

# INAV<sup>LTJ</sup> INK

July/August 1986

Dear Friends,

I am now the proud owner of a new T-Shirt .... one I have always wanted. It says "I survived another Oshkosh" and I wore it proudly the evening of Friday Aug. 8th!! Thank you Bud Davisson and Son. Bud is a well known aviation photographer and East Coast Editor of Air Progress who also happens to have a booth at Oshkosh selling his photos and these great T-Shirts. I know many of you would love to wear one after a week of walking and talking at Oshkosh!

## Oshkosh '86

This was the year for special guests and interesting photographs! For some reason the presence of the Monnett Boy's newly acquired pet gorilla (giant stuffed animal) brought out the best-worst? in everyone. I have wonderful photos of our English Guests, Friends, and INAV Employees but I can't print them and have any friends left at all. Well, one I can because this photo of John is no more embarrassing than he with his belly dancer a few years ago! Our pet appeared at the the party, in the booth, at a forum, on the Sonerai, even was arrested by the county cops and was seen riding in a squad car, buy lastly was raising havoc in the office. Only one English guest eluded all photographs and that was Sandy Gilmour. He was busy taking pictures of everyone else! It was a fun filled, rewarding week for all of us and we hope it was for you!

## Planes at Oshkosh 86

Thanks to the following who had their homebuilts on the line this year:

### Moni

EAA Chapter #60	Janesville, WI
Bill Gustafson	Bloomington, MN
Reed D. Phillips	Freeland, MI
Mick Warning	Oshkosh, WI
Gerry White	Enid, OK

### Monerai

Russ Cedarholm	Mequon, WI
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### Sonerai

Ben Bennett	Uvalde, TX
Bob Brown	Crystal Lake, IL
Bill Brown	Minnetonka, MN
Art Frank	Hanover Park, IL
Bob Keenan	Ankeny, IA
Pete Newkirk	Wheaton, IL
Dave Rawlings	Palatine, IL
Clyde W. Seager	Cary, IL
Bruce Stainbrook	Salina, KS
Ed Sterba	McHenry, IL
Chuck Stottlemeyer	Anderson, IN
Jim Wendel	Hoffman Estates, IL
Ned Wood	Wisconsin Dells, WI

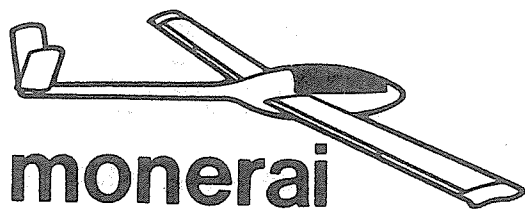
We think this is an accurate list. If you know of any discrepancies please let the office know. As it happens every year and the Fly-In grows bigger and bigger, it is much harder for homebuilts to get in, find a spot to tie down, do any kind of flying, and keep an eye on their pride and joy. We understand all this and do appreciate the efforts it takes to bring your homebuilt!! Thank you!!

A small token of our appreciation is given to our builders every year. This year Malcolm Lawrence brought the awards from London. It is a small statue of the Queen in full ceremonial dress on the occasion of the Trooping the Color in honor of the Queens official birthday parade. The Trooping of the Color is to instill loyalty in the regiments. At one time they were required to swear allegiance.



Today they are just reminded of the allegiance by the colors being paraded in the presence of the Queen.

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# monerai

## News from Builders

John W. Watkins #152  
117 Moreland Street  
Worcester, MA 01609

John sent us a wonderful long letter on Sept. 29, 1986: "..... This has been a pretty uneventful year for me as far as flying goes due to the worst weekend weather in New England since 1945. This was a major factor in deciding to get the Konig Power Pod. I finally got tired of 15 minute flights.

We did not have a weekend with uninterrupted good Soaring until Labor Day, and I spent that one at the Sailplane Homebuilders' convention at Elmira, NY. Bob Burchard and I had been asked to give a talk on the Monerai once again, as the talk we gave last year was well received. We went out in Bob's van, with his Monerai - wings on top, fuselage inside - and my Monerai following behind in it's trailer. It was quite a sight going down the highway, but we got there just fine. When we got there we found Gordie Coleman had driven down from Canada.

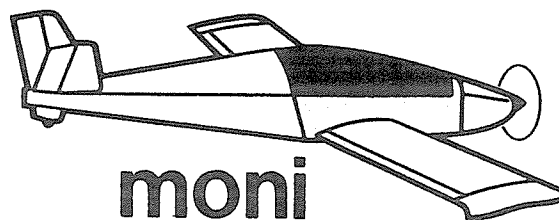
It turned out that we were the only flying homebuilt sailplanes at the meet. The weather was good for a change, and we had a great time flying around while everyone else was on the ground discussing what the ideal homebuilt sailplane would be like. To me the answer to that question was obvious. I didn't need to sit around to discuss it, and went flying instead. It is interesting to note that the only flying homebuilt sailplanes at the Elmira homebuilders meet last year and this year were Monerai's. That should make some sort of impression, but for some reason it doesn't seem to. I have come to the conclusion that most people who want to build a sailplane are building or have already built one. Most others interested in homebuilt sailplanes seem to enjoy thinking or talking about sailplanes, doing concept studies or whatever.

I have learned several things about the Monerai this year that may be of general interest. First, I found the airplane handled much better when the C. G. was approaching the aft limit. Mine is at 35%, and it flies much better than at 30%. I find the thermalling speeds are about four knots slower, and that the pitch stability is more positive. I don't understand why the pitch stability would be better at aft C. G. settings, normally the opposite is true, but it sure seems to be. I also find that the plane seems to fly better if the wings are clean, so I have started to wipe them down before every flight, especially if there is pollen or dust in the air.

I made one slight modification which I found quite helpful, and that is the addition of centering springs for the rudder controls. These springs are about the same as the elevator springs. They are attached to the outer ends of an 8" wide bar attached to the rudder cable adjusting links. This bar is parallel with the rear yaw cable horn. The springs run aft to the truss. They give some feel to the rudders, and make coordinated flight easier. Attaching these springs directly to the rudder pedals doesn't work too well because the spring tension increases the friction in the cables too much. I could send a sketch if you are interested.

We are going to try to give one last try for a great soaring weekend this year. Jim McCulloch and I are getting some Monerai pilots together for a long weekend at Franconia, NH during the Columbus Day weekend.. Hopefully it won't snow! ....."

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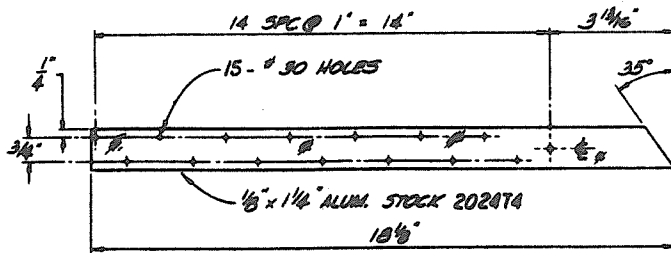
# moni

## Addition to Correction Sheet #2

The following are corrections and additions to Moni plans effective 9/1/86:

#### Sh. 4

1. Pitot Tube Mounting Block: " #28 drill thru..." should be " #30 drill thru."
2. Rear spar attaching bracket to formed rear spar should be attached with 15 CCP-44 rivets, not 16. (See Rear Spar Attaching Bracket Detail below)



Rear Spar Attaching Bracket Detail

#### Sh. 6

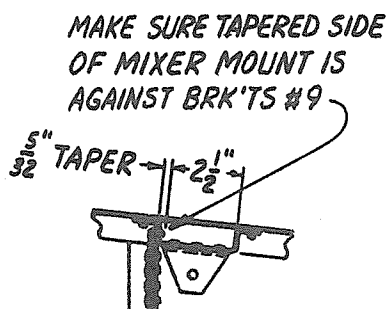
1. Station #5: There should only be one rivet shown, not two, along each edge of the rear spar cap plate. This rivet is one of 15 that attaches the rear spar attaching bracket to the formed rear spar and is located on the bracket center line. ( See Rear Spar Attaching Bracket detail below)

#### Sh. 14

1. Detail "A": "Mixer mount, trim to fit " should be "Mixer mount, see Station #3 - Section C-C Detail on Sh. 15 for proper installation and trim to fit. " (See Station #3- Section C-C detail addition below)

#### Sh. 24

1. Choke Cable Bracket, 1 required: 15/16" dimension should be 1 - 3/16".



Station #3-Section C-C  
Detail Addition

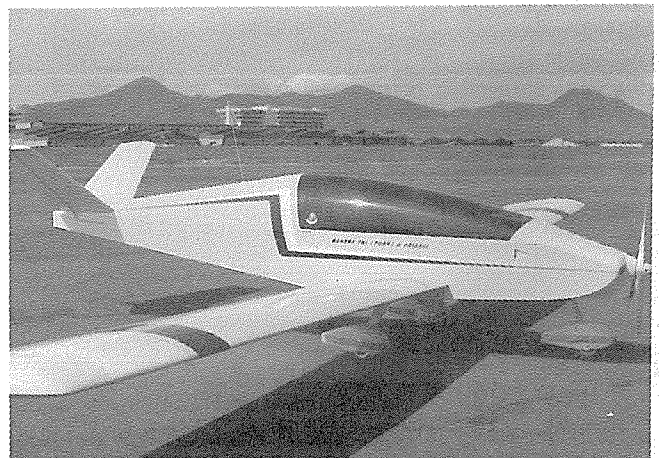
## First Flights

Peter Damude #90  
3345 Weaver Road  
Niagara Falls, Ontario  
Canada L2E 6S6

Peter writes: "My Moni, serial #90 Canadian Registration C-GGWE, finally flew August 17, 1986. It was flown by David Webb an experienced sailplane pilot who was quite enthused with its performance."

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H. Pribadi #347 T  
Nusantara Aircraft Industries Ltd.  
Bandung 40174  
INDONESIA



Another report from Monis in Indonesia!!

"First flight of my Moni was July 18, 1986 at Husein Air Base in Bandung. The airplane behaves quite well except that the canopy lock kept popping open. Had to hold it all the time alternating with the throttle and mike button. Just no time for extending the spoilers on final. It's OK now after adding another spring. I would like to express my gratitude for helping me with advice and pictures to Mr. David C Green, Rear Admiral R. A. Keating, and Mr. Carlos E. Emmons. "

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S.F. Johnson #280  
5 Tania Dr.  
Aberfoyle Park  
South Australia 5159  
AUSTRALIA

We received the following information from Steve:  
 "My Moni #280 flew yesterday 30th August 1986 at  
 Waikerie Gliding Club in South Australia. Flight  
 approximately 20 minutes. Test pilot Maurie  
 Bradney - C.F. I. Waikerie Gliding Club. The flight  
 went perfectly and without any drama's. This is the  
 first Moni to fly in Australia (first of many I hope!)  
 More info and photo's to follow in a few weeks."

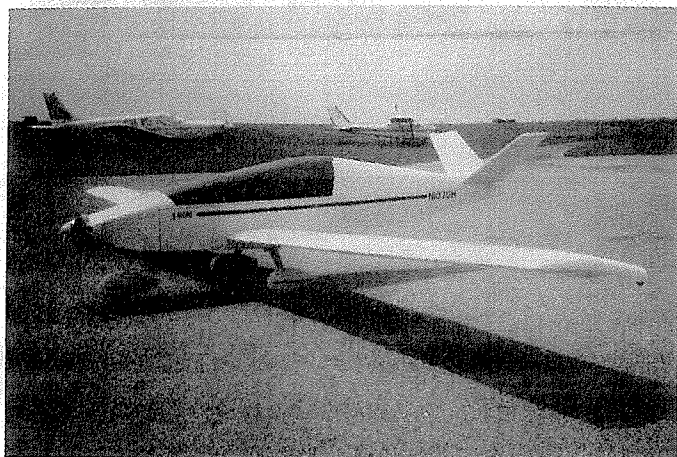
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Bob McLane #329  
 570 Park Ave. Park & North  
 P.O. Box 486  
 Lynchburg, OH 45142

First flight was August 23, 1986

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George E. Heide, Jr. #100  
 620 E. Walnut Street  
 Palmyra, PA 17078



George first flew his conventional gear Moni on  
 April 20th, 1986. While making his Wing Root Rib  
 and Turnover Structure Modifications, he decided to  
 install the Tri-gear Retro Kit. First flight of N  
 107GH as a Tri-Gear was August 19th, 1986. At the  
 time of his letter - Sept. 11 - he had 6 hrs. 30 min. on  
 it and likes the ground handling and landing  
 characteristics much better.

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Herb Sherman #303T  
 387 North Ave.  
 Wood Ridge, N.J. 07075

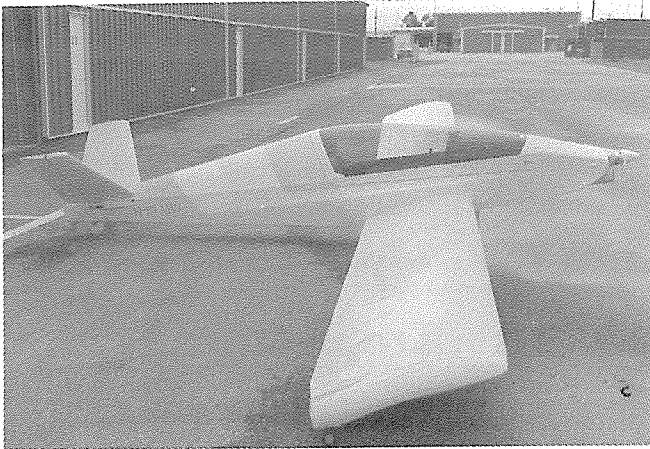


Herb sent us the following letter about his first  
 flight. "Enclosed is the picture of my Moni that I  
 promised I would send. The first and second flights  
 took place on July 7, 1986. I made the first and my  
 son the second. Words can not express the feelings  
 of joy and satisfaction experienced. The little bird  
 flies just fine. The only problem I had was the  
 deployment of the spoilers. I had to use both hands  
 to get them into the last notch. Because of this I  
 was using full spoilers from the beginning of final and  
 using the engine to control glide path. This worked  
 OK for the first four landings but I got caught in a  
 high sink rate about 300' from the runway (2200 ft  
 long) and about 20 ft. high. Needless to say I  
 couldn't stop the sink in time and I touched down  
 about 175' short in a mess of underbrush. I wiped  
 out the main and nose gear. Damaged the right side  
 of the fuselage where the gear mounted and slight  
 damage to the bottom of the firewall where the  
 nose gear bent back. Both wing skins need to be  
 replaced due to denting by the underbrush. I'm  
 going to change the actuating system for the  
 spoilers by going to pulleys to eliminate all the  
 friction from the present cable system. Other than  
 this one problem I couldn't be happier with the  
 plane. I can't wait until I get it repaired and back in  
 the air. I figure spring time. As soon as I finish  
 opening up everything that needs repairing and  
 determine the materials I'll need, I'll be in touch to  
 place the order. Thank everyone at INAV for me for  
 a great little airplane."

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Mark D. Watkins #195  
 3161 Gardendale  
 Port Neches, TX 77651





flown a tri-gear Moni, but I wouldn't hesitate to recommend a standard gear. This has gotten a little lengthy but I tend to run on when it comes to the Moni. "

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Horour Hjalmarsson #10  
Lynghaga 17  
107 Reykjavik  
ICELAND

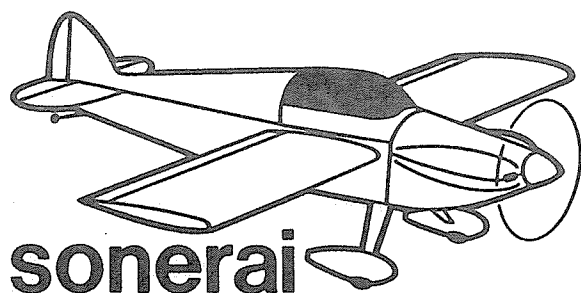
Mark recently wrote me the following letter :

" Enclosed a couple of photos of #195-19MW. One Niner Whiskey and I took our first flight on July 6th and it was quite a thrill. The only problem that I had was the C.H.T. ran higher than I would like but that has been corrected and now runs quite cool on the subsequent flights. I am really enjoying it and the guys in the control tower like it as much as I do. Moni 195 took me 3 years and 3 months to complete but with a growing family and busy professional practice I only had weekends to work on it. It all has been a very enjoyable experience. The Moni has panel-air prepped bonded and riveted wings with the extra rib. The wings have the spoilers which work great! I used the lever modification that removes the forward 180o turn in the cables and gives a direct forward pull. I also used Mercury outboard control cables which are a solid wire in a teflon housing. This greatly reduced the friction in the system! The spoilers are real nice to have on final. I have the 25 hp engine but went to the O. V. C. carburetor. It runs smoother, has a better power response and is supposed to be more efficient. I had to reshape the front end of the cowling and add a prop hub extension but it runs much better. I also have a Prince "P.T.p" prop that has more thrust and runs much quieter than the other prop. I also added a Hamilton vertical card compass, Ball variometer with total energy probe, and a Becker 720 channel radio with 5 channel memory that makes living with a control tower alot easier. I am basically a low time pilot with very little taildragger time. I am however quite pleased that I built a standard gear Moni. The ground handling is quite nice and has enhanced my image around the airport out of proportion to the skill required to fly her. I haven't



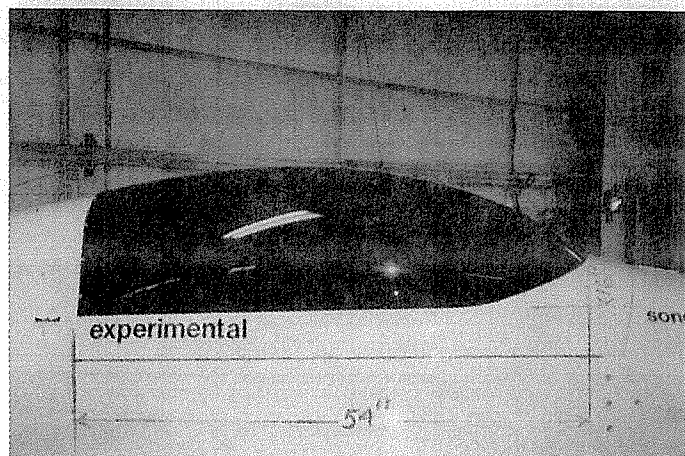
Horour test flew his Moni on July 3rd and had already made nine flights at the time of his letter. He intended to participate in the 50 year anniversary of the Icelandic gliding club on the 10th of August. His is the only Moni flying in Iceland!

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## Sonerai Canopies

Several builders have been asking questions about the new canopies. We are now in production with them and have installed one on our Stretched Sonerai prototype. Basically this new method yields a larger canopy with superior optics and a very consistent thickness throughout the bubble height. The canopy is longer and works better with the Stretched and yet is very suitable for the standard Sonerai as well. Here is a photo and dimensions to give you a better idea of what they are like.



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Bob Olsen SI #323  
Rt. 2 Box 2342  
St. Cloud, FL 32769

from Vee-Gram August 1986

".... reports that his first test flight came off very well. He has requested race #45 for his plane, which is nicknamed. "Top Gun". ...."

Editors note: Of special interest in Vee Gram was Jim Vilet's report WE'RE SHOT DOWN AGAIN -

CLEVELAND AND COLUMBUS RACES CANCELLED. Both the Air Races at both Cleveland and Columbus have been cancelled due to increase in liability insurance rates. Just as things were really "cooking" for Formula Vees after years of waiting, there are none scheduled for 1986.

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Bill Tomsa S II LTS #43  
8 Brookside Dr. E.  
Apalachin, N.Y. 13732

Bill sends me the following letter:

" I've finally started building my Sonerai II LST! There's still along ways to go, as I have only cut and begun to tack the first fuselage side. But , Boy, am I having fun! After getting through doing the woodwork to fabricate the jig table and four sawhorses to support it (with the help of wife, Gloria) it feels great to be cutting and piecing tubing together. But enough of my progress and now to the point of this letter. Forgive me for I have sinned. After receiving your wonderful newsletter for some time, I allowed my subscription to elapse. But I want to rectify the situation right now by re-subscribing and at the same time I'd like to order the summary of builder's tips from past newsletters..... Also would you please send the catalog of parts and supplies. I would like to get the latest prices and information on the newest parts available ( like the new canopy for the Stretched Sonerai ). Thank you very much for your time and consideration and I'll be waiting patiently by my mail box for the above. "



(This one warmed my heart. I see Bill is a man of many talents. If I ever need an illustrator, I'll know who to call on!)

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## Inventory Clearance Sale of Items not Listed in Supply Catalog

### 6061 T6 Aluminum Tubing

O.D. x Wall	Price/Ft.
1 3/4" x .250	3.00
2" x .083	4.50
2 1/4" x .125	5.90
2 1/2" x .049	2.90
1" x .250	2.30
8" x .083	15.00
5" x .049	14.00
1/2" x .095	2.65
1/2" x .120	1.70
7/8" x .058	.65
1 1/2" x .065	1.80
1/2" x .022	.40
1/2" x 1" x .035	1.10
3/4" x 3/4" x .125	2.25
1 1/2" x 1 1/2" x .125	1.50
1" x 1" x .125	1.10
1" x 2 9/16" x .065	3.00
1/2" x 1/2" x .058	1.50
1" x 1" x .125	.65

### 2024 T3 Aluminum Tubing

O.D. x Wall	Price/Ft.
1" x .065	1.50
1 1/4" x .035	2.25
1 1/4" x .058	1.85
1 1/4" x .065	2.50
3/4" x .065	1.50

### 5052-0 Aluminum Tubing

O.D. x Wall	Price/Ft.
3/4" x .035	.90
5/8" x .049	.75

### 6061 T6 Aluminum Angle

T x W x H	Price/Ft.
3/16" x 2" x 2 1/2"	2.20
1/8" x 1 1/4" x 1 1/4"	2.50
3/16" x 1 1/4" x 1 1/4"	.90
1/4" x 2" x 2"	2.75
1/8" x 2" x 2 1/2"	2.60

### 6061 T6 Aluminum Strip & Bar Stock

T & W	Price/Ft.
1/4" x 2"	1.50
1" x 1 1/8"	3.80
1/2" x 1 1/2"	2.25
1" x 3"	6.00
1/2" x 1 3/4"	3.25
1/8" x 1 1/2"	.90
1/2" x 2"	3.25
1/2" x 1 1/2"	3.00
1/8" x 1 1/4"	1.45
1/8" x 1"	1.10

### 6061 T6 Aluminum Channel

	Price/Ft.
2 3/4" x 5" x 2 3/4"	12.00

### 2024 T3 Aluminum

	Price/Ft.
2 1/2"	30.00

### 2024 T4 Aluminum Strip Stock

T & W	Price/Ft.
1/8" x 2"	1.50

### 2025 T6 Aluminum Strip Stock

W & T	Price/Ft.
1" x .040	1.50

### Chrome-moly Aircraft Steel

#### 4130 Round Tubing, Seamless, Normalized, MIL-T 6736

O.D. x Wall	Price/Ft.
1 3/8" x .049	3.80
2" x .065	5.00
5/8" x .065	2.45
1 1/4" x .065	3.75
1 1/2" x .049	4.20
1 1/2" x .083	4.90
1 1/2" x .120	6.00
1 1/2" x .065	4.55
3/8" x .120	2.30
1 7/8" x .065	4.50
5/8" x 5/8" x .049	4.50
1" x 1/2" x .049	3.00
7/8" x 7/8" x .049	4.50
3/4" x 3/4" x .049	3.20

### AD Solid Rivets

AN 426 AD-3-6	.02 each
AN 426 AD-4-3	.02 each
AN 426 AD-6-16	.07 each
AN 426 AD-5-12	.02 each
AN 470 AD-4-8	.02 each
AN 470 AD-4-9	.05 each
AN 470 AD-5-6	.02 each
AN 470 AD-5-7	.02 each
AN 470 AD-5-8	.02 each
AN 470 AD-5-9	.02 each
AN 470 AD-5-10	.02 each
AN 470 AD-5-11	.02 each
AN 470 AD-5-17	.05 each
AN 470 AD-6-12	.05 each

### White Plans Binders

8 1/2" x 11"; 3/4" capacity	\$2.50
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## Oshkosh Trivia

In looking back to see how many Homebuilts we had here last year, I became intrigued to look back even further. Would you believe me if I told you 13 Sonerai have been present for the past 4 years? It's true! In checking over other facts, Carol came up with the idea of an Oshkosh Trivia Contest. We had great fun thinking up these questions. Answers will be found in the Nov/ Dec Issue. Winner will receive new polo shirt! Send answers to Carol on a Post Card. (Incidentally, none of our prototypes are to be included in these answers.)

1. Which years were the boom years and had the most Sonerai at Oshkosh?
2. What Moni builder has been at Oshkosh for the last four years with his completed Moni?

3. Which year had the largest turn-out for the builder's party?
4. Who brought a family of Sonerai in 1980, 81, & 82?
5. What year saw the most Monerai at Oshkosh and how many were there?
6. What did John get from Betty on his 40th Birthday?
7. What year did EAA take a group photo of all the Sonerai at Oshkosh?
8. What years had the most Monis at the Fly-In?
9. Who had their Monerai here 4 years in a row?
10. Who's Sonerai has attended the most Big O's?

Good Luck! Some answers you will know immediately. Others may have you putting on your "Memory Caps"!!

Hats off to the winner.....

*Betty Monnett*

P.O. Box 2984  
Oshkosh, WI 54903

