



THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

Voted to Top Ten Newsletters, 1997, 1998 McKillop Award Competition

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February 2007

Chapter 1000 meets monthly on the third Tuesday of the month in the USAF Test Pilot School Scobee Auditorium, Edwards AFB, CA at 1700 or 5:00 PM, whichever you prefer. Any changes of meeting venue will be announced in the newsletter. Offer void where prohibited. Your mileage may vary. Open to military and civilian alike.

This Month's Meeting:



This 10 X 20 foot mural titled "The Golden Age of Flight Test" by aviation artist Mike Machat hangs inside the new museum.

Air Force Flight Test Center Museum

– Keepers of the "Right Stuff"

Tuesday, 20 February 2007

1700 hrs (5:00 PM Civilian Time)

(Don't be late—no schmooze time—tour starts at 1700)

At the Museum—Edwards AFB

Well sports fans, the light bulb finally went on. After years of driving on base, rolling down Rosamond Blvd. through the guard check and then on down to TPS there is always the unconscious turning the head to the left as you go by the Flight Test Center Museum for a glance at the static displays.

Then it hit me—we haven't been to the Museum in over 3 years. The last time we were there it was for the premier of the movie "Toward the Unknown" with our guest speaker **Mike Machat**. You remember that meeting, Gary and Mike rolling up in the 1953 Studebaker?

Anyway, that aside, I gave **Doug Nelson** a call and asked if we could drop in for a little tour. Doug being the great guy that he is, said "Are you nuts? Who is this???" No, he really didn't say that—just kidding you. Snap out of it! I said I was just kidding! What he really said was "Sure, always love to have the EAA drop in, we'll keep the doors open an extra hour for you and the gang." Now can you beat that? You know what they say about Doug—"What a Guy!"

Now if you don't where the Flight Test Center Museum is located here is the address:

Air Force Flight Test Center Museum
405 S. Rosamond Blvd.
Edwards AFB, CA 93524-8215

Let's all try to get there right around **1700** so we don't keep Doug there real late.

So, now is where I tell you, "looks like an interesting meeting this month. Be sure to come on out to the meeting for some chips, dips, drinks and the ever present chocolate chip cookies" yada, yada, yada. But there's going to be a change to the business as usual pre-meeting buffoonery. As I was talking to **Doug** he let it slip out that our meeting night, 20 February, was **his birthday**.

Seizing the opportunity I decided that we will surprise Doug with a birthday cake and a variety of beverages to toast Doug on his birthday and thank him for the tour. And if going to a birthday party doesn't get you to the meeting, then you might not want to miss the gourmet dining at the BK lounge afterwards where we solve most of the world's problems on the back of a napkin.

- George "Knife" Gennuso
Vice Kommandant

Pay Your Dues! Now! This Means You!

(If you have already paid your dues, please disregard this notice)



Send your cash, check, money order, or other legally negotiable instrument to any chapter officer, or pay online

by **PayPal** through

the [EAA Chapter 1000 web site](http://www.eaa1000.av.org).

Do it now and avoid the embarrassment of appearing on the **Dues Delinquent** list next month!

Last Month's Meeting

EAA Chapter 1000

Scobee Auditorium
USAF Test Pilot School, Edwards AFB CA
16 January 2007

Gary Aldrich, Presiding

The first meeting of the new year found us at the Edwards AFB Test Pilot School, but only after a significant delay due to security constraints. Four **PPTAF** members attempting to infiltrate base security were detected by the Edwards Borderguard. Despite being cleverly disguised as fifty-something corporate executives driving an American luxury car with appropriate DoD base stickers directly through the main base gate, security determined that they were urban terrorists and were detained for questioning until personally vouched for by the **Kommandant**. The delay in starting the meeting was because the C³'s, soda, chips and salsa were onboard the vehicle.

Having narrowly escaped transfer to Guantanamo, the refreshments arrived safely and were consumed by the dozen or so malingerers who had gathered for the free food. Following the feeding frenzy, we moved on to the auditorium for the evening's presentation. Unable to lock down a commitment from **John Sharp** to view the latest goings-on with **Nemesis**, **Vice-Kommandant "Knife" Gennuso** improvised with "project review" briefings of the various aircraft under construction by our members and other sundry bits of information sharing.

Russ "Erbman" Erb held us spellbound with another critically acclaimed "Death by Powerpoint[®]" presentation on the progress of his Bearhawk. We eagerly anticipate transfer from garage to hangar in preparation for final assembly. The **Kommandant** then shared his vast knowledge on the finer points of battery charging.

Satisfied that the aviation related knowledge level of the chapter had been significantly increased as a result of the meeting, the **Kommandant** declared "**Victory**" and adjourned to the BK Lounge for dinner and further discussion.

- **Kent "Cobra" Troxel**
Minister of Propaganda

Kommandant's Korner

The *Fightin' Skywagon II* must be terribly jealous. I've just finished another series of flights in the ubiquitous Cessna



Skyhawk, logging over 25 hours in the last couple of weeks. These flights were in support of the "FTE Airmanship" program we conduct at the beginning of each new class of the Air Force Test Pilot School. We introduce the non-rated contingent of students to the airborne environment using the same tool that has

been employed by flight instructors for the past 50 years or so...the venerable C-172.

Using flight profiles and objectives developed by **PPO Doug Dodson**, each new Flight Test Engineer student is given up to five flights in an Edwards Aero Club C-172S to expose them to the three-dimensional world of aviation. In an accelerated and aggressive manner, we progress from basic attitude flying, to stalls and falls, to an introduction to flight by reference only to instruments. It's terrifically rewarding to see the steep "learning curve" displayed by these motivated young engineers. Compared to a "normal" private pilot student, who may take several lessons to learn pattern and landing procedures, these new FTEs are expected to fly a safe approach and landing with only an hour or two in their logbooks. Of course, they are under the watchful eye of their instructor and some details and fine points of the process are "abbreviated", but the end result is a student who is ready to strap on a military jet and serve as a productive member of the flight test team. A secondary effect is very often evident in the student...getting hooked on general aviation. Given the general predilection of the average TPS student for aviation, it's not too surprising that the small taste of little airplane flying we give them stirs a deeper interest that may result in a future EAA member, a homebuilder, or a sport aviation pilot.

Speaking of stirring interest, **PPO Tanya Duke**, spouse of recent TPS graduate **Brian "Groucho" Duke**, has taken the reins of the Chapter 49/1000 Young Eagle program. **Brian**, who some readers may remember as a young NASA engineer and early member of Chapter 1000, is now an F-16 test pilot and owner of a beautiful RV-6 (*formerly known as "Grandpa's Delight" built by Jack Hakes*). You'll be reading this after **Tanya's** opening YE Rally at Fox Field on 10 Feb, but I suspect you will be hearing of more events in the coming months. She is always in need of airplanes and pilots; but just as important are those folks that run the ground logistics...from checking in the kids to fielding Mom's questions, to loading airplanes, to shepherding tours of the control tower. If you can spare some time, it's a great way to spend a Saturday morning and can change a young person's life. Come out if you can...**I'll buy your first cup of coffee.**

And, if bigger aircraft are more interesting to you...our annual Aluminum Overcast visit is looming just over the horizon. The big Boeing bomber will be visiting in April. **PPO Scott "Stormy" Weathers** has stepped up to the task of coordinating this year's visit, but he will need lots of help. Last year we had a great turnout and we achieved the twin goals of showing off EAA to the public and reminding them of the valiant efforts of the "greatest generation". Let's make this visit as successful as previous year's. Look forward to **Stormy's** requests for assistance.

Check 6, Fly Safe...and volunteer!

- **Gary Aldrich**
Kommanding

Det 51 Inspects The Bearhawk

Nathan Davis and Chuck Rider of EAA Chapter 1000 Det 51 were in town to check the progress on Nathan's TF-51 project. After a day trip to Chino they pulled a short notice PPTAF raid on Russ Erb's Bearhawk project. With them they brought Steve Stants, a flight instructor in the Det 51 area. Of course, Nathan requires each visitor to pony up dues and swear in as a PPO if they want a ride home. So, welcome to the organization Steve! And congratulations Nathan on recruiting yet another member through brilliant marketing strategy. I wonder how many chapters get so many members through extortion?



Camera in the Shop!



“...and so you push right here and it deploys the Coke dispenser...”



“...and up there is the Alien Spaceship Hailing Radio Antenna...”



“...uh, I never noticed that there before...”

Project Police Fly The B-17 “Aluminum Overcast”

(Our Magnum Opus on “Flying The Fortress” continues. If you really like what you read, start saving your dimes and nickels—for just \$359 you will be able to “Fly The Fortress” yourself on 17-18 Apr 2007 right here at Fox Field. Better yet, donate your time to assist with the operation and get selected for one of the coveted “free” spots! Talk to Scott “Stormy” Weathers about how you can help!)

Cockpit

We were allowed to do something that most folks will never do—crawl into the co-pilot’s seat in flight. The seat was adjustable fore and aft. The control yokes come straight up out of the floor between your legs. All of the engine controls are on the center pedestal that sticks out over the hole to the nose section. The throttles are quite large, with an interesting modified “H” configuration that allows you to grab in one place and get the outboard engines, another place and get the inboard engines, or in the middle and get all four. Of course, you could move one at a time if you really wanted to. While a seemingly interesting setup, to my knowledge it has not been replicated on any other aircraft.



Cockpit and instrument panel

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The prop RPM controls are located on the back end of the pedestal behind the throttles, and move more up and down than they do fore and aft. The mixture controls are between the throttles and the instrument panel, and move in the opposite direction that we're used to (pull toward you for full rich, push away for idle cut-off).

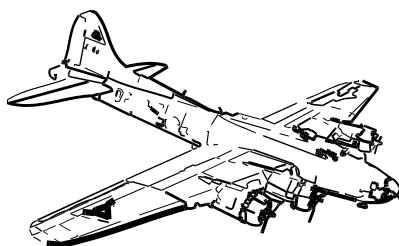


Center pedestal with red throttles and propeller controls on back (rear) end of pedestal



Center pedestal with mixture, magneto, boost pumps, cowl flaps, landing lights, and flap controls

The instrument panel is arranged primarily with flight instruments on the left and engine instruments on the right. Two boxes installed in the panel that generated much discussion amongst the *Project Police* were the dual Garmin GNS 430s. After much discussion, we came to the conclusion that these were not original WWII equipment, and were installed as a concession to navigating the modern airspace.



Engine instruments, with flap switch (yellow) below and landing gear switch (red) above

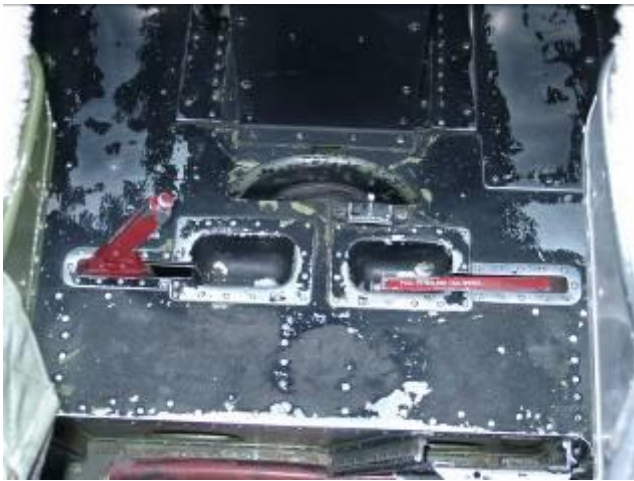
The switch for the electrically actuated flaps was located on the center pedestal in easy reach of the copilot (yellow guard in picture). The standard location for the switch for the electrically actuated landing gear was right next to the flap switch. After the 2003 Van Nuys “incident”, the landing gear switch was moved to the top of the instrument panel where everyone can keep a watch on it and it is less likely to be inadvertently actuated (the cause of the landing gear malfunction).



Right side of panel—engine start switches, fire extinguisher controls, and intercooler controls



Electrical control panel on left side of pilot. Note aileron control lock (red knob) on control wheel. Sidewalls are covered in quilted fabric to cover the many wires, cables and tubes.



Control locks on floor between pilots. Left red lever (raised) locks rudder and elevator. Right red lever raises to unlock tailwheel. Wheel in floor is rudder trim.

The field of view from the pilot/copilot seat was good. The cockpit windows are rather small, but they are also very close to your face, so you can see “enough”. The view over the nose seemed acceptable for taxiing. Standing up in the top turret gives a good view of the tail and all of the bogies overhead.

Rounding out the cockpit is a relief tube located behind the copilot. This is connected to a tube that runs out the right side of the airplane into a venturi, which provides lowered pressure for “flushing”, as well as the bonus feature of producing additional drag.

Flying Qualities

During my five minutes of fame over enemy territory (Cal City), I came to the unforgettable conclusion that “This thing flies like a truck!” Control forces were heavy but the aircraft was responsive, albeit slowly. Even our gliders can roll faster than a B-17. It was also apparent why the aircraft was fitted with a yoke and not a stick—



Fuse panel on left side rear cockpit wall. Note spare fuses stored in the wood frame around the box.

you’ll need both of those hands to have enough strength to maneuver the beast. Now think of flying for eight hours in tight formation with people who aren’t very friendly making it even more difficult, and you’ve got a handful of an airplane.

Bomb Bay

Continuing our trip rearward in the airplane, we next arrive at the bomb bay. The bomb bay is delimited on the front end by the main wing spar and at the back end by the rear wing spar. These spars are unusual based on our experience because they are not built as an I-beam. Instead, they are constructed as a truss. Then again, so are the wing ribs.



Looking up into bomb bay

It’s dark in the bomb bay in flight (the bombs aren’t too fussy about having a window seat), but there is a light switch in the cockpit that will make it bright enough that you can at least see where you’re going.



View of main wing spar truss at the front end of the bomb bay. Near the top of the picture is the hole to insert the crank to manually lower the landing gear.



Bomb bay light switch immediately above fuse panel

Just because the public expects it, some fake bombs are installed on the bomb racks. The bomb bay doors are bolted shut in flight, because you haven't given them that lead on the B-17 bomb bay gearbox you saw on E-bay. *Fuddy Duddy's* bomb bay doors are operational and can be opened in flight, since it had all of the necessary parts.



Motor for actuating the bomb bay doors, missing a few parts

- Russ Erb
Project Police Qualitative Evaluator

EAA Chapter 1440 Approves New Logo

PPO Jim Piavis, founding member of EAA Chapter 1000, now lives in the Seattle area, where he is a Senior Program Manager with a "large Redmond-based software company." Since Chapter 1000 was such a success, he also helped to start Chapter 1440. Of course, the most important part of any new program is to design the patch. He reports to us that this logo has now been approved.



Here is a cheesy filler pic of Jim's recent RV-7 progress, dated 21 Jan 07.



For Sale

Acro Sport II Project. **DISTRESS SALE** (Builder passed away in farming accident)

Wings & ailerons complete except for covering, fuselage 95% welded up, full plans, receipts, logs & more parts. Excellent workmanship.

Located in Mansfield, TX \$8000 obo.
For more info or pictures, contact Sean Gillen at 817-795-1665, or at sean.p.gillen.fam@sbcglobal.net.

Web Site Update

As of 10 Feb 2007, the hit counter stood at **113506**, for a hit rate of about 23 hits/day for the last month.

Just a reminder that the EAA Chapter 1000 Web Site is hosted courtesy of Quantum Networking Solutions, Inc. You can find out more about Qnet at <http://www.qnet.com> or at 661-538-2028.

ANTELOPE VALLEY 99s
17th Annual St. Patrick's Day
Poker Run Flight!
W.J. Fox Airfield in Lancaster



DATE: ♣ Sunday, March 18, 2007 ♣
TIME: 9 a.m. – Cards available at airports!
12:00 p.m. - Barbeque served!
CHECK IN: 10:00 a.m. to 1:00 p.m. at Fox BBQ Hangar with unopened envelopes
No envelopes accepted after 1:00 p.m.
Prizes awarded at W.J. Fox after lunch
➔ See our web site for info: www.freewebs.com/av99s/

STOPS & CARD LOCATIONS: Fox/BBQ hangar, Mojave/Voyager Restaurant, Tehachapi Muni/flagpole, Inyokern/Quonset hangar, Cal City/terminal, Rosamond/old FBO

Fly to 1 or 6 airports in any order. If you don't make it to all airports, you may get cards at W.J. Fox AP. Special prize for the P.I.C. of each participating aircraft that gets to at least 3 airports.

*Rain or shine, it's party time – If weather is not VFR, there will still be a BBQ!!
Poker hands will be dealt & prizes awarded*

AVIATION RELATED PRIZES INCLUDING:
♣ Various locations for overnight stays!
♣ Many fabulous aviation prizes and MORE!!!

NOTE: BBQ tickets should be purchased before March 16th. On the day of the event, BBQ tickets will be sold based on available food. **NOTE: WE SELL OUT!**

♣ For more info: please check out our web site! www.freewebs.com/av99s/

The Antelope Valley 99s is a nonprofit organization

Name(s) of all _____ # Poker Hands _____
Attendees _____
Address _____ # BBQ Tickets _____
City, State, Zip _____ #Combo _____

\$10.00/Seven card Poker hand – Best 5 card hand wins
\$10.00/BBQ (Santa Maria Beef with trimmings)
\$18 COMBO (includes one Poker hand AND one BBQ ticket)

MAKE YOUR CHECK PAYABLE TO ANTELOPE VALLEY 99s AND MAIL TO:

ELLE COUSSENS
3635 Knox Ave.
Rosamond, CA 93560

TOTAL AMOUNT ENCLOSED: \$ _____

For additional info – Call Elle (661)256-4357 or Carol (661) 948-2478

Chapter 1000 Calendar

Feb 20: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Mar 6: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

Mar 13: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Mar 17: Young Eagles Rally, 8:45 a.m., General William J. Fox Field, Lancaster, CA. (661) 940-3698

Mar 20: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Apr 3: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

Apr 10: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Apr 14: Young Eagles Rally, 8:45 a.m., General William J. Fox Field, Lancaster, CA. (661) 940-3698

Apr 17-18: B-17 *Aluminum Overcast* hosted by EAA Chapter 1000, General William J. Fox Field, Lancaster, CA. (661) 609-0942

Apr 17: EAA Chapter 1000 Monthly Meeting(?), 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

May 1: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

May 8: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

May 15: No meeting. Go to Fly-In instead

May 19: Sixteenth Annual Scotty Horowitz Going Away Fly-In, Rosamond Skypark (L00), Rosamond CA. (661) 256-3806

Jun 9: Young Eagles Rally, 8:45 a.m., General William J. Fox Field, Lancaster, CA. (661) 940-3698

To join Chapter 1000, send your name, address, EAA number, and \$20 dues to: EAA Chapter 1000, Doug Dodson, 4431 Knox Ave, Rosamond CA 93560-6428. Membership in National EAA (\$40, 1-800-843-3612) is required.

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Inputs for the newsletter or any comments can be sent to Russ Erb, 661-256-3806, by e-mail to erbman@pobox.com

From the Project Police legal section: As you probably suspected, contents of The Leading Edge are the viewpoints of the authors. No claim is made and no liability is assumed, expressed or implied as to the technical accuracy or safety of the material presented. The viewpoints expressed are not necessarily those of Chapter 1000 or the Experimental Aircraft Association. Project Police reports are printed as they are received, with no attempt made to determine if they contain the minimum daily allowance of truth. So there!

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MUROC EAA CHAPTER 1000 NEWSLETTER
C/O Russ Erb
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http://www.eaa1000.av.org

ADDRESS SERVICE REQUESTED

THIS MONTH'S HIGHLIGHTS:
AFFTC MUSEUM 20 FEB AT TPS
DET 51 INSPECTS THE BEARHAWK
99S ST PATTY'S POKER RUN
MORE B-17 FLIGHT REPORT



The Leader In Recreational Aviation