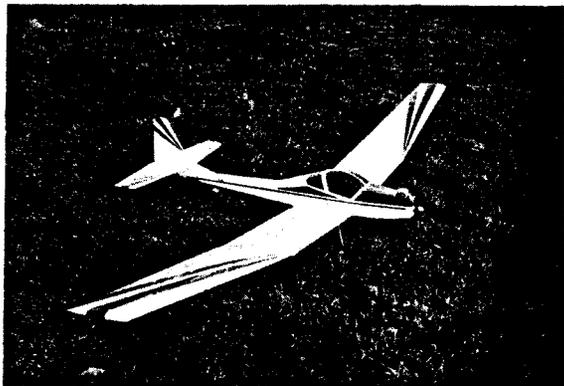
The 1984 LSF REGIONAL TOURNAMENTS are in the planning stage. At least 12 tournaments will be held throughout the U.S. and Canada on the weekend of August 18 - 19, 1984. The events planned are TWO-METER and UNLIMITED duration. Flying site locations have not yet been finalized, and local co-sponsors are being solicited. If your soaring organization is interested in sponsoring an LSF REGIONAL TOURNAMENT in your geographical area, please send a SSAE to: H. Warren Plohr, 5395 Sunset Oval, North Olmstead, Ohio 44070.

*** **

The LEAGUE now has 5100 members and at least 30 have completed Level V in the Soaring Accomplishments Program.

MOTOR-POWERED SAILPLANE

George Haycroft of Louisville, KY sent in a picture of his latest efforts, which are impressive, indeed. (See picture below). Here's what George has to say about it: "I have just finished a motorglider using HP's VT-21 4-cycle engine. I started with a CRAFT-AIR Butterfly kit, used Gemini MTS construction methods almost throughout and drew the fuselage lines from the Grob 109, as advertised in Soaring magazine. Finished at 12 oz./sq.ft. wing loading. Engine ran (on ground test - Ed.) at 1/3 throttle for 1 hour and 25 minutes - using only 8 oz. of 5% nitro fuel and HP's oil. Will have first flight when it warms up!"



Grob - Butterfly - MTS Powered Sailplane

George, it looks to us as if the 'marriage' of the Grob fuselage to the Butterfly wing is a 'natural.' You didn't mention what radio you used, or how many servos will accomplish control. But, the ship looks great! Many of us 'purists' agree that there are times when the use of an on-board engine is the only way to go. In the full-size sailplanes, motorgliders are really taking hold, largely because of the need to eliminate a ground crew, a tow pilot and a tow plane just to get into the air! With a motorglider, self-launching is simple and straightforward. You can use the engine to become airborne and then switch it off after you have the desired altitude. Then, if you wish, you can thermal for the rest of the flight. One of the biggest advantages is not having to 'land out' as they say, because with an engine on board you can re-start and fly home under power. The Grob 109 has side-by-side seating and at least 30:1 glide ratio with the engine switched off and propeller feathered. It will cruise cross-country under power, too, at about 105 miles per hour, using only about 4 gallons of gasoline per hour, meaning economy and versatility. In Europe, motorgliders have become very popular, and entire soaring contests using motorgliders are quite common. It seems to me that this same idea can - and will - be used in model soaring to a much greater extent than it is now...given time. Probably electric power will be used more often than fuel-power, as it tends to be somewhat quieter...although a 4-cycle engine is so quiet that it seems hardly anyone could object. Please let us know how that 'first flight' turns out, George, and send us more details. A three-view and description would be appreciated by our readers, I'm sure.

*** **

BACKLASH

Our subscribers have asked me to supply information about the following subjects (so far): How to repair fiberglass fuselages; Kit reviews and improvements - how they rate and compare; Performance improvement tips; flying techniques and hardware; Contest stories and team experiences; specs, drawings and pictures of winning sailplanes; Advanced construction techniques; Flight reports; Plans and contest information; First-person reports on winning, task completion (LSF) etc; Modifications to electronics to providereadouts of altitude, heading, speed; Plans sources for USA and England.

If any of you reading this can furnish some of this needed information, please write me so that we can get together and plan for its inclusion in an early issue.

By the way...I want you to know something: IF YOU ARE NOT COMPLETELY SATISFIED WITH RC SOARING DIGEST, PLEASE LET ME KNOW AND I WILL REFUND THE REMAINING PORTION OF YOUR SUBSCRIPTION FEE. It is my aim to provide a good, but not perfect newsletter. I am sure there will be some who don't like it, so - if you're one of them - let me know. There'll be no hard feelings.

*** **

ADS 'N' ENDS

ASW-15 ready to fly. Plastic fuselage, built-up wings. 85" span. Like new condition. Tinted canopy, pilot figures, etc. Go scale with only the need to install your own radio. Trade or sell. Jim Gray c/o RC Soaring Digest, Box 186 Peterborough, NH 03458

*** **

Back Issues. As long as they last, back issues of RCSD available for \$1.25 each. Write to publisher for list.

The SAVAGE, a superb slope soarer and capable thermal sailplane; designed by Mark Rebeck; span 70", Area 650 sq.in., weight 32-34 oz., loading 7 - 8 oz. sq.ft. Kit features instruction book, full-size rolled plans, machine cut balsa and plywood parts, and complete hardware package. \$54.95. Uses aileron & elevator control. CALIFORNIA SLOPE DESIGNS, 31932 Calle Winona, San Juan Capistrano, California 92675. Also available: 42" span SON OF SAVAGE.

MAGIC "MAGNALITE" - new carbon fiber material available in sheets of .007" and .014" thickness and various lengths and widths to accommodate most modeler's needs. It's expensive, but Wow! You can make spar caps, trailing edges, reinforcements, etc. For example, a Glider Builder's Starter Kit consists of 4 strips of .007"-thick material 1/2" wide and 48" long, suitable for spar caps on a Standard Class wing, for \$14. Other sizes include a 6" x 24" x .007" sheet, for \$9; 2" x 12"; 6" x 48", and so on, at various prices. You attach them to balsa with cyanoacrylate cement, for example. Read about it in the February 1984 issue of Scale R/C Modeler in an article entitled: "SR/CM looks at Magnalite." It's available from Bob Violet Models, 1373 Citrus Road, Winter Springs, Florida 32708; Tel.: (305) 365-5869.

PLANS, KITS, ETC.
ACCESSORIES
 viking models
 bannister & foss
Fiberglass Reproduction & Quality Foam Core

JERRY G. SLATES

2026 Spring Lake Drive
 Martinez, Calif. 94553

Phone:
 (415) 889-0786

... IN MARCH, THIS SPACE
 CAN BE YOURS FOR ONLY

\$10⁰⁰

TRY A SOARING DIGEST

DISPLAY A - RIGHT HERE.

603-924-6759