



THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

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

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February 2015

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:



The Rohr 2-175 (71X) FanJet

Richard W. Fraser

Tuesday, 17 February 2015

1700 hrs (5:00 PM Civilian Time)

USAF Test Pilot School Auditorium

Edwards AFB, CA

It's February again, and you know what that means for the **Project Police!** That's right, it's time for our designated February speaker! In February 2013, **Richard Fraser** talked to us about one of his projects, the **Pou du Ciel**, or in English, the **Flying Flea**. In February 2014, he talked to us about his experiences on the XB-70 Valkyrie project.

For February 2014, **Richard** will be back again to talk to us about another project he once worked on, the **Rohr 2-175 (71X) FanJet**. Now I know what you're thinking. You're looking at that picture above and thinking "Now wait a minute, **Erbman**. I get my news from AvWeb, I read all of the aviation magazines, and I watch the History Channel faithfully. I've even been to Oshkosh, and I've never seen an airplane like that!" Well, I'm not surprised.

The reason you've never seen this airplane before is that it was developed in secret and flight tested at the remote airport in Holtville, CA (L04 – just north of the Mexican border and a little east of El Centro). The flight

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](#).

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

You may also qualify for the government sponsored EAA Chapter 1000 "Free Dues" program.¹

test program lasted for a grand total of two (2) flights. The airplane was then hid away, and eventually disappeared.

If you want to know how it flew, why the test program was so short, or why the airplane disappeared rather than showing up in the EAA museum, you'll have to come to the meeting. We'll follow our standard format. Meet in the lounge where the **Schmoozemistress** and the **Subschmoozemistress** will treat us to tasty snacks. After the cookies are gone, we'll reposition to the auditorium for the presentation. Following the presentation, under the leadership of the **Kommandant** we will retire to the **BK Dead Kow Emporium** for feasting and storytelling. We can talk about how much **Stormy** misses being able to attend our meetings or why he hasn't published an update to the Total Rivet Count (TRC) on his...what was he building?.... (Watch next month to see if **Stormy** submits a rebuttal)

- **Erbman**

For the Vice Kommandant

¹Simply write your name on a government printed "Free Dues" coupon and hand it to any chapter officer. "Free Dues" coupons are available at any bank, ATM, and many businesses. Ask for it by the secret code name "Twenty Dollar Bill."

Last Month's Meeting

EAA Chapter 1000

USAF Test Pilot School
Scobee Auditorium
Edwards AFB, CA
20 January 2015

Hellmuth Steinlin, Presiding

The first EAA Chapter 1000 meeting of the 2015 season was held at the traditional location of the USAF Test Pilot School. Approximately 10 **Project Police** officers gathered in the Rick Husband lounge for snacks and lie-swapping. Our usual **Schmoozemistress** was not present, instead choosing to stay at home to care for her 10-day old junior **Project Police** officer. In her stead was **Emergency Backup Deputy Schmoozemistress Erbman**. A consensus vote acknowledged that he brought suitable snacking material, but was significantly less cute than the primary Schmoozemistress.

While schmoozing, **Vice Kommandant Hellmuth Steinlin** produced a check made out to the chapter, which set off a flurry of dues paying, with **PPOs** waving \$20 bills in the air and thrusting them at **Emergency Backup Deputy Treasurer Erbman**. It was a sight to behold. If you weren't there, you can still get that thrilling feeling yourself by thrusting a \$20 bill at **Opie** (see page 1 for directions) to pay your dues for 2015.

As the cookies disappeared, the **Kommandant** made a hasty exit toward the door, mumbling something about needing to get **Mrs. Kommandant** to the Burbank airport. This left **Erbman** afraid that he was about to become the **Emergency Backup Deputy Deputy Kommandant** until it was decided that **Hellmuth** was qualified to act as **speaker** and **Deputy Kommandant** simultaneously. Whew!

At this point the assembled mass moved to the ~~auditorium~~ other side of the lounge where the presentation would be held due to incompatibilities between **Hellmuth's** laptop and the auditorium equipment.

Hellmuth proceeded to brief us on his recent trip to the **United Kingdom**, where surprisingly he was welcomed with open arms in spite of his history as an **International Man of Mystery**. **Hellmuth** had decided this year to try a different aviation adventure, so he traveled to Bloody ol' England to attend the **Goodwood Revival**. Upon arriving, he stepped into a TARDIS and was transported back to his glory days of the 1950s and 1960s in Goodwood, Chichester, West Sussex. Here he and the assembled masses, dressed in period appropriate outfits, watched displays such as a flight of two (count them! 2!) Avro Lancasters for the first time since 1964, flanked by an escort of Spitfires and Hurricanes.

Hellmuth also told us of the auto races, which were strictly for period appropriate (1950-1960-ish) cars, from open-wheeled Formula cars to "saloon" cars. Before the crowd got too excited, **Hellmuth** explained that "saloon" was the British word for what we Yanks call "sedans". It's one thing to have a car from the 1950s, and yet another

thing to restore it to perfect working order. But what kind of nut then takes it out and runs it wide open on the race track with a bunch of other similarly old cars? As **Hellmuth** said, people with more money than they know what to do with. Maybe we could get one or two of those guys to sponsor an Avgas fund for **Project Police Officers!**



One other aspect of the Goodwood Revival that we don't see at AirVenture Oshkosh is the widespread fashion show. The spectators, especially some of the ladies, try to outdo each other in exhibiting the pinnacle of haute couture of the 1950s. Think of the scene in *My Fair Lady* at the Ascot Racetrack, just in a more post-war fashion style. **Hellmuth** showed us some portrait pictures of some of his favorites. Murmurs through the crowd noted that he did not show us a picture of himself. Perhaps this look was so good as to depress the other participants.



After the presentation, we retired to the **BK Dead Kow Emporium** where many lies were swapped and then forgotten in a Coca-Cola[®] haze.

Most of this is true.

- **Russ "Erbman" Erb**

Emergency Backup Deputy Minister of Propaganda
Chapter 1000

"We have more zero's in our chapter than any other!"

Kommandant's Korner

Here's the score, folks:

Weatherman 2,
Fightin' Skywagon 0.

Last month I related the story of my agonizing go/no-go decision on our aborted Thanksgiving trip to Eureka (KEKA). In that case, the departure and arrival weather was decent, but the forecast for the return trip held the potential for icing and low IFR conditions. Indeed, the forecast was fairly accurate and validated our decision not to travel to Humboldt County. The trip was re-scheduled (minus the turkey feast) for this weekend. In fact, I was supposed to be composing this article from **Rachel's** couch in Eureka.

Well, if you're getting your news from somewhere other than AvWeb (*Hey! - ed.*), you've seen the "big" weather story on the "Pineapple Express" that's hammering the left coast from SFO to SEA. This relatively warm atmospheric river of moisture takes its name



from its beginnings over the Hawaiian Islands. It was forecast to bring heavy rains and strong, gusty winds to those in its path...including KEKA. While rain is a welcome event in our parched state, LOTS of rain at one time is not necessarily a good thing. Rachel's community was (and remains) under flood warnings and high wind advisories. "Rain", you say, that shouldn't be too much of a challenge for the mighty VC-180, right? The answer lies in the term "relatively warm" mentioned above. As it turns out, the freezing level was forecast to be just under 9000 feet MSL, which is very close to the commonly assigned IFR altitudes on V27. Coupled with the moisture, the icing probability was 55 to 65% for moderate icing. Oh, and the winds aloft at those altitudes were forecast to be 60-80 knots. Long story short, I once again pulled the plug on the adventure. **Anne** and **Rachel** are now formulating a third-date.

Coincidentally, I received a weekly email from AOPA that has "Four wintry tales from the Air Safety Institute" that are relevant to our story. Check out the following recounting of a surprise icing encounter at the following URL: [http://www.aopa.org/AOPA-Live.aspx?watch={E8861771-13A4-4EE8-8AF9-](http://www.aopa.org/AOPA-Live.aspx?watch={E8861771-13A4-4EE8-8AF9-5F11DF6044E8}&#ooid=10ZG9zNjqNF8Kece4QLmG5Im8-oINioU)

[5F11DF6044E8}&#ooid=10ZG9zNjqNF8Kece4QLmG5Im8-oINioU](http://www.aopa.org/AOPA-Live.aspx?watch={E8861771-13A4-4EE8-8AF9-5F11DF6044E8}&#ooid=10ZG9zNjqNF8Kece4QLmG5Im8-oINioU) It has some amazing pictures of a Cessna 182 impersonating a snowman.

The poor **VC-180** remains idle, but I have been active flying the "ED fleet" of Skyhawks with the fledgling class 15A of Flight Test Engineers at TPS. Twelve sorties so far, for 18 hours or so, with a few more next week. The mild weather in our local flying weather has contributed to the high operations tempo. I will soon be able to return my flight suit to the back of my closet to await the arrival of class 15B and turn my attention back to personal flying. Until then,...

Fly Safe and Check 6!

- Gary Aldrich
Kommanding

Project Police Raid At Hellmuth's!!

Under a threat of releasing pictures of him from his days in the French Foreign Legion to the Internets, we managed to get some more info out of **Hellmuth** about the upcoming ~~raid~~ fly-in at Adelanto Residential Airpark (52CL).

The date is still **25 April 2015** (Christmas in April!) from 0800-1200. There will be a Pancake Breakfast, and 4 hours should be plenty for us to eat up whatever they have. You can call 760-963-3207 for more info. Use the password "swordfish".

We were blown out by high winds last year, but we're hoping for better this year.



World class friendly ground crews will meet you to park your aircraft

You don't need to have your own airplane to participate. Just contact **Erbman** (erbman@pobox.com) and tell him that you would like to participate. He will try to arrange a seat for you in one of the planes that is going. If you are planning to fly your airplane to this event, please notify **Erbman**, especially if you have empty seats.



Pancakes taste the best when eaten at an airport!



Large expanses of parking ramp space!



See an actual Russian built MiG!



See the world famous Adelanto Rock Quarry!

52CL has two runways, one East-West and one North-South. The eastern half of the East-West runway is paved, and the rest are dirt. You can land heading west on the pavement and roll off into the dirt if necessary, but I don't recommend landing to the east on the pavement. That makes for a rather short runway with no overrun. CTAF is 122.9. Watch out for the KVCV Class D airspace.

Hellmuth's place is just north of the east end of the East-West runway.

Frosting Is For Cupcakes, Not For Your Airplane!

It may be a little late for this subject this year, but in less than a year you'll be dealing with this again. During the winter months, frost forms on our airplanes to conspire against us and force us to stay on the ground. It is such an important issue that the FAA even forces us to learn about it in ground school.

When we get frost on our car, we mainly just worry about

visibility through the windows. We scrape it off and go on our way. However, frost on the flight surfaces of our



airplanes increases the surface roughness. This slows the airflow in the boundary layer excessively and leads to premature separation. To put that in pilot terms, the stall speed increases, usually much higher than you expect. The accident report usually reads something like "The aircraft ran off the end of the runway without lifting off."

To understand when to expect frost, it is good to look into the science of how frost forms. Generally for frost to form, four conditions need to be satisfied:

1. Air temperature below freezing (If the air temperature is above freezing, but was recently below freezing, frost may still be present)

2. Small dew point spread. That is, the dew point is within a few degrees of the ambient temperature. Another way to say this is the relative humidity needs to be near 100 percent.

3. Calm winds

4. Clear sky

Before discussing how frost forms, we need to discuss a few terms. We are accustomed to looking at the dew point to determine the humidity and predict if fog or low clouds will form. The Dew Point is defined as “the temperature to which a given parcel of humid air must be cooled, at constant barometric pressure, for water vapor to be deposited on a surface as liquid water.”

The Frost Point is similar to the dew point, in that it is “the temperature to which a given parcel of humid air must be cooled, at constant barometric pressure, for water vapor to be deposited on a surface as ice without going through the liquid phase.” Of course, the Frost Point is only defined for sub-freezing temperatures. The Frost Point is equal to the Dew Point when both are equal to 0° C (exactly freezing). As the Dew Point drops to sub-freezing, the Frost Point will always be slightly warmer (less negative) than the Dew Point. This is because “the stronger bonding between water molecules on the surface of ice requires higher temperature to break.”



Rubbing off frost after it melted enough to release from the surface

So how does frost form? After the sun sets, the aircraft surfaces (and everything else) radiate thermal energy in the infrared (IR) wavelengths. If your aircraft is in a hangar, the radiation reflects off the hangar ceiling back toward the aircraft, slowing the rate of cooling. Likewise, if the sky is cloudy, the clouds radiate IR toward the aircraft, slowing the rate of cooling. However, if the sky is clear, space is much colder than the aircraft, so the IR radiation from the aircraft races off into space at the speed of light and doesn't come back. As a result, the upper surface of the aircraft cools much faster than the air around it.

The cold surfaces of the aircraft cool the air immediately next to them. If the aircraft and adjacent air cool below the Frost Point, the water vapor in the air will de-sublimate (transition directly from gas to solid) and deposit on the surface. Frost will only form at temperatures below the Frost Point, which is generally several degrees below freezing. However, once the frost (ice) has formed, it will not melt until the surface warms to a temperature above freezing. Thus, even if the surface warms above the Frost Point but is still below freezing, the frost will remain.

Wind can prevent frost formation. The surface of the aircraft cools the air adjacent to it, but the wind blows the cooled air away, replacing it with warmer air. This prevents the air from cooling to the Frost Point.

Before flying, all frost must be completely removed from the aircraft, or at least melted. The water won't affect the aerodynamics, but don't let it get into the hinges and then climb to temperatures below freezing.

Many impatient pilots have surmised that if you rub the frost until it is smooth (“polished”) that it won't be a problem. However, the NTSB accident database is full of reports of aircraft that had their frost “polished” and then ran off the end of the runway without taking off.

What does the FAA have to say about this? “Previous FAA guidance recommended removing all wing frost prior to takeoff, but allowed it to be polished smooth if the aircraft manufacturer's recommended procedures were followed. But manufacturers never published standards of acceptable smoothness for polished frost, and the FAA has no data to determine exactly how to polish frost to satisfactory smoothness.” As of 30 January 2010, the FAA updated their rules to be clearer. Takeoffs with any frost, polished or not, are prohibited. Period.

- Russ Erb

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

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

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

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

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

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

Apr 21: EAA Chapter 1000 Monthly Meeting, 6:30 p.m., Location TBD, Rosamond CA. (661) 609-0942

Apr 25: Annual Adelanto (52CL) Fly-In. Let's all go see Hellmuth! (661) 256-3806

May 12: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

May 16: Twenty Fourth Annual Project Police Airport Barbecue, Rosamond Skypark (L00), Rosamond CA. (661) 609-0942

May 19: No EAA Chapter 1000 Monthly Meeting. You should have gone to the fly-in 3 days ago

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

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

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

Jul 21: 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

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!

**THE LEADING EDGE
 MUROC EAA CHAPTER 1000 NEWSLETTER**

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

ADDRESS SERVICE REQUESTED

**THIS MONTH'S HIGHLIGHTS:
 REGULAR MEETING 17 FEB @ TPS
 KOMMANDANT WEATHERED IN
 ADELANTO FLY-IN IN APRIL
 WHEN ELSA ATTACKS YOUR AIRPLANE**

