

# THE LEADING EDGE

## NEWSLETTER OF MUROC EAA CHAPTER 1000

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

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<http://www.eaa1000.av.org>

April 2013

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:



**Cookout with the  
USAF Academy Cadets**  
**Tuesday, 23 April 2013 (one week later!)**  
**1830 hrs (6:30 PM Civilian Time)**  
**Flying Dog Ranch**  
**Rosamond, CA**

As I said last November, one thing that we as aviators do extremely well is to follow procedures. Referring to the unpublished *Project Police Secret Need To Know* checklist, in April we host the visiting cadets from the US Air Force Academy. You've seen this before—the cadets are here as part of their Flight Test Course (where they secretly hope to learn enough to eventually become like the **Kommandant** or **Opie**) so they can fly a high performance jet sortie with TPS to collect data for their final report. Yes, according to **Brevet Project Police Officer Lars Hoffman** (you need to submit your dues check, Boss), TPS Commandant, the cadets will still get to fly in the T-38 even in the face of sequestration (which sounds a lot like sea crustacean).

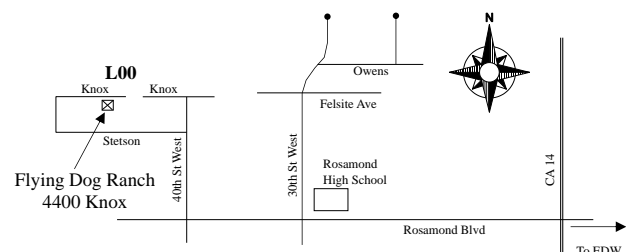
Of course, we use this as an excuse to get together at **High-Cay** for another scrumptious grilled dinner from our own **Master Grillmeister**, except that **Gail** and **Opie** are out flying the **Glamorous Glasair** all around the Caribbean and South America. Therefore, **PPO Bill Irvine** has graciously offered for us to **take the party across the street to the Flying Dog Ranch** (4400 Knox).

You won't want to miss that. If you ask nicely, rumor has it that **Tuki** may bake some of her famous **EAA Chapter 1000 Cookies** or even the **Kommandant's Kookies**.

**Take note:** **This meeting is one week later than usual** to accommodate the cadets' travel schedule. You'll just have to find some other way to entertain yourself on 16 April.

While you're enjoying your masterfully prepared **Project Police Burger**, be sure to engage the cadets in some conversation. I know we're all introverted engineers, which means we look at our shoes while talking to someone. The extroverted ones in the bunch will look at the other person's shoes. It's easy to start—simply ask the cadets a broad question like "Where is your first assignment?" or "What mission did you have to design for in your Aircraft Design course?" My personal favorite is "What is the latest stupid rule to come down?" Trust me, there is always something.

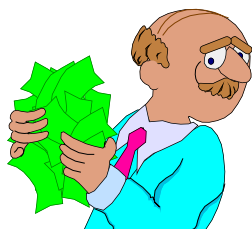
Be sure to check out **Vice Kommandant Hellmuth Steinlin** in his new **Project Police** bowling shirt that was fit checked at the March Board of Directors meeting.



- **Erbman**  
For the Vice Kommandant **Hellmuth Steinlin**

## HEY DUES DELINQUENTS!!!

### You're being cut off!

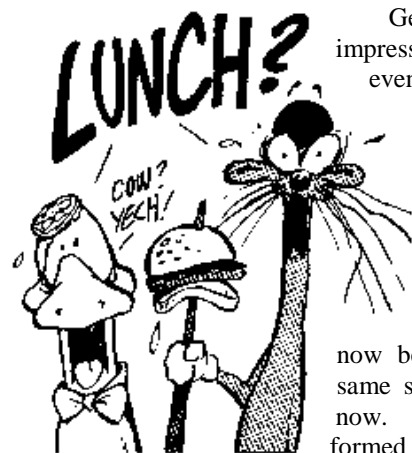


Yep, this is your last newsletter. You can, of course, still avert this disaster by forwarding your dues check (\$20) in accordance with the directions on the last page.

You'll know you're on the bubble if you received an e-mail from Evil Editor Zurg telling you that you are delinquent (assuming he gets to it).

This is the last time we'll remind you. You're on your own now.

## Twenty-Second Annual *Project Police* Airport Barbecue 18 May 2013 at Rosamond Skypark



Generally it is impressive for any "annual" event to be carried on for even five years. How many "First Annual" events have you heard of that never had a "Second Annual"?

Well, your EAA chapter has now been carrying on the same silliness for 22 years now. The chapter was formed in 1991. In 1992 we

hosted the first Airport Barbecue event at Fox Field. We billed it as the "**Scotty Horowitz Going Away BBQ**" because **PPO Scott Horowitz**, recently graduated from Test Pilot School, was on his way to NASA to be an astronaut. We had so much fun that we continued to call it the "Nth Annual Scotty Horowitz Going Away Fly-In" for many years thereafter until hardly anyone remembered who he was and he stopped returning our phone calls.

The event has been held every succeeding year, and this is the 22nd event. Be sure to come early and see the Precision Work Bench Relocation Marching Drill Team, the One-Armed Banner Hangers, and the Scottish Banquet Chair and Table Corps.

The best part will remain—there will be food! You know it will be good when it is from our expert **Grillmeisters**. Expect food to be available around 1000.

The big event will still happen at the **High Cay Partyhaus** on **Rosamond Skypark**, so you can still fly in if you so choose. Hosting will be **Ridley** and **Crash**, along with **Opie's Glasair II-S FT** with its propeller turning the wrong way after being south of the Equator.

Clear your calendar now! More details next month.



Chapter 1000 at the May 1992 Scotty Horowitz Going Away Party and Airport Barbecue, as shown in the August/September 1992 issue of *Air & Space*. In this picture are current members Brian Martinez, Russ "Erbman" Erb, George "Knife" Gennuso, and Doug "Opie" Dodson. Still in the area are Bob Waldmiller, Steve Rainey and Tony Ginn. Behind the prop are Scott "Doc" and Lisa Horowitz. The airplane is Doc's Tri-Q 200.



Cool airplanes on display!



Non-airshow flybys at FAA approved altitudes!



Great food with all of your aviation friends!

## Last Month's Meeting

### EAA Chapter 1000

USAF Test Pilot School, Scobee Auditorium

Edwards AFB, CA

19 March 2013

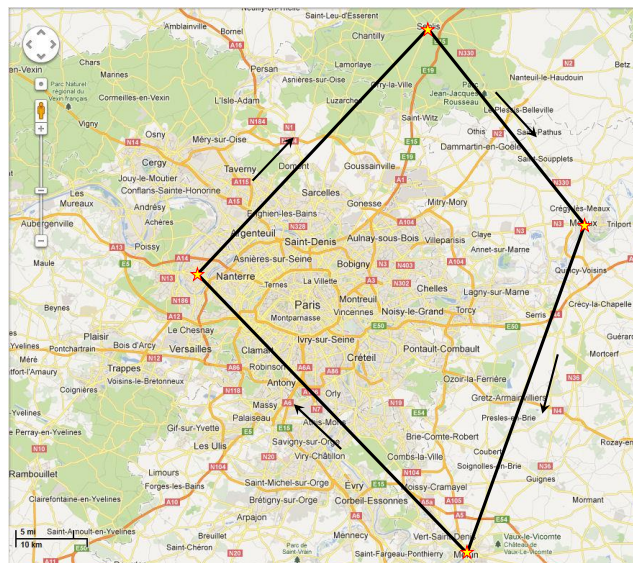
Gary Aldrich, Presiding

Seventeen *PPOs* and guests were in attendance at the meeting. The schmooze time was a retro look back at the way EAA Chapter 1000 used to be with a package of chewy Chips Ahoy! cookies, mostly because **Schmoozemistress Tuki** was in North Carolina.

The program for the evening was **Mark Lightsey** from Flabob International Airport telling us about his experiences building a replica of the Caudron C.460 racer.



The Caudron C.460 was originally built for the **Coupe Deutsch de la Meurthe** race of 1934. This was a cross-country race of 190 km (103 nm) around Paris between Saint-Germain-en-Laye, Senlis, Meaux, and Melun.



Approximate route of the  
Coupe Deutsch de la Meurthe

**Michel Detroyat** had been at the National Air Races in Cleveland Ohio, and had been asked to participate. He asked Caudron for the use of a C.460 to participate in the races. In 1936 Detroyat won the **Greve Trophy** and the **Thompson Trophy** races. Of note, both the Greve Trophy race and Thompson Trophy races were closed course races, much like the Reno Air Races of today. Mark showed us a video of the C.460 in flight. Of interest was that the C.460 was making large sweeping turns around the pylons, much like Jimmy Doolittle had done in the Gee Bee R-1.

Fast forwarding to the recent past, **Tom Wathen** of Flabob International Airport had commissioned **Bill Turner** to build a replica of the Caudron C.460. Turner had started the project but passed away before it could be completed. **Mark Lightsey** had recently moved to Flabob International Airport, and Tom Wathen asked him if he would be interested in finishing the project.

The original engine in the C.460 was an inline Renault 456 of 300 horsepower. As these engines seem to be in short (non-existent) supply, Bill Turner had planned to use a Ranger engine, and had even started the engine mount. As even Ranger engines are long since out of production, Mark decided to change to a Letecke Opravny Malesice (LOM) engine, which is still in production in the Czech Republic.

In 1934 constant speed propellers weren't readily available yet. Mark told us that the original propeller on the C.460 had an air tank that could be pumped up to high pressure to force the propeller blades to flat (fine) pitch. This would be the position of the blades during takeoff. As the aircraft accelerated, ram air pressure through the hole in the tip of the spinner would press on a plate that would open a Shrader valve, letting the air pressure out. This would allow the blades to move to high (coarse) pitch about the time the aircraft got up to speed. There were no provisions for going back to fine pitch for landing. This

setup allowed for faster acceleration on takeoff while still providing the coarse pitch needed for high speeds.

The landing gear pivots inboard to retract, and also pivots aft to clear the wing spar. The original mechanism to do this was far too complex to reproduce, so Mark created a simpler system to accomplish the same task. Power to move the landing gear was from an electrically driven hydraulic pump.

Split flaps were installed as on the original, which proved to be very useful for both takeoff and landing.

As the replica was built for hire, it could not be certificated as Experimental Amateur Built. Therefore, it was certificated as Experimental Exhibition, which only required a 5 hour fly-off period. The fly-off period was flown from Flabob, which could be rather exciting as the takeoff speed was over 100 mph, rather sporty from a 3,190 foot runway (that's 410 feet shorter than Rosamond L00). Mark reported that the replica was just about neutrally stable in all three axes.

After the 5 hours of flying were completed, the replica was disassembled, stuffed into shipping containers and sent to France for a celebration at the former Caudron plant. The aircraft was unpacked and reassembled in the same hangar where the original aircraft had been stored.

All was not well, though. The French authorities had been noodling on their calculators and had come to the conclusion that the main wing spar would fail in compression at only 3.5g load factor. They would not approve the aircraft to fly in France unless the spar was strengthened. Not being totally unreasonable, they had already determined a suitable modification and lined up a shop to do the work. At this shop, carbon fiber reinforcements were installed to strengthen the spar.

Suitably modified, the aircraft was then flown by a French test pilot that we think was a graduate of our USAF TPS from many years ago. Mark said that the French test pilot figured out on his first try the proper way to land the Caudron—a wheel landing at high speed.

The Caudron was flown for some videos and for the celebration and was a huge hit. The next stop was to take it to the Paris Air Show. Just a few days before the Paris Air Show, Mark was flying the Caudron and got too slow on the landing, stalling it several feet above the runway, dropping it in and ending up on its nose, bending the prop. They contacted the LOM company asking how to repair the prop. After reviewing the pictures, they said just to bend it back to its original shape.

The French test pilot flew the Caudron to Le Bourget airport. The original plan was to fly in the Air Show, but after the damage they decided to just put it on static display, especially since they realized it was so small that it would be difficult to see in the air anyway.

The C.460 remained in France for the next year. At that time Mark went back to France to disassemble it and crate it up for return to Flabob. While there, he was invited by a descendant of Michel Detroyat to look through memorabilia from his air race days. Mark stumbled across a letter to Detroyat from Caudron warning him that the

airplane was not designed for the kind of racing they do in America with high speeds and sharp turns. In fact, he needed to be careful because the wing spar would fail if he exceeded 3.5 g! Part of the hazard of building a faithful replica is that you replicate all of the faults too.

While in Europe, Mark took the propeller back to LOM where it was overhauled with new blades.

The Caudron C.460 is now back at Flabob, after a few entertaining rounds with customs in Los Angeles (they couldn't figure out what was in the container by looking at the radar scans). The airplane is still flyable, but is only flown when there is a good reason to, since the risk of damage is higher than most airplanes.

The meeting was followed by a rousing meal at the BK Lounge, where a supersized meal was offered in recognition of an outstanding presentation.

- **Erbman**

For the conspicuously absent Minister of Propaganda

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### Kommandant's Korner

Got another nasty-gram from **Zurg** last night. Seems I forgot my monthly tithe to the little tyrant. You'd think they would



develop some sort of electronic reminder system that would hold all your appointments and todos...maybe I'll work on that. I could have easily sent something in before the deadline as I was just languishing around the **Kwarters** watching the latest cold front blow pets and small children in the general direction of Phoenix. Instead, I allowed myself to wile away the time surfing the worldwide web for nothing in particular. (If **Mrs. Kommandant** is reading this I was working on all the taskings you left me before departing for Italy.)

While I was "conducting research" ace electronic guru and avionics god, **Jeff Landon**, was trying to cram a new software load into the VC-180's GTX330 transponder. You may recall a **Korner** from a couple of months back when I reported that the box had been returned to its birthplace to be given the "ES" treatment. Of course, that means "extended squitter" and that capability is required to be "ADS-B out" compliant. There are only a few short years before all aircraft will require this capability and you know me...the early-adopter. Anyway, you may also recall that I was disappointed a bit in some of the traffic indications provided by the new GDL39 to the GPSMAP 696. I was receiving air-to-air traffic, but I wasn't confident that the "ground-to-air" information was being received from the ADS-B ground beacons scattered about. Well, seems like Garmin shipped the box back to Jeff with version 6.20 of the software. Not more than a few days later, I discovered that version 7.02 was required for full

participation in the ADS-B network. Now that you are up to speed, back to the story.

So, Jeff calls me in late morning saying he's in his fourth hour of trying to get little 330 to swallow his new software. Having raised two headstrong daughters, I can relate to his frustration. Jeff was calling in desperation looking for suggestions. It appears that the method for updating the software in this state-of-the-art transponder is to take a spare backplane for the unit, solder some wires to it and a DB9 connector and plug it in to your computer's serial port! Since none of Jeff's computers have had this type of connection since the New Millennium, he was trying to make a serial-USB adapter function as the go-between. I opined that this type of adapter has given me fits in the past, chiefly with the EDM-700 engine data download. My suggestion was to contact Garmin and find the exact make/model of serial adapter they were using...something JPI told me to do to solve my communication problem (*I had that same experience – ed*). Ultimately, I upgraded the EDM-700 to a USB port...but that's another story.

Late in the afternoon, Jeff called back to report that he had slayed the demon...by searching out an ancient computer at Barnes Aviation that still had an RS-232 connector. He and I were both relieved as I didn't relish another expensive shipping bill if it had to be returned to the factory. I told him that if the wind ever stops blowing I will give him (and you, dear reader) a flight test report on the "new" configuration. Now, back to the computer to search for something else on which to spend my money...

Fly Safe...when the wind stops...and Check Six,

- Gary Aldrich  
Kommanding

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### Let's All Fly To Hellmuth's!!

The Adelanto Airport (52CL), a Private Airport, plans their annual Fly-in and Open House on Saturday **April 27, 2013** from 7 am-3 pm in Adelanto, CA. The members of the Adelanto Airport Property Owners Association (AAPOA) invite you to a 7 am-10 am Pancake Breakfast, static displays of Classic and Homebuilt aircraft along with helicopters. Free ( Donations appreciated !!) and open to all. Contact Chuck Laird at (760) 963-8290, Email [lairdswallow@aol.com](mailto:lairdswallow@aol.com) and Website <http://adelantoairport.zxq.net>

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### Mojave Experimental Fly-In

For this month's Plane Crazy the folks at Mojave Airport are kicking it up a notch. No, Emeril Lagasse isn't putting on a cooking demonstration. On 20 April 2013 from 1000 to 1400 will be a fly-in featuring a bunch of unique experimental aircraft. See <http://www.mojaveflyin.com/> for the full list. It includes Rutan's Catbird, Phantom Biplane, jet powered Super

Salto glider (seen at Oshkosh), Klaus Savier's Determinator Long EZ, Sonex Waix, Relentless (Nemesis NXT), the electric Long EZ, and David Anders CAFÉ Triaviathon winning RV-4. Of course, there are all sorts of interesting aircraft that are based at Mojave that may just come out on display. Maybe **Dave Vanhoy** will pull his fleet out for display.

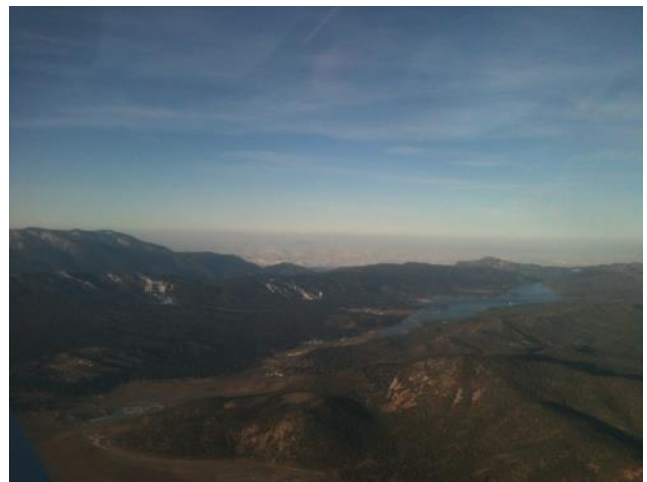
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### Heading South of the Border—Waaaay South

On 6 April 2013 **Doug "Opie" Dodson** departed Rosamond Skypark for another grand Glasair adventure. Part of the trip will be around the Caribbean with a group led by **Paul Rosales**. However, Opie will separate from the group to fly down into Brazil and past the Amazon. Why? He wants to see if his navigation systems will work properly south of the Equator.

For this flight, Opie has been working all winter to complete the wingtip extensions for the Glasair. These were factory-supplied parts which add about four feet of wingspan to the Glasair, giving it better performance at heavy weights and high altitudes.

To follow some of the progress, you can watch **Paul's** progress at <http://www.paulrosales.com>.



**On the way. Big Bear from 11,500 feet.**

Expect **Hellmuth** to draft **Opie** for a meeting presentation on his adventures to and from Brazil.

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### Web Site Update



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.



**Chapter 1000 Calendar**

Apr 9: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., Coach's Sports Bar, Rosamond CA. (661) 609-0942

**Apr 23: EAA Chapter 1000 Monthly Meeting**, 6:30 p.m., Flying Dog Ranch, 4400 Knox Ave, Rosamond CA. (661) 609-0942

Apr 27: Adelanto Fly-In and Open House (52CL), 7:00 a.m. – 3:00 p.m. (760) 963-8290

May 14: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

**May 18: Twenty Second Annual Project Police Airport Barbecue**, Rosamond Skypark (L00), Rosamond CA. (661) 609-0942

May 21: No Third Tuesday Meeting. Go to Airport Barbecue instead.

Jun 11: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

**Jun 18: EAA Chapter 1000 Monthly Meeting**, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Jul 9: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

**Jul 16: EAA Chapter 1000 Monthly Meeting**, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Jul 29 – Aug 4: EAA AirVenture. Oshkosh WI.

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

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

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

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

**Oct 15: EAA Chapter 1000 Monthly Meeting**, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

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](mailto:erbman@pobox.com)

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**THE LEADING EDGE****MUROC EAA CHAPTER 1000 NEWSLETTER****C/O Russ Erb****3435 Desert Cloud Ave****Rosamond CA 93560-7692****<http://www.eaa1000.av.org>****ADDRESS SERVICE REQUESTED****THIS MONTH'S HIGHLIGHTS:****MONTHLY MEETING 23 APR @ FLYING DOG RANCH****CAUDRON C.460 REVIEW****JOYS OF SOFTWARE****FLY-IN SEASON IS STARTING!**