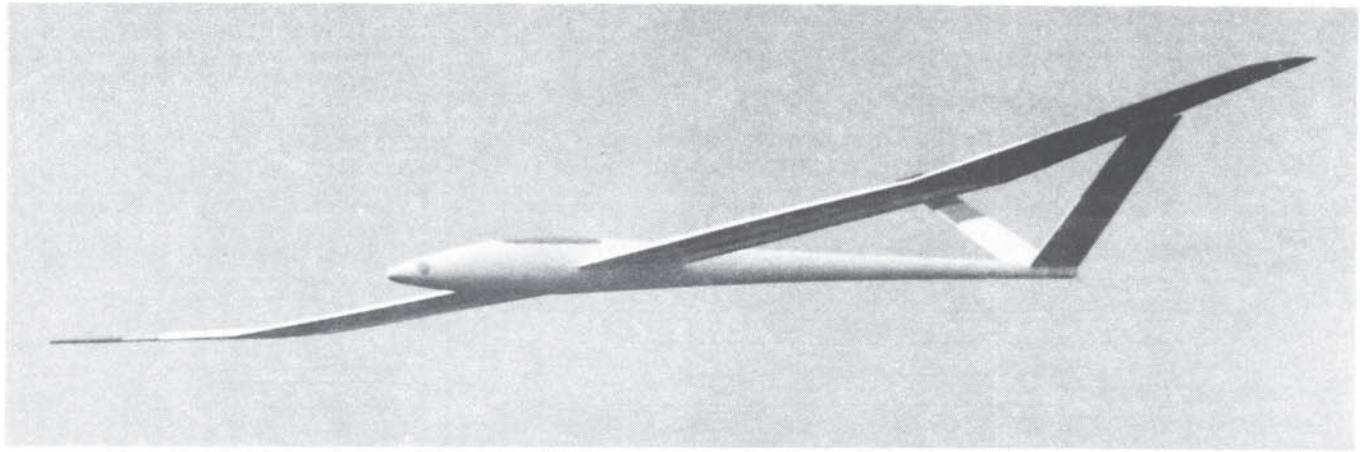
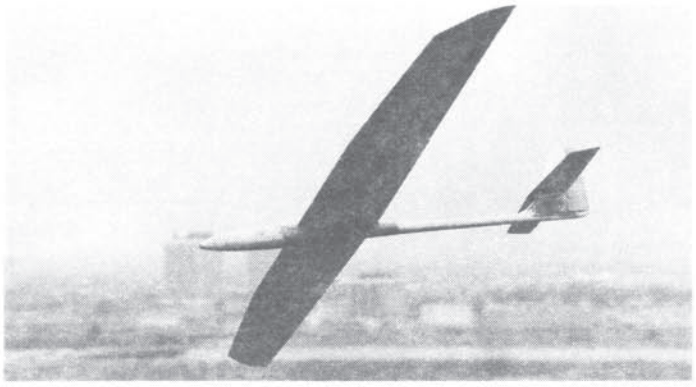
SLOPE SLASHING!

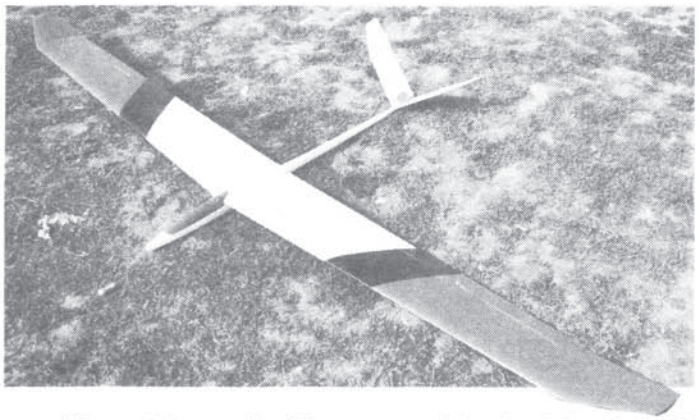
Wurts Edges Perkins at the Hans Weiss Memorial Slope Race

Slope Soaring News

Vol. 2, No. 6 April1990 $1.50







New Toys At Pomona! L.A. Model Hobby Show Report • Miss Go-Fast Construction Continues...How To Build Your Foam Core Cutting Set Up! Torrey Pines Scale Fun Fly Information! • Sneak Peek! Tom Overton's 1/4-Scale P-51 • Looking for a New Radio? Check Out JR's Amazing 347!

Wingin' It

FUN FLY FUN

The steering committee for the second annual Torrey Pines Scale Slope Soaring Fun Fly has been hard at work. Gary Knapp, Jerry Miller, Bill Liscomb, Joe McBride, Angelo Orona and your *SSN* editor have been getting together for a series of monthly meetings ever since January to plan the 1990 event. We've given ourselves assignments and responsibilities, one month at a time instead of trying to pack it all into the last few weeks before the Labor Day Weekend event, and it's paid off! Here it is, four months before the event, and we actually know what we're going to do. Amazing!

The original fun fly last Thanksgiving Weekend was an outstanding success.

Torrey Pines Scale Slope Soaring Fun Fly
San Diego, California
September 1-3, 1990

Sponsored by the Torrey Pines Gulls

REGISTRATION FORM

Preregistration deadline is August 4!

Name _____

Address _____

City _____ State _____ Zip _____

AMA # _____ Phone _____

Frequencies _____

Company you represent _____

Entry fee includes three days slope fee, Saturday night social sponsored by industry members, one entry to the Sunday night banquet and one entry in the pilots' raffle $30

Guest banquet fee ($22 each) ..... $_____

Total ..... $_____

SCALE MODELS ONLY. MUST BE AN AMA MEMBER. LATE REGISTRATION (AFTER AUGUST 4) $5.00 EXTRA. NO EXCEPTIONS!

Banquet Information

The banquet will be held at the Wyndham Garden Hotel, the official fun fly hotel, on Sunday, September 2, at 7:00 p.m. There will be a no-host-bar happy hour from 6:00 to 7:00 p.m. The meal will include prime rib, salad, choice of potato, rice, pasta or vegetable, hot rolls, dessert and non-alcoholic beverage.

Hotel Information

The Wyndham Garden Hotel (formerly the Ramada Inn) is conveniently located within easy driving distance to the Torrey Pines Glider Port. The hotel offers pool, spa, restaurant, view rooms and nightly free happy hour from 5:00 to 7:00 p.m. with hors d'oeuvres.

Room Rates

1-2 people $59

3-4 people $69

Suites $75

Wyndham Garden Hotel
5975 Lusk Boulevard
San Diego, CA 92121
619/558-1818

IMPORTANT: WHEN MAKING YOUR RESERVATION, BE SURE TO MENTION THE TORREY PINES MODEL AIRPLANE EVENT TO RECEIVE THE DISCOUNT RATES LISTED ABOVE!

For more information, phone Jerry Miller at 619/450-1683 or Charlie Morey at 213/494-3712. Mail written inquiries to the address below.

Please send your entry to Slope Soaring News, TPG Fun Fly, 2601 E. 19th St., #29, Signal Hill, CA 90804.

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"Scale fun flies are HAPPENIN'!"

EDITORIAL CONTRIBUTIONS are welcomed. Unfortunately, we can't pay for them. Editorial material is selected based on its perceived value to the slope-soaring community, and the publisher assumes no responsibility for accuracy of content.

CLUB CONTRIBUTIONS are welcomed. Please keep us notified of your club's events and/or fun flying activities. Material printed will be selected at the discretion of the editor.

ALL CONTRIBUTIONS should be addressed to SSN, c/o Charlie Morey, 2601 E. 19th St., #29, Signal Hill, CA 90804. All contributions requested for return must be accompanied by return postage. The editorial deadline is the 15th of the month preceding the cover date. All material is subject to editing and revision as necessary to meet SSN requirements. We can accept Ascii text files over the phone or work with your IBM-compatible 3-1/2" or 5-1/4" disk. Please call first for details at 213/494-3712. Don't get depressed if you get our answering machine. Just leave your name, phone number and the purpose of your call, and we'll get back to you.

ADVERTISING inquiries should be addressed to SSN, c/o Charlie Morey, 2601 E. 19th St., #29, Signal Hill, CA 90804, 213/494-3712.

SUBSCRIPTIONS are $15.95 per year in the U.S.; $24 U.S. currency per year in Canada/Mexico; $32 U.S. per year in Europe/England; $40 U.S. per year in Asia/Pacific/Middle East.

More than 60 pilots registered, and they brought over 100 scale gliders to fly and display for the more than 200 spectators who stopped by to witness the event.

Last year, we ran the fun fly on minimum budget/maximum simplicity program. This year, we're getting fancy!

Last year, we simply collected a minimal entry fee and monitored three days of fun flying. This year, we've added an official hotel with special event rates, a Friday night social get-together, a Saturday night banquet with a guest speaker, a collection of prizes donated by the hobby industry to be awarded to entrants through a drawing, and we've made a few changes at the flying site in answer to complaints or suggestions from last year's pilots.

Once again, I'll be contacting the other magazine columnists, offering them information about the event in hopes that they'll publish it in their far-reaching publications.

I already have a verbal commitment from columnist John Lupperger of *Model Airplane News* to help support the event, both with pre-event announcements and then to attend and provide coverage afterwards. I hope you saw his story about the 1989 fun fly; both John and the editorial/art staff at *MAN* did a superb job with the full-color spread!

Bill Forrey of *Model Builder* showed up for two afternoons at last year's fun fly, and he too provided his readers with his standard high-quality report about the planes and pilots who attended.

This year, we hope both John and Bill will return, and we'd like to encourage the others to attend, too. (Especially *Radio Control Modeler*'s Don Edberg and both *Model Aviation* columnists, Mark Triebes and Byron Blakeslee.)

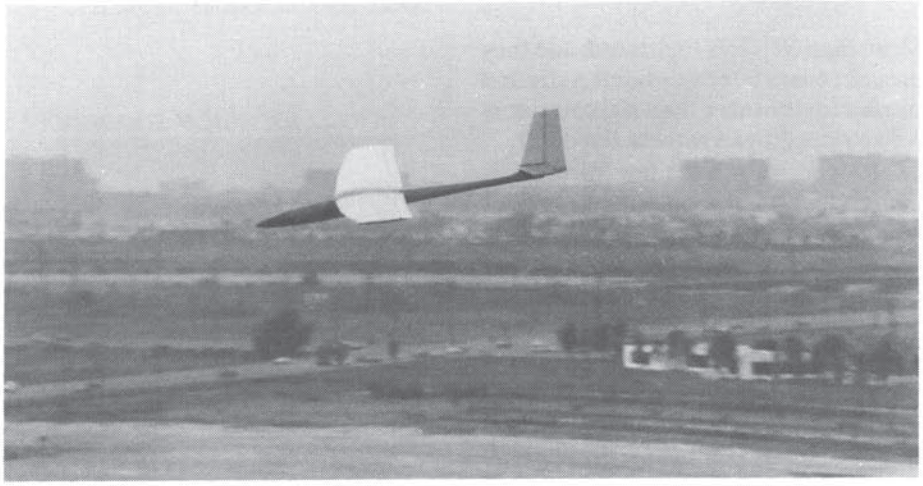
Just a note: After you see where one of these guys has written a good story about slope soaring, send him a letter, note or postcard to say thanks. It makes them feel appreciated, and it helps our facet of the hobby gain more recognition.

The Torrey Pines Scale Slope Soaring Fun Fly promises to become one of the premier slope soaring events in the U.S., and we're very excited about making it happen!

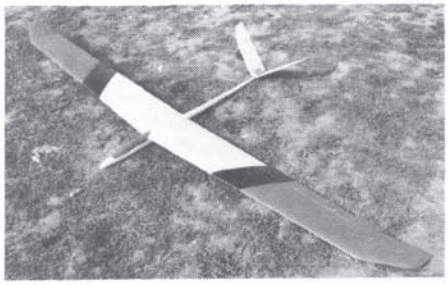
See you there?
I hope so!

Chuck

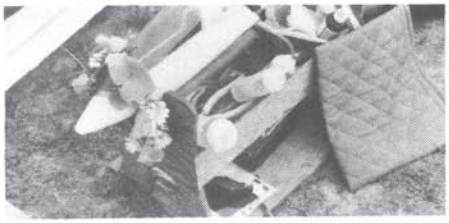
Zen master.
Steve Chan built his fourth-place slope racer from one of Viking USA's "Zen" fuselages. It features a vacuum-bagged Kevlar/carbon fiber wing and an airfoil that transitions from an HQ 1.5/8.5 at the root to an HQ 1.5/9.5 at the tip.

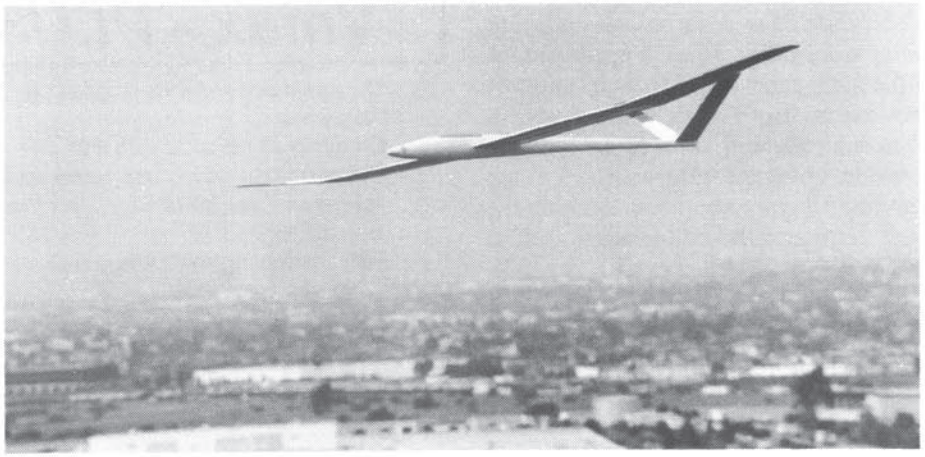


From nothin' fancy to the latest technology...
(Above) Joe Wurtz dug out an old Dean Clark "Hijinks" fuse with an Eppler 374 wing that he used three years ago in the International Slope Race and topped Daryl Perkins in the final one-on-one fly-off to win. (Below) Grand introduced his new Shredder kit. The one pictured has an SD6060 airfoil, but the kit will come with a better choice, the RG12. It's a "pitcheron" design, (like the VS Sailplanes Rotor and V-max) where the tail is non-moving and all control is through the wings. For $100, you get a fiberglass fuse, foam cores, tail plan and bellcranks.



Killer!
(Above) Daryl Perkins showed off his Flite Lite Composites Swift 800 (although he raced his Eliminator). (Below) Bob Ratzlaff's crunched racer got a funeral wreath.





Hans Weiss Memorial Slope Race

Fast Times at Hughes Hill

By Charlie Morey
MARCH 3-4, 1990
LOS ANGELES, CALIFORNIA

Finally! Someone beat Daryl Perkins in a SoCal slope race. Who? None other than Joe Wurts, one of the winningest RC sailplane pilots in the United States of America.

Daryl is unbelievably consistent, and that's how he wins most of the slope races he enters. While everyone else blows at least one turn, Perkins seems utterly bionic in his ability to pilot his Mark Allen/Flite Lite Composites sailplanes time after time without overshooting or making other human errors.

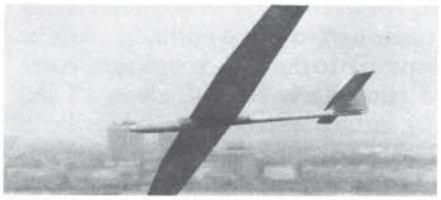
But this time, he met another master glider pilot. Wurts, like Perkins, seems to have a certain "sixth sense" about flying that the rest of us only strive for. If it's thermals he's looking for (in a handlaunch contest, or perhaps cross-country – he wins both types of contest with amazing regularity) one always seems to find its way under his wings. If it's that miniscule edge of speed, that fraction of a second he can pick up in a turn or a hair's breadth advantage at timing the starting dive of a slope race, Wurts always finds it. He's incredible.

Contest Director Ray Kuntz, assisted in the promotion by Perkins, presented the fliers with a well-run program under varying conditions. This duo also will promote the International Slope Race at Davenport in July, and that's one we won't miss, either! Let's hope Joe Wurts can find time in his busy and varied contest schedule to challenge the sport's best in the ISR.

Results

Pilot	Points
1. Joe Wurts	4
2. Daryl Perkins	4 (tie broken w/ fly-off)
3. Tom Kowalke	5
4. Steve Chan	5 (tie broken w/ fly-off)
5. Tony Martin	6
6. S. Heritage	6 (tie broken w/ fly-off)
7. Jerry Bridgeman	7
8. Gibbs	7
9. Wolf	7
10.Grand	7

Seen at the Hans Weiss Memorial... (Left) Dan Danrich is developing a new high-performance sailplane for DCU, the Windstar. (Lower left) Gene and Chris Lovejoy of Glidesigns brought out an ARF Lance-A-Lot prototype to test. (Right) Tony Martin's Spectrum earned its keep with a fifth place. (Lower right) Contest Director Ray Kuntz prepares to signal a start with assistant C.D. Daryl Perkins on the stopwatch. Behind them, Jared Stalls spots for Snipe designer Jerry Bridgeman.



Cutting Your Foam Core Wings

Miss Go-Fast Saga Continues...

By Pete Marshall

Now that we have our airfoil root and tip profiles plotted and our fuselage wing saddle cut to fit, it's time to make Miss Go-Fast a set of wings.

First, we'll make some templates to use for cutting out blue foam wing cores. Using cyanoacrylate glue, cement a root and a tip profile to a thick piece of Formica or Arborite. When the glue has dried, very carefully cut along the outside edge of the profile with a fine-tooth bandsaw. If you don't have a bandsaw, you can nibble all around the profile to within 1/2-inch with a pair of sidecutters. Use eye protection no matter which method you choose!

Then use a grinder to take it down almost to the line. Finally, hand sand your airfoil template perfectly to the center of the profile line using ever finer grades of sandpaper. Finish with 400-600 grit. We need this template to be "ambidextrous." That is, we must use both sides of it. So, we must transfer our chord datum line with the 5% chord station lines, all numbered, on both sides of it. One way to accomplish this is to use light-colored Formica, and glue the profile to the dark, rough side. After the template is shaped, clean off the light surface with solvent and scribe in the chord datum and numbered stations in India ink. Lightly mist this surface with clear lacquer to protect the marks. The paper template can be soaked with cyanoacylate glue and let cure. Finally, wax polish the edge of the template to allow the hot cutting wire glide smoothly over the surface.

Now drill two holes the same diameter as a two-inch finishing nail, one near each end of the template. Don't get too close to the trailing edge. Leave enough "meat" not to weaken the template.

When we cut our cores, we'll attach the template to the foam stock with double-sided tape and push the finishing nails through the template into the foam to anchor the template. You can see why it's necessary to protect the template patterns with cyanoacrylate; otherwise the bare paper would strip off when to double-sided tape is removed and the markings would be lost.

The computer-generated airfoils make it easier. You simply take the mirror-image profile and glue it to the other side of the shaped template. Be sure that the chord datums on each side line up evenly.

Get Wired!

The prerequisite for cutting foam core wings is a super-strong *flat* work table. A 2 x 6-foot table is just about right. And when I say flat, I mean truly flat. Like, you can check it with a straight edge in all directions and see no light under the three-foot ruler. Does the table deform under a load? Place 100 pounds of weight in the middle and recheck it with the straight edge.

I got frustrated with wimpy workbenches, so I made a special 2 x 5-foot wing bench supported by four 2 x 8s on edge evenly spaced under the top. The top is made of 2 x 8s laid crossways (like a boardwalk), covered by 3/4-inch plywood, covered by 3/4-inch particle board. The whole top assembly is supported by four 6 x 6-inch yellow cedar posts which are tied together by 2 x 4s about a foot from the floor. If you decide to build a dedicated wing-making bench, make it higher than normal so you won't have to bend over so far while cutting cores.

Are You Experienced?

At this point, you may be saying, "Jeez, Louise! I'm not sure if I really want to get into foam cutting equipment just yet. This guy hasn't even started talking about the hot-wire setup!"

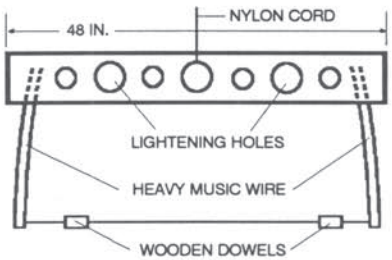
That's right. You must feel a great deal of dedication to this obsession called slope soaring to get it all together. So, if you have a buddy with a hot-wire setup, get on over there. While you're at it, cut your foam blocks out of the sheet. Use a bandsaw (set at exactly 90 degrees) and cut the widths so the templates will overhang the foam by 1/8-inch at both the leading and trailing edges. Your buddy can show you how to cut foam – it takes two to do it, anyway.

Hot Wire Act

The most important piece of equipment for hot wiring is the electrical device that allows you to control the heat of the wire. The best way to do this is to buy a Variac (pronounced "very-ack"). This unit is designed to do just what you want it to do. That is, it'll convert 110-volt household current to a safe, controllable level. It's kind of like a huge rheostat/transformer. You can buy a Variac at big electrical supply stores or through homebuilt aircraft suppliers like Aircraft Spruce and Specialties. Another power source that can be used is an electric train transformer. There are other ways of heating the wire – like car battery chargers – but they start to get a little Mickey Mouse. Go for the best. The Variac will cut your cores for a lifetime.

The concept of hot-wire foam cutting is simple enough. The wire is like a huge light-bulb filament except it's thicker and runs on lower current. If you crank up your Variac, you can make the wire glow red, but that makes for a very stretchy wire.

Speaking of wire, that's the next item on your list. You can zip on down to the local hobby shop and buy Ni-chrome wire if you like. I use stainless steel wire that's normally used to safety-wire nuts and bolts on full-size aircraft. I find Ni-chrome wire a bit thin for my liking, and my ham-fisted foam cutting seems to break it too often. I use stainless wire from .020 to .040-inch thick.



Take A Bow...er, Bow!

For cutting slope cores, most of our cuts will be from 24 to 45 inches long, so we want a wing-cutting bow about 45 inches long. Buy the lightest hardwood plank you can find, four feet by 1-1/2 inches by four inches. Fir, maple, mahogany, etc. Buy a 36-inch length of heavy music wire and cut it in half. Drill a hole near each end of the plank so that the music wire will protrude vertically from the edge (see illustration). Epoxy the wire in place after grinding a V-shaped groove all around it, 1/4 to 1/2-inch from the protruding end to locate the hot wire.

Attach the hot wire to one end of the bow. Grab an old broom handle (or suitable-sized dowel) and cut off two 1-1/2-inch segments. Drill a tiny hole through each wooden cylinder, exactly through the center. Thread these wooden dowels on over the hot wire.

Pull the hot wire tight until it just starts

to stretch (this is about where the Nichrome goes snap!) and wrap it around the other end of the bow. The music wire allows for expansion of the wire when heated. If, at this point, you crank up your Variac so that the wire glows red, the wire will stretch, and you'll have to retension it. Find the exact balance point of the plank after drilling your lightening holes. Mark and drill a hole for an eye bolt at the balance point. You'll suspend the bow from the ceiling with nylon parachute cord, through pulleys, with a counterweight on the other end of the cord. Adjust the counterweight so that your bow stays at whatever height you set it. (I use an old sock with a rock in it.)

Attach electrical leads to your Variac (double wire), run the wire with the nylon cord to the wing bow, and then split the wires to run out to either end of the hot wire. Solder alligator clips to the ends of the wires.

Bored? No, Board!

Your hot-wire setup is ready. Your bow is suspended above the flat, sturdy work table. You have cut and trimmed your foam blanks so that the templates will overhang by around 1/8 inch at both ends.

The last item required is a straight, flat board at least 3/4-inch thick, cut to the same length as your cores and as wide as the foam blanks. I bought a sheet of 3/4-inch plywood and sliced it to different lengths and widths for various sized wings. You'll use this board to evenly weight the foam blank while attaching the templates and cutting the cores with the hot wire. I use an old skin diving weight belt (about 25 pounds) spread out along the length of the board for weight. The weight board will also be used later for skinning the cores with about 150 pounds on top of it.

Tune in next issue for the next steps in your Miss Go-Fast project!

Second Annual Los Angeles Model Hobby Show

New Toys in Pomona!

By Charlie Morey

The Radio Control Hobby Trade Association's second attempt at producing a consumer show in Southern California appeared to be a success for the model car and train people, but the airplane and glider group was limited to a small but high-quality crew. Here are a few of the products we saw.

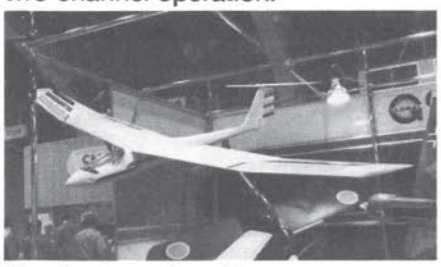
F-4 Phantom sloper!

Bruce McAvinew of Bruce's Aircraft Models (BAM) introduced his built-up fused, foam core wing Phantom. It sports an Eppler 205 airfoil over a 38 in. wingspan. The kit includes all hardware and military decals, and it's offered at a suggested list price of $89.95. BAM also has a line of ARF gliders and electrics. Contact Bruce at 3941 S. Bristol, Suite 93, Santa Ana, CA 92704; 714/241-7518 for more details!

Douglas Aircraft expands!

Doug Hertzog showed his familiar Silhouette and Quicksilver slope gliders as well as a new Ol' Grandad old timer (gas or electric) and a new high performance electric (based on the Quicksilver) called the Breeze. Write or phone for more info at Douglas Aircraft, P.O. Box 92472, Long Beach, CA 90809; 213/498-1737.

Pretty but pricey...
Hobby Shack/Global Distributing's new (power plane) F-18, held by *Model Builder* soaring columnist Bill Forrey, looks like a good sloper. The only catch is its $330+ pricetag! Below is their new ARF EZ Kona 1700T glider. Tufflex (plastic) fuse, 68-inch span, 480 sq. in. of wing area, 31-35 ounces weight, two-channel operation.



Need a tow plane?
Arnold Wratschko of AMS Imports has just the answer for aero-towing your huge scale glider—a Piper J-3 towplane. AMS Imports, 1110 S. Wells Ave., Reno, NV; 702/786-7733.

Scraps...

Mary Ann and the Mustang.
Tom Overton's quarter scale P-51 will turn some heads!

THINK BIG!

Tom Overton is thinking big. His 1/4-scale P-51 Mustang fuselage easily dwarfs model Mary Ann Silva of San Jose, California...and that's only the beginning! His future planes include a Yellow Aircraft A-4 Skyhawk, a 1/3-scale ASW-20 and a Pica 1/5-scale Spitfire. He's promised us stories on all of them.

The Mustang will have a wingspan of 116 inches, and the Viking Models USA fuse is 93 inches long. The GKW (God Knows What!) airfoil tapers from a 26-inch root chord to a 14-inch Eppler 374 at the tip. The wing will have 2,320 square inches of area, over 16 square feet!

Tom's shooting for a 20-pound all-up weight, which will give the big warbird a 20 oz./sq. ft. wingloading. "Maybe for the first time, we are dealing with a chord and Reynolds numbers in the realm of full-scale, and I don't expect the wingloading to be a problem," he says.

The plane has a sound generator from Ram that does machine gun fire through two speakers, one in the scoop under the wing and another by the opening under the spinner.

Tom's choice of receiver is a seven-channel Futaba FM with a 1,200 mah battery, and it's used for ailerons, rudder, elevator and guns. The transmitter is an Airtronics/ATRCS unit.

PHANTOMS, HORNETS AND B-1Bs

Chris Lamont and Bill Matthews, a pair of Point Fermin regulars, have designed some new military power scale slopers. Chris put together an F-4 Phantom and an F-18 Hornet, and Bill is in the process of prototyping a B-1B bomber!

The Phantom and Hornet are available now as partial kits (fiberglass fuse, foam cores and plans) through Chris for $40. You can phone him at 213/519-1810 for more details.

Point Fermin power scale jets!
Chris Lamont (above) has developed a couple of hot-looking jets—an F-4 Phantom and an F-18 Hornet—and he's making them available as partial kits for only $40. Bill Matthews (below) is developing a B-1B bomber. It's not available in kit form...at least not yet!

PSSST! WANNA BUY A HOT RADIO?

There wasn't enough space to show all the photos I took at the L.A. Model Hobby Show (on page 8) with the coverage, so here's a bit more. Kevin Burner of Hobby Dynamics took a half hour of his valuable show time to spend explaining the new JR Radio line, and boy, do they look hot!

JR's neatest item is the 347 transmitter. Why 347? The "3" stands for the types of application it's suited for: helicopter, power and sailplane). The "4" is the number of set-ups it can store in memory (four planes). The "7" is the number of channels.

You want features? How's this for a list? Dual rates, exponential, reverse switches, sub-trim (controllable in 1% increments), ATV/end point adjustment, programmable mixes (4), elevator/flap mix, flap/elevator mix, differential (for ailerons), flap/aileron mix, aileron/flap mix, "crow" mix, dual flap trim, fail safe, trainer, timer, accumulated time, PCM/PPM. Full suggested retail is $644, but the radios should be available for around $400.

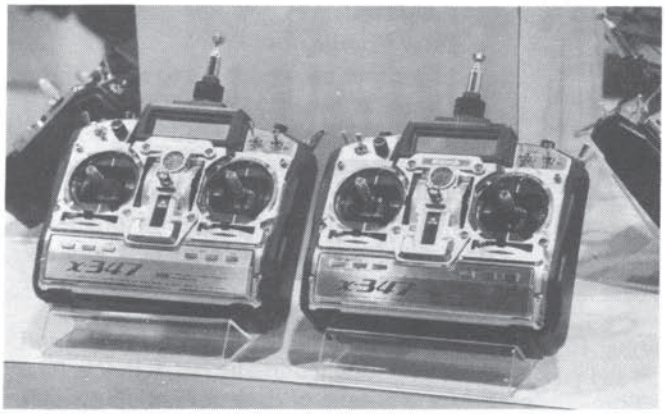
And then there's those neat little servos:

The NES-311 measures 1.16 in. x .5 in. x 1.1 in., has an all-metal gear train and shaft and weighs 0.7 ounces.

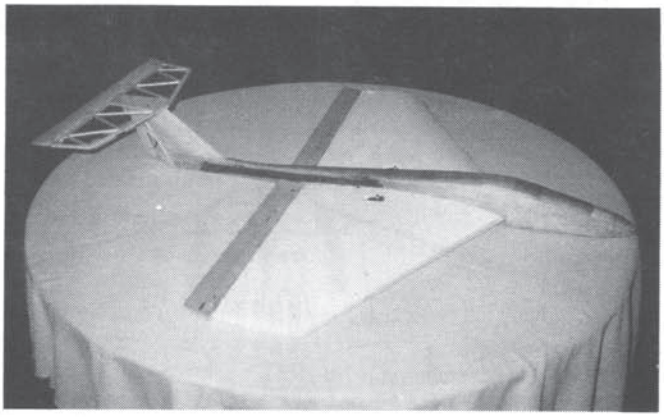
The NES-307 is identical, except that it has nylon gears and is therefore slightly lighter at 0.6 ounces.

The high-speed, high-torque NES-3035 is larger at 1.04 in. x .59 in. x 1.32 in.,

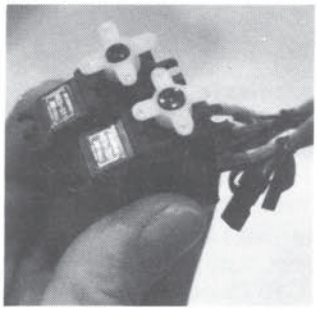
...bits and pieces from the world of slope soaring



JR's multifaceted 347!
The new JR 347 radios can be custom tailored for your specific use at your dealer. The package is assembled with appropriate components for heli, power or sailplane use. They're PCM and have a list of features too long to list in this caption (see text for details). The small servos (below) are available with either nylon or all-metal gears!

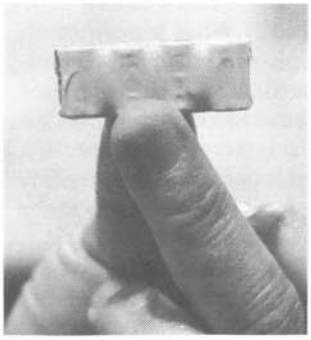


Banzai's next plan of attack!
Jeremy Teo is developing this Manta slope glider. We'll keep you updated as work progresses. Can't wait? Contact him at Banzai Enterprises, 2997 Anderson Ave. Port Alberni, B.C., V9Y 2V3 Canada.



has a cobalt samarium motor, weighs .8 ounces, turns at a speed of 60 degrees in .25 seconds (same as the 311 and 307) and produces 40 oz.-in. of torque.

Building a tiny sloper?
Then you need a tiny battery pack. Jesse Chao's 50 mah pack should fit just about anything!



Contact Kevin Burner at Hobby Dynamics, 4105 Fieldstone Rd., Champaign, IL 61821; 217/355-0022 for more information.

TINY LITTLE BATTERIES

Jesse Chao offers receiver battery packs in all shapes and sizes. I bought one of his 4,400 mah packs for "Bertha" the 28-pound ASW-20 back at the IMS show. At the L.A. Model Hobby Show, I ordered a selection of 270 mah and 600 mah square packs, and observed that he also supplies tiny 100 mah and 50 mah packs. Contact Jesse at J.C. Model Supplies Co., P.O. Box 2406, Fullerton, CA 92633; 213/690-2019 for details on his battery packs and connectors.

ALBATROS!

Vern Hunt? Who's that? I'm not sure yet, but if Mr. Hunt keeps producing beautiful slope gliders like this Czechoslovakian Aero L-39 Albatros, you'll soon know his name well! This photo and a letter appeared at the *SSN* office a few weeks ago out of the blue (well, from Wisconsin, actually). The kit includes a 42-inch polyester glass and carbon fiber fuselage, 52-inch span foam core wing with balsa sheeting, a canopy frame and butyrate canopy, and polyester glass wingtip tanks. The airfoil is an Eppler 205 (so it should fly just about anywhere), and the overall weight is 48 ounces. No price was mentioned, but I'm sure Vern would be happy to talk with you about it when you contact him at 4950 Butternut Trail, Juneau, WI 53039; 414/349-8101.

MANTA!

Jeremy Teo of Banzai Enterprises (see his ads in *SSN* for the Banzai combat sloper) sent in a partially completed prototype of his Manta sloper. No specs were included, but I hope to see more of it when I go up to Richland for the scale fun fly.

From out of Wisconsin...
...comes the first Vern Hunt kit, a power scale sloper of the Czechoslovakian Aero L-39 Albatros.

Air Mail

ALOHA!

Dear Charlie,

I see you are making it to most of the meets on the west coast. Sure wish I could do the same. I really enjoyed the time we spent chasing the various slopes around the L.A. coast. Next time I'm over there, I'm going to bring something to fly, for sure. All of my new models' wings and tails come completely off for small volume shipping.

Had the pleasure of Byron Bruce and Rick Edris' company last fall. We flew for a couple of days at Noaleihu South

Sloping in paradise!
Dick Hancock's Silhouette works great on the Big Island.

Point. Had a ball. Them guys is nuts! Also found out that my tired old eyes couldn't keep up with Byron's camouflaged A-10 Thunderbolt when it got down near the bottom of the pasture in the shadows. Did a real number on the nose section back to the wing. Byron had it flying again the next day. Did I feel bad!

I finished Doug Hertzog's Silhouette with the optional fiberglass fuse. I made the tail removable, installed a 250mah battery pack, two S-33s, R-4H mini receiver and mini switch harness. The C.G. balance was perfect, no trimming needed. Flies like a dream (read: bullet!). While Byron and Rick were here, I added about four ounces ballast in 35 knot wind. Wild!!! What a performer. On another high-wind day, a dive pull-up got 3-1/2 vertical rolls. It's one neat ship, but you have to keep your eyes on it. The inertia is retains is fantastic. Three hundred foot climbs are easy. Say hello to Doug for me. Tell him to make a two-meter version. It'd be fantastic.

Also finished a Mini-Racer by Sailplanes International. Flew very nicely, but not really a performer. No

bad habits, very good slow speed performance in light winds, very predictable. Then I decided to put in some ballast – about 12 ounces – to see what would happen. Hot damn! What an airplane, a real bomb. Goes right where you point it. With coupled rudder and ailerons, it's really something!

Then up popped the Gremlins. While Rick and Byron were still here, I'd done a max dive with a low pullout. It got stabilizer flutter and headed for the ground. Just managed to pull it out before it hit. (Shaky knees!) A couple days later, the wind was up to around 40 knots, and I pushed the ballast up to 16 ounces. It flew like a real hot rod, but now I had stabilizer flutter on the bottom of all large maneuvers. The push-pull rod sounded like a snare drum against the fuselage. I cut a window in the fuse near the bellcrank to gain access and installed a good Sullivan cable in place of the push rod. So far, so good. Also, the plastic bellcrank supplied has a lot of "give" in the material, and I would recommend making a plywood or aluminum replacement. Or run a Sullivan cable direct to the stabilizer wire.

I didn't realize when I started this letter that I was going to write a review on the Mini-Racer! There's a lot of work putting the kit together, but if you sand all trailing edges sharp, you end up with a real performer.

Let me know if you can make a trip over here to get some big slope flying in. Maybe bring along Doug Hertzog or Marty Silberstein. By the way, give those guys an "aloha" for me.

Dick Hancock
Kailua-Kona, HI

Jeez, Dick, thanks for the model reviews! Byron's been nagging me to accompany him and Rick on one of their Hawaii flying safaris. I guess I'll have to fit it into the 1990 schedule (somewhere, somehow!). Let me know when you're planning to visit the mainland again, and we'll go test some of those new planes you've built. – Charlie.

HAPPY LANDINGS!

I've recently been enticed by articles in *Model Aviation* and other publications to discover the extreme amount of inexpensive fun that slope soaring can offer.

I'm a student at the University of Colorado and have been flying pattern competition for years. But being on the front range, I'm confronted with many

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promising slopes. I've had one slope soaring experience with a friend who has a Jaguar. Even though we both are very inexperienced, it was the most fun I've had in a long time. I'm hooked!

There is one question I was hoping you could address for me. Where I have sloped, the landing conditions aren't the best, and I was wondering what is the best way to land. How do you make an approach? I know that if you get too far behind the slope, you can get caught in the rotor, as I found out through experience. Should I traverse lower and lower along the slope and finally land it close to the edge of the slope to avoid the rotor or what?

Randy Claussen
Lakewood, CO

Landing is always the problem. You've gone directly to the main concern about slope soaring, Randy. One of my favorite sites, Point Fermin, is a beautiful, bowl-shaped 150-foot cliff facing directly westward into the prevailing wind. The flying is outstanding; the landings are rough (but worth it!).

If I could have any conditions I wanted, my first choice (regardless of rotor, hill shape, trees or any other undesirable conditions) would be soft ground. Ideally, I'd take tall grass. It softens even the most awkward arrival, so if I were checking out a slope for the first time, I'd look for a soft spot.

Next, my ideal slope would have a steep face to provide lots of vertical force, but the edge would round over gradually (rather than being—like Point Fermin—a sharp-edged cliff). That allows the wind to transition smoothly over the top and reduce or even eliminate the infamous rotor.

Eagle Butte in Richland, Washington is the best example I've ever seen. It's at least 500 feet high; it's very steep, and it rolls over smoothly at the top to provide perfectly laminar air flow for the landing area (which is—you guessed it—tall grass!).

Now, let's take a look at some less-than-desirable conditions.

Hard or rocky ground: In my opinion, this is the pits! Even a smooth landing can poke holes in your glider. Take a good, long look around. Usually there's something relatively soft. It may be way behind the hill, or it may be right on the face in front of you. Or you may want to create your own. Visit a carpet store and

ask for scraps (tell 'em it's for your model airplane club, and most dealers will be happy to give you their throwaways). Spread the carpet out where you want to land. The trick then is to hit the thing!

No landing area: Parker Mountain in Acton, California, is the worst I've ever experienced. The lift during Santa Ana wind conditions is violent—50 to 60 miles per hour is not uncommon—so the flying is outrageous! The landing? Forget it. You stand on a jeep road in the saddle between two peaks. There's a very steep drop off the backside (good flying no matter which way the wind blows), and your landing area is the road. It's only about 50 feet across, and hitting it in full-gale wind is an exercise in controlled crashing. Usually in cases like this, I'll go very low on the hill and then begin to work the plane up back and forth as slowly as the wind will allow. When you've reached ground level just slip it in over the edge. Or, if the ground looks softer on the face, just dump it there, as gently as possible.

Planes that fly regularly at sites like Parker are adapted to the local conditions. They're heavy (for Parker's strong wind) and tough (for the "impossible" landing conditions). The Super Cheetah is a perfect choice for durability.

The dreaded rotor: If you're flying a polyhedral "floater" the rotor is a very real danger, but if your plane is a typical aileron-equipped sloper (your friend's Jaguar, for example) don't worry too much about it. Just stay on your toes!

At Point Fermin, we have to land in a field that's relatively hard and has scattered rocks in it. It's also located on the other side of a busy four-lane street, so dodging traffic is part of the local technique (all the while flying your plane over water). And the rotor is unbelievable! A typical landing often sees my plane (usually a Cliff Hanger or Slope Scale power scale model) getting tossed up on a 90 degree angle several times due to the turbulence. The trick here, is to stay on the stick! React immediately when you see it bounce out of control. And most importantly, never give up! Fly it all the way to the ground, trying for the elusive smooth, perfect touchdown every time.

Sloping is rough on planes, and our landing conditions are the reason why. Practice, control and intelligent selection of the landing area all help extend the life of your glider. And there's no substitute for luck!—Charlie.

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