

# DRAGONFLY BUILDERS AND FLYERS NEWSLETTER

THE OFFICIAL VOICE OF DRAGONFLY BUILDERS ALL OVER THE WORLD

Volume 102

March/April 2003



**Tim Iverson in his VW powered MKII handles the bumps while flying formation with Jim Patillo's Q**

## **Mountain States Fly-In Laughlin NV By Don Stewart**

I promised "No Snow in the Pattern" this year and no one was disappointed. But I forgot to mention

that it does get a bit windy now and then, especially in May. Maybe next year the event will have to be moved back into April. It's simply too warm and too volatile in Nevada/Arizona in May.

Each year Corvair-Pat Panzera works right up to the last minute, drives all night across the desert to Laughlin, gets a little sleep, then tries to talk over the airport noise all day Saturday, answering the hun-

## Mountain States Fly-In, Laughlin NV (Continued from page 1)

dreds of Corvair related questions. This year was no exception. While I wasn't able to bring any dancing girls this year, (as joked about recently on the internet e-mail group) I did bring the PA equipment. That seemed to help, a lot. Actually Pat had to fight more than the normal airport noise, as his voice was still gone from spending 10 days at Sun-N-Fun, working the Contact! Magazine booth.



**Pat finally made it to Laughlin with a running engine. Maybe next year he can actually make the event in a plane?**

Thursday evening's impromptu dinner at the Flamingo was attended by early arrivals Jim Patillo and Sam Kittle, Debbie and me. Friday night's dinner was held (at Pat's insistence, he did plan to be there) at Harrah's - a pretty good size group spread out over 6 tables. Even though Pat & Corvair partner John Moyle were still on the road, we all toasted them with some truly fine deserts. Before dinner, Pat did manage to call to say he'd be late, and to tease me with the sound of his engine running in his driveway.

Charlie Johnson brought his oh-so-decal-ed Dragonfly from Utah with that very special carbon fiber spinner & NACA inlets. Charlie is also a Corvair nut, and every year he always seems to bring something new that he's developed for the Corvair. One year it was billet pushrod tubes, then his "snap ring" used to retain the crank timing gear. This year was no exception. Charlie brought a one off solid carbon fiber valve cover. It is a thing of beauty,

as well as being exceptionally light weight!

The guys from Southern California made a good showing this year. Brad Hale flew in from Fullerton

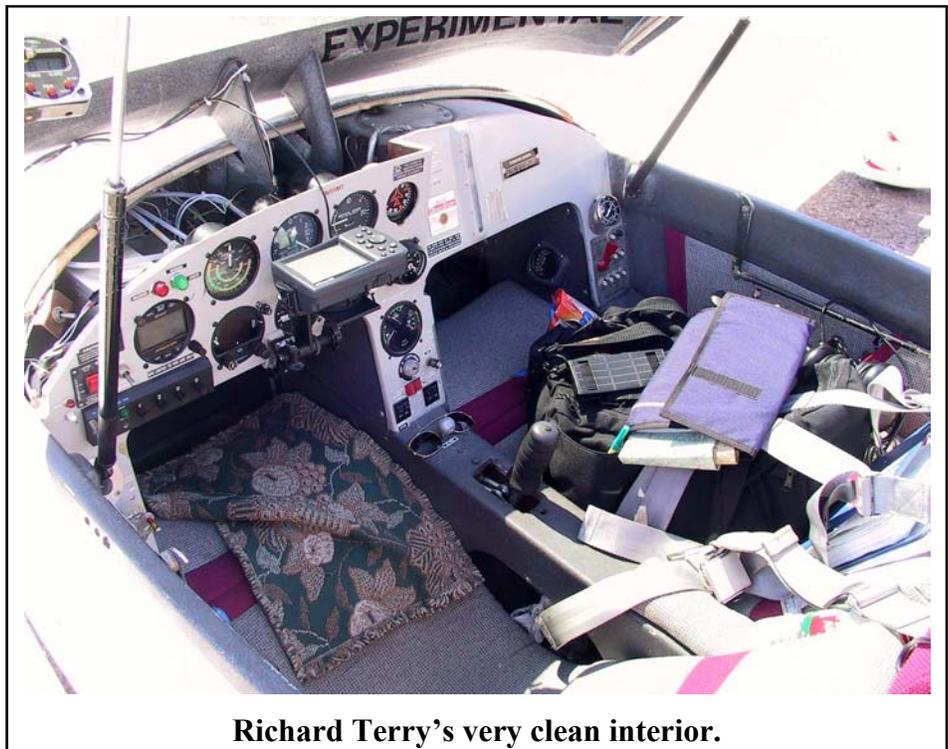
CA in with his excellent DF, this year with a little more paint on it that the last time we saw it.

Richard Terry's very good looking Chino-based DF made its maiden flight to Laughlin this year (Congratulations!).

Jim Patillo (Livermore CA) spent Saturday afternoon trying to bring up Pat's lunch with his Q-200 maneuvers, while Tim Iverson watched all those gyrations following in his very clean Dragonfly from Chino CA. Pat

managed to score a ride with Jim, and with Tim flying just behind, Jim showed Pat just how fast a Q could do an aileron roll.

The Kelly Poor family zipped in



**Richard Terry's very clean interior.**

## Mountain States Fly-In, Laughlin NV (Continued from page 2)

from Phoenix with his immaculate Tri-Q, this time with out his wingman Dave Carlson. This is the first event that I have seen Dave Carlson (as well as Allen Tenerelli) arrive on four wheels instead of three. We hope their planes are flying again soon.

Jack and Diane Huston (or is it Diane and Jack since SHE was PIC on this trip) once again tried to pass off their 152 as an Experimental to vie for the Best of Show Award. Sorry guys, nice try, again. Diane has done a terrific job overcoming her fear of flying, by taking flying lessons. She's to the point of being ready for her check ride. Maybe by the time the Livermore fly-in rolls around, she'll be licensed!

Amid these terrific airplanes, several stood out as Best of Show contenders, but I think everyone agreed with me (well, maybe not Diane and



**Jim Patillo was kind enough to take me up to get some air-to-air shots of Tim Iverson's MKII. While we were at it, I got to experience the awesome roll rate of the Q-200, with Tim watching. I kinda wish Jim would have done another one, in the opposite direction, to help unscrew my brain. ~Pat**



**The view out the right side, while "over the numbers". The large hangar with the open door is where we gathered. Behind that is the Colorado river, and in the background are the Laughlin casinos. The Colorado river separates Bullhead City, AZ from Laughlin, NV. Our fly-in is at the Bullhead airport.**

## Tucson Tom and his 0-200 powered MKII

By Tom Hall  
Tucson AZ

The tail bulkhead of what I hope will become N039XD was laid up on July 27th 2000.

I was first introduced to the Dragonfly in 1984 by my roommate while living in Santee California. He had purchased the first set of commercially available Dragonfly plans, but was the 39th to send in the registration form. As a brand new private pilot and Cessna driver, I was hooked on the design from the first second I saw it.

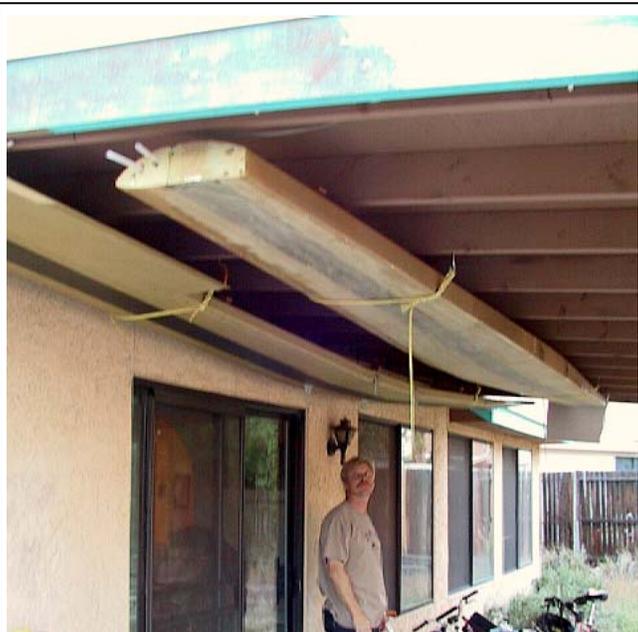
These really were the good old days because I actually got to drive up to Laguna Nigel, the home of the Clark Foam factory, and hand-pick my sheets of foam from floor to ceiling stacks! The sad part of the story is, after I finished the bulkheads and sides, I got married, got a degree, had two boys, and built a 21' fiberglass boat. You know the drill.



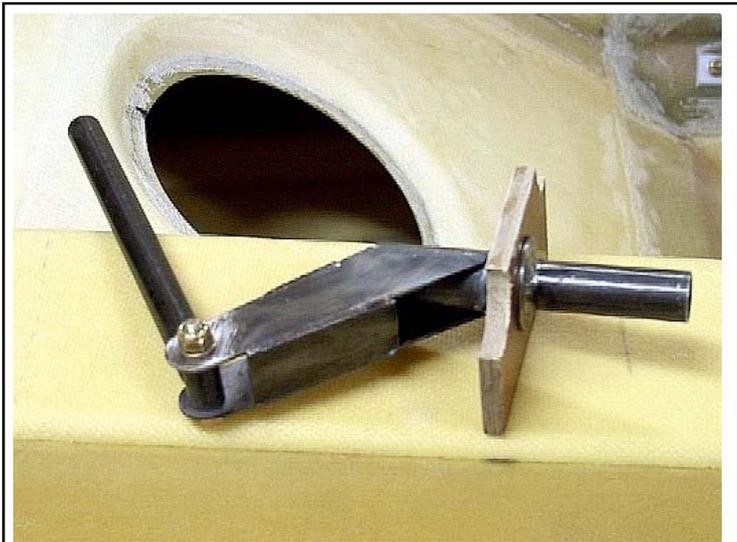
**Tom's fuselage in his garage. It's not often that you get to see a fiberglass structure that still looks green, and hasn't turned brown yet. Note too the "roll" bar is more ingress and egress friendly, With the center "spoke" removed.**

The only part left from those early efforts is the canopy and the plans.

Then there was that fateful day sometime in 1999 while returning



**As with most of us, storage space is at a premium at Tom's house. Tom was able to make use of the overhead space on his rear patio to temporarily store the wing and canard.**



**In DBFN issue #97, John Mason reported on a fix which significantly improves the aileron response by reinforcing the stick attachment fork. Here's Tom's adaptation of this same fix. You can see that Tom has welded plates to the forks, reinforcing the structure, making it a "box".**

## Tucson Tom and his 0-200 powered MKII (Continued from page 4)

from a nice 172 ride to Laughlin, that I stumbled onto a Dragonfly fly-in at the Marana airfield just outside Tucson AZ. I was in love again. I stayed long enough to learn about the Dragonfly e-mail list and started scheming. As soon as I introduced myself on the list, Justin Mace responded and offered up one of his famous demo rides. This was followed by a year of reading, and rereading the plans. I also read every post on the list, and watched all the homebuilt classifieds for a materials kit, or partially completed project.

It was a very tough decision weather to buy an existing project to complete, or to start from scratch. After considering many different partially completed projects, I located a reasonably priced materials kit for sale not too far from home and cleaned out the garage.

Taking the time to build sturdy wing benches and a large glass cutting table paid off many times over. A \$10.00 sheet of white faced hardboard, meant for lining a shower stall is the perfect surface for cutting glass.

The first 6 months saw many weekends where I would start working at 5:00 PM on Friday after work, and not stop until 10:00 PM Sunday evening, except for the absolute minimum breaks for food and sleep. This, along with being comfortable with the plans, materials, and design, generated a

huge amount of progress.

After 90 days I had all the bulkheads and sides finished and was ready to start on the wings. The plans talk about getting lots of friends lined up to help with the wing skin lay-ups. This is an under state-

ment. You might even need five sets of friends, one set for each wing skin and one set to have after the plane is done. If you feed them well enough, you might be able to reuse a set. I found that ribs and home brewed beer work very



**Tom's carbon fiber instrument panel.**

well. Seriously though, make sure your help understands that a wing skin lay-up can last all day and be a hot sticky mess.

We got my last skin lay-up down to 4 hours by having 4 good trained helpers, and all materials pre-cut and pre-measured. Yes, even batches of resin and hardener were pre-measured in disposable bowls ready to be mixed together.

The goal for N39XD is to show that a Dragonfly can still be built and flown by the original builder in a reasonable period of time, (less than 5 years), using an original set of plans, the errata sheet, newsletters, and the Dragonfly e-mail list.

**Tom Hall  
Tucson, AZ**



**Another shot of the control modification.**

## Mountain States Fly-In, Laughlin NV (Continued from page 3)



**Richard Terry's MKI**

**Tim Iverson's MKII**

Jack), that the Best of Show should go to the exceptional Corvair-Engined Test Stand brought together by the Dynamic Duo of Pat Panzera and John Moyle.

I'm not sure, but Pat and John may have made a small error in judgment, by outfitting the monster 6-cyl engine with mufflers before the initial demo on Saturday. Everyone

took their places and dutifully covered their ears during startup, expecting to see the belching fire and hear the earsplitting thunder of typical Chevrolet engines when they first come to life. The clue might have been Pat waved off the offering of headphones (ear protection) from John Mason, and calmly said, "Thanks, but I won't be needing them."

Then it happened, their Corvair politely and calmly fired up and smoothly ramped up to 2000 rpm with nary a tea cup cracked. Very well behaved. We were all simply amazed, maybe stunned - 80hp (more or less at 2000rpm) and we all still had our hearing! Equally dignified applause broke out from the gathered throng as my hat and notes merrily danced down the tarmac from the wind generated by the prop. My sunglasses would have happily followed except for John's quick catch as they flew by.



**Pat Panzera hosted this years Corvair Confab, but this time he brought an actual running engine. After a brief Q and A session, the test rig was wheeled outside and the engine was fired up!**

On Sunday, the mufflers were replaced with straight through pipes, and the Corvair displayed a little more of the Chevy belching that big brother V-8's do so well. After the initial start-up on Sunday morning, and after a bit of an engine warm up, the dynamic duo of John Moyle and Pat Panzera proceed to use the thrust from the mighty Corvair engine, to push the 5000# plus Ford Explorer around the airport at quite a brisk pace. After that feat of strength, the Corvair was quietly packed away for the long trip home. Congratulations to both Pat and John for a job well done, and for adding so much extra-curricular excitement to our annual Fly-In event.

**Continued on next page**

**Mountain States Fly-In, Laughlin NV (Continued from page 6)**



**Charlie Johnson's MKII**

**Brad Hale's MKII**

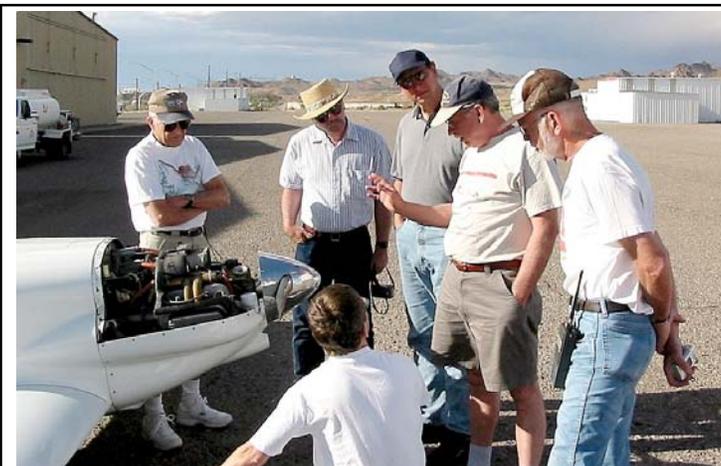


**With the whole gang watching, Pat gets the Corvair engine running on the test stand.**

Saturday's festivities included Bob Johnson's very excellent slide show of his fuel injected VW engine, which he

would eagerly narrate for anyone within earshot, which was held in the hangar supplied by Jackie Loos of Sun River Aviation, the airport FBO.

Later on was a showing of the video tape that Pat recorded during his invitation to Scaled Composites



**Clockwise from left: Bob Boydston, Sam Kittle, Tim Iverson, Jim Patillo, Jack Huston, Brad hale.**



**With Pat at the throttle, and John at the wheel (and brakes) the two of them went for a short ride around the hangars.**



**Pat and John drive by, doing at least 10 kts with their Corvair powered Ford Explorer.**



**Pat runs the engine up to 2500 RPM with the mufflers removed.**

(Burt Rutan) unveiling of their manned space program. As a member of the media (by way of Contact! Magazine) Pat was invited to view this historical event, and managed to tape 90 min. or so of the ceremonies and flight exhibition, which he arranged to share with us tandem wingers. I'm sure Pat will have more to say about that visit, and the availability of the video later on in the newsletter. The tape is truly an amazing thing to watch.

We had 27 for The Dinner on Saturday night - a very nice turnout, thanks to everyone who flew/drove in. As already mentioned, Pat and John received the Best of Show award. Charlie Johnson (aka OneSkyDog) received the Longest Distance award for his trip from Ogden UT, with Jim Patillo coming in a VERY close second. Kelly Poor won the Shortest Distance award.

Regards,

**Don Stewart**  
Prescott, AZ



**It took several tries to get the engine running just right. The carburetor being used has a typical automotive style choke, which unbeknownst to all, was partially closed during the initial runs. Once discovered and remedied, the engine ran just fine.**

# Sullivan, MO Fly-In (Oct 3-5, 2003) Update

By Jeff Le Tempt

Hello friends! I'd like to give you an update on what I have been up to with our fly-in.

I visited Sullivan a few weeks past and had a very productive day. I talked with the Chamber of Commerce for about 2 hours, visited 5 hotels, and may have found a great location for the awards banquet. I was able to secure a reduced rate at 3 of the 5 hotels and think the other 2 will also agree to a reduced rate. (I am still waiting for a call back from the managers). The next DBFN issue will contain more details.

There are also some unique lodging opportunities close by. At Meramec State Park (maybe 5 miles from the airport) they have cabins and a lodge. About 10 miles from the airport is a place called Blue Springs Ranch and they have some cabins available. If a few of us wanted to get together and rent a cabin, it probably would be no more expensive than a hotel, and you could house as many as 6 couples in one cabin! They have one cabin that has 6 bedrooms and the rate is \$255 for 12 people. I have posted a link on the web site:

<http://www.fidnet.com/~letempt>  
(best viewed with Internet Explorer)

The airport manager is very excited about our fly-in. The airport currently has a parallel taxi way that is about 2/3 the length of the runway. With any luck the taxi way will be extended to the entire length of the runway prior to the event. They has a 60' x 110' hangar that will be ours to use as we see fit for the whole weekend. The one downside to the airport is there are no shower facilities for the campers. I have a few solutions to this problem:

## Event schedule

*Subject to change*

<b>3 October</b>		
1000	<i>Event Officially Opens</i>	
1000-1200	<i>X-Plane</i>	<i>Drew Aurigema</i>
1300-1500	<i>Composite Construction</i>	<i>Drew Aurigema</i>
1500-1700	<i>Aircraft Weight and Balance</i>	<i>Jeff Le Tempt</i>
<b>4 October</b>		
0900-1100	<i>Performance Run and Fun Fly</i>	<i>Alan Thayer</i>
1100-1215	<i>Dragonfly Forum</i>	<i>Jeff LeTempt</i>
1230-1345	<i>Q Forum</i>	<i>Jimmy Masal</i>
1400-1515	<i>Prop Forum</i>	<i>Culver Props</i>
1530-1645	<i>Engine Forum</i>	
1700	<i>Group Photo</i>	
1800	<i>Awards Banquet</i>	
<b>5 October</b>		
0900-1200	<i>Fun Fly</i>	
0900-1200	<i>Aircraft Weighing</i>	<i>Jeff LeTempt</i>
1200	<i>Event Officially Closed</i>	

My plan is to give a detailed class on weight and balance. I will have a set of aircraft scales and we will have an opportunity to actually weigh an aircraft during the hands on class. On Sunday morning (October 5, 2003) the scales will be available for anyone to use to get an accurate weight for their plane free of charge. This would be a great opportunity for you guys who used a bathroom scale to get your initial aircraft weight. ~Jeff

- (1) The city will give us access to the shower facilities at the sports complex (maybe a 5 minute drive - can use loaner vehicle)
- (2) Ask a buddy who is staying at a hotel if you can use his shower (2 minute drive)
- (3) Take a sponge bath in the bathroom
- (4) Go stinky for the weekend. If you are going to sit next to me at the banquet I would prefer option 1, 2, or 3 :<

The awards banquet will be held Saturday evening at about 6:30 or 7:00, but the actual location is still up in the air.

See you there!!!

**Jeff Le Tempt**



## Burt Rutan's Commercial Manned Space Program



SpaceShipOne attached to the White Knight

### Burt Rutan's Space Program By Patrick Panzera

On April 18, 2003, I was fortunate enough to attend Scaled Composites unveiling of their commercial manned space program. This previously hidden, active research program has been in the works at their facility for two years. The program includes an airborne launcher (the White Knight), a

space ship (SpaceShipOne), rocket propulsion, avionics, simulator and ground support elements. Master of Ceremonies, Cliff Robertson, introduced Burt Rutan who explained the history and the components of the program. Other dignitaries who attended the event were Dr. Maxim Faget (pioneer configuration designer of the early NASA space program from the Mercury through the Apollo pro-

grams), Erik Lindbergh (grandson of Charles Lindbergh and President of the Lindbergh Foundation), and Dennis Tito (Soyuz space tourist). Further information about the space program are available at the Scaled website: [www.scaled.com](http://www.scaled.com).

Why is this being reported on in the DBFN? Two reasons. Firstly because it's just too exciting to witness this kind of advancement in aviation, which should thrill to the very bone, any red blooded experimental aviator. Secondly, I'm offering copies of a 95 minute video I filmed while I was there, making the viewer a part of history.

When I was invited to the unveiling, I had no idea what to expect. As an afterthought, I figured I'd bring my camcorder. Of course I brought my still camera, as I was covering the event for Contact! Magazine. Once the event began, I realized how important it was, and began filming everything I could.

Bear in mind that I'm not a professional videographer and I didn't bring a tripod, so some of the video quality is definitely amateur. But I did use a very high quality digital camera, and processed the video on quality equipment. The result is first generation quality copies.

We have 2 formats available; VHS and DVD. The DVD is "home made" so you'll need to verify that your

### Tandem Wing Fly-In schedule for 2003



### Mattoon Platoon

**Friday-Sunday, June 27-29, 2003 Mattoon Tandem wing fly-in**  
Finalized info: <http://www.siinc-sources.com/MattoonFly-In>

**July 29th-August 4 EAA AirVenture Oshkosh, WI**

**August 15th-17th Livermore Fly-In Livermore, CA**  
Contact Bob Farnam [bfarnam@pacbell](mailto:bfarnam@pacbell). or visit:  
<http://www.farnamengineering.com/LivermoreTandemWingFlyin.html>

**October 3rd-5th** The 13th Annual Field of Dreams Tandem Wing Fly-in will be held in Sullivan, Contact **Jeff Letempt** for more info. E-Mail: [letempt@fidnet.com](mailto:letempt@fidnet.com) Website: <https://www.fidnet.com/~letempt/index.htm>

Dates are subject to change. If you don't have e-mail access, and you'd like more information on any of these events, call 559-584-3306 and ask for Pat

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## Builder Profile, Dave Carey

### Builder Profile By Jeff Letempt

Meet Dave Carey of Washington, MO. Dave works in the commercial construction industry and has been married to his terrific wife Barb since 1971. He began construction of his MK-II Dragonfly back in 1991. Dave is planning on using a fuel injected turbo charged Subaru EA-82 for his power plant.

Like most of us, Dave has had to balance his aircraft building with raising a family and working many long hours. Most of the early construction was completed in the basement of his home, but prior to attaching the aft turtle deck it had to be moved to the 1 car garage because with the turtle deck installed it would not fit through the basement door.

Dave has completed the fuselage, wing and canard. His canard is form a MK-II, but has a span of only 20 feet, rather than the specified 22'. Dave is using steel gear legs.

The canopy is front hinging and built per the instructions contained in newsletter #14. A very time consuming modification that Dave has incorporated is root faring for the canard and wing. They look really streamlined and well executed.

The completed structures have already been primed, using Flight Gloss Smooth Prime, and Dave is really happy with it. He states that it hides a lot of minor imperfections and is very easy to apply. Dave has also built a reflexor as per the instructions contained an earlier DBFN.

Dave has a little work ahead of him before he flies his Dragonfly, but I

am sure it will be a great plane when it takes to the sky.

We look forward to hearing more about this project in the future

**Jeff Letempt**



## Burt Rutan's Commercial Manned Space Program (continued from page 11)

player is capable of viewing DVD –R disks, which is compatible with 86% of all DVD players, and close to 100% of all players purchased in the last year. The price for either DVD or VHS is \$25, which includes shipping.

Proceeds from the sale will go to the Contact! Magazine relief fund, for the families of deceased aviators, written about in DBFN #99. Visit: <http://www.ContactMagazine.com> for more information on the charity.

Checks should be made payable to Contact Magazine, and sent to:  
PO Box 1382  
Hanford CA 93232-1382

The first hour of video shows several speakers, many of which have already been named in this article, but the majority of the speaking is done by Burt Rutan. He speaks about the history of flight, including space flight, and draws a parallel to emphasize just how lacking the space program is (in general) compared to general aviation. The plan is to bring space travel up to speed.

After the speeches and the dramatic unveiling of SpaceShipOne, we head outside and witness the launch of "The White Knight". After several minutes of watching this awesome hand made, jet powered, launch vehicle climb and dive all over Mojave, we head back in to the hangar, where I capture a conversation with Burt and one of the rocket engine vendors, where Burt speaks very candidly about his dealings with the feds.

In addition to the video, we have a photo CD ROM available, with over 150 high quality photos, including several of Proteus and details of it's sparrow strainer. This CD is available for \$10, with the proceeds going to the Contact! charity.

~Pat

## Classifieds

**For Sale: Dragonfly MK I** N812RG, With HAPI 1835 engine, dual ignition, 40 hrs TT, A&E, Terra TXN923 Nav/Com w/ remote Tri-Nav indicator, new prop, always hangared, excellent condition, needs some engine and cowl work and touched up from sitting for too many years. Includes lots of extras, including all DF newsletters ever published. This has been a labor of love that I need to sell for several reasons. Located in central OH. Serious inquiries only. Asking **\$11,000**. Call or e-mail to discuss or for photos. Ronald L. Geese. (740) 964-9497 or [rgeesel@columbus.rr.com](mailto:rgeesel@columbus.rr.com)

**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@charter.net](mailto:troneill@charter.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](mailto:OneSkyDog@aol.com)

**12<sup>th</sup> Annual Tandem Wing Fly-In Video now available** So here is the deal. Send me \$25 USD and I will mail you a tape anywhere in the world. Personal checks (heck if I can't trust you guys who can I trust) or money orders are ok. Send you payment along with your address to: Jeffrey LeTempt 1107 Murry Lane Rolla, MO 65401 or e-mail: [letempt@fidnet.com](mailto:letempt@fidnet.com)

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