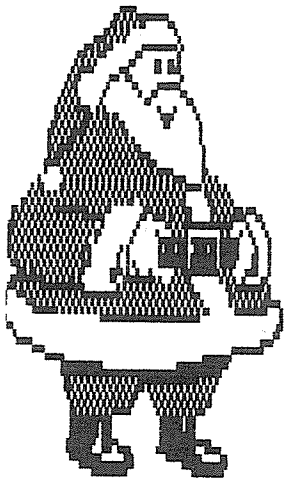
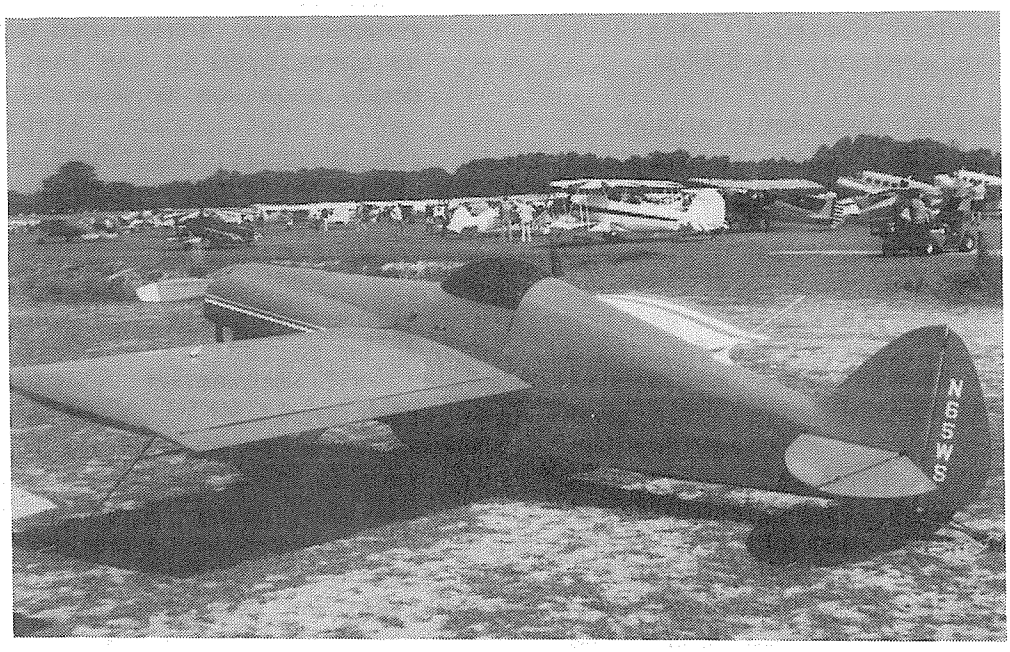
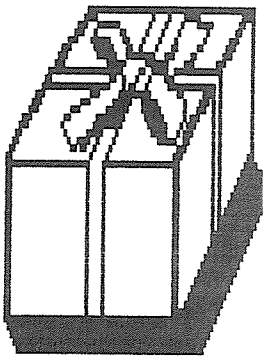
SONERAI NEWSLETTER

JAN-FEB-MAR 1991







Wolland Sterchi's Sonerai I with, I believe, a Cont. O-200. He's been flying the aircraft for quite a few years now. The picture was taken at Sun N Fun this past year when we had our greatest concentration of Sonerai's ever down there.

Here we are starting 1991. This is being written on the first day of winter and it finaly feels like it. Wind chills will be in the 20 to 30 below range tonight. Hopefully in other parts of the country many of you will be able to go Sonerai flying whenever you want. N78ES is in the shop for the worst of the winter again this year. If you listen real close on these very cold days -- you can hear it say "Thank you-Thank you", but you have to listen real close. On my list of 30 things to do before the Spring is an item to "paint exhaust stacks". Afte asking and getting help on finding 1500 degree paint (and only finding the 1200 degree variety) a trip to K-Mart, of all places, came up with the right stuff in the automotive department. You never know where you'll find things.

Don't forget to tune in to the FAA's homebuilt forum at 1-800-426-3814 if you have a computer and modem. I called last ght and there are still just about 12 reports on Sonerai's. We need to support them in this effort.

Sight Gauge Tubing

Eddie Eiland of 1350 Thunderbrook De Soto,TX 75115 write to advise that one of the best plastic tubes to use on your fuel tank sight gauge is Tygon F-4040-A. H esays it will outlast the normal hardware store plastic tubing about 2 or 3 to one. Cost runs about $1.00 per foot and it has a slight yellow tint compared to the clear type. I know that the normal tubing I use has to be replaced about every year for safeties sake, it is one of the things on my to-do list for the winter months. The hardware store type has quite a bit of shrinkage from AvGas over time so I always leave a bit of a curve in the line when installing new tube. One caution -- do not let a loop of any sort get in your sight gauge tubing, it can trap an air bubble and give quite an erroneous reading -- too full when it isn't.

" Someone " up there is watching out for me ...

by Dean McGinnes 1503 Clairdale Lane Lakeland, FL 33801

It all began innocently enough in early June of this past year with a trip to Tallahassee for me and my Sonerai IIL "Lickety Split". It was my first serious XC and the long-range fuel system was expected to perform well. Actually, it wasn't needed as it took only 8 gal for the entire trip. I did run the fuel into the main tank though just to see it work. Upon dismounting, I discovered serious cracks in the spinner. For the return trip, the spinner was removed. As I had a major effort looming ahead in my modeling endeavors, and little spare cash, the aircraft was grounded for a while. Towards the end of July, with a new spinner, front plate and back plate from Great Plains I set to work returning the aircraft to service.

Once the front and back plates were reinforced per instructions from the Sonerai Newsletter and the whole mess bolted securely to the front of the engine, an effort was made to start the engine. No Joy! I pulled and pulled until my arms nearly fell off and it would occasionally pop on # 3 cylinder. There followed several weeks of frustration whereby parts were ordered -- coil, condenser, plugs, etc. only to be installed on the weekend with virtually no change in the engine! It would fire on the impulse coupling only on #3 and not even fire any other cylinder on the impulse. This was heightened by the fact that the builder of my aircraft (not me) managed to arrange things such that the mag could not be removed without draining and removing the fuel tank. I managed to get lazy and quit using my torque wrench to tighten the plugs with the inevitable stripped spark plug hole. I pushed N3974S back into the hanger, shorn of tank, cowls, etc. and refused to look at it for over a week. It is here that the story takes a rather strange turn. As the Bible says "darkness continueth for a night, but joy cometh in the morning".

I finally did what I should have done earlier -- call good ol' Ed S. [illegible] related his adventures with his own mag as chronicled in the last Newsletter. Indeed, soon on my doorstep was his "spare mag"-- just in case. Airplane people are really great, EAA types are the greatest, and Sonerai types are superlative. My AI, Grover Summers, (Chief Tech Inspector at Sun N Fun) rooted around in his "cave" and produced a sho'nuff Slick Mag Assy. Thingamajig. The mag problems were soon to be solved.

I contacted a good friend who had kept me in VW parts 20 years ago when I was racing my Bug. He offered to fix the plug hole on the airplane but in a rare bit of wisdom, I opted to pull the heads and bring them to him. When the head came off, some additional light was thrown on the other engine problems. First of all, the exhaust valves looked terrible. We decided to re-do the heads. I had used a cheap compression gauge which had given false readings and masked the problems. Also, even more ominous, there was almost ZERO DECK HEIGHT! The engine was a 21[illegible] "factory" conversion. Some later research turned up the information that all from that "factory" had too much compression. After the heads were CC'ed, we calculated a bit over 12:1 compression ratio. No wonder I couldn't keep the head temps much below 400 -- even with the under head baffles.

Now, with proper shims under the jugs, the comp. is 9.5:1 and I can't get the heads over 300 degrees no matter how hard I flog them. The mag, properly assembled on the jig, puts out a nice fat spark and the engine starts between the 4th and 6th blade --every time. Because of the machine work needed on the heads, I discovered that in this area are a couple of excellent machinists with the proper experience on Hot Rodded VW's who are also quite reasonably priced. You don't have to send stuff to California.

Most importantly, and the reason for the title to the story, if I had fixed the mag right away, I would have been flying around behind a 12:1 engine which would have destroyed itself. Makes y[illegible]

think, doesn't it?

... Dean had a heck of a time getting this figured out, I don't want his phone bill for that month. The mag was not timed correctly internally if I remember our conversations right. The distributor arm was not lining up evenly with the post it was firing to, so when other things go bad and you loose a bit of your spark, there goes the ball game. Yes, I know it is hard to reassemble the mag properly and get the gear teeth in line, so if in doubt or you end up with a sore arm from "not starting" your engine, maybe it is worth getting a little help.

I have been giving the compression ratio bit some thought, Dean, and maybe what you have there are a set of VW Rabbit heads for their Diesel engine. I don't suppose you tried any #2 diesel in it? Or maybe some Jet-A? You never know.

Low Wing Aileron Linkage

Tom Markos of 2112 Cherrywood Dr. Burton, MI 48519 and I got into a discussion on rigging up the aileron pushrods on his Sonerai IIL. It seems the rod ends were making contact with the rear spar carrythrough structure among other things. Well, this sort of thing has obviously been noticed before and of course I built a midwing so didn't have the exact answer. But -- as always, there are plenty of you who have and Tom got in contact with Jim Smith of Kent, WA for his answer. I knew that the carrythrough had to have a little metal removed in order to clear and this is what Jim also recommended. And you need to think thru the rod end situation, they found that a Heim HM 4 or Aurora MM 4 did the trick on the top. This coupled with the normal AN 490 HT 6P rod ends on the bottom give the correct fit. Yes, it is tight but can be done. One caution -- it is good practice to have a large diameter washer under the rod end nut in order to keep the assembly in place if the bearing fails and tries to come off the bolt.

Tom also found that it was necessary to do a little grinding on the bottom of the torque tube end plate in order to clear his elevator push rod. This seemed a fairly straight forward procedure that may vary from plane to plane. See, it isn't all that tough to answer these questions. Go ahead, try to stump us!

Dave and Cissy's Adventure

Dave Rawlings and Cissy Webb had to make a trip out to Guernsey, Wyoming to pick up their newly recovered Citabria which goes by the name of "Wonderplane." This was during the course of one of our hotter spells this Fall. It only made sense to fly out in Dave's Sonerai II "Sporty", and have a nice formation flight back. In order to extend the "Sporty's" range and carry a passenger, Dave had to leave behind the 6 gallon aux. tank we use for Sun n Fun and found a 2 1/2 gallon tank to fit behind the pilot's seat. Fuel was transferred as before through the use of an aux. pump up to the main tank. This arrangement gave Cissy some leg room while adding about 40 minutes to the available range. Seems like a pretty good way to go.

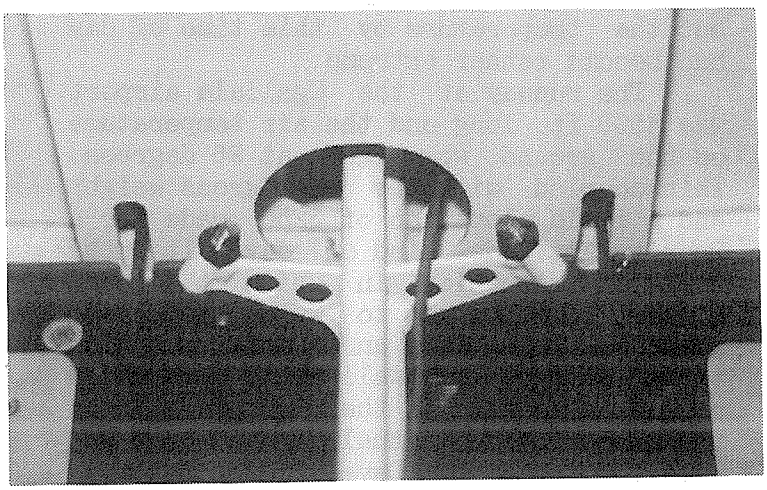
The first day saw them leave The Landings Airport west of Chicago and take an early weather related stop in Iowa City, IA for the night. The next day saw them into Central Nebraska Regional Airport then to Ogallala, Neb. by the middle of the day. Sporty was easily near it's gross weight of course as two people and baggage normally are in a Sonerai II, but the temperature by this time of day had become rather extreme.

The runway at the Ogallala airport was 4500 ft. long and the air temperature on the ground was right at 96 degrees. This coupled with the high gross weight and a field elevation of 3250' made for a Density Altitude kind of day. It's the type of situation in which the local airport bums like to watch touch and goes. So as Dave and Cissy put the throttle to the firewall there were a few people interested in their progress down the runway. The actual ground run was only 1700 feet by Dave's later measurement but once off the ground the acceleration only got them into ground effect. They hung at that altitude to the end of the 4500 foot runway when finally 105 mph showed on the airspeed and they could gradually begin a climbout. To use Dave's words, it was exciting. As they made a circuit of the field, they could see the locals running to their trucks.

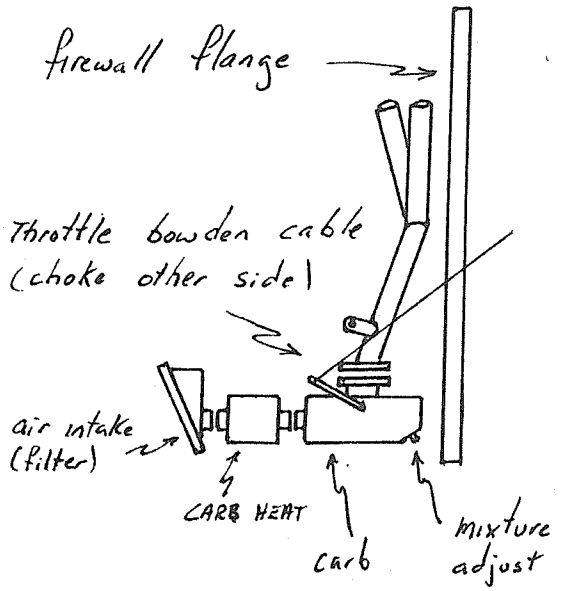
Since they started off at 3250 feet and the destination airport (Guernsey,WY) was at 4395´ elevation, it seemed like a good idea to see just how high this short winged airplane could go today. The answer was exactly 5800 feet (a Density Altitude of about 10,000 ft). Raising the nose to try to gain more altitude just resulted in a loss of airspeed and altitude. I believe in a U-2 spy plane that sort of thing is called the "Coffin Corner". So it was hang on to the seat of your pants, keep the coals to it and wait for the fuel load to burn off. This gradually happened and Sporty soared (?) into the heavens.

Dave said that hanging there at the 5800´ gave him time to really play with the airplane to see if this was all it would do under these conditions and no matter what was tried, it stayed at 5800´. Well, they made it O.K. obviously, but they were taught a lesson in high temperature flying. When I flew out to Colorado back in 1981 the airplane was much lighter, the temperatures were more in line with normal summer weather and I had no trouble getting up to 9500´. When you are at gross with our little airplanes, you need to remember it´s a different kind of bird.

Their trip back home with Wonderplane went well under cooler conditions and at lower gross weights.



Aileron stops (normally FAA required). This is Frank Gillespie´s rather clean method for adjustable stops. 300 Regent St. #312 Kingston, Ontario K7L 4K6. I put mine back on the rear spar carrythru but this sure makes it nice to check on a preflight.



Posa -- the Final Solution

Al Bertelmann
2481 Tattersol Dr.
Harvey, LA 70058

Does this sound familiar? ... Doing the fuel valve two step when starting your engine, carb mixture changes from ambient temperature, humidity, Karma, Lunar phase etc., vapor lock after landing (if you´re lucky), or worse yet, the occasional "misfire" for no apparent reason. Well after two years of dealing with all of the above I traded up to a float type carburetor and couldn´t be happier.

The carb was suggested to me by Steve Bennett of Great Plains Aircraft. It is an "L" type carb meaning the air comes in the front and out the top, a good match for my 2074 cc Monnett conversion VW. The carb is somewhat larger and protrudes further aft than a Posa. This necessitated the fabrication of a new intake manifold "Y" using automotive exhaust tubing. The bottom of the intake "Y" was angled forward about 15 degrees to move the carburetor away from the firewall.

A two bolt flange was fabricated and welded to the intake to match the carb flange. I kept the throttle and choke (yes, and it works great) linkages simple, directly connecting both with stainless Bowden cables and routing them up at a 45 degree angle under the magneto and then sweeping under the fuel tank to the control quadrants. I have a carb heat box which I believe should be used on any venturi/carb installation. If your intake is located inside the cowl (mine is exterior), carb heat may not be necessary.

Anyway, the engine starts better, runs better and smoother (a lot) and in general gives me more confidence in it's reliability. What more could you want?

V.E. Peterson Co.
Central Warehaouse Distributor
28101 E. Broadway
Walbridge, OH 43465 419-838-5911
You will need P.N. 14992 Carb 267X9
Total cost including shipping $126.75

Directional Stability?

It seems like I've already gone through this one before, but in checking through back issues it hasn't been brought up apparently. A few people have called to talk about their first flight in their Sonerai. It's always neat to see how exciting that first time is for them, it's sort of like a debriefing. There are always more questions to be answered after that flight than before, is seems.

One question that seems to come out after a few more flights however has to do with our airplane's directional stability. I remember calling down to Elgin, [illegible] to the Monnett factory after 78ES had a few hours on it, and talking to Gregg Erikson about a problem that I had built into my plane. Whenever I took my feet off the rudder pedals in cruising flight the airplane wanted to yaw to the right in the worst way. We're talking a 90 degree turn in 3 seconds at 125 mph. Boy, I'd really built this thing crooked! Or maybe the engine was supposed to be fastened on to the end of the wing instead of the front of the fuselage!

Gregg's answer was of course direct and to the point and immediately solved the problem at no cost or time expended. " Why did you take your feet off the pedals? Don't do that!" End of problem. A few of the Sonerai's have been built over the years with the canopy and therefore turtledeck raised to accomodate a taller pilot. This has been as high as 6" above the plans. Surprisingly, these airplanes tend to have better directional stability and can be flown "feet off" as they say. The stock airplane must be right on the edge between enough and not enough vertical surface. I'm certainly no airplane designer so there may be a better explanation than that, but in the mean time I do as I'm told and steer with my feet. Any better ideas?

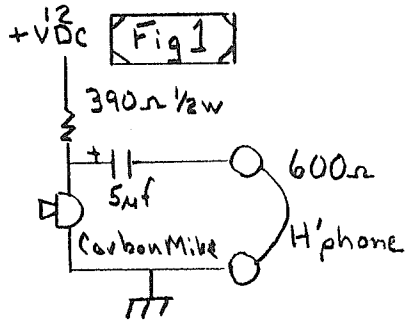
*** Minimum Intercom ***

by Ed Lawrence
217 E. Ccolorado St.
Sherman, TX 75090

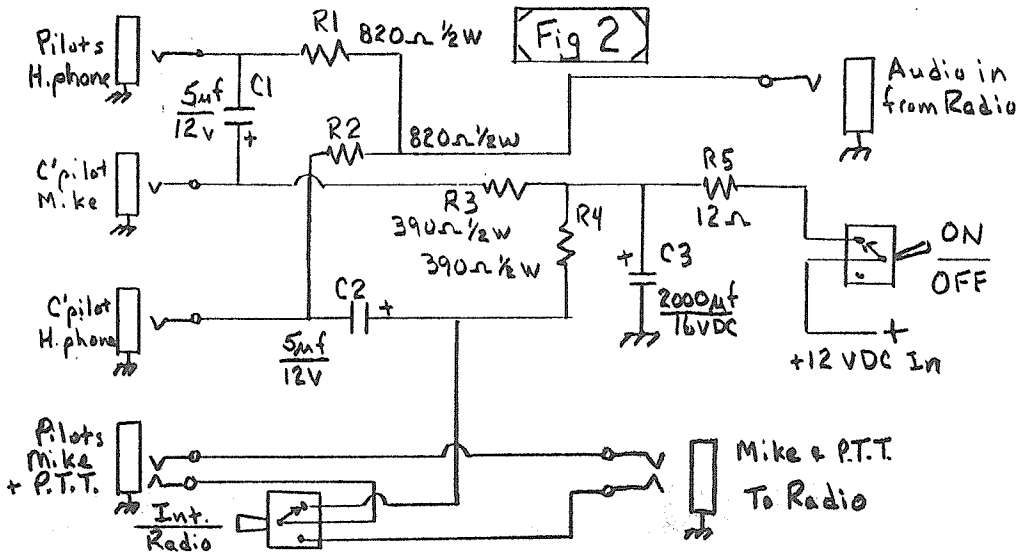
(Ed. -- I owe Ed L. an apology for the time it took to get this in print.)

Here is the Intercom schematic I promised to send you for the Sonerai Newsletter. I built the first one and used it in a Cessna 140 for a trip to Oshkosh about 10 years ago.

The basic idea is very simple. See figure # 1. A standard carbon mike needs a current supply but has a relatively low resistance (50 - 100 ohms). A standard aircraft headset has a moderately high impedance near 600 ohms. So it is possible to couple audio from the mike directly into the headset to make a simple intercom.

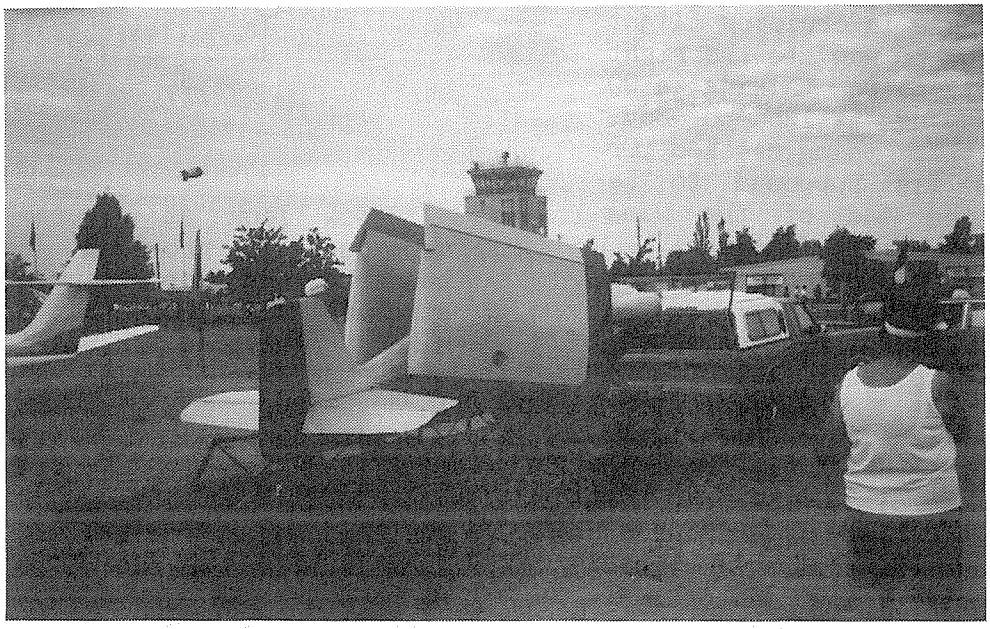


Now look at figure # 2. In this version, I provided jacks for both headsets and for connecting to the aircraft radio. Note that only the pilots mike is switched to the A/C radio. The passenger can still hear the pilot through the A/C radio, but cannot modulate the A/C transmitter. Also, the pilot and passenger cannot hear their own audio. This can be fixed by just shorting the headphones together. If this is done, then increase C1 and C2 to 10 uf. R1 and R2 then can be replaced with a single resistor. The value may need to be adjusted to give sufficient volume from the radio as different radios will put out different audio levels. This input may also be used to pipe in audio from your favorite radio station for music while you fly along.



I have no objection to anyone duplicating this circuit, even for the purpose of selling kits or completed intercoms. (It would be nice if they sent me a sample though!) Perhaps our friend at Great Plains would like to do this. It is such a simple circuit that anyone would be able to build their own with no problem. But remember, this is a Minimum intercom, and is suitable for persons with normal hearing, and will not have enough volume to overcome any large hearing loss.

Ed S. again -- I have an Escort 110 and have been using the audio in my headsets as an intercom for quite a few years now. I figured that since I can normally hear myself talk while transmitting, why not let the passenger in on it also. It did take some thought and a relay and some wires to give the ability to block out the passenger's mike while transmitting. It also requires that I switch to one of the numberless frequencys on my Comm to prevent transmitting on either headset. This is a bit on an inconvenience, but I'm flying a Homebuilt so I should be used to inconvenience, right?



Here's a question for you.-- Was this Sonerai IIL coming to or going from Oshkosh? And whose is it? Some of the Newsletter subscribers probably haven't seen a folded Sonerai. Rate of climb goes down considerably in this configuration as you would expect.

Odds and Ends
Electrically Speaking

I've got three items here that have crossed my desk more than one time in the last year or so. The normal Static source for the Sonerai is to use the wing fold tube as the source connected to the altimeter and airspeed. For some weird reason I chose not to do this and instead plugged the two gauges with the normal threaded plugs but drilled a small (1/16") hole in each before installing. This method is of course as simple as can be with the slight drawback that the needles tend to bounce around a bit in turbulence (or so it seems, maybe it is my eyes that are really jumping). Well, it's an option at any rate, the guys that have used the normal fold tube method seem to have no complaint either.

Antenna location can always get a lively argument going along the flight line. What works for one installation seems impossible to use on the next airplane. I credit my Comm installation to Randy Novak of Oshkosh, WI when he was working for the Monnett factory. The radio is an Escort 110 with a fiberglass whip antenna fastened to the bottom of the baggage tray at a trailing angle so that it just clears the belly fabric. Drag of course is zero. Yes, it is surrounded by all those fuselage tubes and does seem to have a few blank spots (that's the technical term for it), but the overall performance is quite good considering. The turtle deck is a very popular idea although the longeron down the fuselage makes it easier to be offset to one side. The belly of the Sonerai is another possibility but don't forget that a ground plane is needed which makes this area a little more difficult.

The last item is radio noise, generally caused by the alternator putting out it's pulses. This problem is greatly magnified it seems if the battery or batteries are not fully charged. My last gell-cell has finally given up the ghost this past fall. The best indicator I had that the end was in sight was the incredible racket in the headsets. I had to shut the radio off for about 20 minutes till the battery finally picked up enough juice to act as a damper for the pulsing DC. On the same note, if you try to operate without a battery at all it will be a total disaster radio wise. With a gell-cell of only 5 to 6 amp-hrs, we are right on the verge of adequate damping.

Along this same line, a change from one type of headset to another can make a great influence on back-ground noise levels. So far after trying about 4 types of headsets, my old Telex still seems most compatible with the the Eccort 110. It was quite important to get all the grounds fastened properly on the radio and the headsets, but once done the result has been fine the last few years.

Slightly Different Spar Holes

Boy, I hope I get this one right! Jim Slomer of 114 Deborah Lynn Ct. Chesswick, PA 15024 called about a little problem with the rib reinforcing pieces and main spar lightening holes. He got me going on this one because once again I didn't build the "S" wing. It had to do with some of the dimensions for the ribs out in the left wing, and why they were different than the right wing. O.K., that part seemed easy enough -- remember that there are only right ribs made any more, there are no left ones. So, that means that the spacing may be a little different on the left wing. And then I brought up the fact that there is a Note on page S-17 warning about not cutting out one main spar lightening hole (oh, you missed that note?). Since the web of the rib next ot it faces the "wrong" way, there is no room for the rib flange by this hole. Of course, Jim already had it cut out and we had to brainstorm a solution.

You should now be as confused as we were. Jim thought we should put this in the Newsletter in hopes of a few comments. Anybody have any?

A final thought was to move the offending ribs over the 1/2 inch or so needed to make everything fit properly. Well, I didn't have a good reason not to go along with that idea. We didn't see how the overall strength of the wing would be compromised by having ribs moved that small a distance. Any comments on this second idea? It would sure help him out since the lightening hole is already cut out.

Notes from Glenn Eisenbrandt

711 East St.
Fort Atkinson, Wi 53538

(Ed's Note first-- this info refers to an article in the Apr-May-Jun-90 issue.)

1. On your schematic for your Sonerai, you should add a circuit breaker (not a switch) in line with the battery. It should not exceed 10 amps, actually an 8 amp would probably be adequate and safer. The wiring from the battery should be # 16 to properly carry the load. Then you will have no problem putting the battery in the tail.

2. You mention checking the current drain of nav bulbs with a battery charger. I would not recommend this method because many battery chargers will produce much more than 12 to 14 volts when not connected to a battery. The accuracy of the charger isn't good at all. The only way to check the bulb current is to connect an accurate ampere meter in series with the bulb and connect it to a 13.8 volt source.

3. As for having the strobe and radio on separate fuses, it is a good idea but will make no difference for noise control. They are still tied together through the fuses which are a solid bus.

4. On the schematic for the mag you are good except that I would suggest a smaller fuse, a 1/4 amp or smaller. There is only a few milliamperes in the mag, so even a .5 amp fuse might short it out without blowing.

5. You say that you seem to have a high voltage on your cruise RPM. That may be true, but I would check it with an accurate digital voltmeter. The common meter we use is not always accurate. At 16 volts, you would be high, at 15 volts you would be a little high, but not too bad for the shorter periods.

6. Reguarding insulation in the aircraft, I feel that fiberglass is the safest. It will not burn and is light in weight. One source is 3/4" ceiling panels. It is not quite as sound dampening as the plastic foam, but is does help. Some building material uses thicker mat (which can be made thinner) with aluminum backing. No smoke or fumes from it.

Ed's comments -- This is one of those letters that was supposed to get in the Newsletter and didn't at the time. Gle surely knows more about this sort o thing than I do, but you all know that.

Front Seat Solo Sonerai IIL

by Byron Smith
800 South Moraine
Tulare, CA 93274

Ed, I have sixty hours on the plane so far. I think my front seat solo is the only one flying right now. Greg Shonk flew his plane from the front solo for a short time, but it's in storage now. My Sonerai has both tanks, ten gallons in front and eight gallons in the rear, behind the rear seat. It also has an aircraft battery in the tail, with an access door in the side of the plane. This is a 22 lb. battery. The front seat has been moved back against the spar and hangs over the spar. The controls are shortened to a comfortable position to fit me. Visability is great! The plane can be in any fuel quantity solo front or rear. It flys best at a little forwa CG and when carrying a passenger. It is best to have the rear tank empty. The trim system is simple. There is a long spring that pulls the top of the elevator horn connected to a cable up in front. I have a Toyota headlight door motor that is gutted, no electronics in it, I then just turn the red knob and the arm pulls on the cable to release back pressure.

So far the Sonerai cruises at 3000 RPM on the tach. It is a real constant at 140 on the airspeed indicator using a 52 X 48 Sterba speed prop. (Race profile) I am now using a 54 x 46 Sterba full blade prop. At 3000 RPM I indicate 136. Slow, isn't it? With this prop I have RPM gain to full throttle. With the 52 X 48 prop the last part of the throttle was dead, no power gain, no RPM gain, but faster climb. With the 52 X 48 it's 1400 ft/min. The 54 X 46 is a little better. I forgot to mention I have a 2180 cc engine.

Ed, this is a quick rundown on 912BS. It's a little different on the We Coast. There aren't as many Soneral here. If you want to see the RV-4 people grit their teeth, refer to it as a baby RV-4. But that isn't fair, is it?

Well, I think I'll be rambling on.

Rich Wallace's Sonerai IIL from a few years ago. He has the Super-Vee cowl and looks like the lower air intake was opened up.

Karl Jendretzky's Sonerai IIL project from about a year ago. Box 55 Bannock,OH 43972 Hope it is in the air by now.

FRED KEIP PD 90 PD 91
11428 SIX MILE RD
FRANKSVILLE WI 53126

To:

SONERAI NEWSLETTER
C/O Ed Sterba
412 S. 5th
Delavan, WI 53115
414-728-1367

Sonerai News

$$ FOR SALE -- SONERAI STYLE $$

Wanted--- Monnett ABS Wheel Pants can be new, used or slightly damaged
Bob Schank 35 Clarence St.
Belleville, MI 48111

For Sale -- Sonerai IILS 2180 Monnett Conv., 55 hrs.TT, Exc. workmanship, needs prop, canopy, minor tail damage. $5500.00
Larry Hurley 2153 Foxhill Dr.Apt 11
Grand Blanc, MI 48439 313-695-0414

For Sale -- Sonerai II midwing, taildragger, Hapi 1834 dual ign., Ellison T-Body, Sterba prop, Narco 830, Loran -- 360 TT Asking $6000.00 or trade on T-Craft etc.
Fred Kugel 810 Kensington
Celina, OH 45822 419-586-4956 ev.

For Sale -- Sonerai II Mid-wing 1700 VW Alt.,Strobe and Nav. 60 hrs TT
Ron Pfeil W 199 N11525 Rosewood
Germantown, WI 53022
414-628-4716

For Sale -- Sonerai II LT 95% complete Hapi 1834 dual ign.,Great Am.Prop, Trade up or down f/ flying airplane $ 6500 or best offer
Roy Johnson 26 Raleigh Rd.
Framingham, MA 01701

Wanted -- Sonerai I for Formula Vee
Bob Cowart Rt 1 Box 1346 A
Columbus, TX 78934

For Sale -- 1700 cc Monnett VW Engine w/ Electro X, tuned exhaust, oil cooler, Super-carb, Slick mag, spinner a/ prop from Q-2 77 hr TT $ 2650.00 complete
Bill Slattery 17119 Wentworth
Lansing, IL 60438

For Sale -- Diehl Supercase $80, late mod. Type 1 Case $80, Ritz 54x36 prop drilled for G/P hub $100, Set Azusa mech.brakes $30.
Stewart Bergner 6015 Brentwood
Arvada, CO 80003

For Sale -- Sonerai IIL project on gear 2180 Monnett VW, canopy, cowling, Sterba prop. Everything but wings. No time to finish. Best offer over $2200.00 Wisconsin.
Phil -- 715-276-6476

Wanted -- Electro-Vee Magnet Ring
Mike Huff Rt 1 box 193
Fair Grove, MO 65648

Wanted -- Drawings for Monnett Mag Drive and Coupling or the parts themselves.
Bob Schank 35 Clarence St.
Belleville, MI 48111

For Sale -- Sonerai IILT almost ready to fly, will finish and sell with special roll-on trailer, or trade for something slower Up or Down, 2 place. My equity $8000.00 Claude Icard P.O.Box 274
Rutherford College, NC 28671
704-874-2033

For Sale -- Sonerai IIL Project, fuse. welded, wings built, L.G., wheels/brakes fuel tank, two cowls, new 1850 Monnett engine and prop, misc. $ 4000.00
Gregg Erikson 708-513-0641
Also -- Witchawk project 2 place biplane

For Sale -- Sonerai II Midwing Tailwheel 375 TT, wing mod done, Sterba prop, Super-vee or Econo-vee cowlings, complete less short block. $ 3500.00 or best offer
Bob O'Day 708-742-0522

For Sale -- Sonerai IIL Kit - all welding done, 50 % complete, 1900 Limbach engine and access. $ 6000.00 or best offer
303-666-5494

For Sale -- Sonerai I Project: Welded fuselage-tail-controls--primed-- spars, caps,ribs and sheet stock, some hardware. Manuals and video. $2000.00
Bob Schank 313-697-7057 home