

SONERAI I

OCT - NOV- DEC 94

NEWSLETTER



Bill Essenburg's Sonerai II

N49WE takes to the air confounding all pundits and analysts

Oshkosh 94 has come and gone. If you missed it, plan now for next year. We were down this year on the number of Sonerai's present, but no one could complain about the quality. Those Sonerai's in attendance included:

Jim Phillips	Fred Keip
Dave Siekman	John Leone
Jim Stanek	Bill Nelson
Mark Elyea	Jim Meier
Lou Novak	

If I missed anyone arriving without my knowledge, let me know. Dave Siekman flew in from Phoenix and got a "Longest Distance" award but we had to provide another one to Jim Phillips who flew from Wisconsin down to Texas so he and Dave could fly in together. We gave up trying to measure out distances. Dave by the way could only spend one day at Oshkosh! Thanks, Dave and Jim.

The awards were as follows:

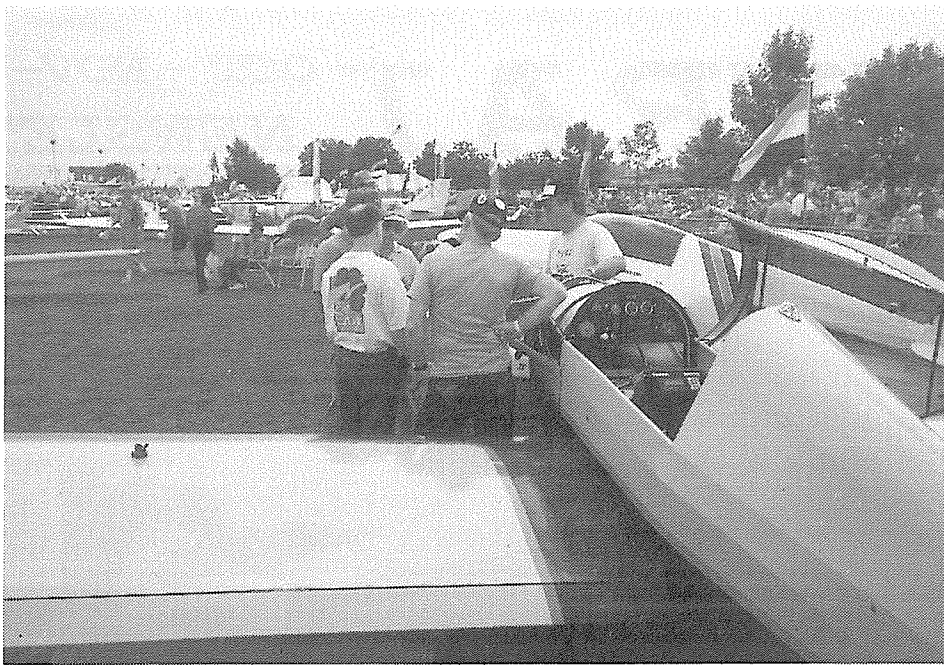
Longest Distance	--- Dave and Jim
Best Overall	----- Jim Meier
Best Paint Job	----- Mark Elyea
Best Interior	----- John Leone
Most Innovative	----- Fred Kiep

As a lot of you know, Tim Buechle has been making the Sonerai awards for several years and feels that it is someone else's turn, so if you have a desire to express your artist talent, please let me know. Sterba Props will provide money for name tags, etc.; it's negotiable.

Our Forums in the Tent and at Homebuilders Corner went well, I think, with almost a full house under canvas and porch. New Sonerai's are being built every day and we all need to share our 20 plus years of experience with the new people. It is impossible to attend either one without learning something new about the design. Be there, or be square!

The Sonerai Dinner was held at John and Betty Monnett's hanger as planned. It was a great success and since we all behaved ourselves so well, they have kindly invited us back for next year. The food was good, the company wasn't bad and we were treated to a slide show by John, Betty and Gregg Erikson of the early days of Monnett Experimental. Not many people

CONTINUED ON PAGE 6



John Monnett and Fred Kiep by Fred's Sonerai III

A scene to be repeated through the years at Oshkosh. Questions answered--opinions given--free.

Essenberg Sonerai Flies!

Well, the long awaited day has come. My Sonerai N49WE has finally flown -- again. My project was a small one compared to most. My airplane was complete, minus engine when I bought it. Still, finding an engine and making all the mods to make it fit and work took 10 times as long as expected.

First flight went well except for a minor oil leak around the prop hub which required that I land sooner than planned. We returned to earth unscathed and I'm working on eliminating the oil leak.

I thought I'd share some observations from my experiences during preparation for the first flight.

I did lots of high speed taxi tests (several hours) while waiting for a final inspection date. That helped me manage my premature first landing. I also taxied and flew from grass at first. I found it much less intimidating than pavement. These airplanes are quick on the ground.

Getting the tail up during taxi tests can be dicey! When I made the power changes to lower the tail, the airplane wants to go left! If you do this make GENTLE power changes -- have a wide, long runway and be ready with right rudder.

On climb out on my first take off, I could not find the ball in the turn and slip indicator. I was unconsciously adding right rudder. I found it buried in

the left corner and adding left rudder brought it back to center.

I tended to overcontrol in flare on my early landings. Being tense and not yet adjusted to the quick controls does that.

I'm noticing poor yaw stability. I'd like to know what success guys have had increasing yaw stability by increasing the size of the tail and rudder.

I've made heel rests on the floor board in front of the rudder pedals. This has made handling the rudder more relaxed because I can rest the weight of my feet on the heel rests rather than on the rudders and reduce the constant rudder to and fro correction I was doing.

So I'm still debugging -- flying this airplane is fun! Control response is "right on". It feels like it is part of you.

I'm also enjoying the planning and doing the tweaking and improving that we can do with experimentals while those poor regular airplane pilots have to fly what's given them and give all their hard earned dollars to airplane mechanics.

Thanks for all your help, Ed, in advising during my project. Thanks also to many other members who shared their expertise. Looking forward to seeing you all at Oshkosh.

Bill Essenberg

415 E. South St.
Viroqua, WI 554665

Some Points From Jim Stanek

I talked to Jim Stanek at Oshkosh and over the phone any number of times and he thought some of you might be interested in some of his LTS observations. He has had the airplane in the air for quite a while now and at Oshkosh as noted in the introduction. Jim lost one of his aileron counterweights which as some of you know on the LTS are located not at the wingtip, but inboard a few inches. The weight is hung on a square steel tube which is welded to a flat plate. As noted before in the Sonerai News, this has been a bit of a problem. On Jim's Sonerai II LTS the airplane felt squirrely in rough air but the stick didn't bang around noticeably. (Ed Hasch had a more distinct impression of a "bouncing" stick than Jim.) As with Ed's, the tubing failed where it is welded to the flat plate, and both gentlemen responded by reinforcing this area with either a "tube in a tube", or in Jim's case, by welding a gusset on the side of the tubing.

Another area that Jim wanted to mention dealt with the nose fork on his TS. He decided to increase the wall

thickness of the fork from .080" to .125" since he thought that the heat of welding the components together would weaken the areas. So his front fork is made from .125" X 1 1/4" X 36" 4130 material.

Jim also has an Ellison Throttle Body carb and experienced a few growing pains with it too. In talking to the Ellison people, he found that the length and shape of the plenum chamber and shape of any bellmouth can be critical. Some of the people have been mounting the carb horizontally and some find them better in a vertical position (airflow going up). This doesn't help you a bit so far, but at least will bring up the awareness that a problem may not just be mixture dependant.

Jim also found out that the idle mixture adjustment can have more far reaching effects than just at idle. Jim's idle mixture screw had a tendency to turn while flying resulting in improper operating conditions. Apparently the idle also effects conditions over the whole throttle range. The fix here should be simple, -- don't let that needle valve move! Both of these points also correspond to things we have learned about the Posa carburetor. Heaven help the man whose mixture needle rotates on a Posa!



Jim Stanek at Oshkosh 94 enjoying himself by his Sonerai II LTS. I believe he is studying the flight manual so he can get himself home.

It seems like only yesterday ----

Every few years the people who are actively flying Sonerai's seem to evolve. Well, the people don't evolve, but a new group a pilots discovers this wonderful little airplane and sort of take up the banner for those of us that have been with it for a long time. I have had to stop my Sonerai flying for the immediate future for family reasons and lo and behold, if you look at attendance at Oshkosh and Sun N Fun, somebody else is right in there getting the job done.

Maybe this last paragraph didn't make very good sense. I feel as though I started out in the second wave of Sonerai flyers in 1978. John Monnett and Gregg Erikson and Bob Hughes and Mel Lamb were, to name a few, in the first group. I never got to fly with them when the airplane was unique to sport flying and created a green sensation (Sassygrass green) wherever it went. I came on line with the Sonerai because the early Sonerai pilots did their work by showing it to the world.

My group continued actively buzzing around the countryside with our little VW's making their distinctive noises at most every fly-in breakfast and airshow in the area. My first Sonerai Newsletter from 1987 had 9 Sonerai's present at Ken Flaglor's little fly-in in Kenosha. Maybe we didn't always show up at the same time and on a number of occasions we didn't all leave at the same time (or possibly same day) for one reason or another. But, there weren't many weekends with good weather that didn't get a good group in the air. A look through the log books of N78ES brings some of it into focus. When filling out the log, I usually made a point to put in fellow pilots names and the occasion for the flight -- I'm real glad I did!

On Dec. 5, 1987 we had six of us fly from several different airports and converge on Janesville, WI. The restaurant was open and we only needed that for an excuse to show up. Those in attendance included -- Bob Brown, Jim Wendel, Dave Rawlings, Ed Hasch and Clyde Seager. The temperature was a "perfect 25 F." and the EGT read "1000 F. at low power". We all

had flown together quite a bit and had a habit of setting up formations as tight as our nerves allowed. We new each other and how we flew.

Breakfast was noisy no doubt and it came time to leave. Janesville on any day wasn't very busy, but they did have a tower so it was up to someone to get us out of there. The decision was made to see if the Tower had a sense of humor and could handle a "flight of six". Since I had the smallest engine and therefore the lowest rate of climb, I got to be in the lead and make the call in. Could they handle a flight of six? No problem as long as we sought our own spacing. That could be done! We decided on two groups of three to keep things lined up a bit easier.

So we eventually all got fired up and plugged in -- thumbs up all around and a taxi to the active runway. Those of you that fly these little airplanes know that there isn't a whole lot to the run-up but the check list is still in order. I called in the "flight of Sonerai's" and was surprised to hear "flight of Sonerai's cleared for takeoff". So they were going to let us go our own way!

I pulled out onto the centerline and eased forward a hundred feet or so. Two of the guys (I don't remember which two) edged up next to me maybe 50 feet off each wing tip and slightly to the rear but still in my vision. I looked back to see the other group of three also take the runway with the room we had left them. Everyone was in position -- " flight of six is rolling"--- and away we went. Actually the second three did hesitate to let us get a few hundred feet in advance before rolling, but I do believe we did have six Sonerai's all on the power on one runway at the same time under the eyes of our friendly FAA in the tower. Thanks to the guys in the tower for making our day.

Yes, we do know about wing tip vortices and even though our airplanes are not very large, we were all aware of their strength from our days of formation flying. Dave Rawlings usually flew "the slot" when we had four airplanes in a diamond and he found out by playing around behind the lead airplane about where they were to be expected. The short wing ai

long chord of our planform made for a fairly powerful experience especially when at low airspeed and high angle of attack. So, we were "tickling the tail of the tiger" as they say and got away with it.

There are many more memories of flights with the other Sonerai pilots to other destinations. I'm glad they are all recorded somewhere in my logbooks. May I recommend that when you do your log entries, put in more than the minimum required. Add a little color to the description of that flight.

A letter from Bill Joens

I moved to Colorado last July '93 from Rochester, MN. I flew my Sonerai 2L (N87BJ) out here in Sept. It took me about 8 hrs. of which 5.7 hours was actual flying time. I didn't push it too hard, running only about 3000-3100 RPM. N87BJ has an 1835 VW, and fuel burned averaged 3.7 GPH, and speed averaged 125 MPH. The distance was 607 NM. This was the longest trip and it never skipped a beat, so I've gained confidence in it's ability to "get me there". N87BJ has 331 hours since constructed in July '88.

At first I kept the airplane "folded" in an 8' by 32' construction trailer in Greeley Airport, CO which worked out great! Since then, I've had to sell the trailer and bring the plane home to keep in the garage. So now I plan on towing it to Loveland Airport when ever I want to fly.

One thing I noticed about flying in Colorado, is that the oil temp goes up quicker and to a higher level, due to the less dense air. I've bought the adapter from Great Plains to install an oil cooler on top of the engine, and hopefully this will solve that problem.

I would be interested in corresponding with other Sonerai builders/flyers in the Colorado area, so would appreciate any names/addresses you could give me.

I missed the last Newsletter, but would be interested in more articles on other engine developments: Suburu, Type 4, Continentals.

Bill Joens 4020 Windom St.
Ft. Collins, CO 80526 303-225-0514

Addendum to John Giordano

We held our "back porch" forum this Oshkosh as usual at Homebuilders Corner and I tried to take a few notes as the hour discussion of Sonerai builders/pilots ranged across the spectrum. John Giordano was there with more information about his accident/incident published in the last Newsletter. It came to be that the coil in John's magneto had failed which of course led to the engine cutting out for good. John had the mag inspected and rebuilt by a A & P and in so doing discovered that the orange colored coil in his 4216 magneto is not the one that you want to have in your magneto either. The new coil is colored black. I don't know how it is that you can tell the color of your coil without braking open the mag or having an entry in your engine logbook, but if there is some reason to get inside it for a look, maybe you can think about a change. The coil isn't cheap as you would expect, but John is going to be spending quite a bit more money than the cost of a coil to get in the air again.

The importance of good workable blast tubes onto the magneto also came up as before. Two 1" diameter flex or solid tubes seemed to be the consensus. Keeping the mag to about 180 degrees is desirable.

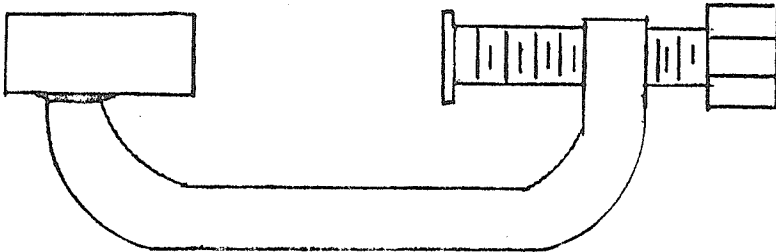
Also up for discussion was the subject of rudder trim on Sonerai's. Jim Meier noted that he had installed an adjustable rudder trim on his Sonerai II and was quite pleased with it. He was able to achieve "feet off" flight for extended periods of time, something not everyone seemed able to obtain regularly. I didn't get the details on size but may in the near future.

And then the subjects ranged on through carburetion, fuel burns, brakes, rigging of ailerons, etc. This is about normal for the course -- if you haven't made it to one of these sessions, you are missing something substantial. Thanks to Ben Owen and EAA for giving us this opportunity to get together on their porch.

A letter from Fred Bainbridge

I sat down a couple years ago and decided to make the wing folding job easier. Here are some of my improvements.

1. A taper pin press made from a 3" C-clamp of steel.



Cut pad from C-clamp
and weld a 1" X 3/4"
steel tube in place.

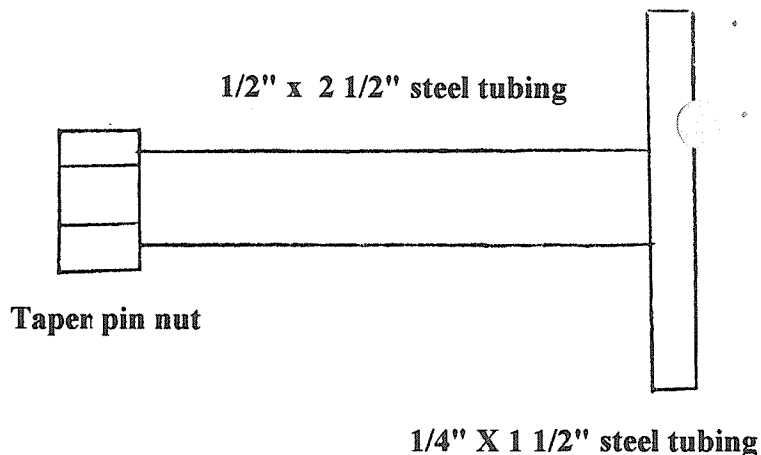
Remove T-handle
and braze 5/16"
SAE nut on.

Presto, an easy removal of the taper pins,
and no more beating with a hammer and
drift.

2. I used to spend a lot of time getting the long steel rod through the wings until I decided to cut the rod in half. Take one half of the rod and drop it through either wing hole. This can then be used to pull the wing out of the center section. Rotate the wing and fold it back, push the rod into the fuselage. It works great!

3. I used to remove the tail wheel when I would hook up the tow bar. Just weld uprights on the towbar and secure the tailwheel rod with rubber tiedown straps. These should be positioned to support the tail wheel between them.

4. Another time saver is to weld "T" handles on the taper pin nuts themselves. This makes for fast removal and installation of the nuts.



I hope you can figure this stuff out. It
takes about 90% of the work out of wing
folding and towing.

Fred Bainbridge 302 Highview Lane
Lakeland, FL 33803

CONTINUED FROM PAGE 1

there knew the history and transformation of the designs, so it was quite interesting. At the end of the evening, we were treated to the sight of the Concorde taking off from our side of the airport, afterburners blazing into the night sky. I believe most present felt it was a pleasant change from the restaurant atmosphere. The greatest challenge of the night was negotiating the tight security EAA imposed on the airport grounds. (The secret is --- it's the GREEN BUTTON, stupid!)

The End of the Year

Well, here we are again, finishing up another year. This is issue # 29, I believe, from the start in Oct 1987. You may notice that this is the first time we don't have 10 pages for you, only 8. Part of the reason is my lack of Sonerai flying, and the inability to make Fly-ins across the country. Therefore, I haven't been as in tune with you guys as in the past. Sorry about that, I really miss it. I plan on continuing the Sonerai Newsletter for the following year, as long as you all send in a bit for me to write about. As in the past, there will be a Notice sent out in December indicating the Re-up time. Stay tuned.....

\$\$\$ WANT ADS \$\$\$

For Sale -- Sonerai IIL 1700 VW, 1000 TT
100 STOH, new ICOM A21, Intercom, new
terior, excellent paint, 110 mph on
5 gph \$8000 Runs Flys and looks great!
Steve 605-336-7791

Wanted -- Sonerai parts
John Bauer 14601 SW 272 St.
Naranja, FL 33032 658-8357 beeper

For Sale -- Smith Miniplane 40 TT 0-290
40 SMOH Stretched-widened, txp, enc, com
elt, room for 6'2" 200+lb pilot \$15,000
Robert Wray 1806 Kansas Ave.
San Angelo, TX 76904 915-949-5813

For Sale -- Sonerai I project, airframe
professionally welded, wings done
w/cowl, bubble, tail, gear, wheels,
brakes, tank, engine mount for A-65.
\$2000 With 0 time A-65 \$6000.
Ann Harner 706 N. Green Rd.
Goshen, IN 219-533-7325

For Sale -- Sonerai II L 2180 Great
Plains w/ Force 1 hub. 250 TT 110 eng.
Cleveland brakes and wing tanks.
Bob Brown 720 Woods Creek Ln.
Algonquin, IL 60102 708-854-3250

For Sale -- will part out A & P
built Sonerai IIL w/spar mod, 5/8" gear,
hyd.toe brakes (from Tomahawk) Terra 960
nav/com, new annual. \$8900.00
Also --- Aero Vee 2020 Dual Igniton,
Ultra carb, New heads, cyls, pistons, low
time.
Russ Larson Box 124 Somers, MT 59932
406-859-3304

For Sale -- 1991 Sonerai II VW 2074
AE 75 hrs \$7000 Call after 7 PM
4-296-0937 Buying engine for Ercoupe

Wanted -- Son II project or completed
aircraft. Preferred to have it 70-80%
completed. Dave Valaer 2833 Summit St
Souix City, IA 51104 712-277-2823

Wanted -- Variety of good used or new
Sonerai parts: cowling, canopy, 5/8"
landing gear, spinner, S wing kit. Also
interested in a Son IIL project.
Mike -- 219-534-2900

For Sale -- unused fuel tank for Sonerai
II, intake manifold for 2180 Engine and
Stub Exhaust kit for 2180
Raymond Bergner 1310 Parker Rd.
Lakeland, FL 33811 813-646-0953

For Sale -- Sonerai II LT fuselage on gear
1834 installed, dual plug heads, VFR
instruments in panel, wing kit.
(No canopy, cowling, spinner or prop.)
Flat bed trailer included. \$5500 invested,
sell for material price.
Curtis Anderson 714-521-4075 Calif.

For Sale -- Sonerai II LT (easily conv.
back to conventional gear) Wing Mod, VFR
instr., Cleveland wheels and toe brakes
No engine or prop.
Ivan Haecker 8434 FM 2673
Canyon Lake, TX 78133
210-438-3354 weekend 210-899-4824 eve.

Wanted -- Sonerai prewelded or tacked
fuselage with tail feathers. Also, landing
gear kit.
Burr 4098 Eddystone Dr.
cinnati, OH 45251 317-827-7195

For Sale -- HAPI 55 hp 70 hr.TT POSA,
hyd.lifters,starter,stub exh,dual
elec. ign, Sterba prop, oil press & temp
tach. \$2600 or best offer.
John Mitchell 402 S. Hickory
Shannon, IL 61078

Wanted -- Right wing for Son. II L and
landing gear for Son II.
Jerry Van Nort 719-738-1290 day
719-742-3746 nite

For Sale -- Sonerai II midwing w/ 1700
Monnett conv. needing to be rebuilt.
Aircraft partially disassembled. \$6000.
Tom Freeman 708-526-3180

Wanted -- 5/8" main gear, S-wing kit,
taper pins, fabric, canopy, interior kit,
wheel pants for 5.00 X 5 and 11.4 x 5
Lamb, rubber donuts for tri-gear, rivets
and misc. hardware.
Darwin Mc Kinney 610 S. 318th Pl.
Federal Way, WA 98003 206-839-6531

Wanted -- Clecos and Rib Forms used to
build Sonerai wings.
Walt Augustine 6948 Neptune Ct.
New Orleans, LA 70126 504-245-8940

For Sale -- Sonerai I fuselage complete
from seat aft including tail feathers
\$200.00 + ship or u-pick-up. TPX Terra
handheld w/charger \$250.00 Ray Jeff Loran
\$200.00 A/S \$75.00 Alt. \$75.00 ROC \$50
009 Dist. w/ 90 cap \$30.00
Mike Kellems 341 Ellington Pkwy Apt D214
Lewisburg, TN 37091

For Sale -- Sonerai II LT, Great Plains
2180 (brand new), Sterba prop, hydraulic
brakes, fuse, primed, canopy finished,
fabric covering, some minor finishing,
wings ready to skin. Owner actively
working on project. Great project for
quick finish.
501-968-2794 or 501-964-5384

Wanted -- Sonerai II Builder looking for
Engine and airframe parts
Martin Roy 1342 Magnolia Ave.
Escondido, CA 92027 619-743-2144

For Sale -- Sonerai II midwing, 1979.
1700 Monnett conv., Slick mag, 260 TTAE,
150 STOH, 4 into 1 exh., Smoke system,
Loran. Built for 6' pilot. \$9200 OBO
Mike Smith P.O.Box 800 Starkville, MS
39759-0800 ph. 601-324-2801

For Sale -- Sonerai II LTS w/GPAS 2180
complete original Monnett Kit. A/C hours
from completion--painted, excellent
workmanship Asking \$10,000 Bill Rosman
1754 Parkview Cir. Palmyra, WI 53156
414-495-4370

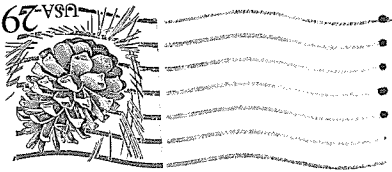
For Sale -- Monnett parts: Super Vee prop
hub and casting. Machined Electro-X
casting (engine mount) and mag drive assy.
Bob Schank 35 Clarence Belleville, MI 48111

Wanted -- 1850 or larger long block
suitable for Sonerai II Super Vee, in good
working order. Nick Fourdraine RR # 1
New Glasgow, N.S. Canada B2H 5C4

FRED KEIP PD 94
11428 SIX MILE RD
FRANKSVILLE WI 53126

C/O Ed Sterba
412 S. 5th
Delavan, WI 53115

SONERAI NEWSLETTER



Sun N Fun 1994