SONERAI NEWSLETTER

JAN-FEB-MARCH 2002

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JACQUES MILOT'S SONERAI IIL

Jacques sent in this photo of his airplane along with a note. He wrote: "This is my Sonerai II "XP". It has a 20' wing span with tapered wing tips. The flaps lower the nose enough so I can see the runway when I come in for a landing, and slow my stall speed by about 4 mph. Trim is on the stab like a Cub. The engine is a 2180, which turns a 56" x 45" prop I made myself. Cruising speed is 135-140 mph, depending on the weather conditions." (Please don't ask your editor about the flap/aileron mechanism, 'cuz I don't have a clue. Give Jacques a call at 819-472-6716.)

WELCOME TO 2002

First of all, I hope you all had a happy holiday season, and that Santa brought you the Sonerai parts that you needed. Given that my Sonerai IIL has been flying for 15-1/2 years now, and it doesn't really need any parts, all I ask for is a few decent flying days during these winter months in Wisconsin. I usually find that the month of January is a lost cause due to cold temps and snow accumulation at the airport. I don't enjoy flying my unheated airplane if the temperature is below 20°F, or if there are a lot of snow banks along the taxiways and runways. When your wing tips are only 3 feet off the pavement, snow banks can do all sorts of damage if you're not careful.

The upcoming year will hopefully be an interesting one. The affect of the September 11 terrorism has changed us all I think, and we need to be continually vigilant, not only for possible continuing terrorist acts, but to make sure that our flying privileges are not further eroded. I would suggest that if you don't already belong, join AOPA or EAA. These organizations are out there fighting for our aviation freedoms, and they need all the support they can get. Secondly, fly your airplanes as much as you can. It helps to support the aviation

infrastructure, which is fragile at best. And when you do fly, be careful. Check the notams each time you fly. I don't want to hear of any Sonerai's getting shot down by an F-15 or F-16.

And finally, plan to take in one of the major fly-in's this year. Sun-N-Fun runs from April 7 – 13, and Oshkosh from July 23 – 29. I'm planning to be at both. And don't forget the many regional and local fly-in's as well. They are all fun. See you there.

IT'S RENEWAL TIME

It's January again, and it's time to think about renewing your subscription to the **Sonerai Newsletter**. Be sure to take a look at the envelope this thing came in and check the mailing label. If it says "PD 2001" and you want to continue receiving this fine collection of wit and wisdom, please send money. The subscription rate is now $14.00 per year. So, make your check or money order (cash is acceptable, too) out to "Fred Keip" and send it before you forget. That way you won't miss a thing. And thanks for your continued support.

SONERAI NEWS

- Great Plains News: From the latest issue of the Beetle Flyer: GPAS now carries the Sonerai II canopy ($395) and the Sonerai Rivet Kit ($319.95), plus they have a bunch of their Sonerai parts on sale thru January 18. Check out their website (www.greatplainsas.com) or call them at 1-800-922-6507.
- 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.
- Back Issues: **Sonerai Newsletter** back issues are available in two forms. A 3-1/2" diskette which contains most of the significant newsletter articles published by Ed Sterba from 1987 through 1995 is available for a mere $10.00. 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, and 2000. If you want any of the above, send me a note requesting the ones you want and a check for the correct amount. The postage is included.

INPUT REQUESTED

As I always do at this time of the year, I'm asking for your input so that this newsletter can continue to be interesting and informative. This input can take several forms. First, if there are subjects that you'd like to see addressed, drop me a note or an e-mail with your ideas. Second, send photographs of your airplanes, along with a little write-up giving some details about your machine (you know: engine size, propeller, weights, speeds, etc.). Again, you can mail them or attach them to an e-mail. And thirdly, write an article. It can be any length, and don't worry about spelling, grammar, and all that stuff, because I'll fix it if it needs it. Just write it and send it in. I accept hand-written, typed, word-processed, or e-mailed. Whatever is easiest for you.

As in the past, I offer an incentive. When you send in an article, and I publish it, you will get the next year's subscription to the Sonerai Newsletter for free. For their contributions to the 2001 newsletters, I'd like to thank Dave Wilcox, Roger Godfrey, Bob Barton, Bill Craft, and Ron Teubert for their help. You guys will notice that your subscriptions have been renewed.

FIRST FLIGHTS

I got one report of a second flight from Gary Zahn, Pickett, WI, so I can only assume that there was a successful first flight. Gary's machine is a Sonerai IILT with a HAPI 2180 with Scat heads. Here's his report:

Hi Fred: I flew my Sonerai on Tuesday, Dec. 11, for the second flight. I have some numbers for you, and also some problems. I departed from runway 18 at Fond du Lac. I used a little less power, and rotated at about 65-70 mph and then settled back to the runway, so on the second bounce, I added full power and climbed out. I kept her over the runway and fairly level this time. It climbed at 1000' per minute at 100 mph, most of the time when I kept her steady. I climbed to 3000' and throttled back to 3000 rpm for some circles to get used to the plane some more. Speeding up to 3550 rpm. gave me about 140 mph, and the 3000 rpm gave me about 120-125 cruise. The stick was centered and I trimmed away most the nose heaviness with full fuel in the front tank. I flew about half an hour and decided to try a descent. I flew the final at 80-85mph and flared over the numbers and set down normally.

Now I will tell you about the troublesome part of the flight. I had my carburetor all set for a max of about

1200 EGT when full rich, and a fuel flow with my boost pump on of 11-12 gal/hour. Now, when I leveled off at altitude, the EGT was 1440. It then went down to 1100 so I kept flying, and soon noticed that it was up to the 1400's again. I added power to gain some lost altitude, and it powered up and climbed up, so I leveled off and cruised a little more. When I decided to throttle back for the decent and the engine quit, but moving the throttle back and forth brought it back to life. After circling another lap, I tried again to decelerate and it did it again. I called back and told them I was having some engine trouble, and was coming into the pattern. I was able to coax her along, but had more trouble the slower I wanted to go. When I was on base turning short final, I just let her die as it was too hard to maintain control with the ornery engine. After touch down while coasting, I tried a restart and she took right off and ran well, so I taxied back to the hangar and shut down normally. They asked me what was wrong, and after explaining this they said "carburetor ice." I had 3 lb. of pressure at the carburetor during this, as I remembered to look, but forgot about my carb. heat. I know you have a carburetor like mine, so thought I would ask you if you ever had anything like this. Some people don't think it was ice but rather some fuel problem. (Maybe she just didn't want to come back, figuring I wouldn't fly her for awhile again.) Gary

E-MAIL UPDATE #4

Here's a list of the e-mail addresses that I've been supplied to date:

H. Aarts (II-J2200) h.aarts@wxs.nl
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Gary Bailey (IILS) gbail@adams.com
Bob Barton (II-1835) rabarton@mindspring.com
Al Bertelmann (IIL) altonb@singnet.com.sg
Dave Bilgri dbcpa@powerweb.net
Wes Blake (IIL-Revmaster) blakew@web-ster.com
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Jim Bohnsack (II) bohnsackja@gvl.esys.com
Kyle Bond bondracing@aol.com
John Borra johnborra@media-net.net
Allen Bruggink (IL) allenb@hnet.net
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Mark Burnham desmo@interport.net
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Doug Evenson devenson@mindspring.com
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Shawn Wolk (I) shawnwolk@sprint.ca
Ron Wright (IIL-1835) wright.ronald1@mcleodusa.net
Robert Yonge (II-2180) goosechrt@aol.com
Gary Zahn (IILT-2165) gzahn@vbe.com

If your address isn't here, or has changed, and you'd like me to add it or fix it, send me an email.

CARB HEAT – ONE SOLUTION

Back in the OND '01 "First Flights" article, I promised an article on my solution to the problem of installing carburetor heat within the tight

confines of the Sonerai II cowling. Here's what I did, and I hope it helps you develop a system that works for your engine installation.

When I finished my airplane in 1985, it had a Posa SuperCarb with mixture control. Since the consensus at the time was that carb heat wasn't necessary with the Posa, I simply set it up to draw cold air from outside the cowling at the cowling outlet. No attempt was made to provide an air filter, either.

After a few years of fooling with it, and not getting the consistency of operation that I wanted, I decided to replace the Posa with a HAPI Ultracarb. This carb had a slide-valve/needle arrangement similar to the Posa but it had a float bowl along with a mixture control. When I ordered the carb, the HAPI Engines guys told me that it worked best with pressurized/filtered air, and carburetor heat. So, it was necessary come up with a carb air box to support some sort of filter, and a heat stove to supply the heated air.

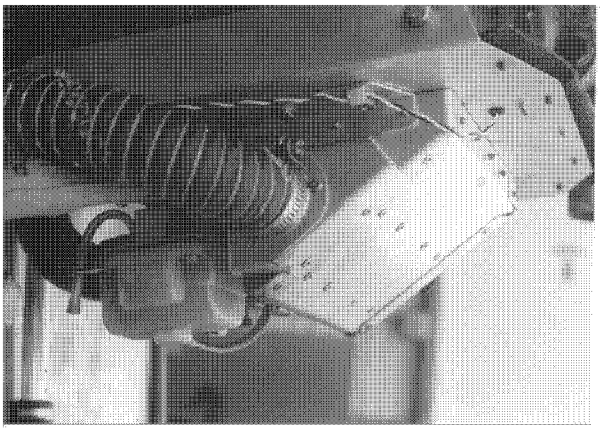


Photo 1

My goal was to incorporate all this stuff into the engine compartment without modifying the cowling. (The cowling was finished and painted, and I really didn't want to do that again.) So, I decided that since the cowling had an inlet under the spinner to provide a source of cooling air for the bottom of the oil pan, that this would the perfect place to get the supply of pressurized air. I would simply build an air box that mounted on the bottom of baffling mounted under the engine. Photo 1 shows the LH side of the air box as it is mounted to the oil pan baffle. Photo 2 shows the RH side of the box and the mechanism that operate the hot air door inside the box. Dimensionally, the box is 4.75" from the front to the back, 6.50" wide, 0.75" high at the front and 3.75" high at the back.

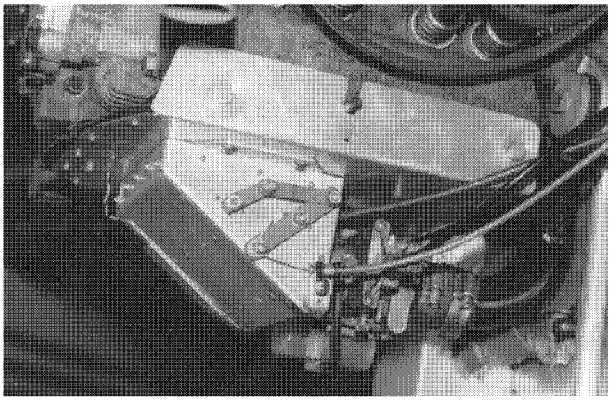


Photo 2

The box is made from .025" 2024-T3 Alclad sheet. It is mounted to the oil pan baffle with two ¾" angles and four #8 machine screws and nut plates. Photos 3, 4 and 5 show three different views of the box. Photo 3 also shows the air filter that I happened to find in the "aircraft parts department" of my local Ace hardware store one day. It is a Briggs &Stratton pleated paper air filter used on one of their lawn mower engines, and costs about $5.00. It sits in the top of the box and is held in place by the oil pan baffle. Of course, there are openings cut in the baffle.

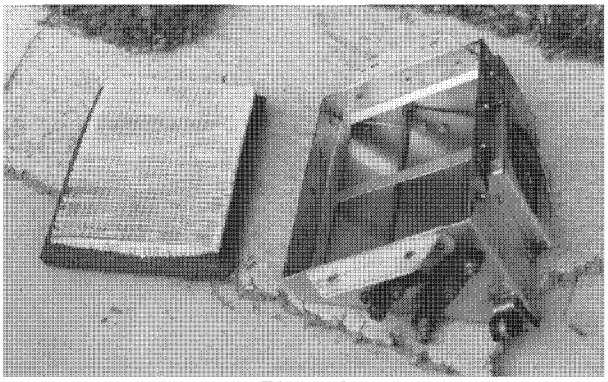


Photo 3

Inside, at the bottom of the box is a flat rectangular duct that brings the hot air in from the LH side of the box. It is covered by an aluminum door attached to a hinge shaft that is actuated by the 3-link bellcrank mechanism mentioned above. In photo 3, the door is closed over the duct, allowing fresh air to pass through the filter on its way to the carb. In photo 4, the door has been opened, blocking off the fresh air, allowing the hot air to be drawn into the carb.

Photo 5 shows the 1-1/2" hot air inlet flange attached to the transition on the LH side of the box. The side of the box has a slot cut in it in line with the internal duct. The transition on the back of the box is sized to fit over the carburetor inlet.

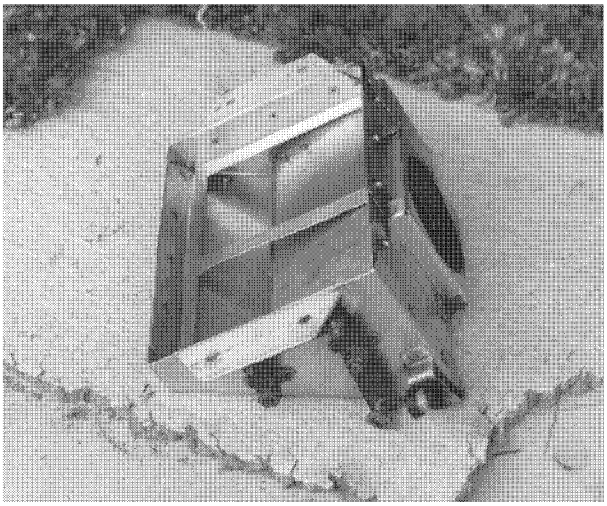


Photo 4

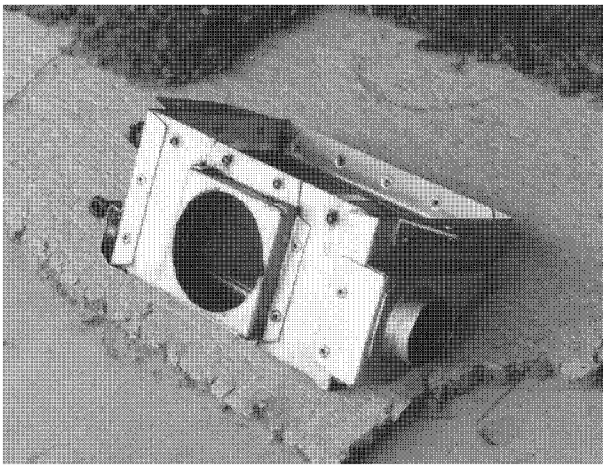


Photo 5

Photo 6 shows the heat stove mounted on the LH rear exhaust pipe. It consists of an open-faced box clamped to the exhaust pipe with two hose clamps over bent tabs. The box is made from galvanized sheet stock left over from the firewall. It has a 1-1/2" diameter hose flange riveted to it. To increase the amount of heat transferred to the air, a cheap hardware store extension spring is stretched out and wrapped around the exhaust pipe inside the box. The stove is connected to the air box with a piece of scat duct and 2 hose clamps.

That's it in a nutshell. There are probably a million other ways to accomplish this task, and I am really interested in how else it can be done. So, please send me photos of your installation so I can publish them, and then everyone can copy your design.

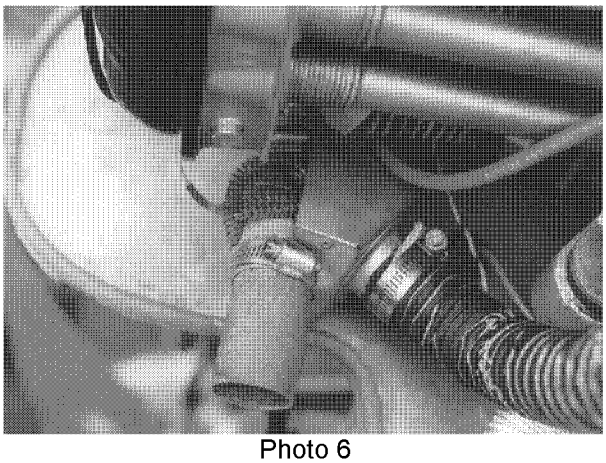


Photo 6

WHAT'S IT FOR? By Bob Barton

One of the neat things about building your own airplane, to be registered in the Experimental category, is that you are free to use your discretion in selecting parts and materials for your project. While it is undeniably wise to use certified items in many, or even most cases, there are certainly times when a less expensive item from the auto parts store will serve your purposes well.

But it is necessary for you to learn just *how* to shop for these things. You must be very careful when you are describing the exact application for the item you are buying. If they get even an inkling that you are going to put this thing on an aeroplane, their genuine concern for your health, and their fear of a lawsuit makes them somewhat less than helpful.

When I go to the corner hardware store for almost *anything*, it is about 90% sure that they will not have exactly what I want. Now I have noticed that clerks working in your generic hardware store always ask the same question. They will unfailingly ask you what you need this gem-crack for. I suppose this habit is developed by dealing with hundreds of customers who either do not know what they want, and who can be talked into buying a suitable substitute…(which the store has in stock).

I needed some brass screws to mount the instruments on my instrument panel. I had high hopes that I could find them at this particular hardware store. I wanted brass to reduce any magnetic influence, and I was looking for *black* brass screws to satisfy my esthetic senses. But, of course, the only brass screws in stock were the gaudy gold colored ones. As we scratched through the meager inventory, the clerk asked the

inevitable question, "What are you going to use them for?"

Why couldn't I have said, "None of your business!"? But no, he was trying to be helpful, so I mumbled something about my instrument panel. He immediately brightened and said, "I know exactly where you can find them. There is a place called *Franklin's* two blocks down the street. The are *sure* to have what you need."

He seemed so confident that I immediately hoped in my little truck and took off in search of *Franklin's.* There is was; just as he said…but as I pulled in the parking area I noticed something amiss. This was not another hardware store. Its display window was filled with cellos, saxophones, and music stands.

Right! The perfect place to find what I needed for my instrument panel.

FROM THE ARCHIVES

From the May/June 1982 issue of the ***Monink****, written by Randy Novak, this is a great article on how to assemble and install the cowling.*

COWLING: The fiberglass cowling, after being trimmed to fit in position and aligned with the spinner, is attached along the aft edge to the tabs shown in the plans.

The best type of fastener to use is a machine screw going into an anchor nut riveted onto the back of the tab. The use of a countersunk 8-32 machine screw with a flush finish washer will give a nice flush fit and offer maximum contact area for a solid attachment. Avoid loose fitting camlock fasteners and such, as after a period of time the fiberglass will erode away from vibration. It is advantageous to add one or more cowling fastening tabs to the firewall station to make the cowling more secure and resistant to bulging out at the sides when the engine area is pressurized by cooling air.

Attaching the cowl halves together is done by using four machine screw anchor nut fasteners at the front, one on each side of the air inlets and a 36 inch length of 1-1/2" piano hinge down each side of the cowl. The stepped joggle on the lower cowl will have to be cut away from the area where the piano hinge is attached and a small slot cut at the forward end of the hinge to allow for removal and installation of the cowl hinge pins. Bending the end of the pin over to form a small ½" long handle will make it easier to grip the pin. Mate the cowling halves together off of the airframe with the machine screws and install the piano hinge towards the aft end of the cowl, as one piece to the inside of the cowl with the pin hinge line centered on the split line of the cowl. Attach the hinge with AAC-42 rivets, countersinking the fiberglass.

COWLING ACCESS DOORS: Rather than remove the top cowl every time you need to fill up, a fuel filler door should be installed just above the fuel neck of the gas tank. Normally made from a 4 inch by 4 inch piece of .025" aluminum, using a piano hinge section 3-1/2" long and a camlock or machine screw as a fastener. This type of door overlaps the fiberglass, resting on the outside of the cowl. A more involved method is to make a flush-fitting door by cutting out the door panel with a very thin Dremmel Tool saw and using the original fiberglass piece as the door itself. It should be of the same dimensions and method of attachment given for the other style door. The flush door requires a 3/4" wide backing strip of .025" aluminum riveted to the inside of the cowl extending around the perimeter of the opening to keep the door from falling inward. Either style door can also be used above the oil dipstick if desired.

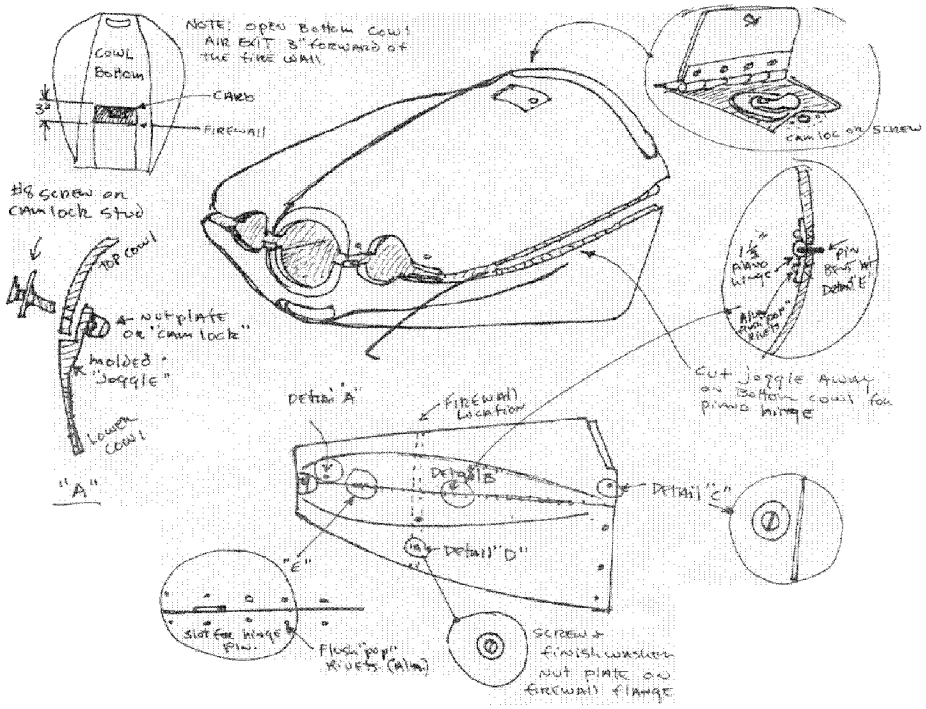
COWLING AIR OUTLET: Because of the larger VW engines now being used and consequently more heat being generated, we have found it necessary to enlarge the size of the air outlet opening at the bottom of the cowl. It should be cut out forward an additional 3 inches. An added advantage is being able to reach in from the bottom for adjusting the carburetor needle and having a clear opening for the excess fuel to drip out during the start up.

Freditorial Comments: Here's a few additional ideas that you might want to consider.

1. *Arrange the hinge pins so that they can be pulled out from the inside rear of the cowling. They are easily accessible from the front cockpit, and cannot move forward into the trailing edge of the propeller. It also makes for a neater looking cowling.*
2. *Use Hartwell latches for the access doors. They mount flush with the surface, and there is no need to have any tools to open them.*
3. *Install small, drilled aluminum reinforcements at each of the attachment holes so that the holes don't "wallow out" over time. You will be removing the cowling fairly often over its life, and the reinforcements will preserve the hole size. Attach them with a small piece of*

fiberglass and epoxy on the inside of the cowling.

4. *If you plan to use the original fiberglass pieces for the access doors, use a narrow, hollow-ground saber saw blade to cut the radius corners. It will make a very smooth cut.*
5. *It may be necessary to add a lip to the front of the cowling outlet to deflect airflow away from the opening in the climb attitude. At high angles-of-attack, the airflow wants to blow into the outlet.*
6. *To aid in aligning the front of the cowling to the crankshaft centerline, fabricate a false spinner rear bulkhead out of plywood, allowing for the width of the bulkhead flange and the clearance between the spinner and the cowling. Bolt the false bulkhead to the prop flange, and then temporarily fasten the cowling to it. Then, you can align and drill the attachment holes while keeping the cowling centered on the spinner.*



WANT ADS

These Ads are provided as a service to you, the subscriber, and are free of charge. I only ask to be informed when the Ad is no longer valid, and needs to be removed. Thanks.

TAPER PIN REAMERS 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.

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)

For Sale: Revmaster 2100 w/ dual Bendix mag, starter, Revflow carb, oil cooler, prop (56x45), approx 400 hrs, came off KR-2, $2000, Doug Evenson, dwevenson@cs.com, (706)327-4601(H), (706)888-4602(cell) (4/01)

For Sale: Sonerai IILTS (low wing, trigear, stretch) fuselage for sale. The engine mount is for Diehl accessory case, $5500, but includes landing gear and hydraulic brakes – which is a $6500 value. Call Steve at (402)493-6507 for more info. (3/01)

For Sale: VW Engine/Parts. Priced to sell complete – only $600. or individually as needed. NEW: single port cylinder heads, 92 mm pistons & cylinders, valve covers, & x-casting. USED: engine case, 1835 cam, stock 69 mm crankshaft, & other misc. parts. Call after 7:00 PM. Dan Bernard, 785-483-6812 (4/01)

For Sale: Sonerai II Stretch fuselage, prebuilt spars, ailerons, Monnett ribs, fiberglass cowling, wing tips, & wheel pants, nosewheel, tailwheel, canopy. $5800. Call Steve Garn, 336-877-0318 (4/01)

For Sale: Sonerai II Mid-Wing, minor ground loop damage, new prop, new cowlings, supercarb, 1850 EconoVee, all major parts. Pictures available email. $2500. Jack Hall, 760-949-6999, jhhall6980@aol.com, Southern California (4/01)

For Sale: Sonerai IILS, fuselage and wings complete, on the gear, cowling, canopy, needs engine and prop. $7500. Don Jester, 417-466-3013 (1/02)

For Sale: Plans, built-up main and rear spars, and formed ribs for Sonerai IILTS. $400 OBO. Please call before 9 PM central. Ask for Pete, 847-543-0233 (1/02)

DIRECTORY 1997-2001

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JFM '97	Happy Holidays!	Intro
JFM '97	So, Who is this Guy, Anyway?	Intro
JFM '97	Thanks, Ed!	Misc
JFM '97	A Request	Misc
JFM '97	Builder Support	Misc
JFM '97	Pitch Trim (One More Time)	Trim System
JFM '97	From the Archives (May1, 1977)	Operations
JFM '97	To Tow, or Not to Tow	Towing
JFM '97	Winter is Here ...	Operations
JFM '97	A Letter from Marty Hammersmith	Misc
JFM '97	A Letter from Dave Wilcox	Wing Fold
AMJ '97	Sonerai Silver!!!	Intro
AMJ '97	Sun'N'Fun 97	Sun'N'Fun
AMJ '97	Format Change	Misc
AMJ '97	Builder's Support Revisited	Misc
AMJ '97	Q&A #1	Engine
AMJ '97	Q&A #1	Brakes
AMJ '97	Q&A #1	Wings
AMJ '97	Q&A #2	Wings
AMJ '97	The Final Cover	Fabric & Paint
JAS '97	Calling All Sonerai Builders and Pilots!!	Intro
JAS '97	Oshkosh '97	Oshkosh
JAS '97	Sun'N'Fun Sojourn	Sun'N'Fun
JAS '97	So, What About Sun'N'Fun?	Sun'N'Fun
JAS '97	"Quality Ribs"	Wings
JAS '97	From the Archives (M/A '82)	Landing Gear
JAS '97	The Final Cover (Cont'd)	Fabric & Paint
JAS '97	Sonerai II Thrust Line	Fuselage
OND '97	Oshkosh '97 Report	Oshkosh
OND '97	Look Ma, I'm a Glider Pilot by Danny Kight	Engine
OND '97	Secondary Ignition	Engine
OND '97	A Letter from Roy Adams	Engine
OND '97	Elect. Schematic by Roy Adams	Elect. System
JFM '98	Happy New Year!	Misc
JFM '98	Warning! Warning!	Misc
JFM '98	Builder's Support Revisited, Again	Misc
JFM '98	Help!	Misc
JFM '98	Full Depth Fuel Gauge	Fuel System
JFM '98	A Letter from Eric Klevstad	Fuselage
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JFM '98	A Letter from Eric Klevstad	Fuel System
JFM '98	A Letter from Eric Klevstad	Engine
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JFM '98	From the Archives (M/A '82)	Canopy
JFM '98	Magneto Box	Fuselage
AMJ '98	Sun-N-Fun '98	Sun'N'Fun
AMJ '98	Scallywag by Don Archangeli	Aircraft Report
AMJ '98	Building Wing Ribs	Wings
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JAS '98	Oshkosh '98	Oshkosh
JAS '98	Sun-N-Fun '98 Wrap-Up	Sun'N'Fun
JAS '98	Mag Coupling Blues by Bob Jaeger	Engine
JAS '98	Building the Spars	Wings
JAS '98	1998 Field of Dreams Invitational Fly-In	Misc
OND '98	Oshkosh '98 Wrap-Up	Oshkosh
OND '98	Jim's Oshkosh Adv. - Part 1 by Jim Hardy	Oshkosh
OND '98	Questions and Answers #3	Engine
OND '98	Questions and Answers #3	Electrical System
OND '98	A Letter from Bob Bastian	Aircraft Report
OND '98	HAPI Motor Mount	Fuselage
OND '98	Sonerai Survey	Misc
JFM '99	Welcome to 1999!	Misc
JFM '99	It's Renewal Time	Misc
JFM '99	Builder's Support Update	Misc
JFM '99	Jim's Oshkosh Adv. - Part 2 by Jim Hardy	Oshkosh
JFM '99	Assembling the Ribs to the Spars	Wings
AMJ '99	Sun-N-Fun 1999	Sun'N'Fun
AMJ '99	PHX-LAX-PHX ... by Dave Wilcox	Traveling
AMJ '99	1st Flight of "Fly'n Mist." by W. Blake	A/C Report
AMJ '99	Skinning the Wings	Wings
AMJ '99	E-mail, E-mail, E-mail	Misc
JAS '99	Oshkosh 1999 Preview	Oshkosh
JAS '99	E-mail Update	Misc
JAS '99	Sonerai Aviation by R. Godfrey	A/C Report
JAS '99	Building the Ailerons	Wings
JAS '99	Annual Inspections and Other Things	Engine
JAS '99	Annual Inspections and Other Things	Prop
JAS '99	Annual Inspections and Other Things	Fuselage
JAS '99	Sun-N-Fun '99 Debrief	Sun'N'Fun
JAS '99	Wrap it Tight, ... by Steve Bennett	Engine
OND '99	Recap: Oshkosh '99	Oshkosh
OND '99	Sonerai II (N2261G) ... by J. Lockamy	A/C Report
OND '99	A Plug for Spark Plug Adapters	Engine
OND '99	Eastwood Stuff	Engine
JFM '00	Happy 2000	Misc
JFM '00	Renewal Time	Misc
JFM '00	Help!	Misc
JFM '00	Another Set of Wings	Wings
JFM '00	Welding the Fuselage by J.S. Gay III	Fuselage
JFM '00	Saturday, Nov. 6 by Jim Hardy	Traveling
AMJ '00	Sun-N-Fun 2000	Sun'N'Fun
AMJ '00	MERFI '99	Traveling
AMJ '00	E-mail Update #2	Misc
AMJ '00	CO ?!!? by Dave Wilcox	Operations
AMJ '00	Another Set of Wings - Part 2	Wings
AMJ '00	Braking News	Ldg. Gear
JAS '00	Oshkosh 2000 Preview	Oshkosh
JAS '00	Sun-N-Fun 2000 Review	Sun'N'Fun
JAS '00	High Altitude Operations & Other Things	Engine
JAS '00	High Altitude Operations & Other Things	Ldg Gear
JAS '00	High Altitude Operations & Other Things	Wings
JAS '00	Kevin Lander's Rear Drive Installation	Engine
JAS '00	Wing Spar Riveting Alternative	Wings
JAS '00	Piston Rings, Again	Engine
JAS '00	Will It Still be a Sonerai? by V. Nicely	Alt. Engines
OND '00	A Look at Oshkosh 2000	Oshkosh
OND '00	Carb/Starting Problems	Engine
OND '00	A Letter from Ron Wright	Engine
OND '00	A Letter from Ron Wright	Wings
OND '00	A Letter from Ron Wright	Trim System
JFM '01	Welcome to the Winter of 2001	Misc
JFM '01	Renewal Time	Misc
JFM '01	A Cry for Help (Again)	Misc
JFM '01	Continental A65/A80 .... by D. Wilcox	Alt. Engine
JFM '01	A Second Letter from Ron Wright	Engine
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JFM '01	A Question on Turbo-charging	Engine
JFM '01	Prop Balancing	Prop
JFM '01	E-mail Update #3	Misc
JFM '01	Engine Storage by Steve Bennett	Engine
AMJ '01	April = Sun-N-Fun	Sun'N'Fun
AMJ '01	Ain't Computers Great?	Misc
AMJ '01	Ron Teubert's Project	A/C Report
AMJ '01	Wing Spar Carry-Thru Questions	Wings
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AMJ '01	More Questions & Answers	Fuselage
AMJ '01	Sonerai Aviation Update by Roger Godfrey	Engine
JAS '01	Oshkosh 2001	Oshkosh
JAS '01	First Flights	A/C Report
JAS '01	Sonerai to Sun-N-Fun 2001	Sun'N'Fun
JAS '01	Ray's Sonerai II	A/C Report
OND '01	Oshkosh 2001 Review	Oshkosh
OND '01	First Flights	A/C Report
OND '01	Ignition System Thoughts by Bob Barton	Engine
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