

Experimental Aircraft Association Chapter 55 June 2003

Hameed Noon

**Meetings are the 2nd Saturday of each Month at the Hangar,
Mason Jewett Field, Breakfast at 0800, Meeting at 0930.**

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Climb and Maintain Flight Level 55

It is with a heavy heart I start this month's letter. At the last meeting I was informed of Mavis Rowell's passing, she was 82. I spent several hours chatting with Mavis and Ivan at their home on many occasions. She was a joy to be around with her everlasting smile, her warm friendly personality and he could talk airplanes with the best of them. Mavis was a pilot and flew the C-150 that Drew Seguin's son, Elliott flies. So when you see the red and white C-150 flying - think of Mavis, I will.



MAVIS & IVAN AT THE CHAPTER CHRISTMAS PARTY

We have two new members who joined Chapter 55 last month, so I would like to take the opportunity to welcome Rick Farrell and Ray Pruett. Rick is an ultra light pilot who flies a Loehle Parasol, he also rides a Harley. Ray Pruett has jumped right in and has

been instrumental in putting me in touch with the right people to get some fly overs of hopefully, F-16's and static displays of an A-10 and C-130. I would like to share part of an Email from Dan. It pretty well sums up what this chapter is about.

"I just wanted to take a moment to thank everyone for a great first meeting with the chapter. Everyone was extremely personable and interesting to talk to. I was impressed by the extent and diversity of the experience and knowledge represented by the chapter's membership, as well as the facilities and programs. I particularly wish to thank Dave and Debbie Groh for the stick time in their Stearman, and Jim Palmer for his time and patience talking to me about my Sonerai. Without a doubt, joining Chapter 55 is one of the best decisions I've made. See you all at the next meeting, when I intend to bring in another member."

Letters and statements like this make me proud to part of this organization.

On to the Event, it is shaping up. The B-17 and C-47 are a done deal. I have been contacted by FLAA, as you know they are the group of pilots who flew flags from all fifty states and Puerto Rico to New York City past Ground Zero as a tribute to the 911 disaster. Some of these Pilots and their aircraft will be attending. Along with what it has been mentioned the Army Reserve will have a large display for us, courtesy of Colonel Fobbs. Del Johnson is putting together seminars to run during the weekend. There will be talks on WW 1 and WW 2, Vietnam, the Gulf War and Iraqi freedom. An AME has volunteered to talk about your physicals. Posters have been sent to many of the airports for them to be displayed.

Ernie Lutz approached Diane Byrum about having Governor Granholm attend our Event. I received a call and a copy of the

letter that Diane Byrum which she hand delivered to the Governor. I also sent a personal invitation to the Governor and with the efforts by Renee Arntz, the Governor should be well aware of our event.

I am getting calls and E-mails almost every day about the Centennial of Flight Celebration in August. Weather permitting we expect a very large turnout, so come on get on board. Let's make this the biggest Aviation event in Michigan this year. The planning committee meets on the third Saturday of the month at 9:00 A.M. and I'll bring the doughnuts.

Michael Arntz
President, EAA Chapter 55

ATTENTION MEMBERS

A company has provided Chapter 55 with a CD rom called KITLOG which is a builder's log for home-built aircraft. Its retail value is \$39.95. It will be a doorprize at the membership meeting to be given away this Saturday.

Teams

JUNE (contact Renee Arntz, 694-4601)

James Andrews	Pete Chestnut
Richard Bacon	Jim Spry
Barb Bacon	Jim Doerr
Steve Ramey	Dick Wilke
Russ Hilding	

July (contact ?)

George Moore	Paul Barbous
Bill Bezdek	Charles Brown
Bill DeGrow	Jack Toman
Lou Farhood	Jim McFadden

EAA Board of Directors Meeting

Board of Directors Meeting – May 7, 2003

The meeting was called to order at 7:05 on May 7, 2003. → Terry Fobbs of the Michigan National Guard discussed the Guard's plans to participate in the Centennial of Flight event. → Officers of Chapter 55 signed the new By-Laws which will now be forwarded to Headquarters. → Gary Long has located a 27" TV with DVD and VCR which we can buy for \$400.00. Motion was made and approved to authorize this purchase. → We need to install horizontal blinds for the meeting room. Debbie Groh will get sizes, specifications, and prices. → Centennial of Flight Celebration. We are talking with CRAA for permission to have booths for interested aviation related businesses around the Blue Hangar. Mike is sending email messages to companies who potentially have interest in a booth at the event. Dave Groh sent 100 flyers to warbird owners announcing the event. There will be signup sheets for the various work details at the Saturday Chapter meeting. The New Standard airplane is not available but we expect to have a Stearman, N3N, and/or an AT6 available for rides. There is a local scout troop that wants to camp on the field.

Bill P. will coordinate with them. Michigan State mounted police are interested in participating in the event. We are in contact with the CAP for participation as well. → Bill Purosky volunteered to paint the food preparation area. The downspouts need to be replaced on the hangar. Gary Long will get pricing on the work. → There is another public meeting on the North/South sod runway to be held at the Mason Middle School on June 5 at 7:00. This will be a presentation of the proposal by the CRAA board followed by Q & A on the proposal only. We need all the support we can get from pilots. → LCC is having a breakfast to honor scholarship recipients, including the Newberry Scholarship. Bill P. will be attending on behalf of Chapter 55. → The Great Lakes Regional Fly-In will be a one day event on June 21. See Bill P. For more detail or to volunteer. → The meeting was adjourned at 8:55

EAA Chapter 55 Business Meeting

Membership Meeting – May 10, 2003

The meeting was called to order at 9:35 am. → There were 53 members and guests in attendance. → Minutes from the previous meeting were approved. → The Treasurer's report was approved. → Young Eagles. Remember that we are having our first Young Eagles event of the season on June 14. We need volunteers, both pilots and ground crew. See Renee Arntz for details. There is also a rally on July 12 → The new TV procured by Gary Long was installed for the meeting. → Mike Arntz asked for someone to volunteer to organize a fly-market for the Centennial of Flight event. So far no takers. → A motion was made and approved to go ahead and replace the gutters and downspouts on the Hangar. → Mike A. went over some of the plans for the Centennial of Flight Celebration, including plans for displays by the Army and National Guard. There was discussion but no resolution on making shirts for the chapter members to wear at the event. → Bill Purosky updated the meeting on his participation in the Scholarship awards breakfast at LCC. We gave a scholarship to Eric Powers who is working on his A&P license. We have 5 applications this year. The fund is down to \$500. We need to consider contributing as a chapter. Note that member can contribute individually and it's tax deductible. → We need three volunteers for the Great Lakes Regional Fly-in to be held on June 21 at Livingston County. Please see Bill Purosky for details. → There will be another planning session for the Centennial of Flight Celebration on May 17 at the Chapter hangar. → **There will be another town meeting on the North/South runway at the Mason Middle School at 7:00 PM on Thursday, June 5. Please plan to attend to support safety at Mason-Jewett field.** → The meeting was adjourned at 10:25. → David James gave a slide show and presentation on his experiences flying in Vietnam.

Notes from Cape Juby

By Terry L. Lutz, Chapter 55 Flight Advisor

According to the June issue of Sport Aviation, the Young Eagles program has to fly 105,150 young eagles to reach the goal of 1,000,000 by December 17th. It is an ambitious goal. The program will have to average 15,000 young eagles per month to hit the target. As I have said before in these notes that the important thing is to fly all those kids *safely*. Nobody will remember if EAAers flew 999,102 or 1,000,102, but they will

remember if there was an accident in the final few months of flying.

Consider that May 29th, 2003 marked the 50th anniversary of Sir Edmund Hillary and Tenzig Norgay becoming the first men to stand on top of Mr. Everest. There was a commemorative gathering of climbers at base camp that day, and the thing they will remember as much as the anniversary is that a helicopter crash marred the occasion, and that there were fatalities. So be sure that you, your machine, and your flight operations are all tweaked up for a 100% safe operation.

Early in May, I attended the Flight Test Safety Workshop of the Society of Experimental Test Pilots. It was held in the Air Force Museum, and for one evening, we had the whole place to ourselves. Several cockpits were open for viewing.

Lt Gen Dick Reynolds, who is now in charge of all development and logistics programs for the Air Force, gave the first paper. Dick was in the left seat when the no. 2 B-1A was lost on a test flight at Edwards AFB. In his presentation, Gen Reynolds brought up several points that are directly applicable to homebuilt flight testing. But before I get into that, here's what happened.

In the right seat with Dick was civilian test pilot Tom Benefield, who had more B-1 test experience than any other pilot. At the time, Dick had a scant 18 hours in the airplane. They were flying an aggressive test card, with lots of test points in areas such as airspeed verification, aft cg, fwd cg, and weapons deliveries. The B-1A, like the Concorde and other airplanes with unusual wing/tail combinations, uses a system of fuel pumps and manifolds to maintain the proper cg. This could be done manually, or automatically, and on this mission, the switch was in manual. There was a warning light at the very bottom of the caution panel that warned of an aft cg limit. As is common on test missions, various cautions would be displayed, many of which were simply an annoyance.

They had completed a test point with the wings swept fully aft, and were transitioning to a point requiring that the wings be swept fully forward. The aft cg limit caution light appeared, and the crew acknowledged the caution. In the mission control room, the engineers took a break and held a short meeting. With nobody watching the traces, and the crew waiting for the airplane to reconfigure, the wings came forward with the cg still extremely far aft. The airplane ran out of pitch stability, pitched up to 70 degrees nose high, and went out of control. Tom Benefield jumped on the controls, but Dick sensed that at about 4000' gal, a recovery was impossible, and initiated capsule ejection. The separation was successful, but there was a system malfunction in the parachute reefing lines and they hit the ground with the nose of the capsule down and to the right. Tom Benefield lost his life at impact.

So what do we learn? How is it applicable to our own test programs? Here are some points to consider:

1. Don't try to do too much on any given flight. Plan the test points to transition smoothly from one to another.
2. Expect to get some warnings from your systems, but don't get "warning fatigue". If something isn't right, make sure

you know why. If you aren't sure, get it back on the ground.

3. If you have a ground team, or a chase airplane, keep them informed on what you see, and what you are doing. They are your support team, and offer a great safety net.
4. It's not always the high risk testing that gets you into trouble. Things like stalls and engine tests are generally well analyzed and planned for. Look for hidden risk in the more straightforward tests.

Some other highlights of the workshop included several other eye-opening lessons learned. On the first flight of the XB-70, they lost their radios, the gear would not retract, and they blew a tire on landing resulting in a dandy wheel fire. This was told first person by Joe Cotton, who incidentally was a pilot during WWII and was unlucky enough to be shot down on his first mission (over Italy) and became a POW.

Fast forward to the B-2 first flight. They lost their radios, too! The airplane is designed to switch automatically from the upper antenna to the lower antenna when the airplane becomes airborne. Except in this case, the lower antenna had not yet been installed. It took awhile, but the crew figured out a way to switch the antenna back again.

Phil Oestricher told about the unplanned first flight the YF-16. The test point was a high speed taxi test to 120 knots, with nose wheel lift off and some lateral stick inputs. The problem was that the engine nozzle control was set up to keep the nozzle open if more than 3500 lbs weight on wheels was sensed by the landing gear. As the airplane accelerated with the nose in the air, the airplane became light on the wheels, the nozzle closed, and Phil had a lot more thrust than planned. When the Light Weight Fighter prototype became airborne, he poured the rest of the coals to it, and headed around the patch. Lessons learned: Develop curious attitudes and talk to as many people as you can. Mentally rehearse the taxi tests and first flight many times.

Finally, at one of the luncheons, we heard Tom Griffin speak about his experience as a Doolittle Raider. Tom was navigator on the no. 9 B-25, "Whirling Dervish", when it left the deck of the Hornet. Each airplane took off with the same length of deck available because there was only 6 feet from the wingtip to the conn, and 6 feet from the left wheel to the edge of the deck. There was no effort to fly in formation. Each airplane took off, made a wide turn and came back over and directly in line with the carrier to check their compass with the compass on the ship. From there on it was wave top flying until just prior to dropping their bombs. Tom's crew thought that they had nailed the Kawasaki tank works. But the Japanese carefully documented the attack, and the crew found out after the war that they had struck the Tokyo Gas and Electric Company right next door.

Because they had taken off 250 miles further out than planned, they didn't know if they would have the fuel to make China. Unexpected tailwinds over the China Sea allowed them to make landfall, but a storm obscured the ground and they had to bail out at 10,000 feet because they knew there was high terrain around. The experiences of the Doolittle Raiders are chronicled in a new book, due out anytime now, titled "First Heroes".

Now that the good flying weather is here, and the rust is knocked off, get out the real high gloss polish and raise your flying and building skills to the next level. Fly safely, and as always, don't forget to help your fellow pilot when the help is needed.

A Review of Panel Planner Version 2.9 Mike Weed, Chapter 180

Panel Planner is a software package that allows you to design an airplane instrument panel on your computer. When complete, you can print out a pattern or export the design to a computer operated mill or punch. This was very intriguing to me since it would allow me to explore many layout variations before actually cutting metal. After contemplating purchasing the \$190 software for a few months, I decided to go for it.

Let me first say that in my day job, I play an electrical engineer, so I'm familiar with a few CAD packages, but mechanical design is not my forte. I could do the panel layout in AutoCAD, but I figured that since Panel Planner already had all the instrument panels and instrument patterns in its database, I could "buy" a lot of time.

After downloading the software (don't even think about this unless you have a high speed connection. Order the CD), I installed it and fired it up. My first impression was that the pull-down menus were pretty sparse. I plopped some instruments and radios on a panel and started playing with them. The first thing I noticed was that I couldn't find the commands to give me some placement crosshairs or to zoom in and out. Since the demo screen shot on the Panel Planner website showed these, I knew they must be there somewhere. No problem, I thought – I'll just look in the Help Section. Clicking on Help only produces the phone number of the Help Desk. So much for the online help! The other thing I discovered was that the images of the instruments were not that great and some, like the Garmin handheld GPS, didn't look properly proportioned. Also, some of the newer EFIS panels and some basic stuff (like Van's plastic ventilator) were not in the database and finding particular instruments was rather tedious. A call to the Panel Planner phone Help Desk revealed that there are some keyboard comments (control-V, etc.) that bring up some of the features I was looking for. These are shown in the manual. Unfortunately, the manual is not in the set of download files, so they had to snailmail one to me. After receiving the manual, I messed around some more and decided to try printing and exporting the cutting pattern. Since Panel Planner doesn't use the standard Windows printer interface, it was not as straightforward as I would have liked. I also planned to print the panel full size on a 36" roll-feed inkjet plotter at work, and it was not obvious how to do this. I guess they just figure everyone is going to tape together a bunch of smaller sheets, YECH! I did print out a small-scale version of the cutting pattern and something immediately jumped out at me. The cutout for my intercom was wrong. It should be a series of staggered holes, and Panel Planner just had one rectangular hole. Since part of the reason for spending the \$190 was to save myself the time of researching all the cutout details, that was a showstopper and I decided to take them up on their satisfaction guarantee. They weren't very excited about refunding my money, but after I

pointed out some of the issues I had, they said they would. So, I guess I'll just go ahead and do the layout in AutoCAD. As for the playing around with layouts, there is a very nice, pretty complete, easy-to-use, FREE package on the Internet called "Experimental Panel Builder"

<http://www.epanelbuilder.com/>)

This package is online only and doesn't export or let you do accurate positional work, but it is great for doing conceptual layouts. For that purpose, it is much easier to use than Panel Planner. Check it out.

↓ In my opinion, Panel Planner is overpriced and poorly executed. It looks very much like a program that evolved, rather than being one that was planned and designed by a professional software designer. It does not use standard Windows interfaces and lacks any kind of online Help facility. Add to that the questionable accuracy of its database and a poor user interface and I can only give it a thumbs down ↓ review. Sorry guys, for the \$190 price it should be much better. ↓