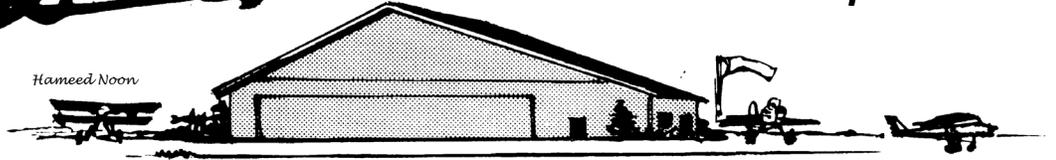


Hameed Noon



**Meetings are the 2nd Saturday of each Month at the Hangar,  
Mason Jewett Field, Breakfast at 0800, Meeting at 0900.**

**Pres: Bill Hanna 627-4360 Vice Pres: Paul Barbour 627-3381 Treas: Gregg Cornell 351-1338  
Sec: Drew Seguin 332-2601 Editor: Charley Downey 349-3903 Graphics Editor: Sue Downey**

## Page 55

**HERE COME 'DA JUDGE** Thanks to an interesting presentation by Rick Duckworth, we now have a better understanding and appreciation of how the show planes at AirVenture are selected and evaluated. The amount of aircraft knowledge the judges must have and the level of detail that discriminates a winning aircraft from the rest is amazing. Rick only hinted at the number of hours and miles the judges must invest at the Convention to do their job, but it obviously entails a lot of volunteer work. Now when I'm at Oshkosh, I'll have a lot more appreciation for the little checkmarks on the prop cards that indicate the judges have been there. Also, when (if) I ever get my airplane completed, I will be sure to park it where Rick can look it over – I'm sure he'd appreciate a good laugh.

**THE POBEREZNY STORY** I recently received a copy of Paul Poberezny's book, "The Story Begins ..." A couple of long time EAA members, Jack Mark and Rudy Frasca, arranged for copies of the book to be donated to Chapter libraries. It is a good biographical look at the man who founded our organization and what makes him tick. It will be in the Chapter library for your reading pleasure.

**YOU WANNA BE A TEST PILOT?** This month's program will put you in the test pilot's seat (at least from the classroom perspective). Terry Lutz, our Chapter Flight Advisor, will provide another one of his talks on matters aeronautical – this time we'll learn about "Flight Testing in the first 25 hours – Learning about your homebuilt one hour at a time." For those who do not plan to ever build their own airplane, the

program should still be interesting and meaningful. There's no reason one can't take their favorite Cessna or Piper out and fly the same kind of test procedures that a homebuilder will need to do. It could be an opportunity to sharpen your skill (how precisely can you really fly) and learn more about your aircraft. Not a builder, not a pilot?? . . . has Terry ever let us down yet? There are certain to be some neat airplane and flying stories buried in his talk.

**TEAM #2 . . . YOUR TURN IS COMING** The May program will be another provided by one of our Program Teams. The folks responsible for our education and enjoyment are:

Kevin Haase	Ed Zdybel	David James
Mark Travis	Jim Spry	Ron Mudge
Lloyd Brown	Brent Andrews	Adam Fogg

With that many brains on tap, I'm sure they will come up with a good program for us.

**HIGH ON KIDS** Our Young Eagles Coordinators, Mike Arntz and Mark Jacob, have scheduled the first Young Eagles for May 12th. That's the same day as our regular Chapter meeting (with its program furnished by the Team above). The plan is for the rally to start after the regular Chapter meeting and run through the afternoon. Mark your calendars to spend the entire day at the Chapter. M&M are VERY aggressive in their marketing of the Young Eagles program and we expect to get a good turnout of kids. Pilots, ground crew, and general helpers will be needed to make the day a success. Despite our best efforts to make



### Board of Directors' Meeting

Wednesday, April 11  
7:30 pm at Hangar

### Chapter 55 Meeting

Saturday, April 14  
8-9:30 am Breakfast  
9:30 am Chapter Meeting



these rallies a serious affair with lots of hard work, the volunteers invariably end up having fun. Don't miss your share!

**FOR SALE** After a relatively brief building period (about 7 years), the MiniMax is now officially offered for sale. It will be sold in "as is" condition with a little trim work, final assembly and control hookups remaining to be done. Don Frank has generously prepared a sales agreement document to assure we have a good, legal sale. All we need now is someone with \$7500 or a "best offer".

#### BOARD AGENDA – 4/11/01

- MAD plan
- Balloon Fest planning
- Roof repair plan
- Young Eagle update
- GLFI update

*Bill Hanna, President* &

## EAA Board of Directors Meeting

### Board of Directors Meeting - March 7, 2001

In Attendance: M. Arntz, T. Botsford, G. Cornell, B. Hanna, G. Hover, M. Jacob, E. Lutz, J. Pirch, D. Seguin, Leah Volker. ➔ Minutes from previous meeting were approved. ➔ Treasurer's report was approved. ➔ Mike Arntz and Mark Jacob reviewed Young Eagles plans. We need pilots and helpers for all events. Availability of rental planes may be a problem ➔ Mason Balloon festival sponsors would welcome our participation. Our role is yet to be determined. Opportunities include Breakfast, Booth, and Ultralights. ➔ Mason Aviation Day is set for Sunday only, September 16, 2001. It will be a basic fly-in breakfast. Joe Pirch volunteered to serve as program chairman. ➔ The Board reviewed chapter goals for 2001. Included is the sale of the Mini-Max. Don Frank has agreed to prepare an agreement to accompany the sale. Advertising options include posting on the Internet ➔ Great Lakes Fly In is on with no new issues for the Board to consider. ➔ The roof of the Chapter needs repair (like a bad habit, this one is hard to shake). Cost of materials for repairs are estimated at four to five thousand dollars. This will be a topic for discussion in the membership meeting.

## EAA Chapter 55 Business Meeting

### General Membership Meeting - March 10, 2001

59 members in attendance, 1 guest – Clay Braden ➔ Minutes from the February 10, 2001 membership meeting were approved as published ➔ Greg Cornell provided the Treasurer's report, with six new members confirmed and paid; Treasurer's report approved ➔ President Hanna

distributed a copy of the letter of support for the LCC Aviation Program written by him on behalf of the Chapter to LCC Administration; Chapter to continue the Newberry Scholarship contingent upon continuation of the LCC program ➔ Bill Hanna announced that Chapter Director Leah Voelker has received a coveted appointment to a Michigan National Air Guard pilot training position with eventual assignment to put her in command of a C-130! ➔ Young Eagles Co-Chairmen, Mark Jacobs and Mike Arntz distributed awards to members who flew Young Eagles in 2000; reviewed plans for events in 2001 and tax advantages to volunteers; need to sign up volunteer pilots ASAP! ➔ President Hanna discussed the need to repair the Chapter facility roof and proposed the alternative of member work parties to accomplish the task in lieu of other fund raising activity; more specific plans to follow ➔ Joe Pirch outlined plans for a Chapter gathering point at Airventure 2001; current plans include a location in Camp Scholler for the first weekend of the convention; sign-up sheets for those interested in a flight briefing session and other activities will be posted on the Chapter Bulletin Board ➔ Charley Downey advised that the Chapter Newsletter online format would be revised to reduce the "loading time" required by recent editions; If you have suggestions, please contact Charley ➔ President Hanna stated that Chapter representatives Ernie Lutz and Greg Hover were maintaining contact with the Mason Balloon Fest committee; Request was received for Chapter ultralight fly-ins; More information to be obtained at the next planning meeting scheduled for 4/10/01 ➔ President Hanna provided update for the GLFI scheduled for 6/23 and 6/24/01 ➔ Meeting adjourned for the scheduled program speaker: Rick Duckworth "What EAA Judges Are Looking For In Showplanes"

*Drew Seguin, Secretary* &

## Notes from Cape Juby

### By Terry L. Lutz, Chapter 55 Flight Advisor

The Cold War has been over for several years now, but during the time we were trading jabs with the Soviets, it could be dangerous business. At one point, the U.S. had some portion of its strategic fleet airborne 24 hours a day, carrying live nuclear weapons. That was dangerous all by itself, but on the bright side, the boys from SAC sure managed to get a lot of flying time! While stationed in Germany, I heard stories about what it was like in the 1950s, just after the Korean War ended. U.S. pilots flying the F-86 from bases in West German and Mig pilots from bases in East Germany would roar up and down the political border trying to figure out what the other guy was doing.

Do that about twice, and you end up thinking “how good is that guy in the Mig?” And he’s thinking “how good is that guy in the Sabre jet?” So it was not unusual to end up in a dogfight near the border until somebody ran low on gas, and whereupon everyone headed home, to live and fly another day. No doubt some Soviet General found out about this good deal and told his fighter pilots in no uncertain terms, “If any American airplane crosses the border, shoot it down. Or, you will be.....(fill in the blank).” An American fighter was subsequently shot down inside East Germany, and the Cold War turned ugly.

A U.S. RB-47 on a classified reconnaissance mission was shot down northeast of Leningrad. The crew was McComb and Olmstead. They were captured and put to the test by the Soviet intelligence machine, and their story would later become the textbook for U.S. pilots, should they suffer a similar fate. The East Germans shot down a C-130 that strayed off one of three air corridors leading into Berlin. They even shot down a gas balloon that had left France as a part of the famed Gordon Bennett Balloon Race. And we can’t forget Francis Gary Powers who was shot down over the Soviet Union in a U-2.

I flew F-4s and later F-16s for an Air Defense unit based at Niagara Falls, NY, during the later stages of the cold war. The mission at that time, as it is today, was to intercept any Soviet military airplanes operating where they could gather intelligence about the U.S. Soviet Bear aircraft (a rather elegant swept wing turboprop airplane with counter rotating propellers) would fly southwest, past Iceland, where U.S. Air Defense units based in Iceland intercepted it. The Soviets were usually on their way to Cuba and were conducting surveillance on the U.S. submarine fleet, among other things. When these airplanes approached the U.S. mainland, airplanes from our alert detachment in Charleston, South Carolina, would intercept them 300-500 miles off the coast.

The objective was to identify the airplane by type and photograph any odd shaped antennas or radomes installed, as well as what we referred to as the “door number.” This was usually the aircraft number painted on the nose gear door, and it was a little tricky to get because you were right beneath the Bear, looking straight up. It was not unusual to get the pictures back and find a nice shot of a Soviet airman taking a picture of you with his camera. Spy versus Spy. But that was as dangerous as it ever got in international airspace.

The case of the P-3 involved in a mid-air collision with a Chinese fighter is actually more than a step back to Cold War thinking. One of the characteristics of Chinese culture is that one’s stature is measured by the size of one’s biggest enemy. The collision and subsequent emergency landing at one of China’s most sensitive military installations has raised China’s stature by making the U.S.

the “enemy” in this situation. They will want to keep it that way for as long as the propaganda stream continues.

The loss of the Chinese pilot is regrettable, but he may have been a victim of his own attempt at some new technique to disrupt the U.S. flight. As for the U.S. role in this incident, we can give the Navy pilot a lot of credit for landing a crippled airplane safely, but the Navy gets low marks for exposing 24 people in such a sensitive role. The intelligence community has always kept things small, and the number 24 is way out of the box.

Back here, in the relative safety of central Michigan, I got to fly Roy Thelen’s RV-8 up at the Tripp Creek Airport. Not only was it a terrific flying airplane, Roy has done an excellent job of integrating systems that will work for him and keep him safe in the process. Small things, like installing a guard on the fuel selector, so you have to consciously release the guard to put the fuel selector in the off position.

Roy elected to use a single fuel gauge, but of course the airplane has two tanks, one in each wing. So he installed small green lights, one on each side of the fuel gauge, that illuminate and tell you at a glance which tank you are reading. Now, you ask, what if the fuel selector is on the other tank? This is a good point. You could be looking at the gauge, which is switched to the other tank, and be looking at a gauge that isn’t going down, green light or no green light. Man, this airplane gets good fuel economy! Roy is trying to figure out a way to make the fuel gauge read what’s in the tank that the fuel selector is selected to. Any ideas?

After shooting landings at Schiffer Acres and Alma International, Robert Parker told me that there were at least a dozen airstrips within 10 miles of Tripp Creek Airport. In the summer, there is some sort of activity at all of them. It’s good to know that aviation is alive and well, just to the north of us.

My real purpose in flying Roy’s RV-8 was to ramp up my RV flying skills in preparation for flying Lou Farhood’s RV-8, which is getting the final touches prior to the FAA inspection. I was over helping Lou the other day when it hit me that building an airplane is the sum of at least a billion tiny tasks. Some are very repetitive, like drilling and dimpling, and of course, sanding, but others try your mind and skills, like putting the final screw in a panel and realizing that the nut plate is bad! All of this makes flying the airplane look like a walk in park. I have to take my hat off to all homebuilders. They are a unique breed and their gaze back at the airplane they built reflects the sum of a thousand tales of courage and perseverance. Sort of like climbing Mt. Everest with your bare hands.

It looks like the weather has finally turned decent for flying almost any flying machine. Remember to knock the rust off

slowly but surely, and as always, give your fellow aviator some help when you can.

[Terry's complete evaluation of Roy Thelen's RV-8 follows – ed.]

## **Aircraft Evaluation Van's RV-8 N17RT**

**INTRODUCTION** - A limited familiarization flight and flight evaluation was conducted on March 27th, 2001 of RV-8 N17RT. The airplane is a low-wing, tandem seat sport aircraft with conventional landing gear and sliding canopy. A modified Lycoming O-320 engine, producing 150+ horsepower with a fixed pitch propeller, powers the airplane. It was built by Mr. Roy Thelen of Fowler, MI. The familiarization was flown with Mr. Robert Parker in the rear seat, and the flight evaluation was flown solo from the front seat. Flights were operated out of Tripp Creek Airport, a 2400' x 75' grass runway.

**FAMILIARIZATION FLIGHT** – Cockpit entry is fairly easy from the left side. You can step on the seat to enter, or put your foot in the right side foot depression used by the rear seat pilot. There is plenty of room to sit down and extend your legs to the rudder pedals without bumping knees on the bottom of the instrument panel. Rudder pedals are adjustable by pulling a T-handle and pushing the pedals back until the next adjustment hole is reached. It would be an enhancement to have a small crank to turn a worm gear and provide infinite rudder pedal positions, similar to the rudder trim in a Piper Cherokee. Looking under the panel, there appeared to be plenty of room for someone with long legs to move the rudder pedals forward. The rudder pedals sit fairly vertical, and little pedal rotation is required to activate brakes.

Engine start is mostly straightforward. This airplane has two differences from production airplanes, that being an alternator field switch, and a remote primer. Master ON, field switch ON, fuel pump ON, then hit the primer switch. The primer switch activates a remote solenoid that provides fuel pressure from the fuel pump into the primer lines. You can hear a difference in tone from the fuel pump when the primer is activated. Otherwise, there is no way to tell that it is operating. With the fuel pump on and about one long second of prime, the engine started normally.

On grass, about 1500 rpm was required to start rolling, and on moist grass, 1200-1400 rpm kept the airplane moving. There is enough forward visibility that S-turns are required infrequently, used mostly to check just before making turns. Tail wheel steering is just right on the ground, and a fairly tight turn, even on moist grass, was easy to do with rudder and just a touch of brake. Engine run-up was normal, but a potential problem showed up when the mixture control was mistaken (grabbed without looking)

for the carb heat control. On the control quadrant, there are 3 knobs, throttle, mixture, and carb heat. If you don't look at those lower two knobs and grab the correct one, it gets quiet in a hurry. This is OK on the ground, but might cause a problem in the air. Relocating the mixture, or putting a different shaped knob on the mixture might be a good improvement.

For takeoff, 10 degrees flaps are used. They are extended electrically, and can be activated by a switch on the instrument panel, or by switches on the top of the control stick. This function is selectable with a switch on the instrument panel. There is also a switch on the rear instrument panel for the rear seat pilot to use in an instructor role. The flap position indicator is on the upper right side of the instrument panel, and is easy to find with a quick glance.

In the takeoff position, the top of the prop spinner is right on the horizon. This is a useful reference for landing as well. On the first takeoff, the nose was lowered slightly from this position, and the airplane flew off the ground between 70 and 80 mph. Directional control was positive throughout the roll, with forces slightly higher on the rudder than on other airplanes of similar weight and power. Flaps are retracted right after takeoff, and climb was 100 mph, which is the maximum speed with flaps extended. During climb, the nose is slightly above the horizon, so some turns are required for straight-ahead climbs. A small amount of right rudder is required during climb, noted on the ball of the Russian compass, and turn coordinator.

The Russian compass is extremely accurate and stable in level flight. However, it is stationary in turns, and the marks in the instrument do not correlate to any reference that might be used for instrument flight. As such, it should be considered a VFR instrument only. It appears to be as accurate as a vertical card compass and would be very useful to measure drift angle during GPS navigation.

In level flight, it takes several seconds for the airplane to accelerate to cruise speed. This is because it gains 80 mph as it accelerates, and because the engine – propeller combination is nicely matched to the airplane. There is no tendency for the engine to overspeed as the airplane accelerates with the throttle still near wide open. During cruise at about 180 mph, the nose is a good fist below the horizon, and visibility is as good as any fighter pilot would want.

In cruise, passing 160 – 170 mph, the airplane becomes mildly left wing heavy, which can't be trimmed out. Other than that, control forces are nicely balanced throughout the speed range, and do not appear to get significantly heavier as speed increases. This is due mainly to both the mass and the aerodynamic balances designed into the airplane. The nose is trimmed up and down with a vernier control on the upper left portion of the instrument panel. There was no

marking on the control to indicate which direction to move the knob for nose down and nose up. So for a first flight, you have to find the correct direction by sampling. From memory, nose down was CW, nose up CCW. It is possible to use the center knob and move the control in and out rapidly, but this moves the trim dangerously fast, and forces could become too large too fast.

The first landing was made at Schiffer Acres, a wide, 3400' long grass runway. First of all, the airplane does not slow down easily, particularly if you keep the nose in the cruise attitude. The pilot has to consciously reduce power and raise the nose, just to get the airplane down to flap speed. Mr. Parker recommended that flaps be fully extended on the downwind and the airplane trimmed for 80 mph. This was good combination, and adequate trim was available for hands off flying with 40 degrees flaps at 80 mph. It was really amazing that there is no apparent pitch change as flaps are extended.

Traffic patterns can be flown power on, or with a more nose down attitude, nearly power off. The power off pattern is bit steeper than a normal 3 degree glide slope, but it leaves the airplane in a better energy state should the engine fail on final. On a 3-degree glide slope, the power required to fly final is 1200-1400 rpm. There is something interesting going on here that bears additional flight testing, because with power on, the airplane tends to be a "back side" airplane, but with power off, it becomes more "front side." Speeds are the same, only power is different.

Traffic patterns are very easy and visibility is amazing throughout. The best landing technique is to get down close to the runway, then flare. If you flare a little early, you will land long and lose sight of the runway earlier and touch down tail wheel first. If you are sinking a bit at touchdown, the spring gear will give you a bounce, but the airplane does not porpoise if you keep the stick fixed. Roll out without brakes is very easy, and as noted before, ground handling is also very easy.

On the next and subsequent takeoffs, it became easier to lower the nose on the takeoff roll, as confidence in both pitch control and knowledge of pitch force required was gained. There is no tendency for the nose to go down more than you want it to as you lower the nose for takeoff. It goes where you put it.

The next 4 landings were done on the hard surface at the Alma Airport. On the way there, we did some aileron rolls. Move the stick, and the airplane does average rolls. Coordinating with a little rudder and relaxing a little on the stick, Mr. Parker demonstrated some beautiful rolls. One thing noted, which has been seen on other RV designs, and that there is a slight aileron buffet at full aileron deflection during rolls. Apparently some airplanes do this and others do not, and the exact reason is unclear.

Landings on hard surface are not much different than on grass, except that the effect of the spring gear is felt more, and if you touch the brakes while using rudder for directional control, some fancy footwork is required. Because the rudder pedals stand fairly straight up, it is a little easier to get brake as you are trying for pure rudder. Perhaps a little more angle on the rudder pedals would be useful.

The airplane is rather good in a crosswind, as both left and right crosswind landings were tried in a 5-knot crosswind. Very little wing low is required on final, or in the flare. The airplane is easy to decrab at touchdown, and directional control following a 3-point touchdown is very easy. Following landings on the hard surface at Alma, we returned to Tripp Creek for a full stop landing. On the narrow runway at Tripp Creek, it is more important to fly the steeper approach profile and to delay the flare until you are fairly close to the runway. Directional control is tight and positive, which is essential on this runway.

EVALUATION FLIGHT – Flown solo, the airplane is just a bit more nimble than with two people. It is refreshing to takeoff and climb out, and in the first turn out of traffic look back and find yourself at 1500 feet above the ground, and just off the end of the runway!! A few basic performance checks were made as follows:

2500 rpm = 181 mph	climb at 100 mph, WOT from 2000' to 3000'
2350 rpm = 170 mph	42 seconds (1430 fpm)
2000 rpm = 142 mph	
1750 rpm = 116 mph	descent at 80 mph, idle power, 40 degrees flaps
1500 rpm = 95 mph	2500' to 1500' 1min, 7 secs (900 fpm)

The airplane is equipped with a Grand Rapids Technologies engine analyzer, which includes a digital display of engine rpm and other engine parameters. This instrument is a little hard to use as a primary display. The pilot can't easily set engine rpm while dealing with the lag in the instrument, and without spending a little more time than necessary looking at it. Also, there were a few nuisance warnings from the instrument that were not easily explained, but could be cleared if necessary. A more conventional display might be more useful to make setting engine rpm a little easier, but the analyzer itself should be retained because the information it provides is very useful.

A series of stalls were flown clean, flaps 20 degrees, and flaps 40 degrees, all with idle power. Stall characteristics are positive and predictable. At the stall, there is mild but easily discernable buffet about 5 mph before the stall, which occurs around 50 mph. There were no differences in buffet with flap extension. At the stall, there is no

tendency for a wing to drop, for the airplane to exhibit a loss of directional stability, or for the nose to drop rapidly. Recovery is easy with just a little forward stick and the nose no lower than the horizon. If the stick is brought back immediately again to initiate a secondary stall, the same characteristics are seen, with no instabilities noted. Very nice characteristics.

After flying the airplane for a couple of hours, you want to grab the stick near the top, rather than around the grip itself. As you gain confidence with the flight controls, you want to hold the stick a little higher. There is a nice grip on this stick, and if the stick were a little taller, it would fit perfectly in your hand for all normal flight maneuvers, while retaining the ability to use all the switches on the stick.

Two landings were made at Schiffer Acres. The first pattern was flown at 80 mph with full flaps. The first thing noticed was that without the rear seat occupant, the airplane can't be fully trimmed at approach speed. This results in having to hold some aft stick to maintain airspeed and glide path, but the force required is small and not objectionable. Flare and touchdown is the same, but at the lighter weight, there is more tendency to skip, or bounce on landing, but there is no porpoising tendency. On the subsequent takeoffs, the tail will come up almost immediately on power up, with excellent control throughout.

The second approach to Schiffer Acres and the final approach to Tripp Creek were flown at 75 mph. The airplane is equally as stable at this speed with one person, and does not look more "back side", or tend to sink on final, particularly if the approach is flown a little steep. At this speed, the flare, and runway used in the flare is about the same as with two people at 80 mph. Without additional landings to try different techniques, there may be additional stick techniques after touchdown to avoid skipping. However, with a moist grass runway, the primary consideration was keeping the airplane light on the wheels during rollout. At 75 mph, the total runway used was about 1000 feet, and it took just a touch of brake to make the midfield turnoff on Tripp Creek's 2400' runway.

SUMMARY – If this airplane doesn't put a smile on your face, nothing will. It is an excellent design that looks like it wants to leap off the ground from right where it sits. Roy Thelen has done a great job of both building the airplane and thinking through the design of its systems. Of note are the safety latch on the OFF position for the fuel valve, a separate fuel sump at the fuel system low point, and lights to indicated the fuel tank selected for the single fuel gauge. Having options for the flap switches is also a nice feature. For fit, finish, and flyability, this is an excellent example of the art of homebuilding. My personal thanks to Roy Thelen for letting me ramp up my flying skills in his airplane, and to Robert Parker for his patient guidance from the back seat.