

monink

The Newsletter of Monnett Experimental Aircraft, Inc.

May, June, 1982

Howdy Partners!

The Big Event is fast approaching and we are all in a tither here! We thought things would be easier this year and the race not so hectic since we are here at Oshkosh already. But we have found that not to be true. We are in a bigger panic than ever - planning for the E.A.A. Oshkosh Fly-In July 31st through August 7th and all of you. Now to tell you of our plans so far.

We will have a booth in the exhibit building as always. Booth C-8. There we will have brochures and info packets of course but also maps to our new building, shuttle service information, a schedule of the week's events, and pretty faces to greet you. John's niece, Jean Diedrich, will be in charge at the booth this year. She has just completed her freshman year at the Univ. of Ill. and earned her Private Pilot's License in the Aviation School there. We are happy to have her aboard.

Our airplanes will also be over on the flight line. When you bring your airplanes, do try to join us. In years past we have had some Sonerai's in remote corners of the airport. Check with us at the flight line and we will make arrangements to get you in with all the Sonerai's and Monerai's. There will be a great turn out this year, 1982. We will again have a Token of Appreciation Award for everyone who brings one of their M.E.A. designs to Oshkosh. Whether the judges think so or not, we feel it is important that you made it! John has chosen to discontinue the Best Sonerai and Monerai Award this year. He truly feels it is very difficult to judge them and thinks everybody deserves an award for the perseverance it takes to finish a homebuilt airplane. They are all special achievements - every one of them - and you each deserve recognition.

Our Special Annual Builder's Party will be Sat., July 31st at 8:00 pm at our new facility. This is a party for all of you who are Sonerai, Monerai, or Moni planholders and builders. We hope to see you all here for some refreshments, good conversation, and party fun.

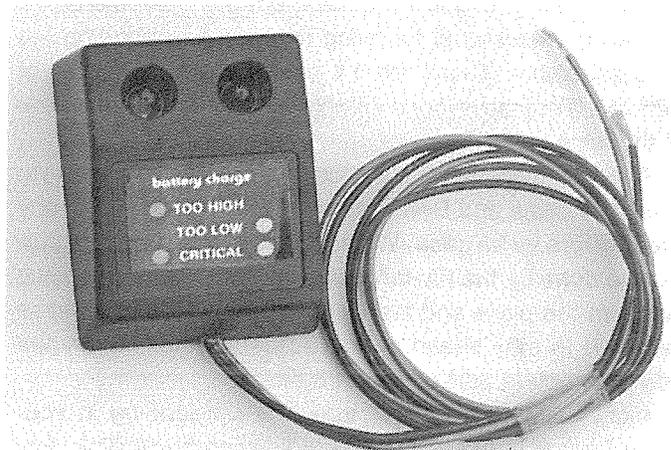
Our new facility is right on Wittman Field across from the E.A.A. Fly-In next to the post office on 20th Avenue before you get to the terminal or Butch's Anchor Inn. Now that should be very clear! We will be open there with special Fly-In Hours. 8:00 am to 4:00 pm and 6 pm to 9 pm Sunday August 1st through Saturday August 7th. On the first day of the Fly-In, Saturday July 31st, we will be open only from 8 am to 4 pm and closed that night for our Builder's Party. The week prior to July 31st, we will be open our regular hours from 9 am to 5 pm in case you are

early and want to stop in.

John has scheduled forums at our building this year instead of in the E.A.A. Forum Tents. They will be general forums on all M.E.A. designs with time for question and answer if you have something specific that isn't covered. The forums will be held from 9 am to 10:30 am on Sat. 31st, Sun. 1st, Mon. 2nd, and Thurs. 5th. I might mention that I was asked to give a woman's forum this year on Wed. at 9:00 in the E.A.A. Women's forum tent on ? ... any suggestions? Maybe Nursing Your Husband Homebuilder Along!

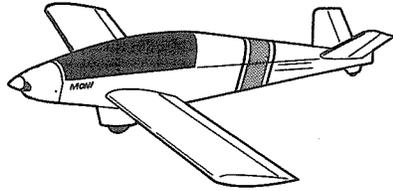
One last thing about the big week. If you have in mind what you want to pick up in the way of merchandise from us, it would greatly ease things if you would order it ahead of time. Call us if you like. We would be happy to pack it and mark it for pick up. This will alleviate alot of waiting around for you and hectic packing for us.

As I mentioned in the last newsletter we do have some new items for sale. Sonerai, Monerai, and Moni patches, hats and t-shirts. Patches are \$2.00, Hats are \$7.00, and T-Shirts are \$7.50 adult, \$7.00 youth. We will also have a new item called a head gasket. Think you will like them as an Oshkosh Souvenir!

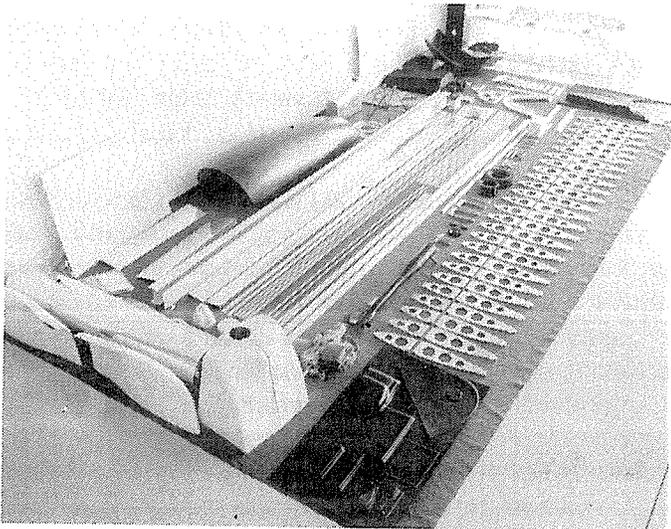


Another new item for sale which John is very excited about is a 12-volt Battery Charge Indicator. This sells for \$21.95. It replaces both a volt meter and an amp meter with a solid state L.E.D. "idiot" light system. A red light means overcharging, amber shows undercharging, when both are illuminated the battery is severely discharged and when both are off the situation is normal. It is super simple to install and use, and is vibration proof. Simply, it monitors the complete electrical system both battery and alternator and tells you exactly where you stand with your electrical system!

moni



We now have some Moni Builders at M.E.A.! The first 25 kits have been shipped, with the next 25 to go soon. I have included this photo of the kit as displayed in the hanger showroom to give you all an idea of what a complete kit looks like all spread out.



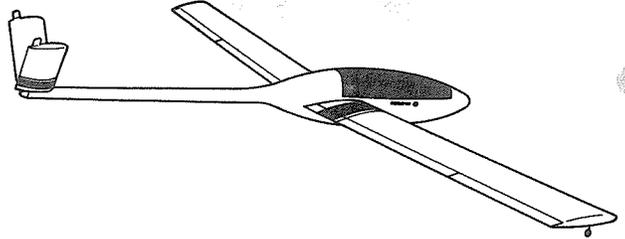
One new item available for Moni is the Precut Wing Fixture Cradles. These are precision cut 3/4" particle board cradles to be used in the wing fixture when bonding the wing assembly. There are 14 pieces in all for a cost of \$28.00. They save considerable time in the construction of the wing.

Randy is busy building a second Moni in our shop. He is using the plans and Don Hardy and he are correcting any minor errors as he goes. We hope to have this second pro-to type done by the Fly-In. Don and John are still plugging away on the plans and manual and progressing as fast as they can to stay ahead of you builders! This is really the only incomplete part of the kit now.

Moni Builders, it's your turn to start sending in your News from Builders and Builder's Tips for the Mohink. Any photos of your progress or tips you have found—this is your chance to share your building experience and your forum.

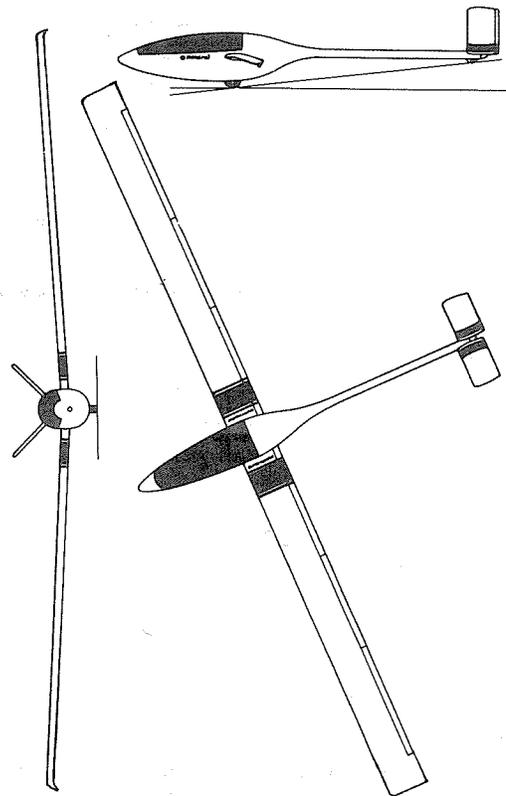
E.A.A. Oshkosh Fly-In
July 31st through August 7th

monerai

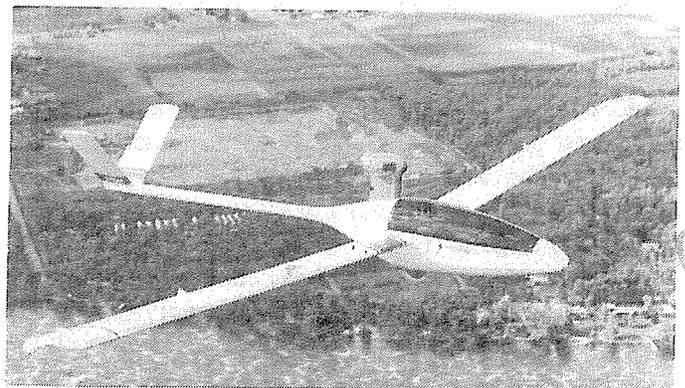


The Monerai Max Kit is now available! Cost is \$140.00. If you called in your order for them earlier, please double check with Carol to make sure we have your order.

Simple add on tips increase wing span to 12 meters and aspect ratio to 18/1. Molded as one piece of fiberglass, they include turn down soft rubber tip wheel mounts. A significant performance increase puts Monerai well above 30/1!!



Monerai-Max



This photo is the Monerai flying with the KFM. 107 Power Pod over Lake Butte De Morts. John has been flying Monerai with this power pod but it is not ready for release as yet. He is still not satisfied with the exhaust system and is still testing various new props. We do hope to have this available as a kit in the fall.

The steerable tailwheel we talked about in the last newsletter is now installed. The basic idea was Randy's. It does not require any cables. The steering function works when full up elevator is applied. Rudder function steers the tailwheel. The tiller fits inside the tailcone and the tailwheel unit attaches to the existing skid mount. We promise to have drawings on this A.O. (After Oshkosh). If you are interested in one, let us know and we will send when it's ready.



First Flights

Nils-Ake Sandberg #253
 O Radiogatan 2C
 S-852 42 Sundsvall
 Sweden

First Flight June 15, 1982

Nils writes "My Monerai was airborne June 15 with me as pilot. A 30 minute flight with the power pod from the 1900 metre runway. The first flight was made between the departure of a Folker F-28 and the arrival of another."

Peter Elms and Richard Visscher #341
 23305 22nd St.
 Vernon, B.C., Canada V1T 4H7

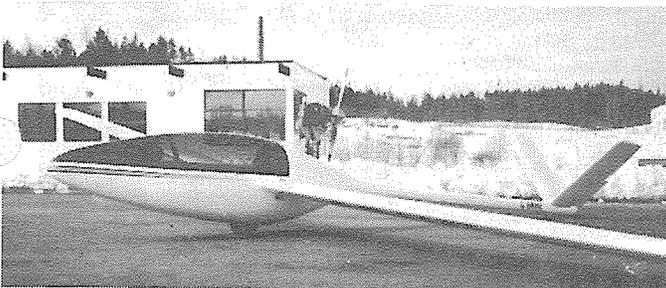


Photo of their Monerai. They have been flying it but not sure when the first flight was.

Harry Knight #207
 1121 Independence
 Bartlett, IL 60103

John Caldwell #317
 P. O. Box 155
 Genoa, IL 60135

Both John and Harry had their maiden flights in June. Congratulations Guys!

News From Builders

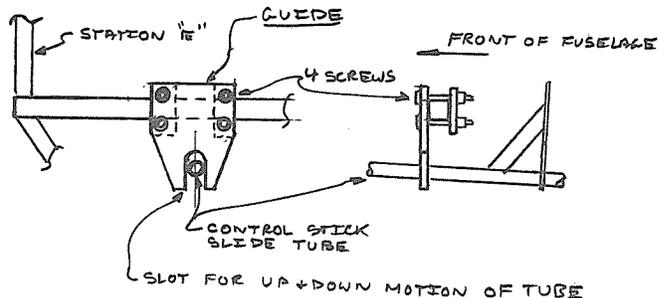
Harry Herb #329
 Box 326
 Gibsonton, FL 33534



Harry sends us this picture and writes: "The service from your place is wonderful. I'm sending a picture of my pride and joy. I'm the skinny old man in the red hat."

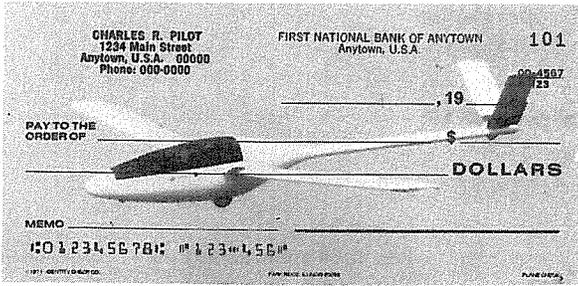
Builder's Tips

John Watkins #152
 117 Moreland St.
 Worchester, MA 01609



Here's a tip for those of you who have a sloppy, loose pitch bell crank. A nylon guide for the slide tube prevents sideways motion.

MONERAI



PLANE CHECKS

A prestige check created especially for the MONERAI builder.

Are you tired of "Generic" checks that look like everyone else's. Then step out from the crowd! Show your stuff with a MONERAI Plane Check!

You do not have to order checks from your bank. Identity Check Co. will print all the information on your checks necessary to make them conform to A.B.A. standards and to be acceptable to your bank. It is often helpful to ask your bank if the Federal Reserve has assigned them any new routing numbers, or if they have changed their MICR layout.

So that your order for Plane Checks can be processed quickly and accurately please enclose:

1. A check in payment of the order.
 2. A voided sample check.
 3. A deposit slip (If you desire any address changes, etc., clearly indicate the changes on the deposit slip.)
 4. The order form below completely filled out. Indicate starting number. If none is given, checks will be printed beginning with No. 101.
- Please allow four weeks for delivery.

Start Using Monerai Plane Checks Now!

Identity Check Co. Box 149-D Park Ridge, IL 60068

Checks are printed with blue backgrounds, and are top-bound. One part deposit slips and registers are included in each order.

Activate my order for **MONERAI** Checks

STARTING No. _____

- 200 checks — \$9.00 400 checks — \$16.00
- Checkbook cover \$.50 (if needed)
- First Class Mail (Optional) — \$3.00

Ship To: _____

Address _____

City _____ State _____ Zip _____

Please see instructions No. 1-2-3-4 before mailing.

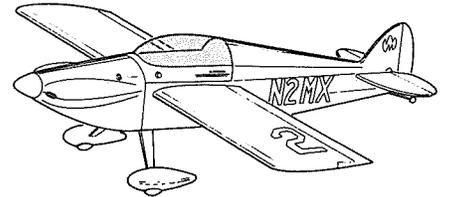
For Sale

John Benjamin #261
973 Nissley Road
Lancaster, PA 17601
Monerai Kit for sale.

Dario Toffenetti #314
5943 Miro Hervesa
El Paso, TX 79912
Zenoah Power Pod Kit. . . . \$950.00

M. Morgan Rockhill #237
204 Westminster Mall
Providence, R.I. 02903
401/274-3472
Untouched Zenoah Power Pod Kit. . . . \$975.00

sonerai

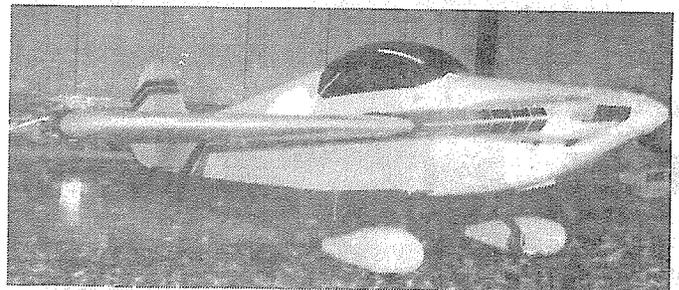


A new kit is now available for the Sonerai Builders. The Sonerai Instrument Package. This package includes the following instruments:

- 2" Tach automotive style case
- 2" C.H.T. with 14 mm probe automotive style case
- Rochester Oil Temp gauge, 72" probe
- Rochester Oil Pressure gauge
- Oil Pressure Hook-up Kit with nylon line
- 0-20,000 ft. Sensitive Altimeter
- 0-200 mph Airspeed
- Battery Charge Indicator
- Compass

It is \$370.00 which is a savings of \$20.00 over ordering them individually out of the catalog.

We had our first Sonerai Fly-In on June 6th as planned. It was a pretty small turn out; seven Sonerai's in all from Fond du lac and Elgin and Oshkosh but great fun was had by those who attended. Pat Mangan, Randy Novak, and Ken Appleby (M.E.A. employees) all worked hard at organizing the day, the events, and the lunch. No one was interested in the contests planned so they held the trophies over until the next contest. But the brats were great and be assured none will be held over. The day was memorable for some. Pat took his young, 10 year old son, Scott, for his first ride in "their" airplane that day.

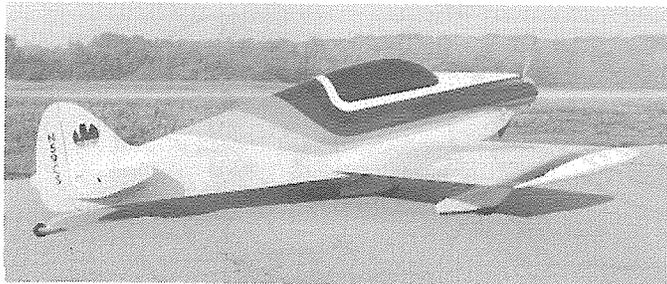


Completed and sitting in our hanger showroom.

Our secretaries, Betty and Carol, had their first Sonerai rides from Randy and Ken. Don and John went out too and Dave Gustafson shot some great air to air shots of everyone. So it was a fun day of flying, rides and good conversation. Maybe you'd like to join us for the next one!

First Flights

Chuck Stottlemeyer #895 IIL
Rt. 6 Box 486C
Anderson, IN 46001
First flight May 29, 1982



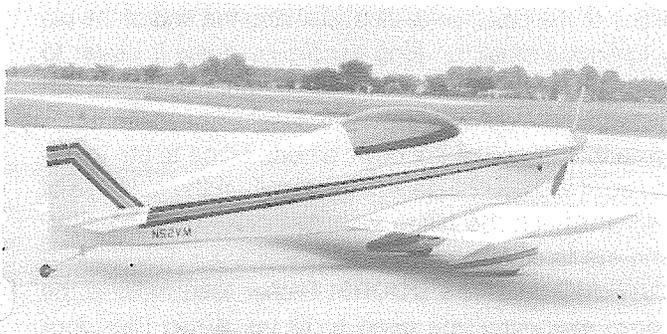
Chuck and Donna write: "Enclosed are some pictures of our new family member. . . . Every effort was made to conserve weight and it has paid off handsomely. Admittedly it was weighed with bathroom scales, but they were known to be reasonably accurate. Empty weight is 501 lbs. including 2½ quarts of oil. ...The aircraft has no bad habits, all controls are smooth, very powerful, and it is delightful to fly!"

SPECS:

Built per plans
Engine 1835cc - own conversion
Empty Wt. - 501 lbs. without seat cushions or interior but includes gell cell in tail, Nav-Com Antennas.
Rate of climb solo estimated at 1000fpm
Indicates-120 at 3000 rpm, 150 at 3500 rpm
Stall-solo approx 50
Prop-Warnke almost constant spd. 52x42
Finish-Stitts Aero-Thane

* * * * *

Ray Macke #986 IIL
213 N. Main
Marissa, IL 62257



First flight announced last issue, April 18, 1982 but now have this photo. Thanks, Ray.

* * * * *

Leon Stoval #1025 IIL
208 Elm
Dumas, TX 72029

First flight was March 16, 1982. Leon writes: "Hey, you guys this Sonerai IIL is something else. Everything doing fine. Flys great....." (Just what we like to hear, Leon.)

News From Builders

I recently received this letter which I had to print for all of you understanding wives, fiances, and girlfriends!

"During my 3-year association with one of your devoted homebuilders, I've learned so much about the trials and joys of homebuilts and that "special breed" of men. The following is an affectionate tribute to my fiancée, Jack Marcoski, #1116 II, whom I will marry in July if he ever comes out of the garage and cleans his fingernails."

Visions Of Flight

*Dear Mom; I didn't know I was in for this
No one said this is what marriage would be
I don't mind holding his oxy-acetaline torch
as he smiles through the framework at me*

*He labors for hours to the dead of the night
With his tape measure and tubing to mold
At completion of each and every task
He skips in like a five-year-old*

*Can you imagine preparing a meal of Peking Duck
And serving by candlelight in the garage?
While visions of flight dance on in his mind,
As he's heady over his private mirage*

*I'm used to the racket and would like to help more
If I only knew what to do
So, generally, I play the "supportive" role,
Fetch snacks and iced tea for two*

*I've always heard said that the difference between
The grown men and little boys
Can be measured by only one basic rule -
It's simply the price of their toys*

*When you marry a man, you marry his dreams
These homebuilder-pilots, they've got to fly
But Mom, at least I got the top of the line. . .
I married a Sonerai*

Sherri Schmalz
Ace Assistant and Co-pilot

* * * * *

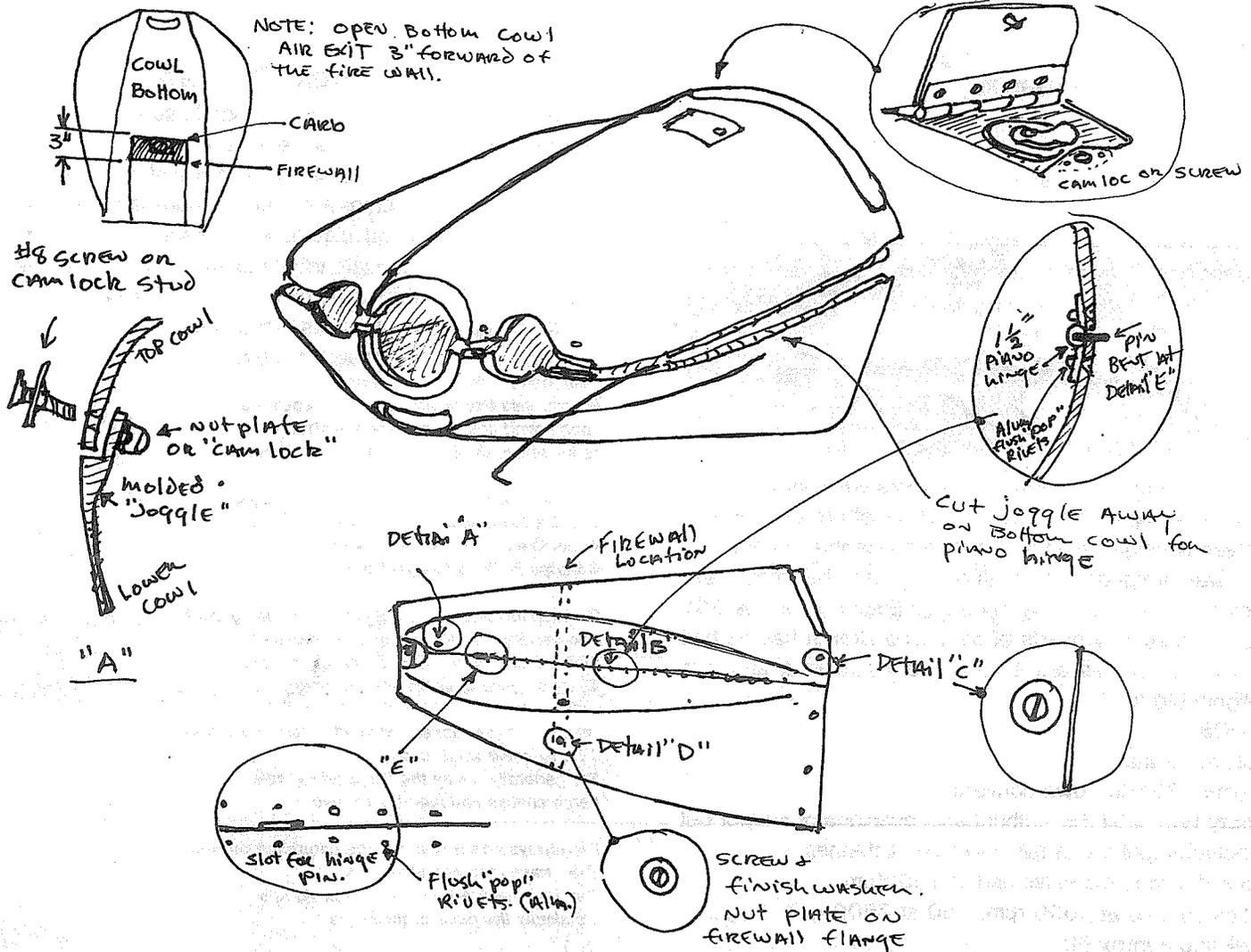
For Sale

Bill Allen
598 Shoshone St.
Grand Junction, CO 81501
303/434-5989

Sonerai completely finished except for fabric and engine. Precover inspection completed. Stits fabric and dope included. Most instruments.

Excellent workmanship \$4,500.00

novak's notes for novices



(Nothing derogatory intended here for you builders. I know most of you are not novices! Just another play on words for Randy.)

Sonerai Tips

COWLING: The fiberglass cowling, after being trimmed to fit in position on the fuselage 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 832 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 cowl 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 1/2" long handle will make it easier to grip the pin. Mate the cowl 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 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 everytime 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 inches 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 dremmed 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 inch 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.

LANDING GEAR STRAP RETAINERS: The material for these two straps is not furnished in any of our kits. It was originally called out as a piece of automobile leaf spring, cut to the dimensions shown in the plans and installed with the convex side up. If this material is not available, 4130 steel stock of the same size may be used, or aluminum straps made from 2024T4 bar stock 3/8 inch thick may be used.

General Tips

Aircraft AN Bolts: The most common type of bolt used in general aircraft assembly work is the standard AN hex-head bolt. This is an all purpose bolt made of nickle-steel (SAE 2330) corrosion resistant steel. The bolt is marked with an X or a cross on the top of the head. A bolt with a plain head is a low strength bolt and should not be used in aircraft unless specifically called out for by the designer.

Standard AN hexhead bolts carry the basic numbers AN3 to AN20. The number indicates the number of sixteenths of an inch of the bolt shank diameter. For example, the AN3 bolt is 3/16 inch in diameter and the AN4 bolt is 1/4 inch in diameter.

The first dash number of the AN bolt indicates the overall length of the bolt shank, from the underside of the bolt head to the tip of the shank. The length is measured in eighths of an inch up to the length of 7/8 inch. For example, an AN6-7 bolt is 3/8 inch in diameter and 7/8 inch long. The dash number then changes to -10 which indicates a bolt with a 1 inch shank. The dash numbers again increase in increments of 1/8 inch until dash number -17 is reached. It then jumps to -20 to indicate a bolt with a 2 inch shank. This sequence of numbering continues up to a dash number of -80, which indicates a bolt shank length of 8 inches.

AN bolts are manufactured with drilled shanks to accommodate a cotter pin for safety. If the shank is not drilled, the letter "A" is placed in the coding after the dash

number. For example, the code number AN3-12A designates a bolt 3/16 inch in diameter, 1 1/4 inch in length with an undrilled shank which would indicate that the use of a self-locking nut would be necessary.

For any type of bolt, the grip length is the length of the unthreaded portion of the shank. It should be at least equal the thickness of the materials or parts bolted together. If the grip length is greater than the thickness, the difference must be made up by installing washers under the nut or bolt head. As a general rule, at least one washer is used under the nut to prevent galling of the material.

The correct bolt length is found by taking the grip length and adding to it the standard length for the threaded portion of the shank, which would be 3/8 inch for AN3 bolts, 1/2 inch for AN4 and AN5 bolts, and 5/8 inch for AN6 bolts.

Marking Aluminum: To avoid scratching the aluminum when marking it, try laying down a strip of masking tape in the approximate location and then mark your lines with a pen or pencil. If you realize a mistake has been made, just peel off the tape and start over again. If cutting lines are marked in this manner, the cutting shears will be less likely to scratch the surface because of the protection offered by the tape.

Hinge Pins & Lubrication: It is a good practice to thoroughly lubricate all piano hinge pins, control surface hinges or any bolt or part that has to rotate or move as a normal part of its function. Use a general purpose or white lithium grease, and relubricate the parts when necessary. Parts such as piano hinges, rod end bearings, control surface hinges, throttle cables, etc. may be sprayed with a penetrating type of lubricant (WD-40, etc.) on an annual basis or more frequently if required to keep the parts moving freely and clean from corrosion. This should be a normal part of your annual inspection in addition to the more commonly done items such as packing wheel bearings and greasing the tail wheel.

Randy Novak

Forums

at our new building

9 a.m. to 10:30 a.m.

on

Saturday, July 31st

Sunday, August 1st

Monday, August 2nd

Thursday, August 5th

Builder's Party

Saturday, July 31st
8:00 p.m.
at our new building
895 W. 20th Avenue

In addition to getting ready for the Fly-In in a few weeks, we are looking forward to some other exciting things. Dave Gustafson, of Communications Resources, is working on putting together a tour for John in October. This will mean bringing our workshops and airplanes to you! Tentative plans, where time and schedule permits, include a talk the first session and a long workshop the second session. These workshops we have done at our facilities for several years. This will involve a \$20.00 fee for the workshop. The tour is tentatively planned for the following places and dates thus far:

Kansas City	Sat., Oct. 16th, 17th	9-4:30
Tulsa	Mon., Oct. 18th, 19 & 20	7-10:30
Dallas	Fri., Oct. 22nd, 23	9-4:30
St. Louis	Mon., Oct. 25, 26 & 27	7-10:30

We are meeting around E.A.A. Chapter locations and working through Chapter Presidents in these areas. Make some plans to attend! More information will be available after Oshkosh.

I am sorry for the lateness of this issue of the newsletter. As most of you know I operate the opposite of magazines and come out at the end of the month on the letterhead. (After the fact, so to speak.) I plead very guilty for this coming in the 2nd week of July as I spent the last

two weeks of June at my mother's in Illinois with all of our family home. It was great fun and can't understand why John didn't join us - only 8 adults and 9 grandchildren, 8 boys and 1 girl - romped at my mom's three bedroom house! But she has such a great family spirit and warmth (exhibited by sleeping on the couch) that we all had a great time. So forgive me and I hope this gets to you before you leave for the Fly-In.

Let me be the first to welcome you to the city of Oshkosh this year. It truly is a great community. People are nice here all year long and are very aware of E.A.A. and supportive of Sport Aviation and our cause.

Looking forward to seeing You and your Airplane!

Betty Monnett

Building Hours

895 W. 20th Avenue
July 31st - 8 a.m. to 4 p.m.
August 1 thru August 7
8 a.m. to 4 p.m.
6 p.m. to 9 p.m.

For Sale

Selling Monerai to build Moni. Includes trailer, ball vario with audio, RFT radio. Time has been flown off. Engine pod complete and running but not flown. \$8,500.00. Call evenings (609) 894-2134.

Frederick Kelp SILL#356
11728 SIX MILE ROAD
FRANKSVILLE, WI 53126
ex. 9/82



monnett experimental aircraft, inc.
p. o. box 2984
oshkosh, wisconsin 54903

