



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 2006

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:



USAF Academy Flight Test Barbecue

Tuesday, 18 April 2006
1700 hrs (5:00 PM Civilian Time)
USAF Test Pilot School Lounge
Edwards AFB, CA

Once again the month of April is here. It seems like it was just here a year ago. That being said, it is time for the semi-annual USAF Academy Cadet Weenie Roast. Well, actually not just a weenie roast, for we intend to throw some burgers on the grill too!

Now I know that I've got you all salivating right now, but don't let that interfere with the reading of the rest of this paragraph, because you'll miss out on the food if you do. In the past, we usually did the BBQ thing at **Houdu's** palatial estate in Rosamond. Not this time, however, as it seems **Houdu** and his bride have plans to be away the day of the meeting. Therefore, we have to fall back to Plan B. You all remember plan B? We all get cheesy 1950's era science fiction costumes and a cardboard set and...no, no, no...that's *Plan 9 From Outer Space*. No, Plan B is where we use the TPS Rick Husband Lounge on base to host the cadets.

The barbeques will be fired up at 1700 and the burgers and franks will hit the grill soon after. In the mean time there will be drinks and chocolate chip cookies to be

consumed. I'm predicting that a good time will be had by all, so don't miss out on this traditional event.

Speaking of missing out on this event, be sure to follow the Kommandant's advice on the procedure to follow so you don't have trouble getting on base. I know, I know it's a hassle, but rules are rules and the government is calling the shots.

So I look forward to seeing you all at the meeting, it's going to be fun.

- George "Knife" Gennuso
 Vice Kommandant and Schmoozemeister

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 according to the directions on the last page.

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

We'll publish the 2005 Chapter Roster in the May newsletter.



Fifteenth Annual Scotty Horowitz Going Away Fly-In 13 May 2006 at Rosamond Skypark

Make your plans to attend now! You're expected to be there, especially since the board has already signed you up for duties. You don't want to be listed in this publication as shirking your duties! We don't know of any new aircraft expected to attend, but **Vince "Opus" Sei** is expected to make the hour long flight to return from Tucson! No word on if Mr. "NASA Associate Administrator for Exploration Systems" will show up.

Last Month's Meeting

EAA Chapter 1000

Scobee Auditorium
USAF Test Pilot School, Edwards AFB CA
21 March 2006
Gary Aldrich, Presiding

The March meeting was held at the Edwards AFB Test Pilot School auditorium following the customary consumption of drinks, C3's, chips and salsa, with a record 30+ attendees.

Our guest speaker was C1000 member **Major Vince "Opus" Sei** (owner/builder of a beautiful F-1 Rocket previously featured in this publication) who briefed us on a recent Iraqi Air Force Accelerated Testing program or "How I Spent My Fall Vacation". An AFFTC (Air Force Flight Test Center) team was assembled and deployed to Iraq to perform a suitability assessment on the Comp Air 7SLX aircraft following a May 2005 crash killing all aboard.



Following the decimation of the Iraqi Air Force during Gulf War 2, it now consists of about 400 personnel and 15 aircraft, seven of which are the Comp Air 7's gifted from the United Arab Emirates (UAE) who apparently didn't want them, and for good reason (read on). The IAF mission consists primarily of Counter Insurgency (COIN) patrol of pipe/power lines and borders.



Iraqi response to CENTCOM direction to "ground" their Air Force. Something may have been lost in translation...



Opus hits on the security detail investigating why they landed on the KSC Shuttle Runway (X68)



"Forger" Stucky, Opus' esteemed Test Pilot, expresses his opinion of the whole Aerocomp operation



What happens when you refuel in the rain...is that a problem??



Bouncing around Iraq



Pitot-Static leak testing the high-tech way. Obviously Erbman has trained him well



Note the Mil-Spec maintenance stands...

The team's evaluation of the Comp Air 7 focused on weight and balance, stall behavior, static and dynamic stability, CG and weight, performance and handling qualities, all of which were BAD... as in DANGEROUS. To make an entertaining story short, after ten test flights (22.3 hours) in five days, the team concluded it was "unsuitable as a long-term military aircraft...being poorly

designed with numerous handling qualities deficiencies, as well as design and maintenance issues failing basic airworthiness standards...and poor quality operating manuals with many factual and procedural errors".



So where do you find ballast in a desert? 300 lbs of gym weights and bottled water



Open air briefing rooms

Having done such a splendid job with the Comp Air's, the team was also asked to evaluate the two Seabird Seeker aircraft (described by **Vince** as "Helicopter meets Seabee" or "Anything will fly with enough vortex generators") and six Sama CH2000 aircraft (winner of the ugliest airplane east of the Nile River contest) donated by Jordan and which rounds out the IAF 15 aircraft inventory. Their conclusions were equally complimentary.



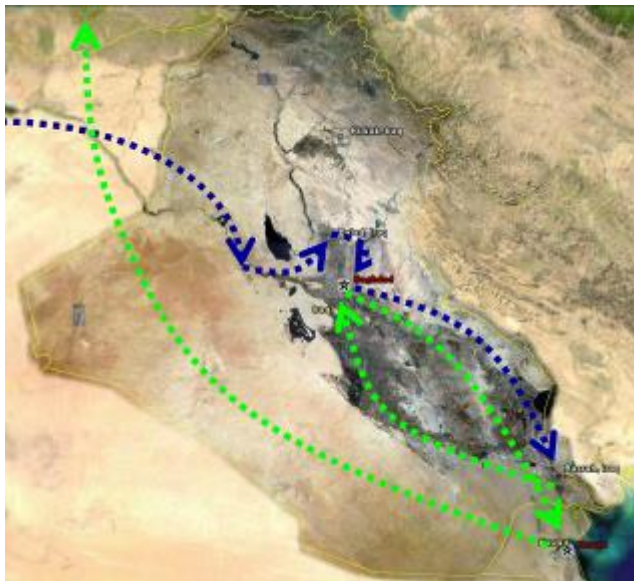
Seabird Seeker



Sama CH-2000



Arming the CH-2000...after all, the airplane is “airbag equipped”



Back again—no good deed goes unpunished

Vince went on to describe some of his other adventures while in Iraq, including some terrific in-country transportation support courtesy of Army Aviation, and his recommendation concerning culinary offerings of chicken, fish and mutton....take the chicken if you get a choice.



**Fish heads, fish heads | Rolly polly fish heads
Fish heads, fish heads | Eat them up, Yummm!**



Not a Mickey Mouse Test Team!

The Kommandant subsequently adjourned the meeting to the BK Lounge where **Opus** was treated to a “Super Size” meal, our greatest tribute. “**Victory**” was inevitably declared by the Kommandant as we once again validated (at least in our own minds) why pilots are the greatest people on earth.

- Kent “Cobra” Troxel
Secretary

Kommandant’s Korner

A wise old aviator once said, “The weather gods don’t want to hurt pilots, they simply want to control them.” This control usually manifests itself in the form of threatening and/or marginal flying weather. After the pilot gives in to this coercion, the gods are generally satisfied. Such was the case when the **Fightin’ Skywagon** was dispatched a couple of weekends ago to the northern reaches of California. The mission was to meet daughter #1 in San Francisco on Friday evening, then



launch for ACV (Arcata) on Saturday morning. The goal was to meet the new boyfriend, spend a night in the B&B managed by same, and then reverse course on Sunday.

The departure weather at WFJ was benign, but a wet and cold storm was moving into the bay area. In anticipation of a damp arrival I filed an IFR flight plan with the notation to pick up the clearance over the Panoche VOR (PXN). As usual, the flight plan got lost somewhere in the FAA computer system, but the friendly controllers at NORCAL Approach (if it's called "SOCAL" down here, how come it's not "NOCAL" up there?) were very accommodating and cleared '05K to the Oakland airport via direct PXN, Panoche 2 arrival to the VOR/GPS approach to runway 09. The weather was layered with soggy broken clouds at 700, 1500, and 2500 AGL and light rain with 5 miles vis. Shortly after we started down from our 8000 MSL cruise altitude we entered the clag. It was mercifully smooth but wet, and the Carb Ice Detector started its annoying squealing, requiring copious amounts of carb heat application. The S-TEC 50 was doing a magnificent job of tracking the GPS course in the descent when the final approach controller cleared us to intercept the localizer for 27R. This generated a flurry of button-pushing on the GNS 530 as I unloaded the VOR/GPS approach and called up the ILS 27R. Even though the winds (10 knots) favored 27, the nice man on the radio said to expect a circle to 09L for traffic considerations.

About 5 nm from the outer marker the verdant hillsides of the south bay area began peaking through the clouds and the airport popped into view right at 12 o'clock...I love my GPS. Switching to tower, I again whined about landing my taildragger with a quartering tailwind, to which the kindly tower dude offered me the shorter, but definitely better aligned, runway 30. After a typically (not!) smooth touchdown, we pulled up to Kaiser Air and their typically great service.

The daughter rendezvous worked perfectly and we had a great meal in North Beach, despite the relentless drizzle. After a good night's rest in the Raddison on Fisherman's Wharf, we awoke to more bad news from the weather deities. Oakland was VFR, but everything from Scaggs Island (SGD) to Fortuna (FOT) was solid cloud from treetops to the flight levels. Further, folks were reporting moderate mixed icing at all usable altitudes and moderate to severe turbulence. Thus, the WX gods got their way and we piled into Rachel's Subaru for the soggy, but scenic drive along CA highway 101. Of course, as soon as we were committed to the asphalt airways, the weather started to break up and, by the time we rolled into Arcata...5.5 hours later, we were greeted with blue sky dotted with lovely puffy white clouds. Sigh...

At least the mission was accomplished...though not as originally planned. The boyfriend was thoroughly inspected, evaluated, etc. and the B&B was a pleasure. Stats? 4.8 hours in the air...11 hours on the road.

This month we'll be entertaining the future leaders of the Air Force again. The "bad" news is that we are hosting them at TPS, so I'll be making another attempt at getting interested *PP Troopers* through the arcane base security system. I'll do my best, but I'll apologize in advance if the secret codes don't get to the correct guard post. I hope you'll be able to make it out for another fun evening.

Fly Safe, Check 6, and let me know if you will be trying to penetrate the base perimeter.

- Gary Aldrich
Kommanding

Lothar of the Glider People

The soaring bug continues to spread through the *Project Police*. On 1 April 2006, *PPO Andy "Lothar" Gerner* finally fooled the April Fool and successfully completed the FAA Practical Test for a Commercial Glider rating. He also set a new record for number of consecutive cancellations of a checkride at either 3 or 4 (the count is still coming in). To his credit, the cancellations were not for buffoonery but for inappropriate weather.

Recollections of the Curtiss C-46 Commando Part II: Reverse Engineering



Having grown up primarily in the influence of Lake Erie, I was always interested in Flying Boats. Since industry no longer wants me to design real airplanes and helicopters, I started looking for flying boats that had not been put into flying scale models. On the Internet I found that the Smithsonian was selling copies of the old plans for 1/72 scale spotter airplane models from WW II. (http://www.nasm.si.edu/research/arch/collections/techdraw/navyrecog_list.cfm)

Lo and behold! There was a plan for a Curtiss C-46. Naturally I had to include the C-46 with the flying boat plans.

Looking closely at the cross sections I finally realized (it takes some people longer than others) that the Boeing Stratocruiser, aka C-97, was not the first aircraft to use a "double bubble" fuselage cross section. The C-46 had preceded the C-97 many years.

The reason for the double bubble on the C-97 was obvious—as a passenger carrying airliner, it needed more volume than the basic B-29 fuselage. Later voluminous Guppies also used the same basic B-29 components.

So why did the C-46 have a double bubble? While doing a little reverse engineering drafting, it became apparent. So here are the results of my reverse engineering. They may not be true, but they seem to be plausible answers.

A brief, but good history of the C-46 is at: <http://www.kotfsc.com/aviation/c46.htm>. The following paragraph is from that history:

"Work on the Curtiss CW-20 began in 1937 when Chief Engineer George A. Page was instructed to develop a 24-34 passenger commercial airliner with a gross weight of 36,000 lbs (16329 kg) and powered by two 1,600 hp (1193 kW) Pratt & Whitney R-2800 Double Wasp engines. The cabin was to be pressurized for above-the-weather operations and was to be capable of accommodating 20 sleeping berths. The latter, arranged across the width of the aircraft, dictated a wide cabin while, to overcome the drag that would have been induced by a completely circular fuselage of adequate diameter, the fuselage was designed as two segments intersecting at a common chord which effectively became the floor line. As a result the cabin was particularly capacious and, in addition to the 2,300 cubic ft (65.13 cubic m) of space in the upper segment, there was a usable volume of 455 cubic ft (12.88 cubic m) below the floor."

Some sources say 36-passenger and some sources say the CW-20 was a 40 passenger transport. If you count, as some people do, the Pilot, Co-Pilot, and 2 "Stewardi," it would make 40. The CW-20 was to have pressurization to compete against the DC-3.

I disagree with two statements in the quoted paragraph; or at least wish to restate them.

1. The 20 berths would not be "across the width" but would be 5 double "berths" on either side of the fuselage. With an aisle down the middle they would require a minimum internal width of approximately 8 feet. The *1941 Jane's All the World Aircraft* says the interior width is 9 feet 10 inches.

2. A complete circular fuselage with the same diameter as the upper segment would have been adequate for the sleeping berths and would have had less frontal area than the final double bubble. A circular cross section with the same floor line would not have sufficient space for luggage, cargo, or aircraft accessory systems underneath the floor. The lower bubble created sufficient cargo room.

The double bubble reduced drag because a fuselage of sufficient diameter to have sufficient luggage, etc space would have been huge. (Picky point!)

Another feature of the double bubble was that the floor could act as a tension member to hold the sides together when the cabin was pressurized. Of course, the C-46 was never pressurized.

The maximum diameter of the upper fuselage is was 24 inches above the floor line. (1942 Jane's says the upper compartment is 6 foot 11 inches high.) The maximum diameter is about the level of a passenger seat arm rest. Obviously the attachment to the floor did not have to be vertically below the arm rest but could be several inches inboard. This space saving design of the seat structure is common today.

Some day, I need to measure the inside of the upper cargo compartment. There is a question in my mind as to whether or not there is a portion of the fuselage with a constant cross section. Some pictures look like it may be constant part way but most 3-views show a curvature.

Next: Part III: C-46 Ancillary Stories

- **Lee H. Erb** (aka Erb the Elder)
EAA Chapter 1000 Det. 5, Arlington, TX

Join us for our annual
KORKY KEVORKIAN
MEMORIAL
Barbecue & Fly In
FEATURING KITS AND HOMEBUILTS
Saturday, May 20, 2006
at the
Reedley Municipal Airport

Schedule of Events
9:50 - 10:30 Young Eagles
10:30 - 11:30 Spot Landing & Fly Trip
10:30 - 12:30 Brunch
11:30 Guest Speaker

Meat Lover's Brunch
\$10.00
by E.A.A. Chapter 376
Served between 10:30 - 12:30

Bruce Porter
WWII Ace
will be our
Guest Speaker
You won't want to miss the video and talk about his experiences as a Night Fighter in the Pacific during World War II.

For more information:
City of Reedley
Phone: 559-637-4203 Fax: 559-637-7253
email: denise.phanew@reedley.com
*Proceeds Benefit the
Reedley Airport Beautification Project*

(for those of you (like me) who aren't sure where that is, Reedley Muni (O32) is between Fresno and Visalia)



Erbman Sews The Bearhawk Wedding Dress

Okay, not exactly, but there were similarities. What you see here is actually creating the fuselage envelope. The fabric is thin and stiff, and you have to learn to handle a huge white backlash.

The sewing was a collection of simple straight stitches with a garden variety home sewing machine, using Poly-Fiber machine sewing thread.

More to follow as there is room in this newsletter that needs filling.

More Blue Max Trivia...

For some interesting trivia about the aircraft in the movie "The Blue Max" (which was NOT screened at the last Chapter 1000 meeting) check out

http://www.airfields-freeman.com/TX/Airfields_TX_FtWorth_NE.htm#hartlee

Cheers!

- Leigh Kelly

Project Police Aircraft Spotters Quiz



Last month, Evil Editor Zurg produced this timely oddball aircraft for your identification. Any PPOs who bothered to show up for the meeting to hear about Opus' Mid-East Vacation would have immediately figured out the identification. Some extra sharp PPOs even figured it out before the meeting.

To review, here are the pictures you were provided:



First in: "It was a little to easy this month, due to the next meeting content (that was the idea...)

<http://www.globalsecurity.org/military/world/iraq/sb71-360.htm>

Here's more open source intelligence on Vince "Opus's" scope of work.

<http://www.globalsecurity.org/military/world/iraq/ch2000.htm>

<http://www.aerocompinc.com/airplanes/CA7/index.htm>

Here's a link on the instant paint booth sticks which was part of my overzealous newcomer's constant interruptions to your fine presentation.

<http://www.zipwall.com/>

Francis X. Gentile"

The Contest Prizes Committee is still divided on whether the customary granting of bragging rights should be granted in this case, since he never actually named the aircraft, although the links supplied were accurate.

Also submitted: "The aircraft is SAJ (Seabird Aviation Jordan LLC, King Abdullah II Design and Development Bureau and Seabird Aviation Australia Pty Ltd) SB7L-360A Seeker. It is trying to fit a market for "Low, Slow, and Often" aerial surveillance in the Middle East, Africa, Europe and Asia. They have been deployed to Iraq for border patrol, infrastructure and security missions.

http://www.seabirdaviationjordan.com/pdf/seeker_brochures_new1.pdf

Lathan Collins III"

Since you did so well with that one, here's this month's challenge:



As always, your job is to simply identify the aircraft shown above and send that information to erbman@pobox.com or to the editor's address seen on the last page of this newsletter. Include any other information you know. Links to web sites with more info are a plus. Next month we'll tell you who (if anyone) was correct.

Web Site Update

As of 9 April 2006, the hit counter stood at 106494, for a hit rate of about 26 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.

Chapter 1000 Calendar

Apr 10-12: B-17 Aluminum Overcast at General William J. Fox Field, Lancaster, CA. (661) 609-0942

Apr 11: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 609-0942

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

May 2: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

May 10-12: **Collings Foundation B-17, B-24, and B-25** at General William J. Fox Field, Lancaster, CA. (661) 947-2647

May 13: Fifteenth Annual Scotty Horowitz Going Away Fly-In, Rosamond Skypark (L00), Rosamond CA. (661) 256-3806

May 16: NO EAA Chapter 1000 Monthly Meeting, go to Fly-In instead

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

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

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

Jul 4(?): EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

Jul 18: 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 CORRECTION REQUESTED

**THIS MONTH'S HIGHLIGHTS:
 BBQ WITH USAFA CADETS 18 APR AT TPS
 REPORT ON OPUS' MID-EAST VACATION
 KOMMANDANT'S WEATHER GOD THEORY
 REVERSE ENGINEERING THE C-46**



The Leader In Recreational Aviation