



# 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>

January 2008

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 Ceremonial Opening of the RV-8A Wing Kit

Tuesday, 15 January 2008  
1700 hrs (5:00 PM Civilian Time)  
Hangar 969, Mojave Airport  
Mojave, CA

Colleagues,

I am honored to serve as your Vice Kommandant (VK?) After all, the VK gets almost as much glory as the big guy. And, I don't really have to do anything, do I? Just take some judges quail hunting once in a while, right? What!? I am responsible for putting together the program for each meeting!? What was I thinking! Knife has done a great job for a long time. It looks like the bar is pretty high. And that January crowd looks tough.

How about this: Let's all meet at my hangar at KMHV (N35 03.3678 W118 09.8292 WGS 84). I just brought home the wing kit for my RV-8A. We will pry open the crates and see what RV wings look like in the embryonic state. We'll unpack the parts and play "Race To Find The Part Number". (then we get to play "Hide the parts from Stormy" right?) The sweet aroma of fresh 2024 aluminum will fill the air. Well, at least it's hypoallergenic. I'll provide beverages and the requisite C's, lest I run afoul of the PPOs in the group.

As you know, the gated security at KMHV is enough to bring Phil Boyer to tears of joy. Still, we can get you through the west gate at 1700. After that, call me on my



**\$20 to Opie – See back of newsletter for address**

If you prefer, you can pay online by **PayPal®** at the Join/Pay Dues link on the [EAA Chapter 1000 web site](#).

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

STU III Secure Cell Phone (661-317-9453). We'll vector you in or send a party to rendezvous. The code word will be "swordfish."

After a highly successful inspection of the RV-8A kit and declaration of "Victory!", we will proceed to the secret **Project Police** messing facility, the location of which will be disclosed by the Kommandant only at that time.

<sup>1</sup>Simply 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."



- Scott "Stormy" Weathers  
Vise Kommandant "Feelin' the squeeze"

### Last Month's Meeting

EAA Chapter 1000  
Kommandant's Kwarters  
Quartz Hill CA  
18 December 2007  
Gary Aldrich, Presiding

The final EAA Chapter 1000 meeting of 2007, highlight of the Antelope Valley social season, was held at the **Kommandant's Kwarters** in Quartz Hill. Hosted by **Kommandant Gary** and **Mrs. Kommandant Anne Aldrich**, the 20 chapter members and guests in attendance were treated to much beerage and wineage prior to a sumptuous meal of lasagna, followed by "Death By Chocolate" cake dessert.

As is our custom, the chapter observed the traditional "Festivus" holiday theme. Everyone gathered 'round the Festivus Pole (designed and fabbed by **Frosty Wyatt**) to pay due tribute with the mandatory comment, "**Real nice pole, Frosty**". Unfortunately, **Frosty** was not present, so we hope he reads this.



Some of the gathered Festivus Celebrants



### More of the Festivus Celebrants

Following dinner, an exchange of gifts was conducted in adherence with the Festivus credo, that being "give a gift you don't want, and are pretty certain the receiver won't want either". This has become known as "**Kommandant's Krap**". Although much to the horror of **Mrs. Kommandant**, the credo was much more closely adhered to this year as some real **krap** showed up. Only one gift was stolen from the initial selectee, twice actually. It should be noted that **Gail Dodson** provided one of her "**High Cay**" brand of custom aviation-related Hawaiian style shirts as a gift. **Definitely NOT krap**. Last year's grand prize, a portable Festivus Pole, was cleverly regifted to an unsuspecting **Stormy Weathers**, despite being openly displayed. We'll see how creative Stormy is at regifting it next year, or **whether it ends up on his RV-8A**. Here's hoping to it becoming a chapter tradition to regift it each year in some clever manner.



**Kommandant Aldrich** addresses the troops on the rules of the "**Kommandant's Krap**". (*Evil Editor Zurg acknowledges that he will receive **Krap** from the Kommandant for publishing this picture. To that, EEZ says "Let him publish his own ruddy newsletter!"*)

Minister of Finance **Doug Dodson** gave a brief Financial Report. In summary, we're solvent, doing quite well, actually.





Mrs. Kommandant, allegedly having had a little too much of the Festivus Juice, airs her grievance about the quality of the “Kommandant’s Krap”, declaring that in the future all gifts must carry a Nordstrom’s receipt. In a related event, Stormy announces that Nordstrom’s is now selling aircraft materials and pilot supplies.

The “Airing of Grievances” was essentially a non-event due to everyone being full of beer and food. The “Feats of Strength” and “Wrestling the host to the ground” were dispensed with by direction of the host/Kommandant. Hey, it was his house, and he did pay for everything.



**First Dog Pixel stands by to wrestle the host to the ground**

Then came the “Awarding of Cheesy Chapter Certificates”, suitable for framing or wrapping fish at the discretion of the awardee. The equally cheesy pin which usually accompanies the certificates were not received, so will be awarded later (when in fact they are actually received). In an interesting twist from EAA HQ, some certificates were awarded for service to EAA Chapter 1000 to several EAAers whose names were not recognized as ever having been on the rolls of EAA Chapter 1000. Very thorough, those folks in Wisconsin.

With a flair for the dramatic, **Vice Kommandant George “Knife” Gennuso** announced his retirement from the post after 10 years of outstanding and exemplary service. In a blatant abuse of power by suspending the

constitution and declaration of martial law, **Kommandant Aldrich** appointed **Stormy Weathers** as **Vice Kommandant**, but promised elections at some unspecified future date when safe to do so. So ended a bloodless coup. But to top this, the **Kommandant** announced his own retirement as “**Kommandant for Life**” (casting doubt as to the validity of the title) at the end of 2008, yet did not announce a successor, setting off an internal power struggle among the “heir apparents” (No, it’s not what you think—everybody will be posturing to make sure they **DON’T** get the job).



**The Kommandant announces his threatened abdication**

The evening concluded with the telling of the **annual Festivus joke** by the **Minister of Propaganda**, which everyone loved and declared it to be the **best joke ever told**. Ending on this high note, the **Kommandant** declared “**Victory!**” and wished everyone a Happy Festivus and New Year. **First Dog “Pixel”** was restrained as guests departed, thus avoiding the same “chase the dog around the neighborhood” situation as last year.

- **Kent “Cobra” Troxel, Col, CAF**  
Minister of Propaganda

## **Kommandant’s Korner**

Days of auld lang syne. The new year is always a time of reflection.

Since this is intended for an aviation audience, it’s appropriate to reflect on aviation. I was printing out last year’s logbook entries (using write-once, read-many, persistent storage media – e.g. paper) from my cosmic electronic logging program the other day. One of the benefits of fat-fingering all your pilot time into an electronic form is the plethora of ways to slice and dice the time into interesting, but questionably useful statistics. Turns out, in 2007 I exercised my pilot certificate a total of 210.3 hours on 270 flights. The rather odd average flight duration that comes from doing math on these numbers is largely attributable to 5- and 10-minute glider instructional sorties. One-hundred-one of those



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hours were going someplace (cross-country) and all but 8.9 hours were during the day. I managed to avoid cloud-flying (the “retro” term for IFR) except for 5.8 hours. Of course, I probably expended more heartbeats per hour in that time than during the flights in clear weather.

The “**Fightin’ Skywagon**”, sadly, only accompanied me during 113.9 hours of aviating. This was slightly under my goal of 10 hours/month, but then again; it’s the quality that counts...not the quantity. Remarkably, the **VC-180** attained a near 100 percent dispatch reliability...marred only by one trip to San Diego during annual inspection time when I was “forced” to drive the new **Bimmer** rather than fly. Of course, these aren’t the only possible statistics. With a bit more digging I could report the cost of all this time in the air...but that would change the classification of this issue of the **‘Edge** to “**SECRET – NO SPOUSE**”. No doubt, the direct operating expenses (read petroleum products) would show a significant increase as the price-per-barrel of oil is living up to its moniker, “black gold”. I prefer to reflect on the hours versus the dollars and avoid any mixing of the two to the maximum extent possible.

If you weren’t at the Festivus bash, you may not have heard of a significant change to the Chapter leadership structure. After 10 years of faithful service, **George “Knife” Gennuso** has returned to the ranks of the (un)common **PPTAF** trooper. **Knife** has shouldered the heaviest burden in the Chapter...providing interesting entertainment at our monthly gatherings...for all those years with nary a complaint and an ever-present good humor. He’s now free to take a well-deserved rest as he builds his strength back up to **assume some future important post** (*foreshadowing?*). For the time being we all owe **George** a huge thank you for his tremendous service.

Who could possibly fill the shoes of the **Knife**, you say? Well, a superbly qualified volunteer has stepped forward in the person of **Scott “Stormy” Weathers**. **Stormy** brings a wealth of new ideas, energy, and enthusiasm to the post of **Vice Kommandant**. Rumor is that he single-handedly wrestled a Utah EAA chapter from the grips of apathy and rose to be its president. This could be a foreshadowing of the future... **Stormy** will need all our help in the form of program ideas and constructive feedback to ensure that the high standards of quality set by his predecessor remain in force in the coming years.

Hey, I hear it may rain...Fly Safe and Check 6!

- **Gary Aldrich**  
Kommanding

### Project Police Go Soviet In The Mighty AN-2 Colt “Big Panda”

*(This month we start another Pilot Report serial brought to you by your USAF TPS PPOs. We could print it all this month, but Evil Editor Zurg likes to stretch it out so that he has several months worth of material)*

On 20 November 2007 two officers of the **Project Police** had the opportunity to infiltrate and evaluate an actual piece of Soviet designed, Polish built hardware, the

mighty **Antonov AN-2 Colt “Big Panda.”** Known as “the world’s largest single-engine biplane” (the Curtiss NC-4 is much bigger, but it was a multi-engine biplane; so were all of those huge WWI bombers), this aircraft stands as solid proof that given enough effort, even 1000 horsepower can be made to fly slow.

The evaluation crew consisted of **PPO Russ “Erbman” Erb** and **PPO Dave “Titan” Vanhoy**, who were augmented by Instructor Pilot **Carter Teeters**, crew chief **Bob Cable** (of Cable Airport fame), Air Force flight test navigator **John “Haole” Shinoskie**, and NASA flight test engineer **Martin Trout**. Note that even though **Erbman** and **Titan** both hold single engine pilot certificates with tailwheel endorsements, as far as the Air Force was concerned there was only one “pilot” on board. For that matter, we don’t know if he or the crew chief were ever military pilots, so there may have been no “rated” pilots on board. That’s got to get some operations specialist somewhere excited. The evaluation consisted of 1.9 flight hours of Eastern Bloc fun and games over and near Edwards AFB.



The elite evaluation crew, Carter Teeters, Russ Erb, Martin Trout, John Shinoskie, and Dave Vanhoy

### Test Item Description

The subject AN-2 was based at Cable Airport in Upland CA (that’s “down below” near the Ontario airport) as part of the **3<sup>rd</sup> Pursuit Squadron** of the **Commemorative Air Force (CAF)**. Known as “**Big Panda**”, the aircraft was named in honor of **Eric Shilling**, one of the founding members of the squadron, who served with the **AVG Flying Tigers**. He flew with the 3<sup>rd</sup> pursuit squadron of the AVG, which was known as the “**Hell’s Angels**”. Their squadron logo was painted on the crew entrance door. The 2<sup>nd</sup> pursuit squadron of the AVG were the “**Panda Bears**”, hence the aircraft’s name. The happy panda is painted under the cockpit on the left side, and the not-so-happy gun-toting panda on the right side. The first AN-2 flew in August 1947. The Soviets built over 5,000. China built a bunch. This particular AN-2 was one of about 12,000 built in Poland, and was fairly new, built sometime in the 1980s. The CAF acquired it “cheap” for about \$50,000.





**Your basic Soviet utility aircraft**



**The honorary Hell's Angels logo on the inward-opening crew entrance door**



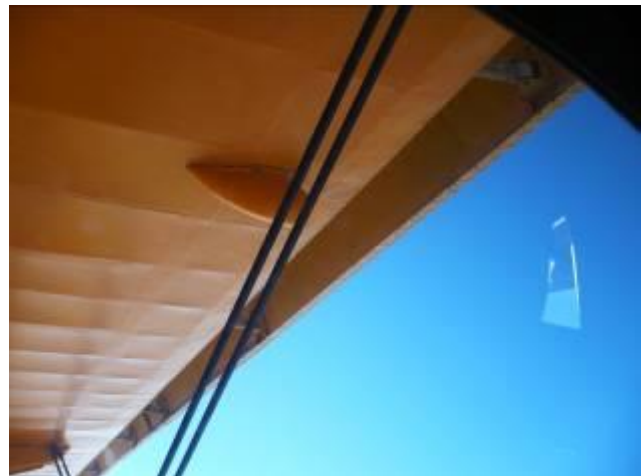
**The not-so-happy Panda side**

The AN-2 was most certainly BIG. It assaulted all of our Western sensibilities about what a single-engine airplane should look like. With a 72 foot...oops...22 meter wingspan (not that my brain has any idea how long 22 meters is without converting to some other unit), it was twice as wide as the **Fightin' Skywagon**, and neither one would fit in **Stormy's** hangar. While the top wing looked like it should be plenty, **Oleg Antonov** added a spare on

the bottom that was almost as big. The biplane configuration is popular where lots of lift and low wing loading are desired, because it has a lot of wing area in a structurally efficient arrangement that keeps the weight down to a reasonable value. As a special bonus the biplane configuration comes with a lot of extra interference drag as well. The wings were fabric covered, which should keep the weight down and Poly-Fiber in business. The entire trailing edge of the lower wing was a plain flap in two sections per side. The inboard half of the trailing edge of the upper wing was also a flap. The outboard half of the trailing edge of the upper wing was the aileron, which drooped with the flaps to about half of the flap deflection. Flaps were extended electrically. The leading edge of the top wing sported Handley-Page slats, which would extend automatically by aerodynamic loads at high angles of attack. In keeping with the big wings, the tail surfaces were also appropriately super-sized.



**Extended flap and drooped aileron on the top wing**



**Extended slat on upper wing**

The fuselage was about twice as tall as you would expect, and it didn't taper much top-to-bottom as normally seen. All of this side area certainly helped with directional stability when you wanted it and weathercocking into the wind when you didn't want it. A nice benefit of the tall fuselage was that you could stand up straight inside the fuselage and still had plenty of headroom. The large crew

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entrance door was on the left side about halfway between the wings and tail, with a large cargo door around it. The door was at the rear end of the usable cargo compartment. It opened inward, and could also be used as a paratroop jump door. A step was provided to ease entry, which came equipped with edges to scrape the mud off of your boots. The step was removable, probably to keep the drag from getting way out of hand, and was normally stowed inside during flight. Anecdotal evidence has shown that the step has a good probability of staying in place on the outside during flight shouldst the crew chief forget to bring it in. Static line cables for “jump up, hook up, shuffle to the door” were installed overhead.

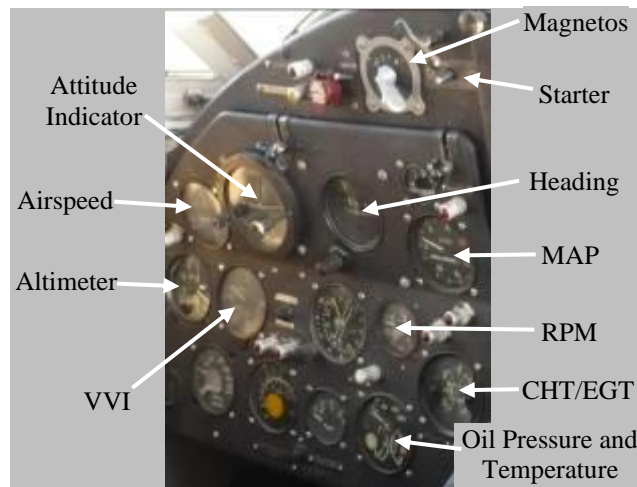
Two doors were in the rear cabin bulkhead, which when opened allowed access to walk straight back to the tail end of the fuselage. While there was a huge volume back there, it was basically useless, since we were told that it was really easy to get the cg too far aft by improper loading. Large port hole windows gave a reasonable view to the passengers, who got to sit sideways in the Soviet version of troop seats. Plastic seats folded down from the side wall with no real back support to speak of. The seat belts were of the same type as found in **Lee Erb's 1953 Studebaker**—a web belt inserted into a clamp, much like a military uniform belt. No metal-to-metal latch system here! Fuselage construction was typical aluminum semi-monocoque with formers and stringers. The only insulation between you and the outside atmosphere was the few millimeters thick aluminum sheet skin. The cabin area was also equipped with three racks for AK-47s and a place to hang a picture of Stalin, but none of these items were installed during this flight. Russian style wheel caps were provided for photo ops as desired, though they weren't compatible with the Bose headsets.

The landing gear was of the less-than-commonly-seen “conventional” (tail dragger) style. This was quite logical for an airplane with a propeller up front that was expected to be operated from unprepared fields. The main tires were very large, and the tail wheel was large, as big or bigger than the 6.00x6 tires I have on the **Bearhawk**. Brakes were pneumatically operated. Air pressure for the brakes was stored in a reservoir fed by an engine-driven air pump.

The fuselage was tall enough that the cockpit was well above the engine. Or was that the cockpit was well above the engine, so the resulting fuselage was very tall? In typical Soviet style, the transparencies were a collection of flat windows held together with much frame work. Really cuts down on the requirement to blow an optically correct canopy. The side windows bulged out beyond the fuselage enough that you could look straight down the side of the fuselage at the landing gear and whatever was below you. The side window could be slid open for ventilation. Air conditioning consisted of 6 inch fans (one each pilot and copilot). To help cull the pilot herd, the fan blades are not protected by any sort of cage, but were made of rubber such that the injury is not too bad. To further protect the copilot, the switch for the copilot's fan was hidden away where not even the IP knew where it was. Therefore its effectiveness was not tested.

The instrument panel layout was a beautiful example of the “shotgun” school of instrument panel design. Find a

hole of the right size and stick a random instrument in it. The only working altimeter in the aircraft was at the extreme left of the pilot's side panel. The airspeed indicator was calibrated in the units of kilometers per hour, which may become the latest rage in homebuilt panels. After all, the numbers are 61 per cent bigger than miles per hour, and 85 percent bigger than knots. This may be the easiest way to get your RV-\* over an airspeed of 300! There was also a CHT/EGT gauge and a manifold pressure gauge calibrated in millibars. Really interesting was the tachometer, a gauge that you would think important, in the (small) 2-1/4 inch size and set up with two hands like a clock. The attitude indicator was of the typical “backwards” Soviet style, but the evaluation crew did not find that confusing because it didn't work. There were several other instruments that may or may not have been working. At the top of the panel the prime panel space was occupied by the magneto switch and the starter switch.



**Pilot side instrument panel**

The center panel was dominated by 25 two position switches (including one marked “Guns”) with more farther down and a non-functional Russky radio that puts you in mind of a Narco Superhomer. The throttle quadrant included from left to right mixture, throttle, prop, something green, and fuel cut-off.

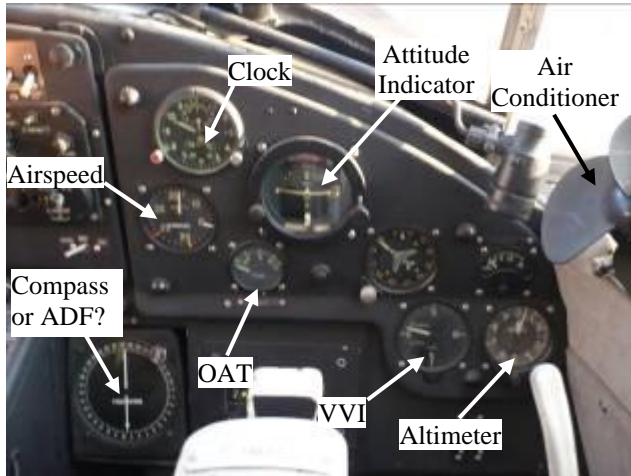


**Center instrument panel**

On the copilot's side was a huge non-functional clock at the top of the panel, another clicks per hour airspeed indicator, a compass or ADF big enough for the Titanic, a



non-functional non-sensitive altimeter, and several other non-functional dials.



**Copilot side instrument panel**

Where were the fuel gauges you ask? On a side console under the pilot's left arm. Apparently CRM hadn't made it to the Soviet Union yet, so the copilot was not expected to monitor the fuel state.

The seat position against the back wall of the cockpit was not adjustable fore-and-aft, but that was okay because the rudder pedals weren't adjustable either. Apparently in the Soviet system they just adjusted the pilot to fit the airplane. As it was, all of us seemed to fit the Ideal Pilot Demographic, since none of us had trouble reaching the controls.



**Non-adjustable seat and non-adjustable rudder pedals**

The engine, up front in the standard centerline position, was a 1000 horsepower Shvetsov Asz-62 IR Geared 9 Cylinder 1823 cu. in. radial engine driving a four-blade AW-2 propeller. That all sounds real impressive until you realize that it's pretty much a Polish knock-off of the Wright R-1820. As such, it rotated in the "correct" direction so that flight instructors didn't have to change their mantra of "More Right Rudder!". Cowl flaps were located at four positions around the cowling. Cowl flap position was of the "direct indicating" type, since you could see the top two cowl flaps from the cockpit. We didn't ask if the engine springs an oil leak does the oil come up and cover the cockpit windows. The oil cooler was located below the engine in a large tube with a fixed inlet. The airflow through the oil cooler was controlled by a three-vane venetian blind sort of set-up over the exit.



**Direct-indicating cowl flap as seen from copilot's seat**

In keeping with the apparent goal of keeping 1000 horsepower from going too fast, the airplane was fitted with more than its share of drag producing devices. A large frontal area was certainly a plus in the quest for drag. The landing gear was typical Soviet—not pretty, but very strong and extremely reliable. The landing gear was fixed in the down position with no wheel pants or fairings. Then again, at the speeds that the Colt operated at, the drag reduction from retracting the gear wouldn't offset the penalty for weight and complexity. Apparently the Poles didn't have the American technology to extrude streamlined tubing (or at least the desire), because the landing gear tubing was sort of a streamlined shape, but was clearly made by welding together two pieces along the leading and trailing edges. No effort was made to hide the welds, which certainly looked airworthy but weren't pretty by any stretch of the imagination. Flap and aileron hinges were all exposed. Curiously, the flying wires and landing wires were streamlined wires. Rather than use a flush NACA inlet, a large protruding scoop was used to collect air for cabin ventilation. Even if the scoop was a drag-producing device, it certainly worked very well, as the cabin ventilation was much better than most airplanes I have flown in. (*Next month we go flying!*)



**Drag producing hinges, wires, and javelin. Pitot-static boom and temperature probe extend forward from the interplane I-strut**

- Russ Erb; Pictures by Dave Vanhoy

### Web Site Update

As of 5 January 2008, the hit counter was not available, so we don't have our statistics this 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**

**Jan 15: EAA Chapter 1000 Monthly Meeting**, 5:00 p.m., Mojave Airport. Stormy's Hangar 969. (661) 609-0942

**Feb 5: EAA Chapter 49 Monthly Meeting**, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

**Feb 19: EAA Chapter 1000 Monthly Meeting**, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

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

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

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

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

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

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

**May 6: EAA Chapter 49 Monthly Meeting**, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

**May 17: Seventeenth Annual Scotty Horowitz Going Away Fly-In**, Rosamond Skypark (L00), Rosamond CA. (661) 256-3806

**May 20: NO EAA Chapter 1000 Monthly Meeting**. That's why you went to the fly-in above.

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**

**C/O Russ Erb**

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**Rosamond CA 93560-7692**

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

**ADDRESS SERVICE REQUESTED**

**THIS MONTH'S HIGHLIGHTS:**

**MEETING AT KMHV 15 JAN-STORMY'S WING KIT**

**BRAWL BREAKS OUT AT FESTIVUS** or maybe not

**GOIN' SOVIET IN THE AN-2 COLT**

**PAY YOUR DUES – NOW! STILL ONLY \$20**



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