

DRAGONFLY BUILDERS AND FLYERS NEWSLETTER

THE OFFICIAL VOICE OF DRAGONFLY BUILDERS ALL OVER THE WORLD

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Photo courtesy of Bill "Spud" Spornitz

This spy photo was shot by our very own Spud. This is Slipstream's reincarnation of Bob Walters original prototype, in Mark III trim, now known as the "Millennium Edition".

By Pat Panzera

AirVenture 2001, Oshkosh WI

So what do you think of the current condition of the original prototype?

Would you believe Slipstream is now accepting orders for the purchase of this as a kit, for the "starting at" price of **\$38,500**?

That's not a typo folks. The price starts at **thirty eight thousand, five hundred dollars!** But that includes a 2200cc Jabiru engine with prop.

I e-mailed Slipstream with the hopes of getting more information, a news release or anything like that. As of this writing, I've received no reply.

But just think what this will do for the value of YOUR Dragonfly! Congratulations, your Dragonfly that up until recently was valued at anywhere from \$8,000 to \$12,000, is now worth three to four times that!

All kidding aside, it's really quite interesting to see this evolution in the design, and to see it marketed this way. I'd be curious to know how many orders they took.

I do wish them well, because quite frankly, if Slipstream is successful, it should drive up the value of our aircraft.



Photo courtesy of Bill "Spud" Spornitz

Yep, 20% of \$38,500 will get you started.

AirVenture 2001 - Brad and Beth Hale

By Brad Hale

HI TO ALL DRAGONFLY'ERS

I recently returned from OHSKOSH, the little air event in Wisconsin, in my Dragonfly. It was good to see several of you during the event.

This was the 4th trip to Oshkosh in my MK II DF. Each time I go, it's a little different route. This time my wife, Beth and I departed out of Fullerton CA (near Anaheim) and went non-stop to Page AZ to spend a little time at Lake Powell on the way. This was probably the longest leg of the trip-about 430sm. We played a day and then departed at 6pm to Montrose CO. This was a short leg to position for an early

morning trip across the Rockies. Sunday we flew on to Holdrege NE, then to Monticello IO as it was raining ahead. Then Monday we went on in to Oshkosh, diverting around a little weather, arriving late morning. We had good weather, not too hot (even in Page), and only a little moisture.

We had no problem getting in to land. They gave us 36L, so we pulled off to the left near where we would park. The plane had 1040 hours on it so we parked in the "1000 Hour" parking near the Homebuilt Headquarters Building. A lot of good flying hours for a little fiberglass plane built in the garage! The plane ran very well with the electronic ignition I installed last winter. Nice to have the added

security/reliability (I also have one mag). We parked almost next to Sam Hoskins Q200 that made the coast-to-coast trip in a single day, a year or so ago.

We did not see other DF's while attending, but I heard that 2 came in after we left. I know if we get together we can make a much better showing next time.

We spent a little extra time in the forums this year, including an evening forum from 7-8pm. Non-stop aviation talk every day! Beth and I had lodging at the U of W dorms downtown, which is handy, with good transportation.

Continued on next page.



Photo courtesy of Bill "Spud" Spornitz

Another great photo by Spuds. Brad and Beth had the honor of parking in the over 1,000 hour area.

I was asked to be part of the "fly-by show", so on Thursday, took to the air with about 5 others. Each of us was given 2 trips past the crowd. I wasn't able to push the power on as it was bumpy and the circuit was small, but I think all got to see the little bird, or the 'white speck' as sometimes called by the controllers.

For those of you thinking of flying into the event, the only suggestion is to try to arrive a little early and you should not have much problem with the entry and the parking. It's a great feeling and experience to fly your own custom airplane into the event, and spend some time with all

the visitors who can't believe how neat this plane is and what the plane will do on 4 gph of fuel!

As I have family in Indiana, I eventually had to leave the show. So Friday afternoon we departed just before the airshow. It was about 2.5 hours to northeast Indiana, around Lake Michigan, over the Chicago "B" airspace at 11,500ft. They provided 'flight following' which is always nice in this busy area. Again smooth as glass.

Beth flew commercial back, to return to work, while I started Friday noon after the fog cleared. I

called my brother to tell him sorry I did not get to say goodbye at my first stop. He said 'where are you?' He was amazed that I was already south of St Louis. Stopped at Stillwater OK for the night. I took the southern route through NM and AZ the next day. I even landed at Santa Rosa NM where part of the runway is the old Route 66.

It was a very good "cross country" trip with smooth flying almost all the way. The only bumpy leg was into Page in the afternoon (this time of day as Beth got out of work at noon).

Brad and Beth Hale

Andrew Aurigema

C-1 Days & Counting

Certification day was tomorrow. In fact it was about 18 hrs away and I still had a million things to do. What will the inspector find that is not to his liking??? How will I explain that we are as far from the DragonFly plans as you can get and still have two wings and no tail??? How am I gona hide the body after I am forced to kill him for flunking my beloved aircraft???

Five years three months and fifteen days of building and it comes down to : “Make sure your completed compass correction card is properly visible on the instrument panel”. Say what??? This can’t be what the fearless defenders of the aviation world are most concerned about. I must have been hearing wrong when the top 5 things I was reminded to have ready were (via a pre-inspection phone call) were all paper related. They did not even include the construction logs. Yup, I was knowing that I could hid the body in the dog kennel when the time came.

In all fairness to the inspector, he really is a world class airplane builder and a personal friend. He was not trying to flunk our project but keep us safe. He has watched our Eos Raptor come together for most of the 5 years it has existed. We have had 3 inspections in all before the final one and he has always been polite (if a bit disbelieving) about our efforts. The design and build team all belong to the local EAA chapter (of which our inspector is the president). We have all spoken many times on aerodynamics, structures, design and simulations. Over the years we have brought to the EAA meetings



Andrew “Mad Rocket Scientist” Aurigema poses in front of his “Eos Raptor”, an original design based loosely on the Dragonfly.

pieces of the airframe and the pictures of our testing. We have invited many of the members to come visit our operation. I and my team have spent 5 years defending the terrible reputation that DragonFly’s have in our EAA Chapter. We have answered every challenge with data and analysis and have been the leading edge in computer operations in the whole group. We are as ready for flight as any aircraft ever built in this chapter.

As the Oak Hill hanger was (chosen) to be the site of the 2001 summer EAA bar-b-q, I was just knowing that inspection day was going to be filled with lots of people having lots of negative attitude. Maybe I had better of started them holes in the kennels sooner, after all, I was expecting better than 50 grumpy ol airplane builders to show.

C-0 Day

The main airframe systems were up and operational. The main sections of aero faring were sitting on the bench ready to be installed. All the access panels and windows were out so that full inspection could be accomplished easily. The motor was ready to fire up on request and the electrics were ready at the touch of a button. We were as ready as the roasted pork butt that had been in the smoker all night. The design and buildup documentation (hundreds of pages of it) was laid out and volumes of “build” and “close out” pictures were cross matched and ready for inspection. Our wings had a thin coat of gray primer on them and our baby sat on the ramp in confident defiance of any snipe that might come her way.

Continued on next page.

**The Mad Rocket Scientists get the green light
(Continued from page 4)**

The guest arrived around noon and for the first hour all ignored the strange little airplane parked in the center of the ramp as the inspector poked and prodded our baby Raptor. He look and listened, frowned and scowled, and even sighed when he pressed the reflexors switch and had to look at the "wrong" wings to see the surfaces move. He was polite and shook his head a lot. He gave us a scolding on loose jam nuts on the control systems and the lack of a metal firewall. As he was measuring down our baby Raptor, I was measuring him up for one of them shallow depressions in the kennel.

The Mad Rocket Scientist Team collectively hung our heads in shame and promised to tighten up all the control system jam nuts (right after we took the airplane apart and shipped it to the test airport and put it back together) and to install a metal firewall (over the 3,200 degree, washed ceramic fiber / BTE cork bonded on with 3000 deg adhesive like the Space Shuttle uses). We were bad. How dare we use technology that is not seen outside of the Solid Rocket Refurbishment Facility. As I said, we took our scolding very well indeed.

Did the design or build books ever get looked at??? Did the deviations from the plans or rationales for the changes ever get reviewed??? Did the B-B-Q get delayed while our inspection dragged on??? NO. None of these things happened. We passed (with a short hit list of "must do's" before our log book got returned to us) and everybody got to eat BBQ and live to talk about the strange little airplane that didn't have a tail. The only time the chatter was stopped was when one of the team "burped the baby" and our 145 hp Lyc blew the hanger clean yet again.

Of all the stuff we did, all the stuff we didn't do, all the stuff we can't even remember doing but hope we did right and it came down to a few bits of paper and a reluctant nod of the inspector's head. Boy, I will sure be glad that compass correction card is in the Raptor the first time I pull back on that experimental control linkage deploying them experimental elevators from that experimental canard attached to that experimental fuselage powered by that experimental motor.

Yea, I sure will be looking at that bit of FAA mandated paper.

Drew in sunny Fl.

Welding tips from Spud

Hi everyone,

Over the years I've done some stick welding, some wire feed welding and gas torch cutting (all heavy stuff), but had no TIG welding or gas "light weight" metal welding experience. Then, several years ago I bought a Lincoln Square Wave 175 TIG at Sun N' Fun. I started playing around with steel scraps, then I went to several of my friends race car chassis shops and gathered all their 4130 scraps (which was thicker stuff compared to aircraft stuff). I practiced, practiced and practiced. I made several pieces and beat them to death trying to break them apart, looked for cracks with a magnify glass, nothing! I proved to myself that my welds were plenty strong, but I just wasn't quite happy in the way they looked? More on this later...

I then went to Oshkosh that same year, went to the welding forum several times over my four days I was there and then bought the Smith "light weight" welding kit recommended for aircraft construction as I was leaving. This unit lightweight! I came home got the bottles leased and started welding. I was "all thumbs" and my welds looked like hell! I just couldn't get it! I was totally frustrated!

I then stumbled upon that my local vocational school (state funded) that offered welding classes AT NIGHT. Two separate courses, one for gas and one for TIG. I checked it out and you'll love this! 7 week course , two nights a week (14 total sessions) Tuesday and Thursday 6: 00 to 9:00 PM. They had all the equipment you could think of. Here's the best part, the entire course was Sixty dollars per course!

Continued on next page.

**In may I had the opportunity to visit Drew at his home in sunny Florida. He was gracious enough to give me the tour, and show off his work. It was well worth it.
-Pat**



42 hours of training and equipment for \$60.00, that's \$1.43 a hour. I've since found out that this these schools and rates are fairly common!!!

The first thing I learned during the first course was that I had much more control over the gas torch than I thought I had. I was changing tip sizes up or down to go cooler or hotter, BUT would always set acetylene and the oxygen the same. That is light the acetylene and set it just so the black soot smoke just begins to clear up and then add the oxygen to get your inner flame set right and there I would leave it. It would still seem that I was still too hot or to cold, never just right! The teacher quickly saw this and pointed out that tip size changes where large steps apart in the scheme of things. He pointed out that the presetting of the acetylene to "just until the black sooty part clears up" was just a starting point for any particular tip. He showed me "with what little adjustment of the acetylene" (as little as an 1/8th turn) and with the a proper readjustment of oxygen can change the temperature and the control of the bead. That little 10 minute session ended up being worth the price of the entire course right there!

I then went on to the TIG course. I feel that having a better understand of the gas welding immediately helped me now with my TIG welding. I thought things were starting to look pretty darn good, well getting better anyway.....

Now please try not to laugh to hard on this one, BUT this was the single biggest improvement in welding I've made to date! The instructor come over to my bench one evening and says "put your glasses on Spornitz" (eyeglasses). I flipped the helmet up and I says "I got 'em on!". I guess

I've had my helmet within 8" to 12" away from whatever I've been welding since starting the course. Now my vision is fine for everyday stuff, reading, driving and I had gotten new glasses within the last 6 months. So HMMMMMMMM! So I go to Walgreen's (the drug store) and I go back to the "Reading Glasses" display and I proceed to pick me out some 2x,3x or 4x power (I can't remember, but they look like semi magnify glasses) reading glasses. I went home and tried them out! Unbelievable! Guys....it was a whole new world. I now can truly see what I'm doing comfortably, with particularly with great detail the bead and my welds are rock solid and look much better. This was the best \$129.98 I've spent so far, \$120.00 for the two courses and 9.98 for the reading glasses (K-Marts have them also).

The instructor asked me if I wanted to take the final welding examine to become a "Certified Tig welder" which he assured me I would pass. I said, "No thank you as I just wanted to make sure my engine and landing gear didn't fall off my airplane, especially when I was flying it!"

So in trying to answer your original question Doug, I'd take either! I would feel comfortable building any part of my airplane with either system. If I had only a gas system available, no problem. If you had only TIG, no problem. I now see why some people prefer GAS over TIG and why some TIG people prefer it over GAS. Some other thought though....The strongest gas weld is not necessarily the prettiest. I think the TIG is better in working on clusters of three or more. TIG is a better looking weld, but it is a much slower process. If you were building a airframe like the Tailwind or Bearhawk that is an all

tubular airframe, the slower process of the TIG would be a factor.

To me it is all temperature control and the control of the bead.

In closing. I did truly get the better deal at Sun N' Fun (Oshkosh also had prettier much the same deal). The best deal I could get here around Kansas City on the Lincoln 175 Square Wave was \$1500.00 to \$1550.00. After a little arm twisting at Sun N' Fun I paid \$1329.00 delivered (they paid for the frt. charges) to my door which also included a fancy "electronic welding helmet".

Sorry for being so long winded!

Very Best Regards,

Spud Spornitz
Olathe, Kansas



A word from the Editor

Hi gang! I hope you've been pleased with your newsletter subscription so far.

As promised in the beginning, I've managed to get an electronic version produced. It's been archived in Adobe PDF format, and is available for download off the internet.

Every issue I've produced is available for download at: <http://groups.yahoo.com/group/dbfn>

-Pat

The Classifieds

Classified ads are published free for those who are current newsletter subscribers. All ads must be renewed after 2 issues.

For Sale: Dragonfly MK II N189SM, with 80hp Continental A-80. 250-hrs SMHO by Skeezix Adkisson, and dual Savier electronic ignition. 3 blade Warp Drive prop w/ Gary Hunter blades. Curses 145-150 mph on 4.9 gph. 21+ gallon fuel capacity, dual throttles, hydraulic brakes, ELT, cabin heat, oil cooler and filter. Garmin 195, vortex generators, electric pitch trim. Asking **\$23,000** or possibility trade for 2 place side-by-side, tri-gear with turbo or bigger engine. See photos in a recent KITPLANES ® magazine, featuring details on electronic ignition. Call 618-594-2681 and ask for Terry, or e-mail: troneill@midwest.net

For sale or trade: NEW Cleveland 500-5 wheels and brakes, a pair, with mounted new Lamb 11x4.00-5 tires w/ tubes, a \$550 value. Will sell, or trade for 'like new' Cleveland 600-6 wheels and brakes, no tires. troneill@midwest.net; tel: 618-594-2681 or e-mail: troneill@midwest.net

For Sale: Too Many Projects! Not Enough Time! I have a dragonfly project for sale everything completed and is now at the filling/sanding stage. Tricycle gear, but could easily be converted to inboard gear if preferred. Inboard gear leg boxes are installed in canard, decided to go tricycle after originally building as a Mark II. Includes test run time only 2180 VW with Force One prop hub, external oil filter, Ellison throttle body, HAPI electronic ignition and Diehl case with magneto. Props Inc. wood prop, spinner fitted and installed. Some instruments included, AS, tach, oil temp, oil pres. New 5" Cleveland Wheels & brakes. \$8500 firm which is less than I have invested not to mention the time! Project is located in central Illinois. If interested e-mail at ingram.r@att.net

For Sale: Dragonfly MK II. Excellent workmanship. Complete plane except the canard and gauges. Everything to complete a new canard except the landing gear. The canard is on the table, awaiting final lay-up. The spar is laid up, the gear leg boxes are installed and all cloth / carbon fiber to complete the project is included. The aircraft has always been hangered, and it comes with a HAPI 1835 cc engine, with dual electric ignition, and latest mods. New Props Inc. 52/42 prop, spinner included. Beautiful red cloth seats. Fuselage is complete with new forward hatch cut out,

but not finished. The wing and the entire paint job are both in excellent condition. I would entertain splitting up the engine from the airframe. Priced for quick sale **\$4800.00** Call Bill Brutsman at 913-888-8942, Lenexa KS, Fax: 913-599-1290 e-mail: wdbtrsmn@aol.com

For Sale: Dragonfly Firewall Forward Package HAPI 60-2DM with 6 hours test stand run time on the engine. Includes motor mount, Warneke prop, exhaust headers, and Posa carb. The engine is still on the test stand so you can see and hear it run. Send your e-mail address and I will forward pictures of the engine to you. **\$2500 OBO** Call Terry Bailey, (home) 706-778-2462, (cell) 770-654-1663 or e-mail: baileyt@hmc.net

For Sale: Dragonfly Covers constructed of TYVEK® marine fabric made by Dupont®. Superb UV protection, dirt and dust protection, easily handled and stored, soft inner lining. Straps are (4) behind and in front over wing, and in behind canard and around cowl. Very light and compact. **\$195.00 US** Shipping to US is \$15, overseas in \$25. personal checks drawn on a US bank account are accepted. AIRRYDER Aviation and Flight Center, PO Box 1990 Hanna, Alberta, Canada. Phone/Fax (403) 854-4541 or e-mail: airryder@telusplanet.net

For Sale: Carbon Fiber NACA Inlets and Spinners. Spinners are \$250 each, including back plate, but w/o front bulkhead. Inlets are \$30 per pair, set in glass. Contact Charlie Johnson, 2228 East 7875 South, Ogden UT 84405 (801)-479-7446 or e-mail OneSkyDog@aol.com

For Sale: Dragonfly Firewall Forward Package: Balanced 2180cc VW engine package, not yet removed from aircraft. All systems go with the package - Intake, Ellison throttle body alternate air box, cabin heat muff, exhaust system, baffling, 40 amp alternator, geared starter, oil cooler, spin-on oil filter, bendix mag, electronic ignition, aluminum finned (cast iron sleeve) barrels, extra heavy heads, force one prop hub, Dragonfly Task cowling, engine mount, hydraulic lifters, chrome spinner and Great America prop. This is a bolt-on and fly program. Price **\$5,000**. I am installing a very special C-85 engine in my Dragonfly. You may contact John Mason by phone @ 559) 626-4491 or e-mail: jmason@lightspeed.net

For Sale: Canard and wing ready to install, new with complete documentation of manufacturing process. Info at: <http://home.t-online.de/home/hans.graesser/prefab/index.htm>

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(559) 584-3306
panzera@sierratel.com



One last photo from Spud. A shot of Richard Werner's Mark I tied down at Oshkosh 2001.

If you Look closely at the huge photo on page 11 of the November 2001 issue of Kitplanes Magazine, you can see this aircraft tied down near the large white tent.



Po Box 1382
Hanford California 93232-1382

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