



THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

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

<i>President</i>	<i>Gary Aldrich</i>	<i>661-609-0942</i>
<i>Vice-President</i>	<i>Scott Weathers</i>	<i>661-317-9453</i>
<i>Secretary</i>	<i>Kent Troxel</i>	<i>661-947-2647</i>
<i>Treasurer</i>	<i>Doug Dodson</i>	<i>661-256-7276</i>
<i>Newsletter Editor</i>	<i>Russ Erb</i>	<i>661-256-3806</i>

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

May 2009

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:



Homebuilder's Work Day

Tuesday, 19 May 2009
1700 hrs (5:00 PM Civilian Time) or
whenever
Your Workshop
Your Town

You're on your own for your aviation fix this month. If you were on top of your game, you would have been at the Eighteenth Annual *Project Police* Airport Barbecue on 9 May. If you're desperate, maybe you can call **Stormy** and he'll let you watch him drill holes or something.

Operation PHOENIX NOISEMAKER Completed—Aria Somewhat Less Than Satisfying

The proverbial Fat Lady has sung, and **Three Sigma** has flown again.

As day dawned in the Antelope Valley on 8 May 09 the winds were unusually light. After a complete preflight, **Three Sigma** was pushed out by the Third First Flight support crew, including **Gary "Snappy" Aldrich** with the way-cool mega-camera, **Tim Brien**, **Dave Vanhoy**, and **Gail Dodson**. The Data Acquisition System (DAS) Programs were started up. Engine start, taxi, run-up, and

before takeoff checklist ran nominally. I took the runway at 0703.



How does this work again?



I slowly advanced the throttle while applying right rudder for takeoff. The ground roll seemed longer than it appeared on the video. The **Kommandant** stated that this takeoff seemed shorter than it was on the First First Flight.

Reviewing the videos show about 9 seconds for this flight and about 11 seconds last year. I accelerated to 100 knots and started the climbout.

After about one minute I had CHTs reaching 435 deg F. The mixture was full rich. As I did before, I pulled the throttle back to try to keep the CHTs under control. Much later we would determine that this probably wasn't the best response I could have had.

THE LEADING EDGE

I had managed to get up to 4000-4500 ft MSL. I was able to maintain altitude and keep the CHTs no higher than about 435. A year ago the temps were running much closer to 490 to do the same thing. After a while the oil temperature had risen to 250 deg F, and at that point I decided it was time to go back and land.



While flying around, the turbulence was sufficient that I had plenty of opportunities to test the response of the airplane to small control inputs.

All responses were so predictable that absolutely nothing seemed out of the ordinary. The adverse yaw seemed to me much less than I normally see in gliders. A very honest airplane. It flies very straight (no heavy wing) and is easily trimmed (except...)

I pulled the power back to start a descent. I figured I had time to do a quick evaluation of the handling qualities with the flaps extended. I slowed and put out one notch of flaps. A few small inputs in each direction showed nothing unusual. Same for two and three notches of flaps.

I entered the pattern and did my best to psyche myself up for the landing. Everything was going well until I ballooned the flare significantly.

Knowing that continuing would most likely either end up in a harder touchdown than I would like or getting too far down the runway (only 3600 feet), I once again did something in anger that I hadn't tried at altitude yet—to go around. I shoved a big slug of throttle in (fortunately the engine had cooled enough to do this), and as expected it took a significant forward stick input to stop the pitchup. The good news is that it didn't require anywhere near the force that the **Fightin' Skywagon** does in a similar condition. I trimmed off some of the forces, then tried to get the flaps up, which lead to some uncomfortable pitch bobbles near the ground as I reached down to the flap lever. I was only able to get the flaps up to one notch, and then the button seemed to jam. Being at low altitude, I abandoned the flap lever in that position, figuring I would probably "overspeed" the flaps.

Later I would determine that the problem was simply that I needed to lift up on the flap lever to unload the pin so that the button could be depressed.

Once more around the pattern again trying to get in the right frame of mind for the approach. This approach went much better. I did a wheel landing because that is what I'm most used to. I probably should have tried to touch down slower, but I did prove that the Bearhawk damped gear can

be made to bounce. After all, I trained in the **Fightin' Skywagon**. On the third touch I was able to keep it down and then just concentrated on going straight down the runway, not touching the brakes until necessary. I have found the two biggest problems on landing come from trying to make big steering inputs and trying to brake too hard, because that usually leads to uneven braking and directional problems. I turned off at the end of the runway and taxied back to park.



This doubles my number of successful landings. Total time airborne was about 26 minutes.



I did come to the conclusion that my thinking on which way mechanize the trim system, which made sense 9 years ago, was not the optimum answer. I found that every time I reached for the trim wheel and moved it without specifically thinking about it I moved it the wrong way. After I did this five or six times I figured I must have it backwards. While it rotates the same direction as the Cessna wheels, the difference is that I grab the bottom instead of the top. I realized that in every other aircraft I've ever flown, to relieve a push force you push on the trim. To relieve a pull force, pull on the trim. Mine is backward of that.

Before I fly again, I'm going to reverse the direction of the trim wheel. I figure I can do that by swapping the trim cables end for end on the front bell crank. There is a possibility that the cables may touch when I cross them, but I'm not too worried. After all, the designer twists his cables to get friction in the system. After that I shouldn't have to think to trim. This also means my operation will

match the direction used in the prototypes. So much for thinking I was so smart.

I've been researching and there seems to be a lot of information to support the idea that engines tend to run hotter during break-in. Either that, or my engine didn't realize that "Phoenix" in PHOENIX NOISEMAKER referred to rising from the ashes, not to a place in Arizona where it is way too hot.

Later discussions suggested (based on experience climbing out of Phoenix on a hot summer day) that my response to the high CHTs should have been to level off and fly fast to get more cooling air over the engine. This would also keep the throttle wide open and the rich mixture (high fuel flow) going, helping with cooling. By pulling the throttle back, I closed the economizer and thus leaned the mixture even though the mixture control was full rich.

PPO Jim Piavis suggested that I should take a look at the Van's Air Force Forum for the RV-10. I found this interesting statement:

"We have not checked the probe yet but I can tell you that the oil got HOT.

The motor had run for 45 minutes on a bench prior to take off. Take off normal, CHTs initially all went to around 435. Kept the speed up and mixture rich and within about 15 minutes 4 of them were just below 400 deg and 2 just above - perfect for a new engine!

The oil temp gradually rose to 236 degrees after around 20 minutes into the flight. I joined the circuit to land and as I slowed on final approach, the temp rose to 242 degrees. Just prior to shut down after a short taxi it peaked at 243."

Everyone tells me that I'm supposed to be excited about finally flying my airplane. It ain't happened yet. Maybe that will happen when I can land without having an in-flight emergency.

Thus **Operation PHOENIX NOISEMAKER** is officially completed, and we're done with having "first flights." Other than the trim direction, the airframe part of Three Sigma is working fabulously. As for the propulsion part, we still need to work through the engine cooling issues. Then again, this seems to be the most common problem on early homebuilt flights.

- **Russ Erb**

Three Sigma Fabricator and Pilot

Last Month's Meeting

EAA Chapter 1000

High Cay Partyhaus

Rosamond, CA

21 April 2009

Gary Aldrich, Presiding

The April meeting was held at **High Cay**, the high desert estate of **Doug** and **Gail Dodson**. Thirty two members and guests attended including eight visiting Air Force Academy students from the Aeronautical Engineering 456 course. The cadets journey to Edwards each semester for T-38 flights to conduct test programs and

reports for the class. It is the pleasure of Chapter 1000 to host the cadets and their instructors **Lt Col Mike Chapa** and **Lt Col Ryan Osteros**.

Despite an unseasonably warm day of 94 degrees, it was a perfect evening, characteristic of spring in the Antelope Valley, and a lack of air traffic due to runway closure for maintenance.

As a result of the last Cadet Burger Burn fiasco, the **BBQ Ignition Checklist** was carefully followed (excerpt from the 12 November 2008 *The Leading Edge*: **George "Knife" Gennuso**, **Master Grillmeister** and **Kent "Cobra" Troxel**, **Senior Grillmeister** attended to grill duties. There was a tense moment as they tinkered with **Doug's** gas grill in an attempt to light it. The fireball was detected by orbiting satellites and briefly interpreted as a tactical nuke until verified as simply two **C1000 idiots** at work. **Knife's** eyebrows are growing back nicely).

Russ "Erbman" Erb enthralled the cadets and other guests as he brought the captive audience up to date on the "Bearhawk return to flight" project, including a walk-around of the actual plane next door.

Following the consumption of Doug's beer and grilled-to-perfection burgers, the **Kommandant** was propped up as he read a prepared statement to the effect that America is the greatest country on earth, the Air Force and its Academy the finest institutions anywhere, and that the office of **C1000 President for Life** means exactly that and that he would personally whoop anyone who said differently.

So ended another chapter meeting, with all of the facts reported accurately as they "may have happened".

- **Kent "Cobra" Troxel**

Minister of Propaganda

Kommandant's Korner

Mrs.

Kommandant and

I just returned from the

most successful Chapter

Fly-in...er...BBQ that

was never planned.

Compared to last year, when no

one...save "**Smokey Bearhawk**" flew into L00 to

celebrate the storied **Scotty Horowitz** sendoff; the 18th

annual event was one for the record books. The general

feeling before this event was that the idea of an annual

Chapter fly-in had pretty much run its course. Declining

attendance in the last several years was attributed to the

increasing cost of AVGAS, spring winds, and more

enticing aviation venues in the local flying area. Thus, the

Board decided to scale back the event by inventing another

name that was more "laid back", minimal advertising, and

a more relaxed set of preparations. **High Cay** was, again,

generously donated as the site and the prep team of usual

subjects straggled in around 0830 or so to set up a couple

of tables and chairs and to move the **Strike Mooney**

outside.



THE LEADING EDGE

Little did we know that the perfect flying weather, coupled with an innocent mention of the event in the RV (that's Van's RV....not Winnebago) community would cause a veritable invasion of little aluminum homebuilts. Further, long lost **PP Trooper Terry Pierce** dropped by in his **Stinson Stationwagon**...ostensibly because he'd been threatened by **Russ Erb** with some unspeakable punishment if he didn't come. Even longer lost **Trooper Ed Dutreaux**, creator of the famously funny **PPTAF** ID badge sneaked in as part of the RV-gaggle. Don't know if the cheaper (relatively speaking) fuel costs or the fact that this was the first day in weeks that we didn't have 30 knot winds in the valley or a combination of them all caused the high attendance. At any rate, the number of Polish dogs exactly equaled the number of hungry visitors and it appeared that everyone had a terrific time. I probably had the best time of all as I was surprised by the appearance of a **CHOCOLATE** cake to draw attention to "**the 37th anniversary of my 21st birthday**". It's hard to imagine a better birthday than sitting around a cozy hangar, surrounded by friends and little airplanes on a gorgeous spring day. (*Coverage of the Kommandant's birthday party and non-fly-in in next month's newsletter*)

With any luck, the ferocious winds we've experienced this winter/spring will at least pause enough to give us a couple of reasonable flying days a week. After yesterday's successful "third first flight" of the **Three Sigma Bearhawk** (probably detailed elsewhere in this issue) **Erbman** needs some friendly breezes to build time and experience in the bright yellow machine if he is to make his unstated goal of **AirVenture 2009**. Lets' all wish **Russ** light winds and low CHTs as he embarks on his Phase I flight testing.

Thanks to all who helped to make the 18th annual "BBQ" a success...and especially to the **Dodson's** for giving so graciously of their home (which is undergoing its own renaissance). I guess it's time to start NOT planning next year's event. Never too early to begin the procrastination.

Fly safe and check 6

- Gary Aldrich, Kommanding

The Hobby Shop

(Originally written for a vintage plastic model kit historical society)

Perhaps it was a classic 1950s-style hobby shop located on Main Street right there in your hometown, near the appliance store and next door to the one selling something called sporting goods. Perhaps it wasn't an actual shop at all, but the back shelf in your local stationary store. Maybe it was a Woolworth's "Five and Dime" or the Rexall Drugstore down on the corner – the one with the soda fountain up front. Better yet, how about a real honest-to-gosh toy store and bike shop with a large model section in the back? No matter what the locale, the mere sight of boxes like the ones pictured above was probably enough to get your pulse racing if you were building models as a kid back then.



A ritual to keep those cherished memories alive has been occurring here in Southern California since 1975. Known as the Kit Collectors Exposition and Sale, this gathering of the clan takes place like clockwork on the first Sunday of the chosen month, and a special group of friends we now call "the family" drives from near and far to share the mutual love of collecting vintage models and all that this special hobby represents. I mention this because an interesting happenstance occurred a few years ago at one of the official debrief lunches following the show. Sitting around the table were guys who'd all built kits back in the day and who were happily reminiscing about their experiences, playing their own version of David Letterman's famed "Top Ten list".

Our version went something like this: Name the top ten favorite models you ever built; Name your top ten favorite model boxtops; Name the top ten favorite kits you always wanted but could never afford, and finally; Describe your favorite hobby shop. Although exploring all the above-mentioned categories was immense fun, it was this last topic that drew the most in-depth and personal recollections from everyone seated at that table. Floor plans of those favorite hobby shops were actually drawn on the backs of napkins and the vivid detail utilized in those descriptions was simply astonishing. It soon became apparent that the memories of those magical stores ran exceedingly deep in this crowd.

We shared indelible memories of which shelves housed which brand of kits, or which oversize kits were held vertically on pegboard with "S" hooks, safely out of

reach of grubby little 12-year-old hands. There were colorful recollections of how the store windows looked with all those fabulous factory build-ups of the latest kits carefully displayed right at eye level. I'll bet those factory-supplied dioramas did more for the successful marketing of plastic models than all other advertising combined. We shared stories of riding our bikes to the hobby shop and leaning them up against the front of the store or a nearby tree with nary a concern that they wouldn't be there when we returned, and if there was ever a good example of the phrase "gathering of the clan" in the '50s and '60s, this was it. Let's take a moment to examine a typical hobby shop window, circa 1959.

There were always the inevitable custom car model contest winners – a highly-coveted honor for any of the local model car nuts. And who could forget those amazing cardboard backdrops shown with the latest guided missile kits such as the Renwal "Blueprint Series" Nike Ajax, or Monogram Snark or Regulus II sitting atop their bright yellow launchers? What about airplanes, you ask? Sure, they were all there from the new supersonic Century Series jets to the latest new commercial jet airliners. With World War II and the Korean War still fresh in our minds, you could also count on a bevy of prop-driven warbirds to be displayed in that window, but they were usually the ones hanging from the ceiling suspended with monofilament fishing line.

Ship models were also well represented, such as the latest aircraft carriers from Revell or Aurora mounted on their turquoise-painted plywood bases and covered with clear acetate. There might even be an example of the mammoth SS United States kit from ITC all lit up at night with its innovative interior lights. Best of all were those Revell and Renwal cutaway models of the new George Washington-class nuclear submarines, each carrying 16 Polaris missiles. The incredible detail displayed inside those ships was like something from another realm – especially if you came from the era where building the Lindberg USS Wasp was the most complicated thing you'd ever tackled.

Once inside the store, another unforgettable memory was the amazing aroma that greeted visitors, a prominent smell of enamel paint, styrene cement and airplane dope wafting through the air usually laced with second-hand cigarette smoke emanating from the owner himself. If perchance there was sawdust on the floor, so much the better, but the smell of cardboard was also a large part of the mix. (Come on, fess up – who hasn't opened a well-preserved vintage model box and taken a whiff of that precious 1950's air held inside all those years?) Add to this sensory mix the seasonal aromas of a fresh spring day, autumn leaves, or winter's blustery cold all mixed together with fresh auto exhaust drifting in from the street, and you had the makings of some very strong olfactory memories.

Not to be overlooked were the names of those hobby shops, most of which were highly reflective of the 'futuristic' times during the Eisenhower and Kennedy administrations. There was 'Hobby Craft', 'Hobby World', and of course my very own local establishment, 'Hobby-Rama'. Sometimes the owner's name would be employed in the moniker, such as 'Sid's Hobby World', or 'Mel's

Model Emporium', but generally, all the stores tried to outdo one another with very cool names that conveyed the very best of those enticing boxes waiting for us inside. Regardless of the name, we couldn't wait to get down there every Saturday – if for no other reason than to just to hang out with our friends.

I can't help but wonder how many of these original establishments are left in the world, especially in this day and age where 'just hanging out with friends' now involves a modem. Despite the cold antiseptic aspects of our digital world, all is not lost. On any given Saturday, we can plug in, log on, and try to hunt down those same exact models we bought at Hobby-Rama or Sid's Hobby World. Only now those 98-cent kits are priced at hundreds of dollars, and we're looking for them on eBay!

- Mike Machat

Evil Editor Zurg's Caption Contest Result

Evil Editor Zurg received an interesting response from long-time *PPO* **Miles Bowen**. Miles writes "The dead giveaway that **Stormy's** report on the "Zephyr-Car" was a complete fabrication:

The design offered some interesting innovations. First, the windshield stays remarkably clean in the summer because all the bugs are shredded before reaching the glass.

If that is true, why have I always had to clean the windshields on all of those single-engine, tractor-configured airplanes I've been flying for 30+ years?"

An interesting question for which **Evil Editor Zurg** has no answer.



Web Site Update

As of 9 May 2009, the hit counter showed **125634**, for a hit rate of 13 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

May 19: No meeting. Did you go to Airport Barbecue?

Jun 2: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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 7: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

Jul 25 – Aug 1: Bearhawk/Skywagon Deployment to OSH. Sign on now! (661) 609-0942 or (661) 256-3806

Aug 4: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

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

Sep 1: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

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

Oct 20: 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.

Contact our officers by e-mail:

President/Flight Advisor Gary Aldrich: gary.aldrich@pobox.com

Vice President Scott Weathers: flynwx@pobox.com

Secretary Kent Troxel: kenttroxel@sbcglobal.net

Treasurer Doug Dodson: houdu@pobox.com

Technical Counselors: Gary Sobek: Gary@rvdar.com

Bill Irvine: wgirvine@yahoo.com

EAA Chapter 1000 Technical Assistants

<i>Composite Construction</i>		
Doug Dodson	douglas.dodson@pobox.com	661-256-7276
George Gennuso	pulsar1@sbcglobal.net	661-265-0333
Brian Martinez	brianmartinez@aol.com	661-943-5379
Bob Waldmiller	waldmilr@qnet.com	661-256-0932
<i>Wood Construction</i>		
Bob Waldmiller	waldmilr@qnet.com	661-256-0932
<i>Aluminum Sheet Metal Construction</i>		
Bill Irvine	wgirvine@yahoo.com	661-948-9310
Miles Bowen	cessna170bdriver@yahoo.com	661-822-0806
Russ Erb	erbman@pobox.com	661-256-3806
<i>Welding/Welded Steel Tube Construction</i>		
Russ Erb	erbman@pobox.com	661-256-3806
<i>Engine Installation</i>		
Bob Waldmiller	waldmilr@qnet.com	661-256-0932
Doug Dodson	douglas.dodson@pobox.com	661-256-7276
<i>Electrical Systems</i>		
Miles Bowen	cessna170bdriver@yahoo.com	661-822-0806
<i>Instrumentation and avionics requirements for VFR/IFR</i>		
Gary Aldrich	gary.aldrich@pobox.com	661-609-0942

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

C/O Russ Erb

3435 Desert Cloud Ave

Rosamond CA 93560-7692

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

ADDRESS SERVICE REQUESTED

THIS MONTH'S HIGHLIGHTS:

NO REGULAR MEETING 19 MAY

THREE SIGMA FLIES (AGAIN)

NON-FLY-IN SURPRISINGLY SUCCESSFUL

HOBBY SHOP MEMORIES



The Leader In Recreational Aviation