Radio Controlled Soaring Digest

December 2004 — Vol. 21, No. 12

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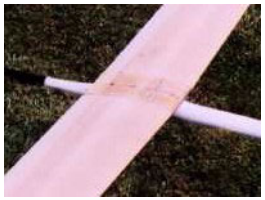

About *RCSD*

R/C Soaring Digest (*RCSD*) is a reader-written monthly publication for the R/C sailplane enthusiast and has been published since January 1984. It is dedicated to sharing technical and educational information. All material contributed must be exclusive and original and not infringe upon the copyrights of others. It is the policy of *RCSD* to provide accurate information. Please let us know of any error that significantly affects the meaning of a story. Because we encourage new ideas, the content of all articles are the opinion of the author and may not necessarily reflect those of *RCSD*. We encourage anyone who wishes to obtain additional information to contact the author.

RCSD Staff and Columnists

URL: <http://www.b2streamlines.com/RCSD.html>
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Yahoo! group: RCSoaringDigest

In the Air!

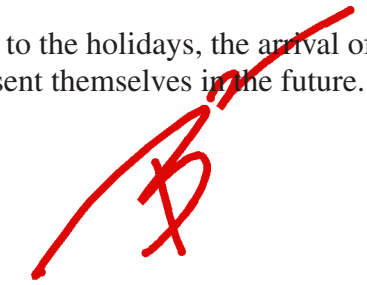
The change in format which was introduced last month has proven to be well received by readers. Our sincere thanks to John Godwin, Johannesburg South Africa, for giving us the idea for the new format. John received an education in aeronautical engineering at Imperial College London, and in the late ’50s flew full size gliders at Lasham. He’s been flying models since the end of WWII and RC sailplanes since the ’70s. John is the web editor for the South African Model Aircraft Association <http://www.samaa.org.za> and also runs a personal web site <http://www.kai-anis.co.za>.

This issue features the Annual *RC Soaring Digest* Christmas and Gift Giving Ideas list, and this year the list is large and well detailed. Dave Garwood sent in a number of suggestions and then wrote “mini-reviews” of two of the items. Rather than extend the list over more pages, we decided to let the mini-reviews stand on their own. You’ll find Dave’s comments on the Airtronics VG6000 on page 15 and his thoughts on the Simprop *Lift Off XS* on page 18.

As Managing Editors, we appreciate the consistent contributions which are the product of the *RCSD* staff and columnists and which serve as the foundation for this magazine. *RC Soaring Digest* has always been reader-written, and over the years many readers have become authors and have provided a continuous stream of articles for publication. Our special thanks to those individuals who forward their writings and photographs for publication in *RC Soaring Digest*.

Our sincere thanks to you the *RCSD* reader as well. Your feedback has been incredibly beneficial, and your continuing support for this magazine is both tremendously gratifying and incredibly motivating.

We here at *RC Soaring Digest* are looking forward to the holidays, the arrival of the new year, and the opportunities which will present themselves in the future.



“High Aspect”

3.1 Meter Sailplane Kit

Light Weight / High Performance

A review by John Dvorak

Specifications

Wing: black poplar veneer over white foam, presheeted, sanded

830.8 sq. in, SD 7080, 9.2%

Fuselage: glass pod and nose cone, carbon boom, glass fin, balsa stabilizer and rudder.

Weight: 28.6 ounces, no radio gear or ballast for CG location

Designed by Krzysztof Jasinski, Poland

Price: $349.00 from artHobby <http://www.arthobby.com>

Performance: Winch launched, tracked well. Smooth turns. Detected thermals. Stable landings in light air. No surprises. No provision for ballast to increase wing loading.

Kit

Surprisingly small shipping box (30" x 12" x 7"). The carbon boom was longest part.

Six sheeted / sanded, foam core, wing panels - four wing panels joined flat by four carbon rods.

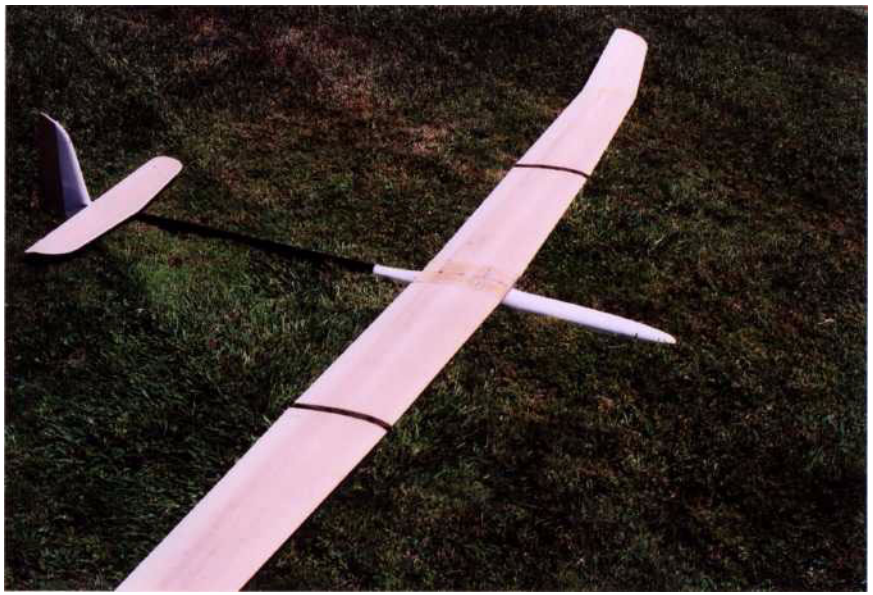
Inside and outside nose cones, glass fuselage pod, glass fin, stabilizer mounting plate.

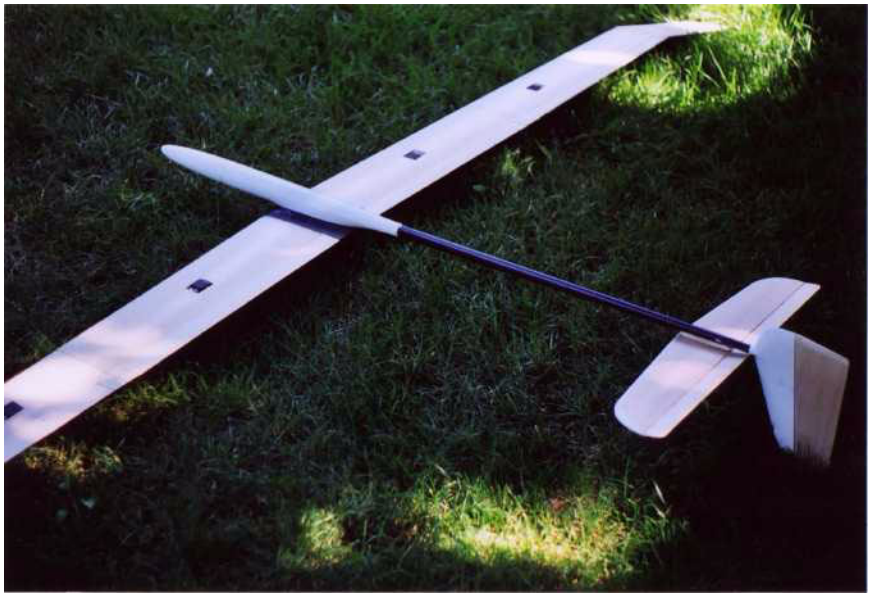
Balsa stab, pre-hinged balsa elevator, sanded.

Flaps, ailerons and servo bays were marked but not precut.

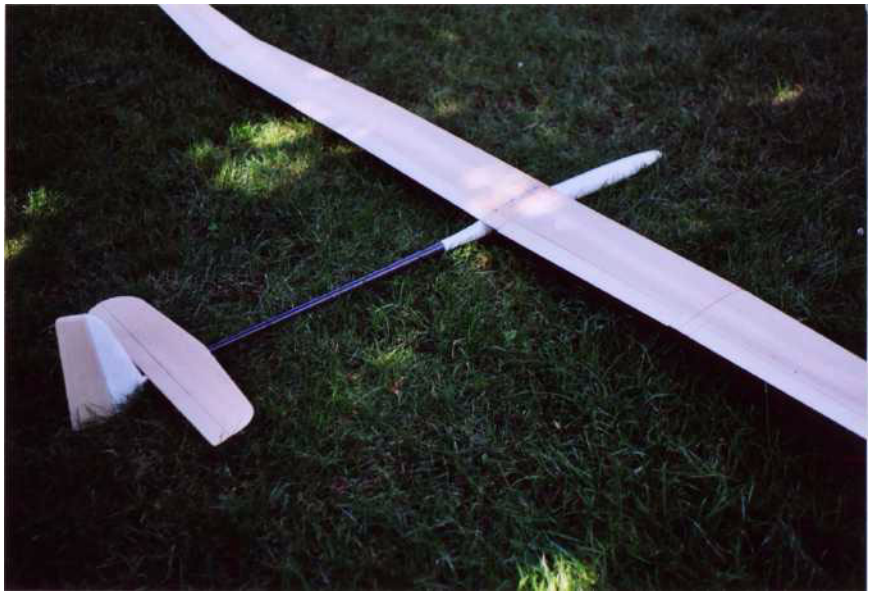
Assembly Manual - clear instructions, 22 photos, glider drawing.

Cade Rees held his grandfather's *High Aspect* sailplane.





Left: Three segment wing. Outer panels were joined flat by four carbon rods.
Right: Servo bays were cut through the veneer. Wiring was strung through precut conduits to one connector in the center.



Black poplar veneer over foam core wing.
Balsa stabilizer and rudder.

Assembly

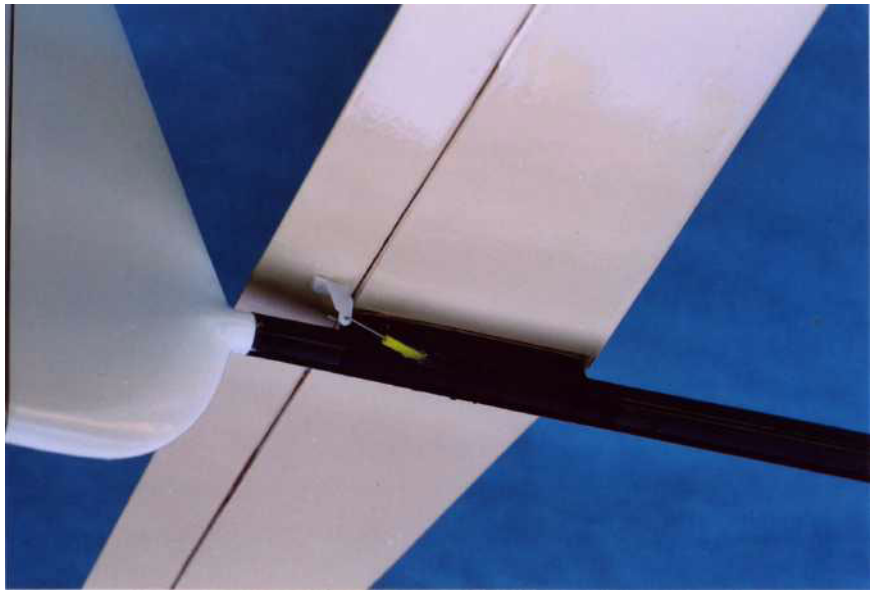
Four fuselage sections. Six Wing Panels.

Fuselage Assembling the fuselage in a planned sequence was important. The only part that was glued, at first, was the stabilizer mounting plate. The fuselage pod, center wing panel, boom, stabilizer, and fin were assembled, aligned and their positions marked.

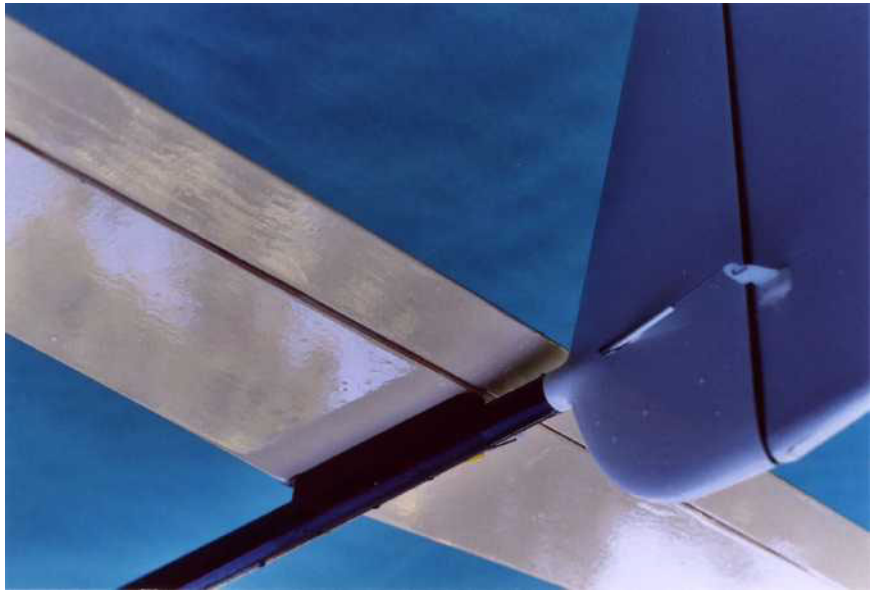
Two holes for the push rod conduits were drilled in the tail and the rods installed. Before gluing, the conduits were taped just inside the boom at the pod joint. Caution. The first 3-inches of conduit were not glued so that the pod joint could slip inside of the boom. CA was dribbled down the conduits to bond them against the inside of the boom.

Stabilizer Mounting Plate. I imagined the stabilizer tearing away from the boom during a winch launch. Only epoxy was specified for attaching the stabilizer mounting plate to the boom.

This joint was reinforced by wrapping glass cloth around the



Elevator push rod entered boom below stabilizer mounting plate.



Stabilizer Mounting Plate. Rudder pushrod entered boom through fin.

boom and up the sides of the mounting plate then impregnating with epoxy.

Wing Center Joint. No provision for attaching the two wing spars was specified except for glassing the center skin. I imagined the 3 meter wing folding during a winch launch so special reinforcing was installed.

The center wing spar joint was reinforced by sawing through both wing panels, along each side of the spars. The saw cuts extended 2-inches into each panel. The dihedral angle was set and 0.074 carbon plates, with epoxy, were slid into the sawed slots thus bonding the two spars together.

Wing Tips Wing tips were epoxied to the aileron panel's foam core and the skin joints reinforced with glass tape and epoxy resin

Wiring. Servo wiring was strung through existing channels in the center and outer wing panels.

Three-wire connectors were used at the aileron panel joint and a 12-pin connector between the wing and the fuse.

An opening was cut in the fuselage to accept the 12-pin connector.

Adhesives. Goop was used to attach servos and to glue fuselage joints.

In the wing servo wells, Goop was placed only on two servo sides; not on the bottom surface.

A servo can then be easily removed by cutting along the two glued sides. Caution: Goop attacks foam, so servo wells were coated with resin.

Marine epoxy resin bonded glass cloth to the three wing joints.

Slow cure 30 minute epoxy glued the wing and stabilizer joints.

Paint. Sanding sealer was brushed on the black poplar veneer wing. The wing was sanded and a color coat sprayed on. Butyrate of dope was brushed on the balsa stabilizer and rudder and sanded to make the tail as light as possible.

Conclusion

Good design and engineering.

Strong light weight structure was easy to assemble.

Major modification - wing spar connection in center section.

Six ounces of lead shot was added in the nose to balance the plane.

Total flying weight - 52 ounces, 9 oz./ft^2.

The High Aspect has had many good thermal flights with no surprises.

Landings were stable and predictable in light air.

Available from artHobby <http://www.arthobby.com>

Products

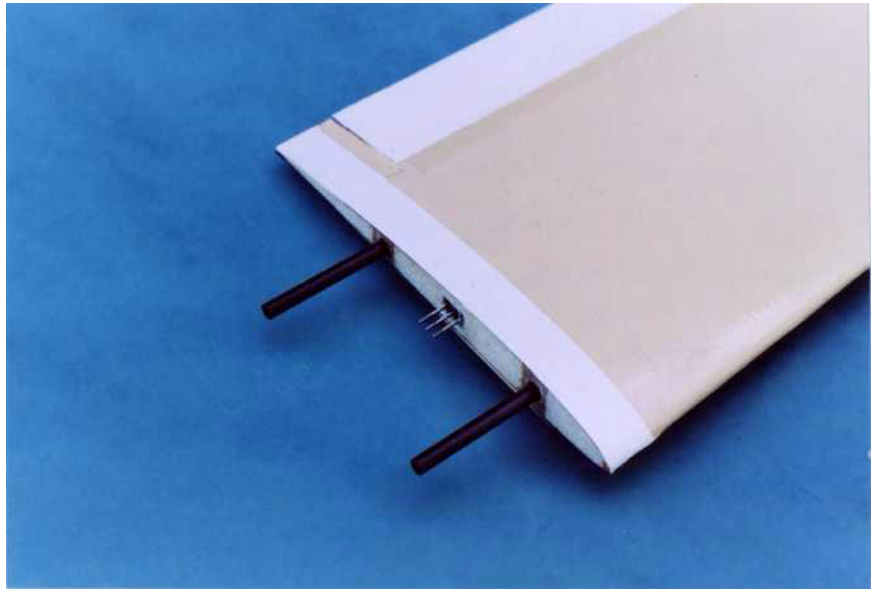
Goop Household Contact Adhesive & Sealant, Electric Products, Inc.,
<http://www.goopit.com>

CA (ethyl cyanoacrylate) adhesive

Marine epoxy resin

McCloskey Heirloom Sanding Sealer, Valspar Corp.

Aerospace Composite Products: 0.074 Solid All Uni-Carbon Plate
<http://www.acp-composites.com>



Carbon wing rods joined the outer panels to the center section. Aileron servo plugged into center panel.

Inner nose cone held control gear and nose cone. Antenna was installed inside of the carbon boom.

Christmas and Gift Giving Ideas

Contributed by the *RCSD* Staff, compiled by Dave Register

'Twas the night before Christmas and all through the shop
The writers were thinking with nary a stop.
No socks or striped ties, no after shave mist
'Cause RCSD has come up with a list!
It's got movies and books and neat gizmos, too.
They'll fit in your stockings, some old and some new.
So read on and see what's been written here.
Merry Christmas to all — and a Happy New Year!

Dave Garwood

My happy discovery this year is LiPo batteries. I was always worried about them 'cuz of the "burn your house down" and "burn your car up" stories and photos. Now I know that it's a matter of handling dangerous materials with care and respect, like ammo reloading or compressed air in a shop.

At an electric fly-in this year a guy let me try a LiPo pack, and my Simprop *Lift Off XS* delivered unlimited vertical performance.

Guy at the field said, "I never saw an electric go straight up." I replied, "I never did either, until today."

So, for this year's list:

Simprop *Lift Off XS* electric hotliner from Hobby Lobby. See my review beginning on page 18.

<http://www.hobby-lobby.com/liftoff.htm>

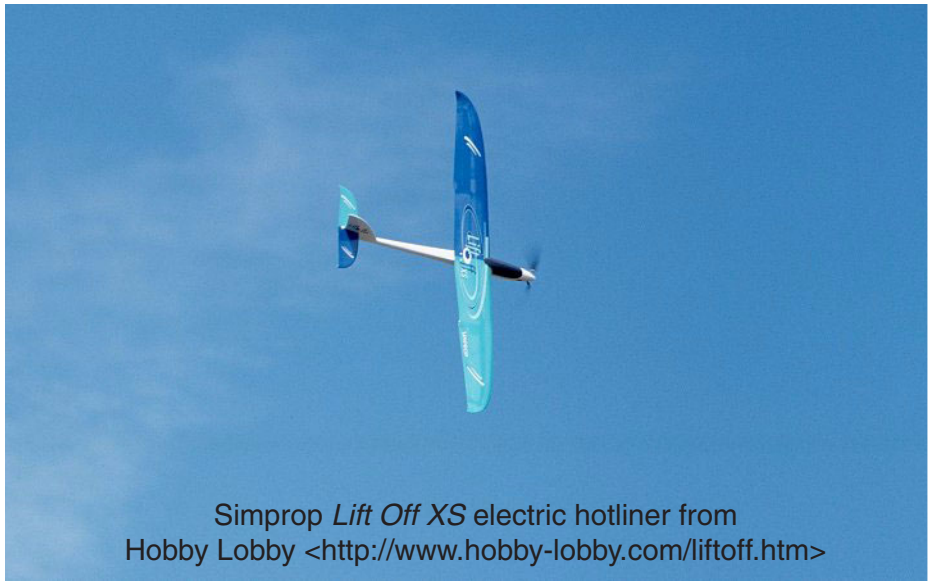
Kokam LiPo battery pack

Dymond Modelsports LiPo charger
<http://www.rc-dymond.com>

And in a more traditional vein:

LEG P-40 *Warhawk* PSS kit
<http://www.leadingedgegliders.com>

Airtronics VG6000 radio my review begins on page 15.



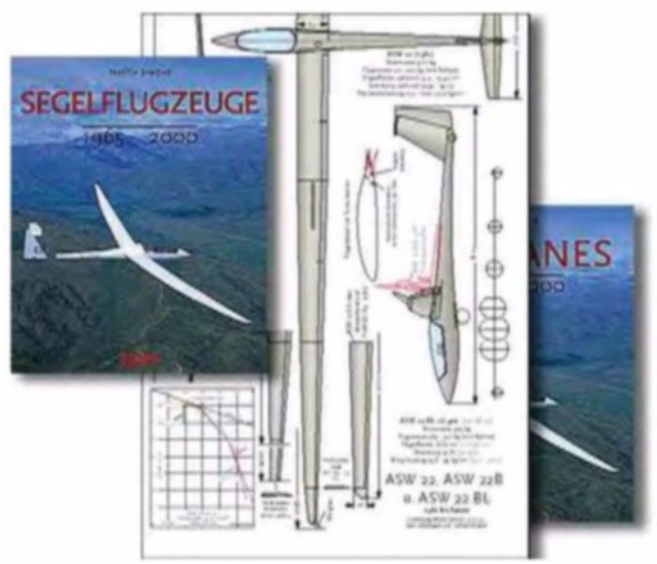
Simprop *Lift Off XS* electric hotliner from Hobby Lobby <http://www.hobby-lobby.com/liftoff.htm>

These are the things I had a lotta fun with this year.

Greg Vasgerdsian

Sailplanes, 1965-2000 Hot off the press and ready to show up under your tree is Martin Simons' latest book, *Sailplanes, 1965-2000*. Packed with 134 sailplanes from 18 countries and 52 manufacturers, it is the third book in the Sailplane series. This book has 140 excellent color three-views, 192 color and 58 black and white photos all in a well laid out 9.5" x 12" hardcover book.

In the 1965-2000 period plastic structures became orthodox while fiberglass was supplemented with carbon and aramid fibers as



Martin Simons' Sailplanes, 1965-2000, available through Raul Blacksten <raulb@earthlink.net>.

reinforcing materials. The improved strength and accuracy of the structures allowed for many advantages to be taken with wing profiles.

For the R/C soaring pilot this is a must have book that comes with descriptions, pictures, and excellent scale drawings showing the most successful designs. In addition there are tailless and variable geometry sailplanes featured along with some of the less expensive designs that flourished on the homebuilding scene in the USA and in Australia. One of the most interesting chapters is on fiberglass sailplane construction — complete with photos!

In the US the price is $64.95 plus $4 shipping and handling.

Sailplanes, 1965-2000 is available from Raul Blacksten, PO Box 307, Maywood, CA 90270. E-mail: <raulb@earthlink.net>

Mark Nankivil

Christmas this year will find me asking for the following items to be included under our family Christmas tree:

HLG Pro Clinic DVD This coming flying season I want to get more involved in our club's HLG/DLG contests and fun flying and the DVD "HLG Pro Clinic" looks to be a great way to soak up some useful information and get a jump start on my model set up and flying. Also in their DVD collection is **Red Line Sky** which features a tremendous amount of photographic and video footage of full size sailplanes, just what I need to light the fires for next year's scale soaring events. I had purchased this DVD for my stepfather who is a retired full scale soaring pilot and he was very impressed with the DVD.

Top all of that off with the new **2005 Radio Carbon Art The Soaring Experience Wall Calendar,** a must have for my workshop wall.

Radio Carbon Art <http://www.radiocarbonart.com>

A Fine Week of Soaring DVD In a recent *Air & Space* magazine, I saw a review of an intriguing new DVD titled "A Fine Week of Soaring" which chronicles a full scale regional soaring competition held in Mifflin, Pennsylvania. Some the flying is done along the ridges in the area as well as plenty of thermal flying. This looks like a great DVD to watch on a cold winter night when you're wishing and dreaming for the great flying weather of the coming Spring. Both DVD and VHS formats are available through the Windrider Gift Shop of the National Soaring Museum.

National Soaring Museum <http://www.soaringmuseum.org>

Experimental Aircraft Association (EAA) Sport Aviation Magazine Archives on CD-ROM The EAA has made available a complete archive of their "Sport Aviation" magazine from 1953 to present on CD-ROM. With the ability to query on specific subjects, authors and articles, this would be a great way to look for information on subjects that I want to model in the future, both for soaring and electric powered models. I might as well ask for a box of paper and ink cartridges for the printer too — I'm going to need it!

Experimental Aircraft Association (EAA) <http://www.eaa.org>

Richter R/C Aircraft Design ***Alula*** Back in September, we visited Bill & Bunny out in Washington. I had the chance to fly the new *Alula* (see Bill's review in the October 2004 issue of RCSD for further details) and I came to the conclusion that had to have one! I have one already on the way — it'll go under the tree for Christmas!

Richter R/C Aircraft Design <http://www.dream-flight.com>

Classic Aero This is a relatively new company that is making kits available of some of the classic early flying boats. Two upcoming kits that interest me are the Dornier *Wal* and the Savioa Marchetti SM55X. I've collected various bits and pieces of information on these two great aircraft over the years and the idea of being able to put that to use building electric models of both definitely works for me!

Classic Aero <http://www.classicaero.com/main.html>

Cavazo Sailplane Designs Hopefully this coming year will see a trip or two out to see my friends Alden & Joyce Shipp in Lucas, Kansas and to visit the great sloping conditions at nearby Wilson Lake. I'd like to have something a bit different to take out there, and to also use around here on a few potential slope sites, and the **CSD Manta-Ray EPP** flying wing looks like a good choice. Heck, an electric pod for it may be useful, too.

Richter R/C Aircraft Design Alula
<http://www.dream-flight.com>

Cavazo Sailplane Designs <http://www.rcglider.com>

And I'll finish up with the most important wish of all — that you, yours and all find 2005 to be a wonderful and most awesome year in every way. To all of you, my very best wishes for the coming Holiday Season and throughout the New Year of 2005!

Good Health and Good Lift!

Bill & Bunny Kuhlman (B^2)

Michael Richter's *Alula* kit has already been mentioned, but we just cannot pass up another opportunity to promote this fun-filled sailplane. The price is reasonable, it's easy to build and transport, operates in light slope lift or thermal conditions, and truly flies like a bird. The *Alula* kit is another winner for Michael, and is a well received addition to his now legendary Weasel series of slope gliders.

<http://www.dream-flight.com>

SkyKing RC Products Ed Berris recently started up SkyKing RC Products, and the product line is expanding rapidly. Ed carries two tools which are relatively unique, the David razor plane and the Perecman router base and template set. Both of these items are exceptional tools for the modeler's workshop.

SkyKing RC Products <http://www.skykingproducts.com>

The David razor plane, made in Holland, is somewhat similar to the German Solingen FIX razor plane carried by other firms, but we've come to like it for its



David Razor plane (left) and Perecman router base and template set (middle) from SkyKing RC Products <http://www.skykingrcproducts.com>. Right: Fiskars Softouch Multi-Purpose Scissors (Item #9911) <http://www.fiskars.com>

differences and have been using it quite a bit.

The David plane body is of aluminum alloy, so it's rigid but lightweight. The blade, made by David, can be placed in any one of three positions — forward, middle, or rear. In the forward position, the blade sticks out from the front of the plane so it can maintain contact with the surface all the way into corners. In the middle position, the body and blade act as a standard shaving plane. In the rear position, the blade can be used on concave surfaces.

The David plane is more comfortable to hold than the Solingen model and can be used on concave surfaces with sharper radii. Additionally, the David plane completely encloses the incredibly sharp blade, unlike the Solingen, reducing the opportunity for bloodletting to near zero.

The David plane is far superior to the plastic "razor planes" usually found. As mentioned above, the blades are extremely sharp and are made from high quality steel. They last a very long time, even when used on hard balsa and spruce.

As is our usual practice with new razor planes, we spent a few minutes finessing the sole into perfect flatness with water, a bit of dishwashing liquid, and 400 and 600 grit sandpaper on plate glass. The sole was nearly perfectly flat out of the package, and we actually removed a very small amount of extraneous material.

The smooth cutting David razor plane comes with two blades for $12.00, plus packing and postage, but you might as well order that extra pack of ten blades for $10.00 additional while you're at it.

The Perecman Router Base and Servo Template Set is also available from SkyKing RC Products. The acrylic Perecman router base has an extended piece of brass tubing and tapped holes. The tapped holes are used to attach the Perecman base to your Dremel router fixture, replacing the solid black one which came with it. When the special router blade is attached to the Dremel tool chuck it passes through the brass tubing.

In use, one of the provided templates (or one you've made yourself of 1/4 inch thick material) is attached to the surface to be routed and the base tube in the Perecman router base exactly follows the template contour. The depth of the cut is determined by the setting screw adjustment on your router fixture. Slick!

You'll be able to cut perfect servo openings in your wings each and

every time, and the servos will fit tightly. With your own templates, you'll be able to cut spar slots, channels to install air brakes, etc., and you'll get consistent results.

The complete router base and servo template set includes the transparent Perecman router base and five templates — Hitec HS50, HS 81, HS 85 and HS 225, and a circle for Hitec servo cans — for $29.99. The router base with guide bushing and special router bit is $10.00, templates are $8.00 each, and additional router bits are $4.00 each.

Ed and SkyKing have taken over production of some of the **DAW (Dave Sanders' Dave's Aircraft Works), Harris Nelson and Mark Grand designs**, so make sure you check out the SkyKing web site for other exciting items!

<http://www.skykingrcproducts.com>

The Fiskars Softouch Multi-Purpose Scissors (Item #9911) is our last suggestion for this year's list.

These scissors have hardened stainless steel blades, cushion grips in the handles, a spring action, and a lock-unlock feature. We use ours for paper of course, and also for cutting aluminum flashing template material. The handles are not the circular type usually seen, but rather are straight. We find these to be easier to grip, and they are OK for right or left handed users. The blade angle is such that you can keep the blades close to the work surface as you cut. The spring loaded handles open smoothly when you release them and the sliding lock holds the blades closed for storage.

<http://www.fiskars.com>

We picked up our scissors at JoAnn Fabrics, a national chain.

If you sign up to receive JoAnn Fabrics mailers you'll get discount coupons on a regular basis, about every two weeks. These coupons are usually worth 40% off on any single item, in a store or on-line. If you use a coupon for the Fiskar scissors, for example, it reduces the price from $19.99 to $11.99, making the purchase a real bargain. There are so many modeling related items at JoAnn Fabrics — cutting mats and rotary cutters, pins of various sizes and shapes, rip-stop nylon fabric, glues and tapes, small tools, etc. — you'll find it incredibly easy to use those coupons faster than they arrive in your mail box. Also, you can go to the JoAnn Fabrics web site and see what others have to say about specific products. (The Fiskars scissors, by the way, have an exceptionally high rating.)

<http://www.joannfabrics.com>

Dave Register

Something old, something new, something borrowed... Wait a sec! Wrong celebration! But the sentiment is still OK. This year I've gotta go with some items from the "way back" file as well as a few new ones that have been really neat this year. All of the following are items I've personally used. I know in many cases there are options from other suppliers but the wallet isn't deep enough to cover everything – wish it were!

Mark already mentioned a couple of my favorites but I'll emphasize them again:

HLG Pro Clinic Paul Naton's HLG Pro Clinic is a terrific addition to your list this year. I've practically worn it out watching and re-watching all the little details. I'm not very competitive at DLG but it's my favorite flying mode and even for us old duffers, there's a lot to be gleaned from this excellent video. And while you're looking at Radio Carbon Art's web site, any of the other videos are great watching. Ever since "Endless Lift" Paul and Aimee have done a terrific job and it just keeps getting better and better.

Soaring Experience wall calendar Also at their web site, check out the "Soaring Experience" wall calendar. Mine recently arrived and the photography and art work are outstanding. Yeah, the one from the local funeral parlor is free at church but the "Soaring Experience" is much more uplifting and works well in your office or workshop.

Radio Carbon Art
<http://www.radiocarbonart.com>

Vacuum Bagging Made Easy video and Composite Molding Made Easy While we're in the DVD mode, I have really enjoyed both Phil Barnes' "Vacuum Bagging Made Easy" video and Terry Lukenbach's "Composite Molding Made Easy" video produced and supplied by Bill Hayman. Phil really tells all in his two DVD set and Terry's overview of mold making is very good. Both videos cover the numerous hints and tricks these

The February 2005 pages from the Radio Carbon Art "Soaring Experience" calendar. <http://www.radiocarbonart.com>

guys use to ply their crafts so very well. If you have an interest in either topic, Bill Hayman's DVDs are of very good quality and cover the landscape better than anything else I've seen on these topics. The DVD format is particularly useful for a quick review of any of the many topics covered:

<http://www.paonline.com/hayman/video.htm>

Auto-Vac Bagging System Continuing the theme of vacuum bagging, now that you've seen the video maybe you're chomping at the bit to give it a try. There are several systems available to you from several sources but the pump and bagging kit that jump started me several years ago is still going strong. That's the Auto-Vac Bagging System from Aerospace Composite Products. Works great, very simple, very reliable and suitable for any grade of foam and composite material.

Ez-Vac Bagging Kit If you'd rather enter a little easier and are sticking with sheeted surfaces or white beaded foam the Ez-Vac Bagging Kit is an affordable way to start. Both are available from Aerospace Composite Products at:

<http://www.acp-composites.com>

Dymond 60 servo I continue to get excellent performance from my DLG wing servos using the Dymond 60 servo from Dymond ModelSports Ltd. It's about the highest torque in the thinnest package for DLG that I've found. They fit flush in any wing that uses the latest Drela airfoils (~7.5% thick!) and they've survived a lot of use and abuse this past year:

FMA M5 receiver Also in the DLG line, the M5 receiver from FMA has proven to be an extremely light weight, long range and very reliable unit. I know folks have also been using the Berg units, and they look good, but I can only speak from personal experience here and the M5, including the new low voltage version, is my choice. Fits great in the nose of the XP3 but is equally at home in a five channel plane.

FMA Direct <http://www.FMADirect.com>

Great Planes CG Machine In addition to the Great Planes Laser Incidence Meter listed last year, I'll now add the Great Planes CG Machine. If you don't feel like making your own balancing tool, GP does the work for you. Price is right and it simply works. Using both the CG and Incidence meters really helps get a new ship off to a good start and is equally helpful in sorting out where you want to be for maximum performance. Check them both out at your local shop or at any of several on line stores:

<http://www.hobbypeople.net>

<http://www.towerhobbies.com>

Sirius Pro Series battery charger So you're heading for the field (or slope) 'cause the weather just turned great and you took the afternoon off. About halfway there you remember you

Left: Sirius Pro Series and Sirius 100 chargers from Sirius Electronics <http://www.siriuselectronics.com>
Right: Triton field charger available from <http://www.electrifly.com>, Tower Hobbies <http://www.towerhobbies.com> and other sources.

haven't charged the batteries in a few days. No problem if you have a field charger of some sort. I've mentioned this topic in numerous past lists because it's still the most used item in my shop and I don't think anyone can be without one. Among the field chargers for NiCd and NiMh use that has been an outstanding value for me is the line of Sirius chargers. My favorite is the Pro Series but the line has expanded quite a bit over the years. Check them out at:

<http://www.siriuselectronics.com>

Triton field charger I've also recently added a Triton field charger to my list of shop and field tools. It has a very wide range of capabilities for NiCd, NiMH, Lead-Acid and Lithium batteries. Built in programming and memory for all of the above as well as cycling, and charge/discharge rate controls. And it will handle up to 24 NiCd/NiMH cells from a 12 V source. Take a look at:

<http://www.electrifly.com>

<http://www.towerhobbies.com>

Micro Mark As in year's past. I've got to put in a word for Micro Mark, my favorite tool store. The one tool I just can't do without is a good set of hemostats. It's not for surgical repair of pilots – although occasionally that's needed. It's for grabbing and holding little screws and nuts (think teeny little micro servos!), great for fishing wires and connectors out of strange places in your fuselage and wings and for grabbing linkages so you can put that extra half turn on the clevis to get your trims just right. Browse a little at Micro Mark. Get a couple of straight and curved hemostats (the curved ones are more useful). Also check out their files, saws, tools and all sorts of other goodies. A great source for stocking stuffers!

<http://www.micromark.com>

Thanks to all the *RC Soaring Digest* contributors that make this list so very easy to compile each year.

And thanks to Judy, Jerry and B^2 for carrying on the *RC Soaring Digest* tradition and inspiring and encouraging all of us.

Enjoy a great holiday season and bright and promising New Year.

Take your family on vacation and your kids to the field.

Live, laugh and be happy!

Airtronics VG6000

Reviewed by Dave Garwood

This time last year I had just begun using the Airtronics VG6000 and found it fit my needs wonderfully. It's a six channel computer transmitter with NO MENUS. All the functions are accessible from a single screen, and that makes a happy time for me, a guy who never seemed to get the hang of watches and other electronic devices in which eight functions are controlled by four buttons.

A year later I have purchased a second VG6000, and traded for a third. I've traded away my older "many menu" computer radios and I'm rapidly standardizing on the VG6000. I never really got comfortable with the "deep menu" radios, and for more than ten years I worked mainly with small variations of the original six-servo sailplane program done for me by a flying buddy. That shameful period is all behind me now, because with the VG6000 I can do all I need to do, working quickly and easily from scratch.

Many of my planes are two-servo slope soarers, but a computer transmitter comes in real handy here to provide dual rates and exponential rates. I fly a few electrics, and the VG6000 handles them no sweat. I'm setting up my second six-servo thermal duration plane and as long as you don't need more than three flap positions (on a switch), the VG-6000 serves well here as well.

One of Dave's VG6000 transmitters shown with some of the components it can be ordered with: 92717 seven-channel receiver, 92515 five-channel micro receiver, four 94322 standard-size ball bearing servos, and three 94091 super-micro servos. The taped on aircraft ID panel on the lower part of transmitter is explained in the review.

I've noticed but two limitations in comparison to the other computer transmitters. First is the lack of capability to record model names in the transmitter; you can store settings for four models, referenced only by number. I worked around this with tape on the front of the transmitter. The second is that the internal stopwatch function truncates the display and reads out in ten-second increments, rather than the expected every-second increment. It's okay for timing a long flight, but for precision duration landing tasks, you'll still want a stopwatch, perhaps the one held by your timer.

Not many things in this world are perfect, but given the high capabilities, reasonable cost, and ease of use of this radio, I find it useful enough to standardize on for my slope, electric, and thermal flying.

The VG6000 is available in four versions, with various combinations of receiver, servos, and ESC, starting at $285.95.

Go to <http://www.airtronics.net/> to see a complete list of features and to download a copy of the instruction manual.

NO FEAR!

by Sherman Knight, Seattle Area Soaring Society

Over the last several years, the Seattle Area Soaring Society has lost several outstanding pilots. They are still alive, they just don't fly at the sailplane field anymore. They don't fly because of the deteriorating safety conditions at the field. This topic has been discussed in great detail in the club internet forum and at local meetings.

The basic problem

Too many planes have been shot down in the last couple of years, usually by someone coming to the field for the first time. They just naively go over to an unused corner of the field and turn on their transmitter, unnoticed. But we also have had newcomers who actually refused to put a card on the frequency board after being asked to do so — they claim they know what they are doing.

Everyone reading this article knows both of these actions create a variety of safety issues, from inexperienced pilots crashing their newly bought aircraft on a populated flying field to interference causing the demise of a sailplane worth several hundreds or even thousands of dollars.

Indestructible!

Unfortunately the trend of prebuilt, replaceable part, indestructible aircraft is making this "newcomer" scenario more complex.

Until recently, we all had a common fear. A deep seated fear that went to the core of why we had safety rules. The fear of crashing and destroying several hundred man hours of work that we had lovingly cared for and carefully built. The time we invested in construction and finishing had turned balsa wood and fiberglass into our baby. We would sneak looks at it. Caress it and touch it whenever the wife was looking the other way. We could talk for hours to other pilots about how we built this or modified that. Trying to get a sailplane pilot to talk about crashing was like trying to get my dad to go to the hospital. It was impossible. The fear was too great. Talking about it might jinx the next flight. So instead of talking about crashing we talked about and enforced safety. I learned to fly under the fear of crashing. It has been ingrained into me for years.

So what happened several months ago when I went sloping with my now beat up Zagi? I realized after I launched and had been flying for five or six minutes, that I had never even checked to see if there was any frequency control.

What should I have done?

Land immediately.

What did I do?

I kept flying.

Why?

Because I didn't care if I crashed.

OK, OK, I said it. I flew dangerously. I violated every rule I had learned for the last decade. And why? Simply because I didn't care if I crashed.

What is it about indestructible aircraft?

"My baby" no more

In the last several years, models have evolved to the point where most come ready to assemble. A couple of minor tools and you too can build a plane in a very short time. A visit to the local hobby shop and I could not find a single kit consisting of balsa sticks and a sheet of plans. Everything they had in stock had a prebuilt wing and fuselage.

When you purchase a prebuilt plane or put together a plane that

is indestructible, it is nearly impossible to call it your "baby." There is no direct investment of substantial time and effort on your part. What is the result of that? Your fear of crashing goes way down. What happens when you loose your fear of crashing? Your concern over safety goes way, way down with it.

The big connection

Along these lines another problem is created. If you don't care if you crash, you never ask for help.

I enjoy helping rookie sailplane pilots who ask for assistance. Their plane always goes home in one piece. They respect the frequency board and other pilots on the field and show a desire to understand the safety issues.

We have always had rookie pilots who came to the field believing they know how to fly and therefore not asking for help. They usually crashed on the first flight. About 50% came back with a new plane and asked for help. The ones that come back and asked for help are now the club top dogs.

Unfortunately, way too many rookie pilots are showing up at the field with "indestructible" aircraft. As a result, fewer rookies are asking for help, and maintaining a safe field is getting to be an ever larger problem.

And the point is...

My point is to bring up some issues in a way that maybe you have never thought about before, demonstrating the relationships which tie them together.

Human nature is never simple. Flying a combat aircraft caused me to shrug off safety procedures that I had spent a decade learning.

There are certainly some essential relationships to think about. Perhaps solutions can be found by analyzing those relationships and doing a bit of creative thinking.

The SASS solution: SASS established a two-pronged approach.

Members now focus on being aware of the arrival of newcomers to the field and make a special point to greet them, explain the field rules and why they exist (including the requirement for AMA membership), and volunteer assistance.

Additionally, those who willfully disregard the field rules are confronted by both a number of aligned club members and at least one Safety Committee member, not by a single person.

These changes have made a vast difference on the club field, 60 Acres South.

Safety is now in the forefront, and a higher percentage of newcomers are staying with the hobby and becoming SASS members.

And those "lost pilots" I mentioned in the first paragraph? They're coming back.

FAI has received the following Class F (Model Aircraft) record claim:

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Claim number: 9931
Sub-class F3B (Glider)
F3: Radio controlled flight Category
Type of record: N°158: Distance to goal and return
Course/location: Location to be confirmed
Performance: 10.66 km
Pilot: Gary B. FOGEL (USA)
Date: 22.10.2004
Current record: 1.90 km (27.05.2003 - David L. HALL, USA)

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The details shown above are provisional. When all the evidence required has been received and checked, the exact figures will be established and the record ratified (if appropriate).

CIAM Home Page: <http://www.fai.org/aeromodelling/>

Simprop *Lift Off XS*

A review by Dave Garwood

Here's an e-flight plane that will blow your hair back. A "hotliner" in every sense of the word, the Simprop *Lift Off XS*, imported by Hobby Lobby, stands out from the crowd. The kit comes heavily prefabricated, with molded fiberglass fuselage, gel coated in sparkling white; and with sheeted wings and horizontal stabilizer covered with Oracover. Building consists mainly of mounting the motor, installing the servos in the wings, and installing the elevator servo and battery tray in the fuselage.

I used the motor, prop, ESC, and NiCd battery pack recommended by Hobby Lobby and I am mightily impressed at the performance this plane delivers. It will sustain an unlimited climb at 80% and in 12-14 seconds it's near too small to see. Cut the motor and cruise for up to a minute and a half. You can do this 8-10 times on a battery charge and thus easily get 10-15 minutes of exhilarating flying on a single charge.

The plane is heavy, and thus wants to be flown fast, so it prefers large, graceful, sky-filling maneuvers, including big loops, Split-Ss, and Cuban-8s. It will sustain inverted flight and pull an outside loop. It's an energy plane and will glide for a long time on its thin airfoil. As a test, I was able to climb for 15 seconds under motor power, cut the power, and pull 15 loops on the way down before having to apply power again. I'm very pleased with the output of the rotating can AXI brushless motor – very powerful and very quiet as the power train has no gearbox and thus no gear noise.

At an electric fly-in this year a pilot let me try a LiPo pack, and my Simprop *Lift Off XS* delivered unlimited vertical performance. This was exceedingly impressive to me. An observer at the field said, "I never saw an electric go straight up." I replied, "I never did either, until today."

So I got a 1900 mAh 3S2P Thunder Power LiPo pack through my local hobby shop, and using a Dymond Modelsports TurboLipo charger (you need to use a LiPo charger with LiPo batteries). The LiPo and AXI powered *Lift Off XS* can be genuinely described as a "Wunderplane." This one is a definite keeper.

For more information on the *Lift Off XS*: <http://www.hobby-lobby.com/liftoff.htm>

Bill & Bunny Kuhlman
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Beppe Ghisleri's *Aiguillon*

Our Italian correspondent, Beppe Ghisleri, has been flying a Swiss N-20 "Aiguillon" on the slopes of Italy and Austria for over a year. While Beppe intended to have a PSS model, that's not quite how things worked out. Here's the story...

The idea

Beppe first saw the *Aiguillon* in the second issue of Dave Jones' *Quiet Flight International*, July 1994, in Simon Cocker's "PSS" column.

There was a small three-view and a short write-up which described the 1951 prototype as using four by-pass engines adapted from Armstrong Siddely Mamba turboprops. The prototype did fly, actually making a few test hops before the project was abandoned.

Beppe had no interest in the N-20 *Aiguillon* initially, but about two years ago he was going over some of the early *QFI* issues, spotted the N-20, and decided he would build one for PSS.

Luckily, the advent of the internet made finding documentation for the model relatively easy.

Additionally, Beppe was able to contact a Swiss PSS modeler, Reto Schmid, who sent him detailed three-views of the N-20, reproduced on page 20. Together with photos of the prototype in a museum, where it now resides, Beppe had sufficient material to start his project.

Planning and designing

Because the model was to be flown in slope lift, and hence designed to be a glider, adjustments were made to some of the dimensions. The model is therefore not exactly scale. Beppe enlarged the wingspan of the outer sections a bit to increase the wing aspect ratio. Even with this change, the aspect ratio is rather low for a glider. The fin and rudder have also been slightly enlarged to match the higher aspect ratio.

Beppe's N-20 is a relatively large model. The fuselage has an overall length, nose to tip of fin, of 1.42 meters; the wingspan is 1.92 meters and the wing area is 87 sq.dm. The completed model weighs 3200 gr. ready to fly.

The wing uses an airfoil designed by another Italian modeler, Simone Nosi, the SN42. This section is 8% thick and has a near zero pitching moment. Beppe used the Panknin spreadsheet on the B^2Streamlines web site to compute the needed wing twist. Two degrees of washout is used, starting at the wing outline break at roughly half span. There is no twist in the inner panel.

The SN42 wing section and about 3000 other profiles can be downloaded from the Profili web site. (See References.)

The MAC was determined with Planform-Analysis Version 1.4 by Greg Ciurpita based on John Hazel's Liftroll Spreadsheet. The CG was set to 10% ahead of 25% MAC, a static margin of 0.1.

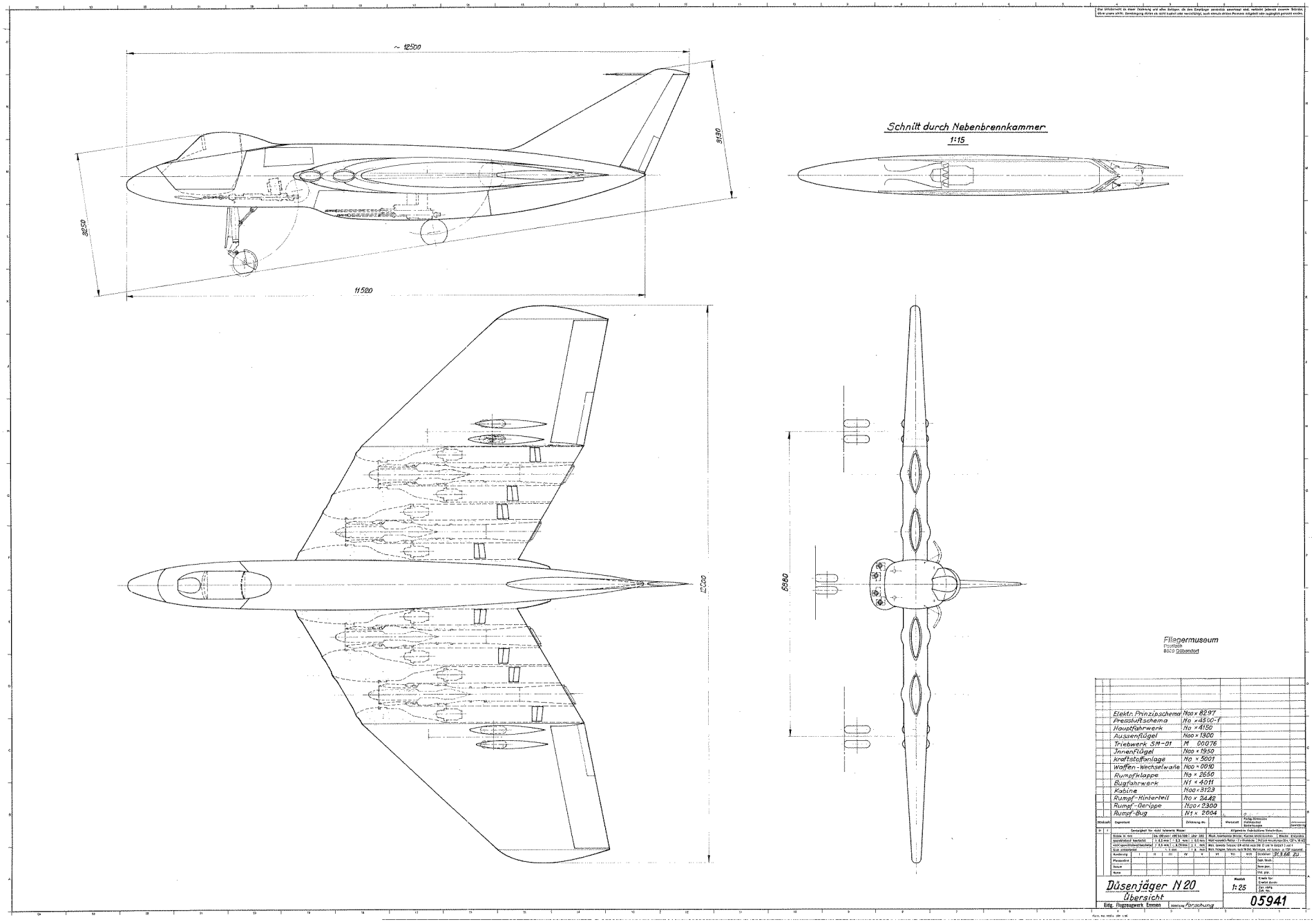
Construction

The fuselage is from blue extruded polystyrene shaped and carved and covered with 200 gr./sqm. fiberglass.

The wings are from white foam sheeted with 0.6 mm obeche veneer and covered with 40 gr./sq.dm. fiberglass. Some carbon tissue is laid on the underside to help resist landing bruises.

Between the foam and the veneer, on the trailing edge, some carbon tissue helps maintain the form of the profile which is very thin.

Every half wing is built in two pieces, individually sheeted and later joined with two short 3 mm thick poplar ply reinforcements.



Federal Aircraft Factory N-20 *Aiguillon*

The wings are joined to the fuselage with a 22 mm diameter 0.5 mm thick aluminum tube.

There is a hatch on the underside for wing connections, made with a plastic tie, and for servo cable connections.

The rear part of the cockpit canopy is removable and is held in place with small magnets. This allows access to rudder servo, receiver and battery.

Surprises

Beppe had originally planned to perform initial flight testing without the nacelles in place. Once everything was sorted out, the nacelles would be added, making for a true PSS model.

Just before initial test flying, we found the N-20 had been built in three versions — two powered and one glider. The glider (N-20.1) was built first, then the lightly powered N-20.2 *Arbalete*. The version modeled by Beppe, N-20.10 *Aiguillon*, was the last of the three, but without the nacelles his model looks very much like the glider!

This lead to some consternation on Beppe's part, as his model was no longer a PSS and he couldn't figure out what class it will fit when he attends a slope contest.

Beppe walks back up the hill after another successful flight at Koralpe in Austria.
Photo by Stefano Corno & Alberto Restelli

Flying

Beppe's home slope is not exactly what you would desire for a PSS model.

The slope works with thermals only and the thermals needed for a model like the *Aiguillon* are created at the "burrone," an almost vertical cliff falling to the valley some 800 meters below. Here you can find thermals that blow your mind and blow your models up faster than if they had an engine aboard. But you can occasionally find... nothing, and loose sight your model.

Upper left: Beppe's N-20 in the workshop before painting. The swept wing on the wall is Beppe's rendition of Herk Stokeley's RC-HLG. (see the March 1997 issue of *RCSD* or "On the 'Wing... the book, Volume 2."

Above: Painted and ready for the slope, the N-20, minus nacelles, in its cradle.

Left: Tearing along the slope, Beppe's N-20 really puts in a performance. No mistaking it for a conventional tailed glider, that's for sure.

The launch site is about 200 meters from the cliff, so when you fly a PSS model you have to walk down to near the cliff and have your model launched from above. If the thermals cease, you have to make a fast decision — either come back at once and land or try to fly further out and lower, with the risk of a potentially damaging heavy landing, or worse, to loose your model in the woods. This is certainly an adrenalin pumping site for PSS, but a really great place for "normal" soarers.

Despite the challenging situation described, Beppe found the right moment to launch his *Aiguillon* and was able to fly it for 30 minutes.

The model was a bit nose heavy, so some up trim was called for. Nevertheless, it flew beautifully — fast and true, going up and down with easy rolling and looping.

The model has a strange habit. Beppe says it makes no noise, "Even when it flies fast just in front of your nose, you can hardly hear something."

Two days later, Beppe was on vacation and he tried a new CG setting, 6% static margin. Now the model didn't need up trim, but it gives the pilot the impression of floating around, even if the flight path is still the same.

Beppe was able to take his *Aiguillon* to THE slope for PSS, Margone, a vertical cliff 600 meters high, where you fly in air coming straight up. He put the lead back in the nose (100 gr.) to bring the static margin back to the 10% setting for this outing.

More recently, Beppe took his N-20 to a slope in Austria where it flew in magnificent fashion.

Our sincere thanks to Beppe for sharing his model and flying experiences with us.

References:

Panknin spreadsheet:
<http://www.b2streamlines.com/Panknin.html>

SN42 airfoil: in a package of 3000 airfoils from the Profili web site <http://www.profili2.com>.

Profili 2: Profili 2 is a computer program which acts as a "front end" for XFoil, designs airfoils, generates polars, and produces airfoil printouts for cutting foam cores or producing rib templates. <http://www.profili2.com>

Federal Aircraft Factory N-20 documentation:
<http://www.physikcd.ch/n20.html>
<http://www.eusebio.ch/Daten_N20.htm>
<http://www.worldatwar.net/chandelle/v2/v2n2/switzers.html>
<http://www.harnisch-gallery.ch/>
<http://www.paulnann.com/country/Switzerland/N20.htm>
<http://www.paulnann.com/country/Switzerland/Arbalete.htm>
<http://www.luftfahrtmuseum.com/html/ii/i011831.htm>

Beppe Ghisleri and his N-20 *Aiguillon*.

More photos from the 2004 CVRC Fall Soaring Festival

Photos courtesy of Dave Beardsley

Opposite page: Each day started with a low altitude high speed pass by a full size aircraft — a motor-glider Friday, Daryl Perkins' Lancair ES Saturday, and this twin Beech before flying formally started on Sunday.

This page: A few samples of the dramatic landings which many pilots thought would garner the 25 point bulls-eye score.

Above: Overshot the bulls-eye and drifted too far to the left.

Upper right: An overshoot and slightly out of bounds to the right.

Lower right: This landing garnered 25 points. The nose skeg stopped the aircraft right on the border, but the springy wings bounced it back into the bulls-eye a couple of inches.

Composite image of the launch of an Unlimited sailplane at the 2004 Central Valley RC Soaring Club 2004 Fall Soaring Festival, October 2-3.

ISTANBUL F3J OPEN 2004

TURKEY'S GLORIOUS FINALE and MORE GOSSIP

by Uncle Sydney (Sydney Lenssen)

Dateline: November 2004

The magic carpets flew into Turkey again at the end of October, bringing 85 of the world's top thermal pilots from all over the world to compete in the Istanbul F3J Open. Three days of glorious sunshine and gentle breezes at the Riva flying site on the Asian side of the Bosporus brought 2004's international F3J scene to an enjoyable climax.

Philip Kolb gained revenge, beating Joe Wurts by a whisker: 0.8 point in 2,000 compared to 0.3 point in 3,000 at Red Deer. Both wins could have gone either way. What a pity new world F3J champ David Hobby was not there to fight his corner again.

To win a fly-off place, you could not drop 14 points in six rounds, such is the standard now demanded! Miss the 100 spot twice and you are out, even if you manage 9.50 minutes plus each time!

For the record, 2004's Istanbul Open attracted 29 flyers from Germany, five from Italy plus Paulo Panfilo's new wife Laura, three from Slovakia and Holland, four from Greece including the irrepressible Nikos, Crete's noisiest dentist. The Czech Republic had four including "Pike's" father and son Vostrels, Slovenia had two who both made the fly-off. Three came from Croatia, hosts for next year's Eurochamps, 11 from the UK of whom four had flown there before, four from each of the United States of America, Switzerland and North Cyprus, and finally 13 Turks from the host club, making a total of 85 competitors. Next year the hosts hope to top 100 entries!

F3J success owes a lot to teamwork — even the very best pilots don't win without well-knit helpers. This year's Istanbul Open provided proof.

Three of the four US pilots, Joe Wurts, Larry Jolly and Skip Miller, got into the fly-off with the help of Jim McCarthy (and his wife). Back from Canada, winning German team Philip Kolb, Tobias Lammlein and Karl Hinsch all won their fly-off places. Most amazing achievement of the weekend, however, was the Feigl family team from Germany — father Peter and sons Sebastian and Benedikt — all three made the two round fly-off, placing 3rd, 4th and 5th. Sebastian won the event last year. Next year, Feigl's for the top three places?

Remaining three fly-off places went to Primoz Risner and Nejc Bozic of Slovenia and Reinhard Vallant, Germany's first junior champion at Upton in 1998, hardly recognizable today with his cropped hair but still showing dashing flair.

Last words on the fly-offs: Contest director Serdar Cumbus tried to squeeze the two rounds in at the end of Saturday afternoon, so that all of Sunday could be devoted to the Speed Cup. But the first round saw Skip Miller with someone's line and chute wrapped round his tail and a refly. By the end of the second 15 minutes, pilots were flying through haze, mosquitoes and rising damp from the field. Short days of October and the day long sunshine exacted their toll.

But from the spectators' viewpoint nothing could have been better, for the final round then had to be flown first thing next morning. Sunday's air at 8.00 am. was almost dead still with the last of the haze being burnt off. At last, the supreme challenge of competing with no thermals, with only the slightest difference between good air and bad.

Nobody daunted, the twelve launched with Joe and Philip on spots 1 and 2. Philip snatched off at 2.5 seconds, barely halfway up the line, Joe later cursing that he couldn't believe that anyone would gamble on a short tow in

Left: Skip Miller carries some of the US Team aircraft along the flight line. Right: Larry Jolly, minus his usual floppy hat, making some adjustments between rounds. All photos by Sydney Lenssen

those conditions. Philip flew straight over the left-side hill and onward to close to out of sight. Joe stayed closer, this side and the other side of the same hill, smooth as silk. But none of the 12 climbed significantly. No way, for once, could anyone make the 15 minutes. But who could find something from nothing?

First back, Larry Jolly, had his poorest launch and was down at 4.32 minutes while the others held. Then at seven minutes several more came in for landings, eking out the seconds on the brink of stalls. Then it looked all over, for Joe was almost back in the field as Philip reappeared over the top of the hill, at least 30 metres higher.

Then Joe took a circle and held. He took another and held again. Then several more and the model went up a couple of metres, but then came down again. In the meantime, Philip had tried a turn or two on the side of the hill and then fell out in sink. By the time he was back to where Joe was circling, they were both at the same height and both needed that height to clear the trees and get back to the spots. Joe speared the hundred with Philip's nose 30 cm

up, then spearing next spot a split second later. Philip's early ping gave him a 1.1 second margin at 8.33 minutes — and the championship.

Then we all went off gossiping, trying to dream up ways of widening the top score margins.

Late morning Sunday, as soon as the F3B course was prepared, saw the start of the Speed Cup, attracting 41 entries ranging from top world standards to F3J flyers who had never done a speed run in anger.

With amazing efficiency, everyone moved through three rounds and very few took more than a minute or so to complete a flight out of the regulation four minutes allowed. With four winches available, the next competitor was up and away before the last flyer had landed, all quite safely.

I find the F3B speed task exciting given a few spectacular crashes, not that I would wish that on anyone. Vera Bastuck blew up her wings and Karel Koudelka had a high speed spin and loop before spearing in, and that was all the damage. At Riva, the quickfire launching showed the outsider just how vital the quality of air is to the launch height, and then how easily in good air the model can snap through its turns on the four legs. Conditions on Sunday sometimes switched from buoyant to claggy in the space of two slots.

Not unexpectedly, the regular F3B flyers emerged victorious, sometimes taking two or three bites at the launch, and getting times down to the 17 and 18 second mark. First place went to Armin Horzitz, a popular winner, who expressed special thanks when he picked his silver platter, having come last in the F3J. Second was Peter Golz followed by Philip Kolb who is now flying F3B regularly in Germany. How long before F3J becomes too boring for him?

How do you organize and run the perfect F3J competition? This is the Istanbul Soaring Team recipe.

Inevitably and importantly you need funding, and Istanbul's Soaring Team goes about this seriously. This year's event was sponsored by fifteen companies, and I make no apology for naming and thanking them: BEKO, Fujifilm, RC Power, cardFREE, Tudor Batteries, 100 Power, tesa, Eurest Sofra, C section, Superfresh, EFES beer, Amerikan Hastanesi, Euroserve, Mustang Hobbies and Gursel Tasimacilik. Red Bull, the energy drink people, were promoting in a big way. There is also the support and backing of the Koc Group, but Mustafa Koc tells me that that's really there as back-up these days, now that the event has established itself.

On the flying field, the launch and safety corridor is marked out with 20 cm wide red plastic strips nailed to the ground through brass eyelets, divided into 15 m long sections, with several loudspeakers and most importantly two large digital timing screens, large enough for everyone including spectators to see. This year the end of the slot had a new sound, a harbour horn announcing the arrival of the Queen Elizabeth into the valley.

All transmitters are bar-coded and scanned on collection and return to the impound. Before you fly, you hand your scorecard to the independent timekeeper.

Jaro Muller, one of several event judges, takes a break

Scorecards are collected separately at the end of each slot and taken to the far end for processing. Towline anchors are already in place, upwind and downwind of the flight line, so towmen need only run out the lines and take a pulley.

Halfway through each slot, flyers for the next round are announced and they assemble in the

ready-box. At eight minutes, flyers and spotters can go to their places in the safety corridor. When all models are down safely and trannies switched off, then the next slot can switch on with 2.15 minutes before the start of working time. The whole timing sequence is automatically controlled. You can kick with two seconds or one second to go, as you choose, confident that the start will be reliable. This sequence is what you expect at world and euro championships, but in Turkey it is done to perfection.

Then you have a marquee which is large enough to store everybody's model boxes plus assembled models in case of rain, plus chairs and dining tables for about 120 to sit down for lunch. Lunch break is called to suit the flying and everyone is fed within 45 minutes from a hot and cold running buffet, a mouth watering array of puddings and fruit, every type of hot and cold drink plus Beck's. Chefs and bow-tied waiters ensure that it all runs smoothly with every wish fulfilled. Amazing — and fattening!

There's an ambulance on site with two first-aiders; mobile toilets are in the next field, four men's and three for ladies, emptied and cleaned three times a day. A mobile snack bar provides hot-dogs and burgers all day long, there's an area marked off with picnic tables and chairs for spectators, and visiting families come in their dozens every afternoon. When it gets dark, floodlights are switched on, overhead gas heaters and bonfire barrels discourage the insects and keep you warm. Dozens of 12 volt batteries are available for topping up nicads.

The club has thought comprehensively how to cover any and every need, and then done it. Two quad bikes allow the organizers to get around the huge field rapidly. A squad of local villagers are organized to recover any models which land out in the heavily wooded surroundings. Two flyers, who shall be nameless, came down into the trees either side of one of the hilltops, so a helicopter was called in to locate and retrieve, within the hour.

Another important ingredient to this Istanbul F3J festival is that everyone stays in the same hotel at Riva, with its spacious rooms terraced up the hillside looking over a rugged Black Sea bay. With winter approaching, the flying left little time for swimming, although some of us did. The hotel was an ideal base for eating, drinking and exchanging gossip at ease and in comfort. It takes a 10 minute coach ride to reach the flying site. About halfway there you pass the Turkish National Football Team training centre, which explains why the hotel was built on the bay.

When you compete with the Soarists, it is like a dream come true. The genie from the bottle has granted every wish! It would not work without the dedication shown by the club, its sponsors, caterers and suppliers to making you feel welcome and at home. This same determination to run the very best competition gave Turkey their famous and deserved second team place earlier this year at the World Champs.

Everyone would want to give special thanks to Semin Kiziltoprak who shepherds the competitors for weeks beforehand and then night and day for the festival. Her team of travel organizers keep buses coming and going and lay on tours. Gentle giant Serdar Cumbus is the contest director supremo who ensures that the

Joe Wurts, perennial international competitor, came in second.

competition run smoothly, and yet has time to deal with every personal problem on site. Serda Sualp runs the computer, the matrix and produces scores within minutes with his team of timekeepers and helpers. How does he remember all our names, but you meet him once and he does, at breakfast or late into the night.

Huge thanks to Mustafa Koc, the original driving force who convinced the club to think big. "Find sponsors, never make-do or accept second best if you want the event to grow." Mustafa's birthday fell on the Friday night, Republic Day in Turkey, and excuse for a slap-up feast in the marquee, a display of frantic Salsa dancing including an awesome performance by Semin, champagne all round and the biggest chocolate birthday cake you've ever seen.

For the record, let me note the stalwart performance of the jury, Ralf Decker, Jaro Muller and An Other: they did not deal with one single protest.

For Contest Eurotour fans, next year's first round will be back at Riva early April — check dates on the web site. Second round in May moves to Italy, not the traditional site at Forli, but to Vercelli, centre of Italy's rice growing district, halfway between Milan and Turin, flying on the local airport. Ryannair serves nearby, I am told.

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An overall view of the marquee — large enough to store everybody's model boxes plus assembled models in case of rain, chairs and dining tables for about 120 to sit down for meals and the awards ceremony. Sides could be rolled up and space heaters drove off the cold. Excellent!

Jerry Slates launches Gene Cope's TG-8 off Eagle Butte, Richland, Washington during a Scale Slope Fun Fly. The TG-8 was a Piper *Cub* modified into a glider by removing the engine and replacing it with a third seat up front. Because of a critical shortage of training gliders, hundreds of two-place powered aircraft were converted into three place gliders in 1942. The Aeronca *Defender* became the TG-5, the Taylorcraft *Tandem Trainer* was turned into the TG-6, and the Piper *Cub* became the TG-8. Photos for this montage by Kenneth Mills, Asheville North Carolina.