

SONERAI NEWSLETTER

JULY-AUG-SEPT 2004

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IVAN MARTINEZ' MODIFIED SONERAI IILS

Since Ivan reported his first flight back in the AMJ-03 issue, I've been waiting for a photo and update report, and here it is. Ivan writes: "Here is a picture of my plane. I have 33 hours on it as of my last flight, which was flown next to Dave Wilcox in his Sonerai. We flew around together for 2 - 3 hours on the Sunday after SWRFI. While flying with Dave, I experienced the scariest event of my entire flying experience. We made a landing with a direct cross wind 20 knots - gusting to 28 knots. I have flown next to Wade Jones and Dave Wilcox, all Continental-powered Sonerai's. Our planes are very comparable in performance. I will be completing the 40 hr phase soon. My cruise is 135 TAS with 24" manifold pressure, 2425 RPM, and burning just under 4 gph. To date climb tests have not been performed but at 90 IAS, I can maintain 1000 fpm from 500' to 1500' (full fuel solo at 915 lbs)." Ivan's bright yellow airplane has several modifications: The wing has a Riblett GA37U-A415 airfoil with a 55" chord, 12" wing tips resulting in a 20' wing span, and has been moved forward on the fuselage 2". The engine is an A65-8 Continental with a Sterba prop. The vertical tail has been raised 6", and the tail surfaces have a symmetrical airfoil shape. Empty weight is 648 lbs. Ivan lives in Sugarland, TX.

OSHKOSH PREVIEW '04

Are you coming to Oshkosh this year? Are you bringing your airplane? I sure hope so. It's definitely more fun when there's more than one Sonerai II (mine) and one Sonerai I (Jeff Lange's) to look at. Also, if you bring your homebuilt, you get this official "I Brought My Homebuilt to 2004 AirVenture" patch:



This year's AirVenture extravaganza runs from Tuesday, July 27 thru Monday, August 2 at Wittman Field in beautiful Oshkosh, Wisconsin. As usual, I'm planning to be there most of the week, hopefully arriving on Sunday, the 25th, and departing on Sunday, the 1st. My blue tent in Camp Scholler will be home for the week. I'll be parking my airplane in the "Auto Engines" area again. Since there is now a new Homebuilt HQ that is further north on the flightline, I'm not sure where that area will be, but it should be somewhere north of the tower. If you're bringing your Sonerai and it doesn't have an auto engine, don't worry, we'll sneak you in.

Here are some of the events that will be happening:

- "Sonerai Builders Forum" by yours truly, Thursday, July 29, 1:00-2:15 PM, Pavilion 06. I've got a new PowerPoint presentation, so come and see it.
- "VW Engine Assembly Workshop" by Steve Bennett, Wednesday, July 28, 1:00 PM, Engine Workshop
- "VW Conversions in Sport Aircraft" forum by Steve Bennett, Friday, July 30, 4:00-5:15 PM, Pavilion 04.
- "AeroVee Engine and AeroCarb" forum by John Monnett, Thursday, July 29, 11:30-12:45, Pavilion 09
- Homebuilders Headquarters Dinner, Thursday, July 29, 6:00-9:00 PM, at the Nature Center Pavilion. You'll need to buy your tickets in advance (\$10.00 each) at the Homebuilders Headquarters. I've attended this several times, and the food and drink is always good, and the speakers interesting.

- Sonex Hangar Party, Friday, July 30, 8:00-11:00 PM at the Sonex Hangar. John, Betty, and Jeremy always throw a good party, and we Sonerai folks are always welcome.
- Finally, be sure to check out the workshop area if you need help with your welding, sheet metal, and/or fabric covering skills. And don't forget the Fly Market and the Parts Mart tent.

There you have it. I hope to see you all there, and please stop by and chat.

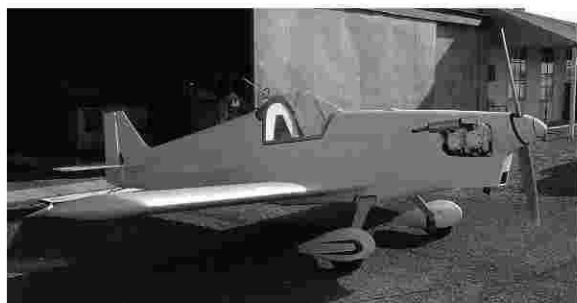
SONERAI NEWS

- ➔ Sonerai I Website: Jeff Lange now has a website for you single-place aficionados. It can be found at www.sonic-art.net.
- ➔ Fly-In Schedule:
 - Northwest, Arlington, WA 7/7-11/04
 - OSH, Oshkosh, WI 7/27-8/2/04
 - Virginia State, Petersburg, VA 9/18-19/04
 - SERFI, Evergreen, AL 10/1-3/04
 - Copperstate, Phoenix, AZ 10/7-10/04Be sure to go the one nearest you.
- ➔ Sonerai Wing Construction Manual: It is now available. There are 18 pages of text, 85 photographs, and 12 drawings, as well as a complete materials and a tools list. If you would like your own personal copy, sent me cash, check, or money order for \$25.00. Postage is included. (The manual is now included with the plans, so you new plans holders already have it.)
- ➔ Back Issues: Sonerai Newsletter back issues are now available in three forms. The first is a 3-1/2" diskette which contains 209 of the newsletter articles (text only) published by Ed Sterba from 1987 through 1995. It costs a mere \$10.00. The second is a CD which contains complete copies of all of the newsletters published from 1996 through 2003 in a ".pdf" format. The cost is \$50.00. And finally, there are also hardcopy back issues for \$3.50 each. I have the last two issues from 1994, and all of the issues from 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, and 2003. If you want any of the above, send me a note requesting the ones you want and a check for the correct amount. Postage is included.

ERIK JONSSON'S FIRST FLIGHT

On May 10, I got the following note from Erik Jonsson in Idaho Falls, ID:

First Flight was on 9-26-03 and the duration was just under 2 hours. Flight characteristics were good, additional tail adjustments were needed to keep the heavy Continental 65 nose up. A continual stick back pressure was needed until a small trim tab was added. I used a 6" piece of fuel tubing duct taped to the bottom of the elevator to determine the size of the trim tab needed. I ended up using a slightly smaller amount of angle on the aluminum tab once I installed it.



Since then I added the wheel pants and a CO detector, a permanent antenna on the rear of the canopy, a GPS mount near the throttle, a cabin heat system (inadequate with no insulation), a paint job, a slip coordinator, a Telex ANR headset, and a new tailwheel and spring (thanks to John Avent and Roger Lee for the spare tailwheels and springs). I have no electrical system, and hand propping it after a prime with NO throttle allows for an easy start. I have had carb ice a couple times flying over 8000' this past winter, and was happy to have a working carb heater.

Cruise is 125 MPH at full throttle, 5GPH, McCauley 65x60 MET L Prop. I hope the slow cruise is due to the boxy cowl, that is soon to be smoothed.

Hope to meet many of you at OSH,
Erik Jonsson, Twin Falls, ID

Freditorial Comment: CONGRATULATIONS, ERIK!!!

CW CRANE'S FIRST FLIGHT

On May 27, I got the following note from CW Crane in Arlington, TX:

Thanks to your invaluable help. There is hope for those projects that have been around a few years. I acquired mine two years ago from the third owner of a project that has been around since 1985. After a little more than a year of concentrated effort N42HL finally became airborne. I asked a friend who previously owned a Sonerai IIL like mine to check it out for me. He reported that it flew well and all the engine parameters were fine. The hand held radio needs the help of an external antenna, and the firewall seal doesn't. Once those items are corrected, I look forward to the test flight period and eventually some cross country adventures.

Here is a picture taken after the first flight.



On June 8, he sent this update:

I had hoped that I could give you some performance figures by now. However, the weather and other factors have prevented further testing for the time being. The plane came in a light weight of 499 pounds and I had hoped that it would allow the 1700 cc VW engine and 54x36 Hegy prop to give fairly good speed numbers, but the few that we got were a little disappointing. However, that was just pattern speeds from an uncalibrated ASI and I hope that once we get into the test area and get the ASI/pitot calibrated they will improve.

Because I sit so tall in the saddle, I knew that I would either have to raise the turtle deck or lower the seat. Since the deck was there and the seat wasn't, I decided on the latter. I used 1-1/8" tubing to make an outer aileron control tube and 1/2" tube to make a concentric inner elevator control which made the controls about 1 1/2" shorter than using the plans. I also chose to put the controls only in the pilot position. Putting the seating surface on the bottom of the seat frame and using 1" high density foam did lower the seat enough that I sit in it rather well now. We had to add 5" of foam cushion for the test pilot, though. :-)

Other changes were to include your jackscrew trim mechanism, differential brake controls for the mechanical brakes, full width cockpit flooring,

metal belly pan, improved tail wheel control using tubing and rod end bearings, and a canopy brace to prevent it being damaged by the wind. I am using a hand held radio and GPS for the avionics "stack".

I like the way it turned out. A 2165 cc engine and DIEHL case came with the project and I may be putting that engine in sooner rather than later, but for now, this will be a good learning tool.

CW Crane
Arlington, TX

Freditorial Comment: CONGRATULATIONS, CW!!! CW and I had numerous phone conversations working out various problems. It was fun, and worth all the effort.

GORDON ESLAVA'S FIRST FLIGHT

On June 27, Gordon posted the following on the Yahoo group site:

Took the first flight in my SII today. Boy what a rush. Did a couple high speed taxi runs and almost lost it on the second one. Did full power take-off, tail up thru 40 rotate 53 (early), then finally built speed thru 60, and started climbing around 75 (knots).

Shot one approach high with a big slip, then went around and brought her in near the numbers on the second try. Took most of the afternoon to get my knees to stop shaking. Everything went well.

Now it's time to start putting on the hours.

Gordon Eslava
Bremerton, WA

Freditorial Comment, Again: Congratulations, Gordon!!!

GOIN' TO SUN-N-FUN (THE 2004 VERSION)

This was my third trip to Sun-N-Fun in my Sonerai. The first was in 1992 with Ed Sterba and his Sonerai II. The second was in 2001 with a bunch of Citabrias and a Decathlon. And this time it was with Keith Tridle, my intrepid hangar partner, and his Wagabond.

We left Burlington, WI, our home base, bright and early on the morning of Friday, April 9. We had a one day weather window to get to Florida, or we

would have to wait several days for the weather to clear again. And there was the promise of tailwinds. It was chilly, with the temps running in the upper 30's, so I had my longies on, along with several layers of clothing to stay warm.

Our first stop was Lawrenceville, IL, after a little less than three hours flight time. It had warmed up some, but I decided to stay warmly dressed for the next leg. We gassed up, and headed for Gadsden, AL. After another three hours, or so, of clear skies and light tailwinds, we touched down in Gadsden. As I flared to land, it felt like someone had suddenly turned the heater on in the airplane. But wait, it doesn't have a heater. It was 80 degrees there! Let me tell you, it didn't take long for this boy to take off the layers, and get out of the longies. We were definitely in the south.

Our final leg of the day was to Perry, FL, where we decided to spend the night. I logged 8 hours of flying that day and was a bit tired, to say nothing of hungry and thirsty. Perry has one of the nicest Hampton Inns I've ever stayed in. If you need to overnight in Perry, certainly give them a try. Besides, there's a great barbeque place right next door.

On Saturday morning, after a leisurely continental breakfast at the motel, the manager took us back to the airport (he also picked us up the night before). We weren't in any real hurry because everywhere to the south of us was fogged in. Just before noon, the fog burned off enough for VFR flight, so off we went. Before we left though, we decided it would be prudent to call the Lakeland tower and ask if it would be OK to come in without transponders. You see, Lakeland is just inside the Tampa 30-mile veil, and the special arrival procedures didn't start until Sunday, and neither Keith or I have a transponder. They said to "come on down" and report 15 north of the airport.

And that is exactly what we did. I was in the lead, and called in first as "experimental 99 Foxtrot Kilo." The tower guy acknowledged, and asked what type I was. I said I was a bright red and silver Sonerai II. He said to call five miles out on a base for runway 27. As I got to the appropriate place, I again called and reported five miles out. He cleared me to land, and about 30 seconds later he came back and said, "99 Fox Kilo, that thing sure is bright. I can see why you don't need a transponder". Needless to say, I was still chuckling after I landed. What a great way to be greeted on my arrival.

To say we were a little early would be an understatement. There were probably only 20

other homebuilts tied down, but we didn't care. We'd made it.

We spend Sunday bumming around the Tampa/Lakeland area visiting some of the surrounding airports, and returning to Lakeland to make sure the airplanes were tied down well because of forecast thunderstorms. Monday we returned to find that the airplanes had survived the storms well, and spent the afternoon watching the show come together. On Tuesday, we drove to Lakeland in the rain, and I was pleased to have 20 of you come to the Sonerai Builders Forum that was among the first scheduled of the day. Due to a communications foul-up on my part, I didn't get Steve and Linda's laptop to try out my new PowerPoint presentation. So, I had to wing it, as usual. Thanks to all you Sonerai folks for being there. Also, Al Bertelmann brought his Sonerai II over from South Lakeland, so we had two Sonerai's on the grounds this year.

Wednesday was a nice day, but very windy and cool. I actually had to wear my light winter jacket, all day.

Our departure day was scheduled for Thursday, and it turned out to be another one of those weather windows. It looked like we could get home if we pushed it a little, and it looked like we'd have tailwinds again on the last half of the trip. So, we quite literally launched at the crack of dawn (the sun was no more than a diameter above the horizon when we lifted off).

To make a long story short, I stopped in Dawson, GA and Nashville, TN for gas, flying about three hour legs. The first leg had very light headwinds and clear skies, while the second leg picked up some tailwind. When we departed Nashville's Tune airport, it looked like we could make it all the way home with just one more gas stop at Urbana, IL., and the winds were picking up.

As most of you know, I use a six gallon aux tank to supplement my 10 gallon main tank on these longer trips. I burn about five gallons out of the main tank, then turn on the transfer pump and pump the aux gas up into the main tank. The system worked flawlessly until this leg.

As I was approaching Vincennes, IN, I decided it was time to transfer the fuel, but when I flipped the switch, nothing happened. The little red indicator light on the panel didn't light up, and fuel wasn't flowing up the clear Tygon tubing. I knew I couldn't make it to Urbana with the five gallons of gas that was left in the main tank, so I decided to stop again at Lawrenceville.

It was déjà vu all over again. Just like my last trip home from Sun-N-Fun, there were 30+ mph winds at the surface, right out of the south. Again, I had to carry cruise power down final to get to the end of the runway, and the airplane almost stopped in midair as I flared.

I attempted to troubleshoot the problem, and couldn't find the fault (it turned out to be a failed switch), so I filled the main tank and headed north. Since I was making over 150 mph ground speed, and it was only 280 miles to Burlington I figured that I could make it with out stopping again. And I did, in just under two hours, using 7 gallons of gas. We'd made it all the way from Lakeland to Burlington in one day and 9.7 hours of flying. Was my butt numb.

So, in summary: 2241 miles round trip. 19.5 hours (9.8 hours down, 9.7 hours back) of Hobbs time. 78.9 gallons of 100LL (\$209.00). 4.04 gph, 115 mph block-to-block, and 28.4 mpg. And it was a lot of fun. Do it again next year? Probably not.

COCKPIT-RELEASED TAIL HOOK ASSEMBLY

By Ivan Martinez

I trailer my Sonerai to a controlled airport with an 8,000 ft runway. The FBO where I get fuel often has several jets and twins parked at the same ramp that I fuel at. My Sonerai has to be prop started. Without some help holding my tail, it is a real dance climbing into a moving airplane. I keep looking at those jets. My \$1,000,000 policy won't go far if I hit one of them. For a long time I have been thinking of a compact cockpit-released tail hook assy. The following is what I came up with:

To attach mine, I used the tail wheel attach bolt and one of the hard points from my tow bar assembly. On the drawings, there are provisions for both fabric-covered retrofit and for an uncovered Sonerai.

1. Make piece #1 (don't cut slot for lever #4 yet.)
2. Test fit and attach #1 to landing gear bolt (bend tab to fit.)
3. Make piece #12 & fit.
4. Drill #1 & #12 together & fit
5. Make pieces #2 & 3 (use full scale template) and rivet together. Drill this assembly with #11 bit (use full size template to drill holes.)
6. Have these two pieces welded together (weld only where marked on full scale template. Note suggested offset alignment for rope clearance after it drops.)

7. Make pieces #4, 5 & 6 (I cut a 1 1/4"X1/8" spar cap right down the middle and got both levers.)

8. Test fit the assembly (note the bushing stop on the full scale template. Also I put the slot for lever #4 on the right side. To make the slot drill a series of 3/16" holes and file straight.)

9. Make hook #10 (Use a 1/4" bolt. Cut the threads off. Weld a piece of bushing stock to the bolt. Make the bushing LONGER. It's easier to weld then grind back to 1/4" after you weld it. Heat and bend to shape. Put a "tail" on the part of the hook where the hold down bushing nestles. I used the actual hex head to make the "tail" of the hook.)

10. For low wings make part #11 and rivet to aileron pivot assembly on the LEFT side of the airplane (use 1/8" soft aluminum rivets. If need be, they can be drilled out in a few seconds and they hold well.)

11. For mid wing place #11 some where easily accessed from seating position and from the outside, also.

12. Run the "T" handle control through #11 (don't forget to masking tape the 1/2" nut & washer to part #11 BEFORE you run cable down fuselage. YOU WILL HAVE TO TIE SEVERAL TIE-WRAPS WITH ONE HAND...IT CAN BE DONE. Use a hose clamp where detailed in drawing. This is a safety feature. Don't want cable to hit elevator linkage.)

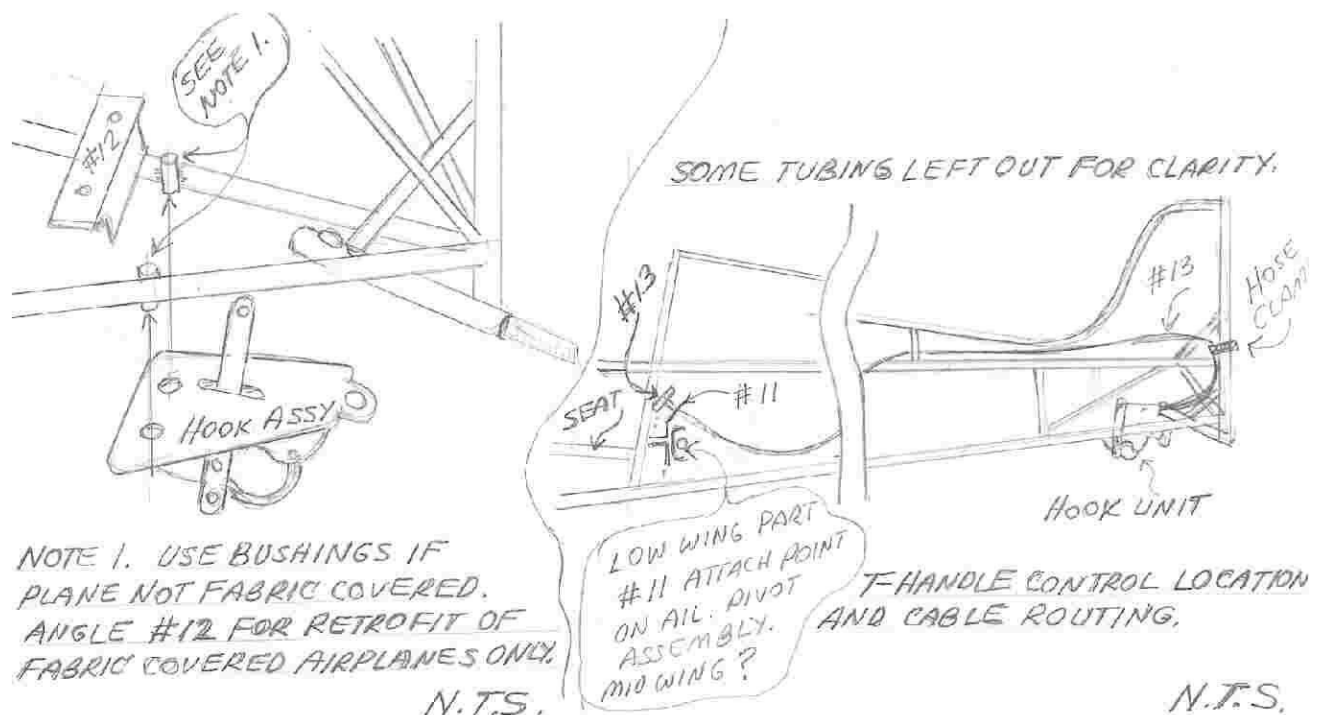
13. Round all sharp edges before final assembly (I actually streamlined the assembly to minimize drag.)

14. All the work can be done through the large inspection hole on the left side of the Sonerai. Test the assembly for operation (I left some tension on my cable so that the cable is "pushing" on the release lever when hook is locked. A short tug of the "T" handle and the hook is free...the rope drops...you are off. LOOK AT THE SKETCHES AND PARTS LIST. ALL THE INFORMATION IS THERE

Ivan Martinez, Sugarland, TX
 mrmarmbleman@mindspring.com



Tailhook Installed



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TAPER PIN REAMERS & WING RIB LIGHTENING HOLE FLANGING DIES FOR FREE LOAN. Brown & Sharp #3 and #5 for AN386-3 and AN386-5 taper pins. \$150 deposit, shipping one way ~ \$5. Free loan for 14 days, \$2 per day after that. David E. Wilcox, 517 E. Saratoga St., Gilbert AZ 85296. dwilcox@ispwest.com

SPECIALTY WELDING CAN SUPPLY YOUR COMPLETELY WELDED SONERAI FUSELAGE AND OTHER WELDED COMPONENTS. Contact Greg Klemp at *Specialty Welding*, W6461 County YY, Neshkoro, WI 54960, (920)293-8089 or (920)293-8007 (Fax)

RACEAIR DESIGNS IS AVAILABLE FOR YOUR FABRICATION AND RESTORATION NEEDS. Contact Ed Fisher, (330)856-7520, raceairdesigns@aol.com. Over 30 years experience in dope, fabric, welding, and sheet metal. Numerous awards including 1991 Oshkosh Grand Champion Ultralight. No job is too big or small. Need a fuselage welded? Give Ed a try!!

For Sale: Sonerai II wing components. One kit w/front and rear spars, ailerons, cap strips, and hinges, \$650. One kit same as above except w/o rear spars. Two sets of 18 ribs, \$400 each. One set of 16 Quality ribs, \$450. Or everything for \$2000. South suburb of Chicago. L. Edwin Langeland, (708)389-6637 after 6 PM. (3/03)

For Sale: Turbo Revmaster engine, 94mm pistons, Warnke prop, 180hrs tt. \$4500 OBO. Kris Kampe (603)367-4322, kampe1@earthlink.net (4/03)

For Sale: Sonerai IIL, TT 294 hrs, TSTO 170 hrs, 1834 VW 60hp @ 3400, A&P owned, always hangared, Annual due 3/31/04. \$10,900 obo. Ken Christian, (660)263-7937 (1/04)



For Sale: Sonerai IL, 98% complete. Built as low-wing using Sonerai IIL plans as a guide. 1835 VW w/ SuperVee prop hub, oil cooler, & HAPI UltraCarb, Sterba prop. This airplane was 1-2 months from completion when the original builder was killed in a motorcycle accident. Current owner doesn't have the time to finish. \$4,500. Allen Bruggink, (262)335-6459, albrug@hnet.net (1/04)

For Sale: Sonerai IILS, N2533Z, Jabiru 2200 (80 hp/2000 TBO), 60 hrs TT engine/airframe, expertly crafted by experienced builder, custom Sensenich prop, Cleveland wheels/brakes, 15 gal. fuel, Odyssey battery, folding wings(trailerable), flies perfect/hands off, bought L-16...must sell one, \$20,000 firm, Mike Frost (941)729-1050. (1/04)

For Sale: John Monnett's prototype Sonerai IIL, approx 500 hrs TT, good condition, always hangared, engine runs well but probably needs a teardown inspection before flight, needs new tires to fly, \$6,000. Bobby Webb, (662)429-4273 (1/04)

For Sale: Gyrocopter (Benson-type) with Brock seat tank, metal tail, extended mast for Rotax or your choice. Offset gimbal head with rotor blade bar. Needs rotor blade and engine. Otherwise assembled, on gear with Brock joystick control and wheels. \$1950. Fred Ninneman (816)353-1161 (2/04)

For Sale: Sonerai II, built 1981, 200 TT, Revmaster 2100S. Will deliver for expenses: \$10,000. Also, a complete HAPI 1835 with Zenith carb, \$3,000. Bob Jorgenson (435)678-3436, bobl@sisna.com (2/04)

Wanted: Project donation for Navajo Youth Flying Program, 4 corners area SE Utah. Bob Jorgenson (435)678-3436, bobl@sisna.com (2/04)

For Sale: Sonerai I, has flown a few times, but has no paperwork. Structure is solid, finishing details are poor. Wings flush riveted w/ AD rivets, but no S mod. Engine has ForceOne prop hub, electric start. Complete as is, \$3,500, w/o engine, \$2,400. Individual pieces: fuselage/tail/spar box \$900; wings/ailerons \$1,500; 5/8" gear/wheels/brakes/axles, \$300; Scott tailwheel/spring \$50; instruments/panel/fuel tank, \$300; Ed Fisher, (330)856-7520, raceairdesigns@aol.com (2/04)

For Sale: Sonerai II project. Ready for cover. S-wings, on the gear, fiberglass turtledeck raised for taller pilot, built for Continental A65 which is included (basket case). \$5,000 invested, will take \$2,500. Kurt Schafer, (807)274-1766, wkos@jam21.net (3/04)

