THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

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

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

http://www.eaa1000.av.org *April 2011*

Chapter 1000 meets monthly on the third Tuesday of the month in the USAF Test Pilot School Scobee Auditorium, Edwards AFB, CA at 1700 or 5:00 PM, whichever you prefer. Any changes of meeting venue will be announced in the newsletter. Offer void where prohibited. Your mileage may vary. Open to military and civilian alike.

This Month's Meeting:

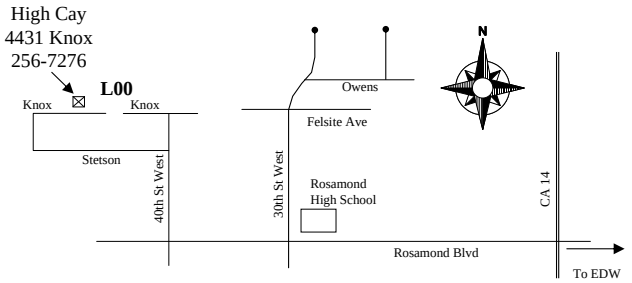
Cookout with the USAF Academy Cadets

Tuesday, 19 April 2011
1830 hrs (6:30 PM Civilian Time)
High Cay Partyhaus
Rosamond, CA

Last November, we told you that every April and November, a small group of cadets temporarily escape the regimentation of military academy life to wing their way west to fling an eager craft through footless halls of air. While here, they look forward to the highlight of the trip--hanging out with the ***Project Police*** at the world-famous High Cay resort. These cadets from the US Air Force Academy are enrolled in Aeronautical Engineering 456. Now it's April and they are here to visit the Test Pilot School and conduct flight test in support of their class project.

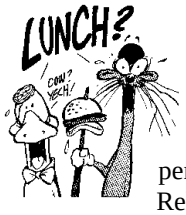
Of course, as you may have suspected by now, we need you to join us on the usual meeting date to show them a typical evening of EAA Chapter 1000 regalia. The future of our nation's defense (or at least the world state of flight test) depends on your attendance. Please bring an appetite for hamburgers and be prepared to share stories of aerial achievement and daring feats of airmanship - true or just plausible fabrications. We are hoping to see a re-emergence of that secret concoction--the "**Kommandant's Kookie**", a pleasing blend of chocolate chips in a peanut butter cookie, sure to be a delight to all ***PPOs***.

As usual, the ceremonial fire (barbeque grill) will be lit at 1800.



- Scott "Stormy" Weathers
Vice Kommandant

Twentieth Annual *Project Police* Airport Barbecue 21 May 2011 at Rosamond Skypark



For the twentieth year in a row, the ***Project Police*** are fabricating a reason to party.

Last year's event was marked by pre-event activities including a performance by the Precision Work Bench Relocation Marching Drill Team, the One-Armed Banner Hangers, and the Scottish Banquet Chair and Table Corps. There was an actual sighting of a flying Bearhawk. The Spot Landing contest and People's Choice airplane judging continued to be eliminated which was met with a large round of apathy from the assembled participants who didn't even notice since there were no awards presented.

The best part will remain—there will be food! Expect food to be available around 1000.

The big event will still happen at the **High Cay Partyhaus** on **Rosamond Skypark**, so you can still fly in if you so choose. Rumor has it that **Opie's Glasair II-S FT** will be in the position of honor this year. That's the benefit of being the host aircraft. The scuttlebutt is if you twist his arm gently he may take you flying. Of course, you can always try that on **Gary Aldrich** with the **Fighting Skywagon II**, or **Russ Erb** with the **Combat Bearhawk.** If you ask **Dave Vanhoy**, be prepared to fly upside down.

Clear your calendar now! More details next month.

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.

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

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

Last Month's Meeting

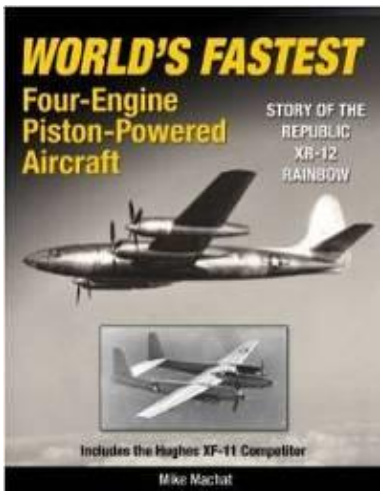
EAA Chapter 1000
USAF Test Pilot School, Scobee Auditorium
Edwards AFB, CA
15 March 2011
Gary Aldrich, Presiding

The March meeting was held in the Scobee Auditorium at the Edwards AFB Test Pilot School, featuring world renowned aviation artist, author, editor, publisher and all-round cool guy **Mike Machat**.

Despite starting badly due to a delay in arrival of the **Vice Kommandant** (and refreshments), the "social hour" subsequently proceeded without further complication. Chips, salsa and C^3's were promptly consumed and the "entertainment" portion of the program commenced.

Aviation Art- an Inside Look

The slide show opened with photos of the Republic XF-12, a prototype photo recon aircraft featuring four R-4360 engines, each in a nacelle the size of a P-47 fuselage. The plane achieved 450 mph in level flight in 1946. It appeared too late in the war to reach production, and was eclipsed by the emerging jets of the time. This plane is featured in Mike's new book "World's Fastest Four-Engine Piston-Powered Aircraft" (*now available at Amazon.com for pre-order*).



Mike showed drawings he did as a young lad, and paintings of the same planes done later as a commercial artist (Seabee, Constellation, X-15), and of the Super 80 (billed as a "Super Plane for the 80's") when he first started with McDonnell Douglas.

We were walked through the step by step process of converting an idea for a painting, research, drawings and sketches, modeling, to final product using a He-111 kill by an F-51 recon plane overflying the crashed He-111 in a field near Dresden ("Photo Finish"). Also, the famous "Hey, Pard, You'll Get A Free Steak At Pancho's Tonight" painting of Yeager and Hoover in the X-1 and P-80 depicting the approach to final after the world's first Mach 1 flight. Mike discussed how he used models at the exact time of day and angle to get it just right as described to him by Yeager, but was concerned about a shadow cast on the P-80. Later, when shown to Yeager and Hoover, the latter remarked that he got the shadow just right as that's where Hoover positioned the P-80 for the X-1 to block the sun, and that he'd been living in Chuck's shadow ever since!

Mike also talked about "The Golden Age of Flight Test" painting, which has over 40 aircraft in it, featuring twelve scenes from the movie "Toward the Unknown" with William Holden and Lloyd Nolan.

After concluding the presentation, Mike graciously took the time to answer any and all questions and provide some additional colorful anecdotes before we spirited him off to the BK Lounge of the Dead Cow Emporium for a supersized dinner.

I must confess that mere words can not adequately convey or describe the visual presentation that Mike brought to us this evening. Breathtaking imagery in the form of photographs and artwork filled the big screen in all its electronically projected glory.

Most, if not all of this, is true.

- Kent "Cobra" Troxel
Minister of Propoganda

Kommandant's Korner

Just when you thought it was safe to start your spring flying…SNOW! Yup, that's what the LA weather-guessers are telling us as I type this. After just a couple of "teasers" it appears we're still in the winter mode. Well, if it's not nice enough to fly, we can still gather and talk about it…maybe even have an adult beverage or two in the process. After all, it's time again for the "**Future-of-the-Air-Force**" gang from the Academy to descend upon **TPS** and **High Cay**. It's always fun to see just how much dead cow an energetic USAFA cadet can put away. Sometimes I wonder if they feed them out there. Further, we are once again to be blessed by a Flying Fortress visit when **George Daubner** and crew bring EAA's "**Aluminum Overcast**" into General Fox Field.

Speaking of the B-17 visit, thanks to all who contacted me to volunteer for a spot on the crack ***Project Police*** hospitality team/ground crew. I think we have all the critical jobs covered for the visit, which starts with the aircraft arrival around **1200** on **18 Apr 11**. However, lest you think you are off the hook, we still have openings for "wheel chocks". You may recall from my earlier communication that these vital assets fill in any position that becomes temporarily vacant during the visit for various reasons…potty breaks, lunch, enemy action, etc. When not actively deployed, the wheel chock is available to augment the general camaraderie of the event and provide a colorful diversion for the visiting air/ground crew. Remember, we in Chapter 1000 have a rather "unique" reputation among the folks in OSH-land and, by golly, we need to live up to it…or maybe even embellish it somewhat. So, if you have a free morning or afternoon on Tuesday or Wednesday (19/20 Apr) come on out and we'll put you to work.

Speaking of work, I'd like to assure you that the impending government shutdown will not affect the para-military operations of the ***Project Police***. Since we don't accept any government funding and rarely abide by any of their rules anyway, all scheduled events listed herein will occur as scheduled. In fact, if the Donkeys and Elephants don't blink on this weekend of political standoff, I'll be at Foxy's Landing around 0830 on Monday for breakfast. All furlough-ees are invited to join in so we can lambaste our respective representatives in Washington while scarfing down some high-cholesterol treats off the menu. Should common sense prevail (yeah, like that's gonna happen…) then I guess you'll know not to skip work and head to the airport.

Fly Safe and Check 6!

- Gary Aldrich
Kommanding

Glasair Roll-Out Party 23 April 2011!!

As was detailed in a previous issue of ***The Leading Edge***, **Doug Dodson** has reached a milestone in the construction of his **Glasair II-S FT**. First Flight was on 23 Jan 2011, and Phase I testing was complete on 14 Feb 2011. To celebrate these events, there will be a Rollout Party for **N6940P** at **High Cay** on **23 April 2011** to formally introduce it to the aviation community. The festivities start at Noon and will continue throughout the day and into the evening. Anyone reading this newsletter is invited to join us. There will be hamburgers and plenty of beverages in a suitable variety for adults and children. This event is completely hosted by **Gail** and **Doug Dodson**. Please find time to stop by for just a minute or an hour or four! Fly in or drive in!

(*See map on first page and on flyer for directions*)

- Doug & Gail Dodson

Volunteers Needed: Young Eagles 4 June 2011 Kern Valley Airport

Spring is in the air and its time to start planning your summer flying! The Kern Valley Airport Manager, realizing the overwhelming sortie generation capability possessed by EAA1000, has invited us to his beautiful airport in the hills to conduct some Young Eagles flights. The goal is to increase aviation awareness and support for the Kern Valley Airport while introducing some kids to the thrill of flight. The tentative target date is **June 4th** which can be adjusted based on EAA1000 mob rule. I'll be working with the Airport Manager and a local school teacher/pilot to ensure proper scoping of the event. We desperately need aircraft and volunteers! The Techachapi Society of Pilots has committed to assist and EAA49 has been contacted. As I'm looking to bring in pilots/planes/volunteers from around the area the occasion demands some social festivities to follow (ie lunch). If you

are willing to help or offer your advice please contact Dave Marten.

dandtmarten@hotmail.com
david.marten@edwards.af.mil
Cell 605-390-8044.

- Dave Marten
Young Eagles Coordinator

Notes From Below

I had hoped to get some feedback from my article, "**Bass Akwards, or Turn the Other Cheek**", http://www.eaa.org/experimenter/articles/2010-11_bass.asp that was in EAA's Experimenter at the end of last year. My arguments wiping away 100 years of conventional wisdom about the instability of tail draggers must have been incredibly convincing or no one reads the Experimenter. There is a need to get a handle on this problem as evidenced in Russ's first flights videos. Well class, your assignment is to read said article (it is not long and no quantum mechanics are needed.) and think about it. Your comments will be appreciated. If you do your homework your reward will be http://videosift.com/video/Top-Gear-Clarkson-tests-a-Reliant-Robin-3-wheeler?fromdupe=Top-Gear-Jeremy-Drives-a-Reliant-Robin . It is an illustration of the reason for speed restraint while taxiing tricycle geared aircraft. My next installment may be on the desirability of nose wheel brakes on tricycle gear aircraft. How about feathering props for singles?

All this landing gear study comes from an interest in roadable aircraft. I had an article in Kitplanes a while back titled, "Dream The (Almost) Impossible Dream". The requirements for the landing gear and the chassis of a road vehicle are very different and it is just one of the problems that tend to kill such projects. Over years I have evolved a configuration that I believe would work reasonably well. It is more like a flying motorcycle. For such a vehicle to be both a useful flying machine and road vehicle it has to be light weight and low drag.

Some time back I was looking at my design and had a revelation; if we forget about making it fly and do a road only version it becomes a much less daunting project with vastly more potential customers. I am currently building the prototype T-W-E-E-T, Three Wheel Efficient Economical Transportation. I'm not great at updating my web site but for more info check: www.mirco-ltd.com and www.t-w-e-e-t.biz

- Murry Rozansky

Three Sigma High Power Cooling Test

On 29 March 2011 the mission for **Three Sigma** was to deliver **Dave Vanhoy** to Visalia CA to pick up his **Giles G-202** where the engine had been inspected by LyCon.

The elevation of Visalia (KVIS) is 295 feet. **Three Sigma** is based at Rosamond Skypark (L00), elevation 2415. For normal flying around here with sufficient ground clearance it is more difficult to get enough manifold pressure to get 75% power at reasonable RPM settings (Lycoming O-540). I saw today's mission over much lower terrain as an opportunity to fly **Three Sigma** at 75% power to see if the modifications to the cowling allowed sufficient airflow for cooling at this power setting. I have generally been limiting myself to 65% power or less.

Taking off out of Visalia solo and with less than 40 gallons of fuel was a hoot. Even climbing at my normal cruise climb speed (100 KIAS, faster for better cooling), by the time I got to the other end of the runway (6559 ft long) I had already gained 500 feet. I was well above pattern altitude by the time I finished turning downwind for departure.

I climbed up to 2500 feet and actually had to throttle back to get to 75% power at 2400 RPM. I set the mixture to the best economy setting (Lean Of Peak). I was only able to maintain this flight condition for about 5 minutes before I had to descend because of clouds and approaching my next destination. During that time the CHTs had decreased slightly from their values at the end of the climb, showing that cooling was occurring. Outside Air Temperature was about 50 deg F.

Interestingly enough, the true airspeed at 75% power at 2500 feet was about 120 KTAS with a fuel flow of 12.8 gph. Earlier that day, I had been at about 65% power, 6500 feet and cruising at 120 KTAS with a fuel flow of 10.3 gph. There really is a speed and fuel economy advantage to going high. Around here we climb high mostly for terrain clearance.

For those of you who may not remember, **Three Sigma** was built with a cowl flap that had sufficient exit area according to experience and rules of thumb. However, engine cooling had been marginal and power settings had been limited to about 65% power continuous. The suspected problem was that the cooling air could not get to the cowl flap exit efficiently because it was effectively blocked by having to flow around mufflers, heat muffs, and a sea of SCAT tubing. The fix was to add rather aggressive louvers to the sides of the cowling to provide an unrestricted path for the air to flow from the cylinders out of the cowling.

With the completion of this test, I can conclude that the cooling modifications made to **Three Sigma** provide sufficient cooling throughout the operational envelope. Some modifications to the operational procedures may be required for long climbs or flight at high outside air temperatures to keep the CHTs within limits, but it is still possible to operate the aircraft with only an acceptable degradation of performance.

- Russ Erb

Bearhawk Fuel System Design And Implementation

(*reprinted by permission of the author*)

After a rather long build process I am finally getting to a point where I can no longer put off decisions about the fuel system and how to implement it in my plans built Bearhawk. I am using an injected IO-470 and have to incorporate fuel returns, high pressure pumps, flow meters and a few other tidbits.

The really big decision is where to place the fuel selector and best locate the low point drains. I liked a panel mounted location, with a Left, Right, Both and Off positions. This seems to make sense and keeps the selector up and convenient both to view and operate with ease. I have seen several variations on this theme in several Bearhawks and the Stinson Voyager. They seem to work. My concern was how would the system perform with a fuel pump in the delivery line?

To test out the system I mocked up the delivery lines per Bob's Beartracks recommendations with 5/16 ID clear Tygon tubing and went about seeing how good the delivery flow was. When filling the lines from totally empty the fuel would flow like the proverbial cow on a flat rock. I was able to start, stop and vary the flow rate at the fuel servo location at the upper back of the engine. So far so good, a solid baseline.

Inquiring minds wander and wonder and…what would happen if…How about unporting a tank? After introducing air into the system, simulating an unport, it was difficult to reestablish a solid fuel delivery until all the bubbles had been removed. The bubbles would tend to migrate back towards the tank but flow delivery was always erratic and feeble. Leaving the system to settle out for a while resulted in large air bubbles in the lines. Needless to say this observation begat several episodes of water play.

The results went something like this:

Single side fuel delivery was problematic due to air locking if unported.

Both Sides ON was best at purging air and establishing unrestricted fuel flow.

If the lines were unported on a single side it took a head pressure of almost ¾ of a full tank to establish flow and purge the lines. This would equate to 12 to 15 gallons of fuel in the aircraft.

Locating the fuel selector up on the panel only aggravated the situation causing a large, difficult bubble to form at the high point of the looped up system.

Time for a little actual aircraft testing. Scott Williamson, owner of N509RF, had more than a passing interest in this situation as 509 has a panel mounted fuel selector, and he is currently building a quick build kit.

We devised a ground based testing scheme to see what would happen in the aircraft. Scott drained the left main tank, leaving approximately 3 gallons, and isolated it by placing the selector in the Left position, drawing fuel from the left tank. The engine started and operated normally during a long taxi out to the runway. Minimal fuel was visible in the sight gauge. Approaching the runway we began a large radius sweeping right turn and sustained the turn for several revolutions. The centripetal force migrated the fuel away from the wing root, no visible fuel in the sight gauges, eventually it got quiet, the prop motionless. When the aircraft stopped moving, fuel was visible in the sight glass.

Unport the tank and the engine will stop. Data Point!

Numerous attempts to start the engine resulted in…no start and a dead battery. Subsequent starting with the fuel selector returned to the BOTH position resulted in immediate starting. This test was repeated a few times with the same results.

Unporting a tank in single side operation will create air bubbles in the fuel system. The fastest way to restore fuel delivery is to select BOTH on the fuel selector. This allows fuel to flow in from the highest, fullest tank and vent bubbles up thru the other lines.

My curiosity has been satisfied. Placing the fuel selector on the floor and fuel line routing per Bob's recommendations has the highest integrity based on bench testing and ground testing. Builders should follow Bob's recommendations and utilize proper routing with smooth sweeps always flowing downward from the tank outlet, with no S traps in the runs. The fuel selector should have a BOTH position.

1. The "Bob System" is optimal and should be kept as the "Gold Standard".

2. Modifications to the fuel system should be builder tested to verify all functions.

3. The refill of the fuel lines after unporting a tank happens faster and more reliably when the fuel selector is in BOTH.

4. Take off and landing should always be on BOTH.

5. Sustained uncoordinated flight and or single side fuel delivery should be avoided while maneuvering in the takeoff or landing phase of flight.

6. Operation with minimal fuel levels should be approached cautiously.

A further extension of the fuel system thoughts might be to review what to do should there be a fuel delivery interruption.

Emergency Procedure - Engine Failure might look something like,

Wings Level
Pitch for best glide (75 mph)
Carb Heat ON
Fuel on BOTH (Not fullest tank because that isolates the ability to move bubbles out.)
Fuel Pump On (If equipped)
Mixture Rich
Prop Increase
Throttle Various
Ignition Check
Select Landing Site

I have resolved to install fuel selector on the floor, with fuel delivery loops per Bob's methods.

Builders with a different scheme should test their installations carefully. Strive for simple, reliable, predictable. Gravity has yet to fail!

- Kevin Deutscher
Bearhawk #272

Project Police Aircraft Spotters Quiz

Last month, Aviation Über-Historian **Mike Machat** provided this photo to **Evil Editor Zurg** to befuddle and amaze you. Once again, EEZ was able to do just that, as only one response was received. From our perennial man with the answers, **Murry Rozansky**, we got "This early stealth aircraft mock up was built as a runway and taxiway simulator for the **Republic Rainbow**.

What appears to be a relief tube that empties near the driver's (Flight Test Engineer) ear is actually a speaking tube like in navel (*sic*) ships for minimizing electromagnetic frazzle that might cause cross firing of the pseudo nosewheels inflamerators. The steering of the simulator is by pilot thought control which necessitates the organic (wood) superstructure as natural and organic materials such as cellulosic natural composite materials and their decomposition products (ethanol) are better able to convey the pilot's thoughts to the natural rubber ground engaging steering effectors. This early attempt at stealth was quite effective as you can see; the rest of the airframe is there behind the cockpit. Extra Ultra Top Secret: Destroy Before Reading."

At least **Murry** was correct about the **Republic Rainbow** part, or more accurately the **XR-12** (or **XF-12** depending on what year you care to answer the question). According to **Mike Machat** this was a test bed for the cockpit and canopy design. The stated requirement was for pilot field of view straight up, to both sides, and significantly down. The driver in the truck drove around the taxiways, up and down runways, during the day, night, in fair weather and rain. The designer sat in the cockpit and evaluated the design. Apparently the mockup was successful as the final design of the Plexiglas (or Perspex) nose fairing was significantly different than this early version. We didn't get an answer on "Does the gosport work both ways?" or "How does the driver open the door to get into the truck?"

As for the bonus points for identifying the truck, an expansion of the original picture shows that it was a Studebaker, or at least that it was marked as a Studebaker. **Mike** said that he heavily Photoshop®ed this picture, "fixing" a myriad of dents all over this truck, saying that it was embarrassing what the original picture looked like. He did leave one original dent in the hubcap.

As for the other question asked in last month's newsletter ("The…F-110 was produced under a different designation. Do you know what that was?"), only **Vince "Opus" Sei** submitted an answer of "F-110 was the Air Force F-4. 10 points for Opus".

Web Site Update

As of 9 April 2011, the hit counter showed **137437**, for a hit rate of 16 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.

Doug Dodson's Glasair Roll Out

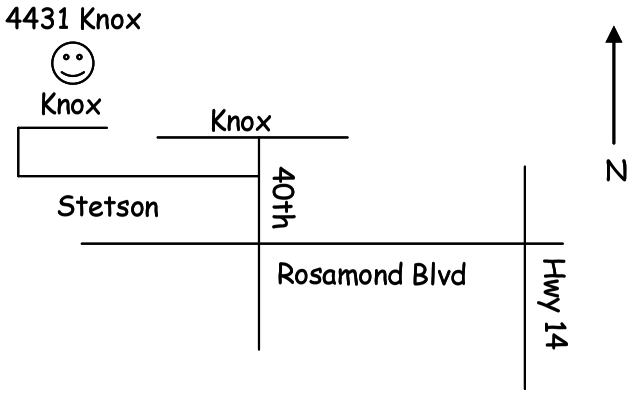
1991

Where: High Cay (see map below)

When: Saturday, April 23, 1200-???

What: Food, Drink, Friendship

Who: if you are reading this, then its YOU & Your Family (kids too)



2011

Chapter 1000 Calendar

Apr 19: EAA Chapter 1000 Monthly Meeting, 6:30 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

May 3: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

May 17: No Third Tuesday Meeting. Go to Airport Barbecue instead.

May 21: Twentieth Annual *Project Police* Airport Barbecue, Rosamond Skypark (L00), Rosamond CA. (661) 609-0942

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

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

Jun 21: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

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

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

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

Jul 25-31: EAA Airventure Oshkosh. Multiple ***Project Police*** missions are currently in planning.

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

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

Aug 16: 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

Composite Construction		
Doug Dodson	douglas.dodson@pobox.com	661-256-7276
George Gennuso	pulsar1@sbcglobal.net	661-265-0333
Brian Martinez	brianmmartinez@aol.com	661-943-5379
Bob Waldmiller	waldmilr@qnet.com	661-256-0932
Wood Construction		
Bob Waldmiller	waldmilr@qnet.com	661-256-0932
Aluminum Sheet Metal Construction		
Bill Irvine	wgirvine@yahoo.com	661-948-9310
Miles Bowen	cessna170bdriver@yahoo.com	661-822-0806
Russ Erb	erbman@pobox.com	661-256-3806
Welding/Welded Steel Tube Construction		
Russ Erb	erbman@pobox.com	661-256-3806
Engine Installation		
Bob Waldmiller	waldmilr@qnet.com	661-256-0932
Doug Dodson	douglas.dodson@pobox.com	661-256-7276
Electrical Systems		
Miles Bowen	cessna170bdriver@yahoo.com	661-822-0806
Instrumentation and avionics requirements for VFR/IFR		
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:
MONTHLY MEETING 19 APR @ HIGH CAY
BUY MIKE MACHAT'S NEW BOOK!!
MURRY PLAYS WITH SHOPPING CARTS
THREE SIGMA HIGH CRUISE POWER TEST

EAA™
THE SPIRIT OF AVIATION