

SONERAI NEWSLETTER

OCT-NOV-DEC 1998

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(AFTER 6 PM CST)



TED HULTZAPPLE'S SONERAI IIL

Ted's airplane is powered by a 65 HP Lycoming O-145 with the lower cowling changed to suit the carb air box. Note the "Wittman Wingtip" shape in the shadow below the airplane.

OSHKOSH '98 WRAP-UP

For those of you who didn't make it to the AirVenture '98 (It will always be "Oshkosh" to me.), you missed a good time. The weather was great up until Monday, with bright sunny skies and temperatures in the '80's. Of course, on Monday when I left for home, it started to rain just as I started to take my tent down, and I had to skirt around some light rain just south of Oshkosh, but I beat the heavy rains that came later in the day and on Tuesday.

We had seven Sonerai's come to Oshkosh this year. And although that number is four or five fewer than

we've had in the recent past, we had good representation from around the country. Here's a list of the guy's that came:

Fred Flynn	West Chester, PA	II
Jim Meier	Waunakee, WI	II
Jim Phillips	Whitefish Bay, WI	II
Jim Hardy	Valley View, TX	I
Dave Wilcox	Gilbert, AZ	IILTS
Larry Spicer	East Dundee, IL	II
Fred Keip	Franksville, WI	IIL

Thanks to everyone for bringing your machines.

The turnout for the Thursday night forum was pretty good, and I got to cover a lot of different areas of concern. The nice thing about having the last forum time period of the day is that we can talk as long as we want, and we were there for almost two hours. Of course, Friday night was the party at John and Betty Monnett's hangar. That too was a good time, and thanks to John and Betty for having us. It's great to the Monnetts actively involved in the homebuilt arena again. The Saturday Noon get-together at the Homebuilder's HQ went kind of slowly. I think we were all pretty much talked out by then.

I'm thinking of making a couple of small changes for next year. The first will be to move the Sonerai's from the auto engine area. Most people interested in auto engines want to see liquid-cooled, belt-reduced engines. Also, we won't get hassled when we want park Continental-powered Sonerai's with the VW-powered variety. The second change will be to eliminate the Saturday "Club" meeting. I think we can cover all the important topics during the forum or out on the flight line. Let me know what you think.

I really enjoyed talking to everyone again this year, and plan to do it again next year. Starting making your plans now.



**A Common Occurrence at OSH
(Dave Wilcox removes the cowling from
his IILTS and a crowd gathers)**

SONERAI NEWS

➔ Some news from **Great Plains Aircraft Supply:**

1. Steve has about 50 of the planned 100 hours of testing on the "rear drive" VW conversion. So far, so good. The testing is being done on an air boat that Steve built specifically for the job. He's planning to put this type of conversion on the Sonerai that he will be building this winter.
2. The newly designed hydraulic disc brakes that were on display at OSH are ready for sale. They look like miniature Cleavelands.
3. A new 1/4" lower profile secondary ignition system is now available. It will be easier to fit inside the Sonerai cowling.
4. Steve is starting the development of a propeller speed reduction unit for the VW.
5. GPAS will again be supplying completely assembled engines soon. If you're interested, check with Steve. (800-922-6507)

➔ **Sonerai Newsletter** back issues are available in two forms. A 3-1/4" 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 \$3.00 each. I have the last two issues from 1994, all four from 1995, all four from 1996, and all four from 1997. 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.

JIM'S OSHKOSH ADVENTURE - PART 1

by Jim Hardy

Editor's Note: Jim flew his little bitty Sonerai I from Dallas, TX to the Oshkosh '98 in one day! Here is his story. In the next issue he'll tell about his stay, and his trip home.

The Flight Up to Oshkosh.

I left the bar VK alone at about 0620 the 27th. Just enough light to be able to make a forced landing if needed and then the coolest part of the day for aircraft performance. I watched the sun rise over Lake Texoma, which again reminded me that I was now piloting a feisty little airplane about 3 hours before I should be getting out of bed! I made my first fuel stop at Saloam Springs, AR about 2 hours later without incident. Here I met my traveling partners Niva and Kip in her 140 Cessna, nicely polished for the show at Oshkosh. Not having an electrical system or starter, I had to go through the ritual of

teaching the line boy how to run my fuel valve, so that I could do the hot start procedure for the VW and Posa carb. combination. (When if fires, fuel valve on, and don't flinch, it is just me coming over the wing to grab the throttle!) We left there about 45 minutes later and headed north east for a point we would never make.

After being airborne about 10 minutes, we came across weather (rain and low ceilings too low to run through without a seeing eye dog) that ended up forcing us down to a little airport at Aurora, MO. Here we took the time to eat lunch and visit with the locals that were preparing a KR2 for its first flight. The project, by my understanding, had been in process about as long as my Sonerai (25 years). They also were entertained by the fact that I was driving a VW engine on a long cross country. Ceilings had lifted, all 2 gallons of fuel taken on, line boy trained, and we were off on what was to be our most interesting leg of the day.

A skinny runway, about 1500 ft elevation, mid 80's and hills off both ends made this a less than boring takeoff. I stayed on the deck accelerating for the needed positive climb. Commenting to Kip, my squadron leader, about my displeasure with the terrain, he could only declare just how good my little white airplane looked against the rich green trees and hills. Against is ok. In the hills, was what I was concerned about. The humor was gone within the next 10 minutes, with the onset of more light rain and low ceilings that would stay with us for the next 150 or more miles. In these miles, we probably disturbed better than 80% of the bootleggers of the hill country in a masterful scud running formation flight that rarely saw more than 500 feet below us to the trees. I sat at 7 o'clock high on the 140, watching them weave the path, while I followed, pointing out options for airports or courses if needed. Great tool that GPS "Go To Nearest" button! Real beautiful country. I'll have to return someday when I can relax and enjoy it in something bigger than the Sonerai! Something about running ridges in a VW powered ship that didn't appeal to me. The airplane however, loved the cool air that came down with the showers, allowing the engine to cool off measurably.

We flew over the Lake of the Ozarks shrouded in the mist, and then further to the Missouri River with all it's beautiful, looming tall rock faced walls. I still wonder what those people on the other side of that ridge thought as we were only visible for a second or two. "Dem new beetles are fast!" Though fuel wasn't critical, we deserved a break and fell into Moberly MO for fuel and a needed leg stretch. Here we met

the local insurance salesman and had great conversation. I felt that he was fighting the responsible urge to go back to work, wanting to become an airport bum for the afternoon. He did walk me down to the neighboring hangar to show me a little airplane that was "kind of like yours." It was a pretty Sonerai II with a nice Blue and gold paint job. What's better is that it looked like a working, fun airplane, not a hangar queen!

We now realized, from this point, that the arrival at Oshkosh in one day was now doable. This leg had much better weather but it still refused to leave us alone totally. We climbed up to 5500 feet and headed again in a straight line towards our next fuel stop. With the higher altitudes and better weather I let myself pull away from the slower 140 and thus found myself being the point man for my troops. After established at altitude came the first pretty little puffy clouds below us. This would have been fine but they all started holding hands and standing taller. VFR could no longer be maintained so, every man for himself and find a hole! One thing neat about the Sonerai is that when you are cruising at 125, you still have another 100 mph before you reach the Vne of 225! This means you can pretty well choose your angle of descent. This can make the smallest holes plenty large enough for a vertical 180+mph pylon racer. Being a nice guy, I warned my partners behind me so they could make a less fun, but more Cessna type of decent. This happened twice to us on this leg, the second time I found myself over the Davenport airspace. When I would put my nose down my GPS would quickly inform me that I was diving into controlled airspace. So I had to step over to a more westerly hole to honor my GPS's desires to keep me from getting violated. Davenport had been our next fuel stop, but do to the better time and higher altitudes, we were to press on to Monroe, WI.

This decision to press on, taught me something about my airplane that will keep me from repeating a past error. When I built my airplane, I went to great efforts to mark the fuel sight tube for useable information. I leveled the airplane for the weight and balance and used this positioning and called it level flight attitude. I then added one gallon at a time and made a mark for each gallon on the gauge. Flying with a friend one day I decided that the fuel onboard was too low to play any longer, and headed home. I saw with my markings that I easily had enough fuel for even VFR reserves, but boy did it go away in a hurry! An old aviator once told me that you haven't heard quiet until you have flown a glider. Wrong! You haven't heard quiet until you're flying a single engine airplane that is minus the noise of one

engine! I was furious, but safe, as I landed on my home runway, and for weeks pondered why I let it get to that. I now know.

Back to the present situation. With over 4 gallons indicating on my gauge I new the added 50 miles would be no problem. 25 minutes at less than 4 gallons per hour. Every time I looked away from my gauge, from there on out, somebody would steal a gallon! I stopped looking away and it still was going away in a hurry! I left my wingman and headed for the nearest airport that showed gas, on my GPS. No cars, no pumps visible, I climbed back up without landing. Then the decision, go on, so an immediate search for fuel became critical.

Not wanting to be violated for flying a glider with out a license, I set my sites on Freeport Illinois. I pointed it right to the end of the nearest runway, and landed with a slight tailwind but mainly a left cross that made my landing put most of the air show routines at Oshkosh to shame. 9.3 gallons in a ten gallon tank, I could have flown a pattern after all!

Apparently the airplane rides considerably farther tail down than I had figured. We will later determine the actual flight attitude, and re-mark our fuel gauge.

Back in the air, I met my flight over the Monroe, WI airport. We headed slightly east to avoid the Madison airspace as requested in the Notams for the fly in, then direct to the Ripon intersection for the VFR radio arrival. Our controller seemed to be very happy with us, as there were now six aircraft in a nice little line heading at him at Fisk intersection. He asked if any of us would be interested in landing on the 36 runways (this is air show center if you haven't been there.) If so, rock your wings! I shook my little ship so he could see me about six miles away. "I think I saw the little guy, number 3 in line, confirm by repeating!" So I did. About 3 miles later he turned me east and sent me to the tower frequency. Goal in site! Tower didn't even

see me! I had to inform him that I was on short base to final turn! "Oh yeah!, the little guy, your cleared to land on 36L and enjoy the show!" I turned out to be the show. This landing was even more a show than the last, but I didn't care at this point. I had made it! I taxied to my place among the other Sonerai's with a well placed and earned grin on my face. (I later found the reason, or excuse, for my bad landing at Oshkosh. My landing at Freeport II. had bent my tail wheel steering rod, so when the tail came down, I was suddenly pointed the wrong way. That's my excuse and I'm sticking to it!)

I couldn't get anything done, due to all the people that were asking questions about the plane, admiring it, and discussing in disbelief that I had flown the tiny little VW powered craft all the way from Dallas Texas area, and then in one day even! I finally popped open the cowl and looked the engine over real quickly and pulled my tie downs from the cheek cowl area and put it to bed for the night. I came out the next morning and uncovered the canopy and cleaned off the bugs and rain so it would look it's best. I then trekked over to register the airplane, and again had to tell them the stories, and yes, all the way from Dallas. Then over to the Homebuilders HQ to register with them and claim my very nice Showplane Participant coffee mug and a ribbon for finishing the aircraft and flying it in to Oshkosh, in the same year! I am hot stuff! Upon returning to my airplane, I notice a new pretty little bird setting off my wing. A Hummel Bird! Exactly one half of a VW engine, and he flew it all the way from Santa Fe, NM! He stole my thunder! I was no longer the farthest and the smallest! Real nice fellow in spite of himself!

For the trip up, the stats seem to come in as follows: 128 mph, 8.5 hobbs hours, about 3.75 gph for a total burn of 31.9 gallons. Fuel burn is still a little higher than I would expect, but I'm letting it run rich to cool the cylinder heads. More about the week there, mechanical findings, and the trip home in the next "Issue".

QUESTIONS AND ANSWERS #3

Ken Christian from Moberly, MO sent a couple of questions along with his renewal check concerning the engine on his Sonerai II:

1. Do you have any good ideas on using a "Cub-type" exhaust system to prevent the "loss of compression" (from high humidity conditions.) My valve grind/lapping only lasts about 3 hours of flying!!! Do you recommend valves from a small block Chevy engine?

I don't know if I have any good ideas, but maybe a few comments. First, I know of several builders who have installed 2-into-1, or 4-into-1, exhaust systems and managed to get them inside the tight Sonerai cowl. The real challenge of this type of installation, other than making it fit, is dealing with all of the heat that the pipes transmit to everything in the cowl. On one airplane there was serious distortion and buckling of the cowl near the pipes. On another airplane, the builder wrapped the pipes with insulation, and found out in a very short time that the insulation held moisture and rotted out the pipes.

At Sun'N'Fun this year, Al Bertelmann showed me his newly installed inside exhaust. To deal with the heat, he glued Fiberfrax to the inside of the cowling and then glued heavy-duty aluminum foil over the top to keep oil out of the Fiberfrax. According to Al, it was working well. Most of us mount our carburetors beneath the engine, just inside the cowling air outlet. If you are going to run the exhaust pipes out the cowling outlet, they will be right next to the carb. Not a safe situation in my mind. I have had the exhaust valve leakage problem as well, but it doesn't seem to affect the performance of the engine much. I just pull the heads every year or so and lap the valves. What I have found is that the problem seems to be corrosion on the valve seats. I also plug my exhaust pipes after each flight. It seems to help extend the time between lappings, but doesn't solve the problem. If anyone out there has found an effective solution to this problem, let me know and I will pass it on. As far as using small block Chevy valves, I really have no experience since I only run stock VW valves. Again, if any of you engine experts out there can provide guidance, send it in.

2. Do you think it is possible to use a small wind-driven generator (about 10 amps) on a VW powered Sonerai? I had the Syncro alternator system and had to replace the magnet ring twice. So, I removed it and just fly short flights then recharge the battery. It sure would be nice to use my electric starter once in a while!

I definitely think you can use a wind driven generator. Also there are alternatives to the Syncro. The November/December 1997 issue of the **Dragonfly Builders and Flyers Newsletter** had an article on the installation of a Suzuki alternator where the magneto normally mounts. I assume that this builder was using some sort of electronic ignition. (If anyone is interested, send me a stamped, self-addressed envelope, and I'll send you a copy of the article.) You did not elaborate on your alternator problem, but back in the July/August/September 1995 issue of the **Sonerai Newsletter**, Mel Lamb wrote a short note on securing the magnet ring to its housing using six #6 brass screws to prevent the ring from moving should the epoxy bond between the ring and the housing fail. I've done it to mine, and have 12 and a half years and over 500 hours on my original Syncro.

A LETTER FROM BOB BASTIAN

Well here goes; my Sonerai IIL is finally done. It took me 3-1/2 years, with some time off in the summers for "honey-do's". I'm still married, too. Like I said, it's a IIL and now I wished that I would have spent the

extra money and built the stretched model. My front cockpit sure is small.

Anyway, I started out by finding a guy in Colorado who purchased a kit in 1981 and never touched it. So, I ended up giving him what he paid for it in 1981; not too bad of a deal. I started cutting and welding, and this part went pretty fast, and I thought, boy, this is going to be done in no time. Ha ha!! But you just keep plugging along doing one job at a time, and before you know it you're done.

One word of caution - I have found out this stuff is addictive. After I finished my Sonerai, I've made parts and gas tanks for other people, and now I have a Cougar I in my shop that I'm restoring.

Anyway, next came the need of finding an engine for the Sonerai. I happened to find one in Tennessee. Two guys there had started a Sonerai and I guess got frustrated and sold the project. They still happened to have the engine. It was a Revmaster 2100D which was 4 years old but never run. One of the guys was using it as a coffee table (You know he was single.) as it was still in the crate. I took it to work and borescoped it to check for rust, and found it to be in very good shape.

Well, the pieces finally started to go together for good. I used Stits (Poly Fiber) up to silver and finished with PPG Durathane with flex agent added. It came out very slick. It almost looks like plastic was poured over the airplane.



Bob Bastian's Sonerai IIL

Now, down to the airplane: it came in heavy at 570 lbs. There is no starter but it has the 20 amp alternator. The Revmaster has a lowered compression of 8.0:1. The other guy was going to use car gas. I use 100LL. I figure it to have about 68 HP. I'm using an Aymar-Demuth prop with

composite steel leading edge. It's a 54" x 48", although a 47" would have been better. Static is 2900 rpm. At 3000 rpm it's indicating 135 mph but I also had to shim the horizontal stabilizer down 4 washers. My ailerons are down 1/4" too. My temperatures have not been a problem so far, but I have only flown in 60°F weather. My oil temperatures are 190°F with the cooler below the engine. CHT is 400°F in climb and 325°F at 3000 rpm. Revmasters are redlined at 3200 rpm. I'm hoping to see 150 - 155 mph, but more trimming is needed. I should cruise at 135 mph.

As of this writing (early spring), I have 10 hours of taxi time and two flights of 30 minutes each. After each flight the engine seems to keep getting smoother. I had 5 hours in a C-140 and 3 hours in a Cub when I got in the Sonerai. This thing is quick on the ground and I have springs and chains on the tailwheel. The airplane is fast for the HP, doesn't like to slow down, cheap to build and operate, and turns on a dime. Well, I'm waiting for the weather to break to fly my time off so I can get ready for Sun-N-Fun.

Robert Bastion
Walkertown, NC

Freditorial Comment: Congratulations, Bob, on a really nice looking airplane. I get numerous questions about using the Revmaster engine in the Sonerai. I hope that this letter will help answer some of them. Maybe we'll see you at Sun-N-Fun '99.

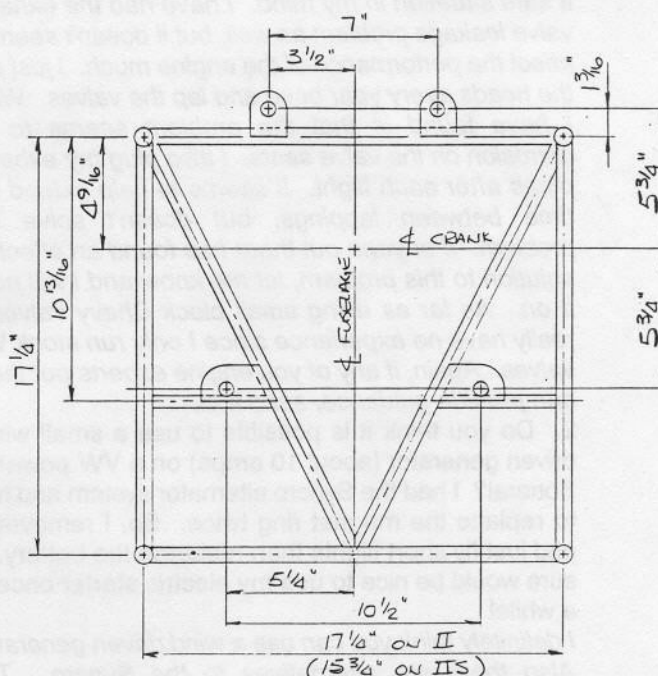
SONERAI SURVEY

At Oshkosh this year, Dave Wilcox offered to develop a Sonerai Data Survey to collect significant performance and C.G. data on as many flying Sonerai's as we could get. The reason is to establish a baseline of information that could be used by individuals to compare their airplanes to others already successfully flying. Dave will collect and analyze the data, and we'll publish his findings in this newsletter.

I would ask that each of you who has a flying Sonerai to please fill out the survey on page 7 and return it to Dave at the address on the Survey. Also, if you know anyone with a Sonerai who doesn't subscribe to the newsletter, please pass a copy of the survey on to him and ask that he fill it out and send it in. Thanks.

HAPI MOTOR MOUNT

The drawing below shows the motor mount locations for properly locating a HAPI VW conversion. This is basically the same mounting pattern as the small Continental engine. The only difference is in the thrust line location. If you are going to use a Continental, change the upper 5-3/4" dimension to 5-1/4" and the lower 5-3/4" dimension to 6-5/16".



*Happy
Holidays
Everyone!*

SONERAI SURVEY

1998

YOUR NAME AND ADDRESS:

forward to:

David E. Wilcox
517 E. Saratoga St.
Gilbert AZ 85296

CONFIGURATION

SONERAI I <input type="checkbox"/>	SONERAI II <input type="checkbox"/>	MID WING <input type="checkbox"/>	LOW WING <input type="checkbox"/>	NOSE WHEEL <input type="checkbox"/>	TAIL WHEEL <input type="checkbox"/>	STRETCH <input type="checkbox"/>
WHEEL PANTS <input type="checkbox"/>	SPINNER <input type="checkbox"/>	ENGINE TYPE	DISPLACEMENT	HORSE POWER	PROP PITCH	PROP DIAMETER

WEIGHT AND BALANCE DATA

YOUR CALCULATED EMPTY WEIGHT CENTER OF GRAVITY	EMPTY WEIGHT	SUM OF RIGHT AND LEFT MAIN EMPTY WEIGHTS	TAIL OR NOSE WHEEL EMPTY WEIGHT	OIL WEIGHT IF IN EMPTY WEIGHT	FUEL WEIGHT IF IN EMPTY WEIGHT	PLANS SPECIFIED EMPTY WEIGHT

MEASURED ARMS USED FOR WEIGHT & BALANCE
ORIGINAL WEIGHT DATA, WING LEADING EDGE = 0, FWD OF L/E (-), AFT OF L/E (+)

MAIN GEAR	NOSE OR TAIL WHEEL	OIL	FUEL	PASSENGER	PILOT	OTHER

PERFORMANCE DATA

						75% POWER TRUE AIRSPEED
	MAX RATE OF CLIMB SPEED					
	STALL	CRUISE indicated	WIDE OPEN THROTTLE	FINAL APPROACH	TOUCH DOWN	
MILES PER HOUR INDICATED						
ENGINE RPM	aircraft static				idle	

OIL CONSUMPTION IN QUARTS / HOUR	MAX RATE OF CLIMB FEET PER MINUTE	FUEL CONSUMPTION IN GALLONS PER HOUR IN CRUISE	TAKEOFF DISTANCE	CENTER OF GRAVITY OF PERFORMAN DATA	DENSITY ALTITUDE OF PERFORMAN DATA	AIRCRAFT WEIGHT OF PERFORMAN DATA

CONSTRUCTION DATA

LABOR HOURS TO BUILD	YEARS TO BUILD	COST TO BUILD INCLUDING ENGINE	COST OF ENGINE	TOTAL FLIGHT TIME	YEAR OF FIRST FLIGHT	N NUMBER

ARE YOU THE BUILDER?	DO YOU FLY PASSENGERS?	5/8 OR 1/2 MAIN GEAR?	DO YOU HAVE THE "S" WING MODIFICATION?	HAVE YOU EVER HAD A FORCED LANDING IN THE SONERAI?	DO YOU HAVE A STARTER?	ON A SCALE OF 1 BAD TO 10 GOOD, HOW SATISFIED ARE YOU WITH THE SONERAI

PILOT DATA

TOTAL TIME AT FIRST FLIGHT	TAIL DRAGGER TIME AT FIRST FLIGHT	FLIGHT TIME IN THE THREE MONTHS PRECEEDING YOUR FIRST FLIGHT	DID YOU PREFORM THE FIRST FLIGHT?	DID YOU HAVE AN UNEXPECTED SAFETY EVENT ON YOU FIRST FLIGHT?	WHAT HAS BEEN YOUR LONGEST CROSS COUNTRY ? (MILES)	IF YOU HAVE BEEN TO OSHKOSH, WHAT YEARS?

WANT ADS

For Sale - Sonerai I, 4 Hrs T.T., less Engine. \$3,900, Jim Jaeger, Box 438, Kewaskum, WI 53040, (414)626-2611 (3/97)

Air Schank Going Out Of Business Sale - New and used Sonerai parts, Engine parts, Tools and hardware, New and used instruments. Call or write for 5 page list. Bob Schank, 35 Clarence St., Belleville, MI 48111, (734)697-7057 after 5 pm. (3/98)

For Sale - 1600 VW engine, 0 TT. Disassembled - all new parts. Complete engine. Mexico universal AS41 case, Case inserts. Case machined for Great Plains Force One Prop Hub. Has Force One Hub Parts. Dual Port Heads. Forged counter weight balanced crankshaft. Balanced pistons and rods. Pauter performance cam. Horz oil cooler and adapter plate. \$1900 Bob Schank, (734)697-7057 after 5pm (3/98)

For Sale- New Bogie tailwheel \$10.50, Used Bogie tailwheel and Monnett tailwheel caster with 2-5 1/2" springs (needs the chains) \$25.00, New unmachined Monnett "Electro X" casting \$100.00, Used Monnett Sonerai I fuel tank (needs cleaning) \$55.00, Used pair of axles, 3/4" shaft, 5 3/4" long \$4.00, Used fuel shutoff valve \$5.00, Surplus fuel shutoff valve \$6.50, Used set of rudder pedals asm. with toe brakes (see Sonerai I drawing page 11 and 15c) \$20.00, Used Sonerai I torque tube asm. (see drawing page 5) \$40.00, Used two rudder cables with MS667-3 clevis ends 10'-9 3/4" long \$7.00 for both, Used two aileron P-P rods, one is 13 5/8", the other is 14 1/4", both with AN481-4P on one end and REB-3N on other end \$6.00 each, New (4) 87.5 cylinders and pistons \$75.00. You pay the shipping. Bob Schank (734)697-7057 (3/98)

Wanted -Sonerai Super Vee Cowling. Mike Smith (601)324-2801 Daytime (4/97)

TAPER PIN REAMERS FOR RENT - Brown & Sharp #3 and #5 for AN386-3 and AN386-5 taper pins. \$1.00 per day for both reamers, \$150 deposit. David E. Wilcox, 517 E. Saratoga St., Gilbert, AZ 85296, (602)231-5824 (1/98)

For Sale - 1992 Sonerai IIL, 300TT, dual ignition, electric start, new tires, brakes; has S-mod, basic VFR instruments. Not a show plane, but well built and flies great. \$6000.00 firm. Also have new in the box Bendix/King KX99, Garmin GPS-90, intercom. Dennis Barnette, (601)256-9767 or e-mail at dennis1@mail.tsixroads.com (3/97)

Wanted: Sonerai I, Prefer flying, but call on any type. Jack Spring, 248 Jack Spring Ln., Kentwood, LA 70444, Home (504)229-8297, Work (504)344-1533. (2/98)

Wanted: Sonerai IIL completed and flying, prefer something built in the 1990's. Contact Ed Collins, (530)872-4400, or write 261 Chandler Dr., Paradise, CA 95969, or email BEIDMAN@AOL.com (1/98)

For Sale: Sonerai II kit. Welded airframe with tail feathers, flight controls, and gear. 1835 cc VW with Electro-X mount (10 amp alternator), 4016 Slick Magneto, Posa carb, propeller, spars finished, Super-Vee cowling, fuel tank, most instruments. \$2750.00 OBO Zeke Zechini, (703)707-1949(work), (703)830-1046(home), or mark.zechini@lmco.com (1/98)

For Sale: Complete Sonerai II kit. Fuselage and tail welded, some instruments, all parts to complete except engine and paint. \$3800. Ed Torbett, (815)895-3888 (3/97)

Wanted: Any Sonerai parts to help add to Sonerai/KR-1 Museum, tax deductible. Call or write: Tom Hall, 658 S. Abbey Ave., Springfield, MO 65803, (417)862-3837 (1/98)

For Sale: Sonerai IIL w/ 75 hp Lycoming 0-145-C3, Magnum Ivo-Prop, ground adjustable, 12 gal wing tanks, S-wing, new 3/4" Grove landing gear, new canopy, improved cowling, 60 hrs TT. Flies great at 3.5 to 4 gph! \$9500 OBO. Call Craig Merrill, (803)521-4577 (2/98)

Wanted: Engine/project for Sonerai II, prefer 2180 w/ dual ignition but will consider all. Jeff Newlin, 12173 E. 1700th Ave, Hutsonville, IL 62433, (618)563-4456 before 10 PM central. (1/98)

QUALITY RIBS L.L.C. SELLS COMPLETED RIBS FOR SONERAI AIRCRAFT. Contact Great Plains Aircraft or Quality Ribs L.L.C. direct at (602) 892-7189 for a brochure on the company. (2/98)

For Sale: Complete VW intake system, professionally built with a Rajay turbocharger, heads, and Posa carb. \$600. David Fitzjurls, (501)963-6037 after 5 pm CST. (2/98)

For Sale: Sonerai IILT on gear (easily converted to IIL), Trim system, controls & rudder cables in, Fuel tank, pump, and all plumbing included. Built per Monnett to stay light. Project 95% complete. Bubble canopy needed. Panel done, instruments in. Lots of hardware. Spars done. 1 wing 75% finished on steel jig. Junker engine on fuse for cowling fitting. New pickled 1914 VW with all plumbing except carb. New Sterba prop. This is a very nice and complete project. Too much to list. Will consider parting out. Bob Wood - Sheboygan, WI, (920)803-9205 (work), (920)803-9206 (fax), (920)452-4095 (home) (2/98)

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) (2/98)

For Sale-Two Sonerai Projects, 1850 cc VW, four 150 hp inverted Tiger inlines, new Sterba Sonerai prop, stock Subaru EA-81, Sonerai cowlings, canopies, etc., Hatz biplane wings, center section, and fuel tank, Christen Eagle ailerons. Will happily trade or negotiate within sane boundaries. Also have 2 1/2 runway acres on Arizona Airpark, M. Lee Wachs (707)463-0467 (3/98)

For Sale: Sonerai I - Very nice single place, five minute wing fold design, \$3000, one hour south of Oshkosh, (414)626-8726 or (920)533-4379 (4/98)

Wanted: Sonerai IIL, IILS, IILT, or IILTS, condition not too important. Call Joe, (352)628-1027 (4/98)

For Sale: Sonerai IIL, 80% complete, fuselage, control surfaces, and canopy bow welded, flush-riveted S-wings w/ wing walk, cowling fitted, all VFR instruments, zero-time 1915 cc Graet Plains VW engine w/ oil cooler and Elison carb, 5/8" gear w/ hyd. brakes & wheel pants, seats & cushions, I-Com intercom, ELT, fuel tank, BRS chute ordered, flight manual and construction manual, excellent workmanship, Must sell, \$10,000 OBO, call Jerry Kennedy, (405) 733-4932 (4/98)

For Sale: Sonerai IILT, 95% done, needs covering, all parts to finish, 1835 cc reman. VW, prop, instruments and flight controls installed. \$5000 (541)564-8153 (4/98)

Wanted to Buy: Set of wings for Sonerai II, and Sonerai II mid-wing fuselage. Call Tom Hall, 658 S. Abbey Ave., Springfield, MO 65803, (417)862-3837 (4/98)