



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>

September 2002

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 ART OF FORMATION FLYING

Cliff Heathcoat and Steve Korney
Tuesday, 17 September 2002
1700 hrs (5:00 PM Civilian Time)
High Cay
Rosamond, CA

Ed-U-macation! Yes, yes, I know it's a big word for you guys out there, but that's what the next meeting is all about. And just so you don't feel intimidated, remember that Jethro Bodine went all the way to the 6th grade with his edumacation. If he can do it so can you.

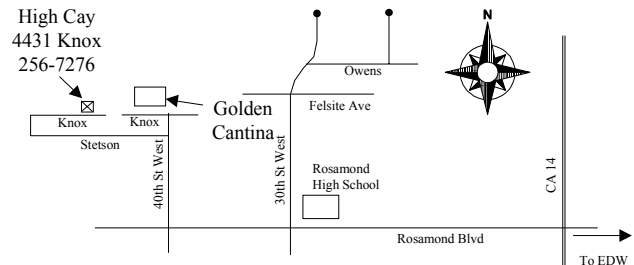
First of all the meeting will be at **High Cay**, not the TPS, so don't show up at TPS, since no one will be there and you'll feel stupid. And second, we're going for more test points on the Chapter Grill in the form of freshly cooked brats, your's truly presiding thank you very much. So, don't be late, actually try to get there at around 1700 (5:00 p.m. civilian time) because we need all the daylight we can get for this interesting, informative and edumacational event.

So what is this scholarly event you ask? Well let me lay it out for you. **PPO Mark Dickerson** has arranged to have two **FFI (Formation Flight Inc.)** card-carrying members come out to High Cay and give us a presentation on the finer points of GA formation flying. Now I have to commend Mark, judging by the e-mail traffic, he has done an outstanding job of setting this meeting up. I'm sure he's pouring over his newly purchased copy of the T-34 Formation Flight manual and the GA Formation Flight Reference manual as we speak and will become a veritable suppository of information on formation flying.

Now, get this, Mark went out and got **Cliff Heathcoat** and **Steve Korney** to come up to the high desert to help with our formation flying edumacation. And, sports fans, they will be arriving in a pair of T-6's which they will have parked out on Opie's ramp. That's the reason for being on time for this meeting. Cliff and Steve would like to pass on some formation flying knowledge to us, have a brat and a cold soda and be back at their home base before sunset.

I'm telling you, this is one meeting you do not want to miss. Stop what you're doing right now and go over and mark your calendars and request those kitchen passes. And as always, be prepared for some good food, drink and airplane talk.

- **George "Knife" Gennuso**
 Vice Kommandant



Operation Rubidoux Sundown X



Last year, the Flabobians successfully managed to avoid "inspection" by the intrepid **Project Police** by first moving the date of their Open House from February to September, and then by a lucky (?) break of scheduling the Open House while the Feds had the skies shut down to "those dangerous little airplanes."

Therefore, they are overdue for "inspection". Unwilling to let such a flagrant violation go uncorrected, your Board of Directors has authorized the formation of a **Project Police Tactical Assault Force (PPTAF)** to secretly infiltrate Flabob International Airport on **21 Sep 02**. This raid has

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been officially designated Operation Rubidoux Sundown X.

All **PPOs** interested in serving on this mission are directed to contact **Erbman**, the official pre-raid coordinator, at 256-3806 or erbman@pobox.com. Those with available aircraft should include the number of seats they have available. Those interested in filling an available seat should express their interest to be put in contact with an available seat holder.

Appropriate identification placards will be available from Russ for your aircraft. Display of the placards is mandatory to avoid the embarrassment of the **Project Police** accidentally inspecting your aircraft. They also have the desirable side effect of striking fear into passers-by.

We will continue our highly successful raid format by again starting with a sumptuous breakfast and pre-raid briefing at the Apple Valley (APV) airport restaurant, where we will admire the **Project Police's** graffiti skills. **PPOs** are expected to arrive at precisely 0800-ish. When properly fed and briefed, we will make a high precision infiltration and strike to the land of the Flabobians. Expect that we will be able to accomplish our objectives and still be home in time for dinner.

The uniform for this operation includes **PPTAF** T-shirts (your choice of color—keeps 'em guessing), sunglasses, and appropriate headgear. Definition of the remainder of the uniform is left as an exercise to the reader.

Just An Old Fashioned Fly-In V



William J. Fox Airfield, Lancaster, CA, will be the site of the Fifth Annual "Old Fashioned Fly-In" Saturday, September 14, 2002.

The event is open to the public. Pancake breakfast will be served from 7:30 to 10:30. The spot landing contest will be from 7:30 to 9:00. Lunch will be available from 11:00 to 2:00. Free raffle for fly-ins at 1:00. All day swap-a-ride. There will be no airshow, judging or registration fees. Listen to ATIS for spot landing and ramp parking information. For more information email ozzielevi@antelecom.net or check the web site www.eaa49.av.org.

Last Month's Meeting

EAA Chapter 1000
Scobee Auditorium, USAF Test Pilot School
1700, 20 August 2002
Gary Aldrich, Presiding

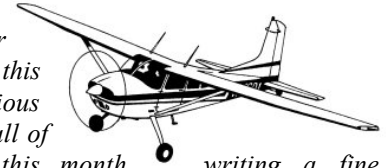
We shmoozed, moved to the auditorium, and listened to Erbman and the Kommandant talk about their recent trip to Oshkosh. See accompanying article. Erbman also had some neat stuff to show us.

Don't you want to volunteer for the chapter secretary position?

- **Erbman**
Pseudo-Secretary

Kommandant's Korner

(The Kommandant's Korner has been cancelled this month. Our illustrious Kommandant used up all of his word quota for this month writing a fine article from the Toy Meister and assisting in the Oshkosh report. In his place, I will substitute the standard Confederate Commemorative Air Force Flight Briefing:



1. Don't hit anyone
 2. Don't do nuthin' dumb
- As the Kommandant would say, fly safe and Check Six!—ed)



Young Eagles Update

Hello All,
The following pilots and aircraft participated in the August 10 Young Eagles Rally at Fox Field:

Total: 22

Pilot	Type	#YE
John Bush	Cessna 140	2
Bob Hoey.	BD-4	2
Scott Liefeld	Cessna 150	2
Don Gates	Mooney M20C	2
Wen Painter	Cessna 182	4
Con Oamek	Beech F-33A	4
Shel Simonovich	Cessna 150	2
Doug Dodson	Mooney M20C	2
Jack Schweizer	Piper PA-28	3

The following assisted the rally as ground crew.

Katie Liefeld	Miles Bowen
Karen Steinaway	Bill Ratliff

Remaining Rallies for 2002

September 21	Fox	8:00 am
October 19	Tehachapi	9:00 am
November 16	Fox	9:00 am
December 14	California City	9:00 am

- **Miles Bowen**
EAA Chapter 49/1000 Young Eagles Coordinator
av_young eagles@yahoo.com
(661)822-0806 (home)
(661)275-6528 (work)

New Member

In July we welcomed **Shawn Fleming** into the *Project Police* fold, but our less than perfect newsletter editor failed to mention it in the August newsletter. Anyway, here goes...

Shawn works as a B-52 pilot for AFOTEC with **Erbman**. Shawn, his wife **Tania** and two kids live on base right across the street from where Erbman used to live. He is a long-time EAA member with an EAA number in the 100,000s. Currently Shawn is working on clearing out his garage so that he can get back to work on his Kitfox Model IV, which is currently occupying a storage facility in Rosamond.

Be sure to welcome Shawn to the *Project Police* and tell him to get to work on the Kitfox!

The Project Police Do Oshkosh...Again



In mid June of 2002, your Kommandant and Newsletter Editor (NLE) decided to answer the call of the **Grand Poobah-rezny** to report to Wittman Field in late July to defend the honor of the *Project Police*, harass the **Vice-Grand Poobah for Chapter Stuff (VGPCS)**, rouse the rabble, have a good time, and, of course, leave all of our money behind.

Getting There

After an appropriate amount of *Project Police* Proper Prior Pre-Flight Planning, the VC-180 *Fightin' Skywagon* and her crew were ready to go. Departing our home base at Fox Field on 22 Jul, soon we were filled with awe (awful?) from the sights as we skimmed the southern rim of the Grand Canyon. The mission was proceeding swimmingly until it was time to land at Farmington NM. Here the active runway was 07, and the wind was something like 150 at 25 knots. Do the crosswind math, and it ain't pretty. Even less so when you remember that the *Fightin' Skywagon* is a taildragger. However, there was a runway 11, 2783 feet of dirt. At least that would take the worst 30 degrees out of the crosswind, so we requested runway 11 and were granted permission to land.



The "Big Ditch"

After filling up the *Skywagon* with 100LL and ourselves with Mexican food, we set out on the next leg which would take us to Hays KS for the night. The first order of the day was to gain altitude—lots of it. For not too far east of Farmington was the highest terrain of the trip—that nasty stuff they print in dark brown on the sectionals to try to convince you to stay away. Our route of flight would pass through two passes where the terrain elevation was about 10,500 feet. Of course, that wasn't challenging enough, so consider that the only weather of any significance that week had been sitting right over the Rocky Mountains from about Albuquerque up to Denver. Cloud bases were about 12,500 feet MSL, so your illustrious *PPOs* flew at 11,500 feet, dodging several rain shafts while squeezing between the white (soft) stuff and the brown (hard) stuff, eventually breaking out into the sunshine of eastern Colorado/western Kansas.

After a non-eventful approach and landing at Hays, the *Fightin' Skywagon* was shown to a nice hangar for the night while we were whisked away to the hotel for dinner and a hot tub, though not at the same time. After eight hours of flight at minimal hypoxic altitudes, that was about all we could take. Of course, watching the "Pilot Briefing Channel" (referred to as "The Weather Channel" by non-aviators) was enough to give us mild concern about the next day's mission.



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23 July dawned with clouds and precipitation about everywhere in the country except for a corridor between Hays and Oshkosh. Darndest thing. After breakfast and a trip to the airport, we set out for Dubuque IA, where they were reportedly giving out with free food, free T-shirts, and cheap (but not free) fuel. This leg was without incident, until about 45 minutes out of Dubuque when the clear skies changed to a broken to overcast layer between us and the ground. Calling Approach Control to request a pop-up IFR clearance led to an interesting discussion. The ILS to Runway 36 was the approach in use, except that our approach plate book didn't include that approach. We counter-offered with a GPS approach to Runway 31, but the controller insisted that no such approach existed, even if we were holding it in our hot little hands. Realizing arguing with the controller about whether these approaches existed and the currency of our approach plates (which were current) wasn't going to buy us anything, we finally managed to find a VOR approach to Runway 31 that we could all agree on, and thus managed to get down through the clouds.

With both the Fightin' Skywagon and her crew refueled, we gathered our giveaways and launched out for the relatively short leg from Dubuque into Oshkosh. We, of course, briefed and flew the approach into Oshkosh perfectly, since, unlike some people who try to fly in, we had actually read and studied the approach procedure.

Since we landed on Runway 09 this year it was a relatively short taxi to parking in the North 40 camping area. We secured the airplane using the Kommandant's new Fly-Ties (<http://www.flyties.com>), and set up the **Project Police Kommand Shelter**.



The Project Police Kommand Shelter

Sallying Forth...

After paying our tribute to be allowed on the field for the next few days, the **Kommandant** called the **Vice Grand Poobah for Chapter Stuff's** phone number and, not surprisingly, got his voice mail. Here he left the cryptic message "**The Project Police are on the field. Be afraid. Be very afraid.**"

From there we set out for the homebuilt area to see who we could find and eventually make our way to the ~~money changers in the Temple~~ vendor buildings. We

rapidly found our way to **Paul Rosales'** and **Gary Sobek's** airplanes in the 1000+ hour homebuilt lot. Soon we had met up with **Paul** and **Victoria**, and the daily airshow was starting with a mass gaggle of P-51 Mustangs. Next to last in the gaggle was **PPO Nathan Davis** (EAA Chapter 1000 Det 51) in "the polished Mustang." We and the crowd are waiting for Nathan to get some appropriate nose art applied so we can have a proper name for his airplane.

Recommendation: Nathan—Call Mike Machat.



Nathan Davis in Search of Suitable Nose Art

While taking beaucoup pictures of Nathan and his polished steed, who should come walking up but EAA Chapter 1000 Det 11 **PPO Jim Piavis**. We had only been on the ground for maybe two hours and already had run into several people we knew, all from California. We need a better system for seeing our local friends than flying all of the way to Wisconsin.



Jim announced to us that having demonstrated his Über-Homebuilder status by completing a scratch-built Boredom Fighter, he has now slipped to the dark side and has started work on an RV-7 tail kit.

Project Police Goodwill Tour

During the ensuing days, we had the opportunity to talk to many old friends. We saw **Phyllis Goldenbaum** at the Poly-Fiber booth in the vendor building and **Jon Goldenbaum** just after he had finished briefing a throng on fabric covering and released them to try it out with **Lynn Zaro**, Poly-Fiber Instructor Extraordinaire. Jon told us how Poly-Fiber had invested money in these pavilions

and thus had claim to them. This continues to be a great marketing coup because while the forums are billed as “How To Fabric Cover An Airplane” it would be more accurate to append “Using the Poly-Fiber System.” The result is, of course, many of these participants will return to his company to buy covering supplies. Perfectly legit and makes a lot of business sense too.

We saw **PPO Mick Myal** at the *Contact!* booth, and I had a chance to talk to **John Deakin** who writes the “Pelican’s Perch” on AVWeb. He will be out at TPS in September, and has expressed a willingness to come back in the future to speak at a chapter meeting.

Of course, we stopped by the Chapter House to find the **VGPCS** and secret undercover **PPO Bob Mackey**. He was so excited to tell us about how he found our message, and liked it so much that he dragged another friend in to hear it. Bob seemed to enjoy this chance to talk with the troops on the front lines, and told us all about his latest fun activities at headquarters. It’s a shame the Chapter Office doesn’t have a more liberal TDY budget—we’d love to have Bob come out and visit the *Project Police* in person again. Hey Bob—I bet we could even arrange another glider ride....

While at the Chapter House we also said hello to **Claudette Colwell**, who represents us on the Chapter Advisory Board from a little closer to home in Placerville CA.

Much like the missile defense systems’ technique of hitting a bullet with a bullet, while walking from **Paul Rosales’** RV-6A toward the Young Eagles building with the specific intent of looking up **Steve Buss**, Young Eagles Executive Director, he pulled up in front of me on his scooter when I was about halfway there. So there we stood, in an eddy in the midst of the activity discussing the latest release of WinYEFC, the state of the Young Eagles program, progress on the Bearhawk, and anything else that struck our fancy. In case you’re wondering, Steve won’t need to be looking for another job in a year and a half. Much as I suspected in 1992 when the Young Eagles program was announced, the program has been such a success that it will be continued after the 17 December 2003 target date.

While roaming around, we would run into **Jim Pivais** again the next day, and also would make contact with **PPO Gary Sobek**.

Bearhawking

I was a bit surprised to not find the prototype Bearhawk in place on display when we arrived. It turned out that they were delayed by weather (day VFR only) and didn’t arrive until mid-morning Day 3 (Thursday). However, one of the customer built Bearhawks was there, built by **Wil Graf**. I got a chance to meet him and speak to him briefly, but he left right about the time the prototype Bearhawk arrived.

Several of you took the time during the July meeting to sit in my Bearhawk fuselage and evaluate the position of the seat and rudder pedals. As a comparison, I climbed in the prototype and confirmed my suspicions—while I could move the seat forward far enough to fully actuate the rudder pedals, the seat position was uncomfortably close to

the instrument panel for my liking. This confirmed my decision to move the pedals aft by three inches. I also noticed that the instrument panel was not vertical as I had thought, but actually sloped away from the pilot, making it easier to see, and possibly easier to fit some of the instruments in.



It’s a long way up...



...and a long way back down!

Several times I had walked by the Metal Forming tent, only to see **Kent White** (The Tin Man, who I know from the Bearhawk e-mail list) surrounded by legions of adoring fans (or at least interested EAAers). I finally walked by while the air show was in progress to find very few people there, and got a chance to talk to Kent and let him convince me that I really wanted the itty-bitty Meco Midget welding torch that he sells. Also at this time I felt a tugging on my Camelbak, turning around to see **Pat Fagan** standing there.

On Thursday I attended the forum put on by **Budd Davison** on the status of the Bearhawk kits being built in Mexico. He announced that they had just shipped the first 5 kits, and expects to have the demonstrator ready for Sun N’ Fun next year.

Forecast Calls for Overcast Aluminum

While I was investigating Bearhawks, **Gary** was doing some “Official TPS Business” (thus justifying his tax

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write-off) by talking to the coordinators for the B-17 Aluminum Overcast tour. The B-17 will be at Fox Field on Thursday, 24 Oct 02. You can buy your way onto a flight before that date (go to <http://www.b17.org>). No tickets are sold “at the door”. On the preceding days the B-17 will be hanging out with the folks down at TPS.



While on a weather theme, it did rain on us from time to time. The **Kommandant** enjoyed watching poncho festooned EAAers watching the air show while he sat under the protection of the Fightin’ Skywagon’s wing.



Rain, Schmain! We Wanna See Da Airshow!



Neither Rain Nor Sleet Nor...Well, You Know The Rest

Airplane Spotting

As you would expect, we saw many an airplane here and there, many of which we showed you at the chapter

meeting. A highlight was seeing the only airworthy original **Aerocar**, owned and operated by Ed Sweeney. I had been fascinated by this concept ever since my Dad had a plastic model of one when I was a kid. I had always wondered how the controls and instrumentation of the car and airplane had been integrated in the “cockpit.” By careful study through the windows I was able to figure out how most of it worked. Interesting point—you could fly it from the right seat, but you couldn’t drive it from there. There were no toe brakes on the rudder pedals—once on the ground you used the car brake pedal and presumably steered with the steering wheel.



Another highlight (lowlight?) was to finally see a **Short Skyvan** (or was it Shorts Skyvan? There are plenty of references for either spelling). I had built a control line model of one many years ago from plans in *Model Airplane News* (never flew it), but had never actually seen

one. If you thought the C-23 Sherpa was ugly, don't even think about looking at this one.



Shopping

It seems you can't go to Oshkosh without everyone asking what you got in exchange for leaving your hard-earned money (or credit) behind. As mentioned, I picked up a Meco Midget welding torch from TM Technologies (<http://www.tinmantech.com>). I've been using it quite a bit since then and it is a big step up from my previous torch, which was actually a very good torch. There are two major improvements with this torch. The first is weight. When used with the ultra-lightweight hoses (which I also bought), the torch weighs about 10 ounces in your hand and balances there nicely instead of trying to drag itself out of your hand. This is great when you have to hold it in weird positions for minutes on end—much less tiring, especially since you're not dragging heavy hoses around in addition to the torch. The second benefit is the knobs are located where they can be adjusted with the hand holding the torch. Adjusting my previous torch was a two handed affair, which meant the current weld had to be abandoned every time an adjustment needed to be made. The system for storing the tips ("the fish") is very cool, and includes built in wrenches needed to use the torch.



Meco Midget Welding Torch and "Fish"

Another major purchase I made was accessories for my Garmin StreetPilot. One was a combination AC adapter power and data cable, which I think should have been included from the very beginning. Since the StreetPilot eats batteries in about 2 hours, it's tough to

upload terrain data from a PC for 1.5 hours while the GPS runs on batteries. Previously available were a data cable and a cigarette lighter power cable, or a combination of these two, but that wasn't useful because my computer wasn't in the car.

The other accessory was what I call the beanbag mount. This is a mount for the GPS that has shot in it for stability and a high friction rubber base big enough that you can place the GPS on the dash of a car (such as a rental) without having to stick a mounting device to the car.

I also bought a 20-foot flagpole for the house. This was a telescoping flagpole—you carry it out, attach the flag, drop it in the hole, and push the sections of pole up one by one. Works good, lasts long time. I bought it there because they were offering a discount of about \$100 off the regular price. Someday I'll get the concrete and rocks to put it in the ground. You might not think of Oshkosh as a hot bed of flagpole shopping, but there were at least two vendors and about seven booths pushing flagpoles. I guess they figure we EAAers are a patriotic lot.

Then there were the nit-noids—I finally joined NAFI (National Association of Flight Instructors), picked up a new Aircraft Spruce catalog, various drills and tools (and catalog) from Avery, more NiMH batteries from Mr. Ni-CAD, finally got a Photo Micro-light that the Kommandant had been trying to convince me for years to get, and of course this year's Aeroshell Amoolia Airheart poster.

Fortunately for Mrs. Kommandant; the Kommandant's severe case of Gadgetosis Nervosa was in temporary remission. Facing the dreaded 2000-hour TBO milestone on the trusty O-470U may have contributed to a relatively sparse list of "gotta-haves" for the vendor booths. Thus, a significant amount of time was spent conversing with engine rebuilders and modifiers and copious amounts of literature were collected.

One inexpensive but much-desired item on the list was a "Skybound Datawriter", version 2. For those without a direct connection from their bank account to Jeppesen; the Skybound Datawriter is a hardware/software combination that allows the updating of the Skywagon's GNS430 database from files downloaded from the Jeppesen Internet site. The first version, which has been working well for 2 years or so, was, nonetheless, restricted to the Win98SE operating system. The new version, compatible with the four Windows[®] versions since released, was touted to be available for purchase at the Jeppesen tent. So, first stop for the Kommandant on Tuesday afternoon was the aforementioned tent where he was told that the 100 (!?) units brought to the show had been distributed in the first 20 minutes. The Kommandant was seen walking away and muttering to himself about Jeppesen's marketing prowess.

Never fear, though, as several small gadgets found their way into the omni-present Trade-a-Plane bag; the most notable, perhaps, being a Pitot probe cover that is scientifically proven to depart the aircraft at 50 Kt if you forget to remove it on preflight. Now, I don't know what's worse...flying around the pattern without indicated airspeed or paying another \$19.95 for a new Pitot cover; but the sales pitch impressed the Kommandant so the VC-180 is now sporting a funky-shaped piece of foam rubber.

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The remainder of his gadget haul is unworthy of mention here, but suffice it to say that the Kommandant thoroughly enjoyed standing behind Erbman like a small, shoulder-mounted demon and whispering, “go on...buy it! Oh yeah, you need one of those...sure, Penny will see the logic in that, trust me....”

Norm’s Shindig

Every year **PPO Norm Dewitt** holds a barbecue party for all of his friends at a house just off the airport. This had been a high point of our trip in 2000 and we weren’t about to miss it this time. We were reasonably wet by the time we got there, as this was one of the afternoons that it had been raining. That was quickly forgotten as we dined on Norm’s exquisitely grilled beef, chicken, and what not (especially the what not). We were so impressed that we summarily promoted Norm to the exalted rank of **Project Police Grillmeister**, where he joins **George “Knife” Gennuso** and **Randy “Raven” Kelly** in that illustrious status.

We also talked to him about the status of his airshow career, and convinced him that he wants to come down to speak to us about airshow aerobatics. **Recommendation: Vice Kommandant schedule Norm Dewitt for a meeting presentation.**

We also got to see several other people we had met before, including **Tom Hallendorf** who has participated in our events at the Edwards Open Houses in his IO-540-powered “Super 6”.

Of course, I wasn’t helping out with the consumption of “Adult Beverages”, so the Kommandant felt obliged to make up the difference. Not a problem, since he had me standing by to serve as his “Designated Wing Walker” to prevent any “taxi incidents” during the long walk back to the **Project Police Kommand Shelter**.

Departing The Area Of Operations

Morning dawned on Friday and it was time to break down the **PPTAF Kommand Shelter** and pack all of our assorted loot into the Fightin’ Skywagon for departure. We pushed out and taxied down to just short of Runway 27, where we sat watching the engine temps for about 15 minutes while the rest of the world seemed to be taking off and landing. Of course, we didn’t feel too picked on since there were many, many other airplanes sitting there with us converting avgas into noxious fumes without much other usefulness. Military mindset triumphs again.

We did finally break out of there and started to retrace our steps toward Hays KS. As we were approaching Cedar Rapids we noticed it was approaching lunchtime, so we put in there to take the airport courtesy van to lunch.

After lunch, we departed, noticing a hat on the runway during takeoff roll, which we dutifully reported to the tower. Before reaching Des Moines, we looked out the big picture window to see the clouds and rain marking the front that the fine FSS briefers had warned us about. Deciding not to try to penetrate it to left, we tried going around it to the right. Of course, the front kept extending to the right, and we had flown about 200 nm diverging from our course line at about 30 degrees until we were on the west side of

Lincoln NE when we saw enough of a break in the weather to punch through.

At this point, having a cross track error of about 100 nm, we decided to abandon Hays KS and roughly parallel our old course line to Goodland KS. Not the fanciest place to put down, but a good place to be “down here wishing you were up there” rather than the other way around.

The next morning we launched and threaded the same pass back through the Rocky Mountains, where the controller kept calling traffic that was about a mile from us paralleling our course at our altitude. We never did see any traffic, but it eventually went away. Weird bogus echoes off the mountains, perhaps?

Just to do something different, we decided to head to St Johns Industrial to get cheap gas, drive the old AMC courtesy car, and see if it was barbecue day at Corky’s. The last 50 miles or so we had some clouds to dodge and duck under while avoiding the large rocks. We were low enough that we were happy the GPS was working, since navigating to our destination would have been tough by any other means.

After lunch we started the final leg home. We watched the tach time slowly add up, and at N34° 43.87 W113° 22.95 (over Wikieup AZ, about 50 nm east of Needles CA) at 1305 PDT it showed 2000.00. Apparently the engine missed the e-mail saying that it had just reached TBO, because it didn’t miss a beat, just droning along like it had for at least the previous 1000 hours.

With a successful approach and recovery at Fox, the **PPTAF** bedded down the Fightin’ Skywagon, declared Victory!, and went home.

S’atistics

For the engineers in the crowd, here are the s’atistics from the mission. Things to note:

1. We were laughed at by the weather gods, who saw fit to provide us with headwinds both ways.
2. Lots of time spent at Mach 0 on the ground at Oshkosh can really bring down your average ground speed.

Date	Leg	From	To	Dist	Time	Fuel	NM/HR
7/22	1	WJF	FMN	500.7	4.1	51.7	122.1
7/22	2	FMN	HYS	442.7	3.9	48.0	113.5
7/23	1	HYS	DBQ	444.2	3.9	48.9	113.9
7/23	2	DBQ	OSH	133.7	1.4	18.0	95.5
7/26	1	OSH	CID	187.2	1.8	22.0	104.0
7/26	2	CID	GLD	478.8	4.2	54.9	114.0
7/27	1	GLD	SJN	469.1	4.0	48.4	117.3
7/27	2	SJN	WJF	436.5	3.5	43.5	124.7
TOTALS:				3092.9	26.8	335.4	
					GAL/HR	12.5	
					NM/GAL	9.2	
					NM/HR	115.4	



Ramblings from the Toy Meister



In the last century, when I learned to fly, the concept of hearing protection was foreign to most folks, and I was no exception. I abused my hearing with firearms, farm equipment and rock music. When I strapped on the mighty PA-11 “Cub Special” it never occurred to me that the rotating machinery up front could be causing me physical harm...even if it was only 65 horsepower. Besides, I was 19 and invulnerable. Two additional factors contributed to my lack of hearing protection in my early flying...all the electrons in the airplane flowed only from the magnetos to the spark plugs; and my instructor, who communicated by screaming at me from the back seat, was already convinced I couldn’t hear anything, so why bother?

As I matured and my aircraft got more complex, powerful, and noisy, I began to invest in equipment that offered some protection for the sensitive auditory system. Of course, I was still young and stupid so my rationale for these devices were two-fold...so I could understand radio transmissions; and because I looked cool. Thus, my first aviation headset was a Plantronics T-50 that clipped on my glasses just like Chris Kraft at Houston mission control (and left my other ear open to the noise). Later on, when my Uncle (Sam) began paying for my aviating I absolutely fell in love with the oddly-green David Clark products. These provided significant passive attenuation of ambient noise in all sorts of very loud military and civilian aircraft. They did this at the expense of weight, bulk, and clamping pressure; not to mention cost.

In the early 90’s, an “anti-noise” technology was developed and marketed by the Bose® Corporation. This active noise reduction, or ANR, used newly developed micro-electronics and digital signal processing techniques to sense and target the most harmful frequency ranges normally occurring in aviation environments. The Bose® Series I aviation headset was an engineering marvel but, like most “first-of-the-breed” devices there was room for improvement. Chief among the complaints from pilots was the weight and bulk of the unit, coupled with short battery life. Of course, cost was also an issue, making the Series I the most expensive headset on the market at way more than \$1000 per copy.

My first regular use of ANR technology occurred when I modified my trusty David Clark’s with a kit produced by Headsets, Inc. This inexpensive (less than \$150) retrofit required a modicum of hand-eye coordination with a soldering iron and provided reasonable performance at the expense of even more weight on your noggin. They were also cumbersome because of the extra power cord and battery case that morph’d into a simulated rat’s nest every time you looked away. (see <http://www.eaa1000.av.org/related/gadgets/anr.htm>)

Enter another audio industry giant, Sennheiser, and their HMEC-200 ANR headset. This unit was based on a combination of the frame of the popular Peltor folding

passive headsets and some world-class electronics. Bulk and weight were reduced, comfort drastically increased, and noise-canceling performance was awesome. I picked up an example of the \$795 (list) headset at Oshkosh in 1995 and was generally happy with the protection and quality of sound it provided. The unit was plagued with very short battery life (2 hours) and a low-quality connecting cable frequently fraught with broken wires. When it worked...it worked great, and I fitted the Skywagon with a power jack to keep my battery budget reasonable.

Meanwhile, Bose® introduced the Series II headset. The form factor remained roughly the same bulky and angular shape, though the use of lighter-weight components improved comfort somewhat. Cost and noise attenuation figures remained about the same as the Series I...and I continued to tout the less expensive and lighter Sennheiser as the headset of choice. By this time, nearly every manufacturer of aviation headsets had ANR on their flagship units and competition was fierce in the industry with “mine’s better than yours” claims flying from the marketers.

Fast forward to July 2002. I had just repaired the Sennheiser for the umpteenth time when a card arrived in the mailbox offering me free use of a new Bose® X Aviation Headset for thirty days...a “test flight” in their words. Hmm...why not give this new gadget a try on the way to and from Oshkosh with fellow PPO Russ Erb? The company website (<http://www.bose.com>) claimed to have assaulted the deficiencies of the previous versions, namely weight, bulk, and power consumption...and won. The new design, which tips the scale at roughly 13 oz uses some of the acoustic tricks made famous by Bose® home stereo speakers and the “Wave Radio” line of compact audio systems. After reading several reviews on the web, I called a helpful gentleman on the phone (you introverts can do the whole transaction on the website) and my Bose® X was on my desk two days later.

I was instantly impressed with how light the box was. At first, since there was no tape securing the package, I was convinced that they’d sent me an empty box. But no,

in the well-made Cordura™ case resided the compact and lightweight headset. Despite the odd-



looking spring hinge in the center of the headband, the unit rested lightly on my (size 7) head. The foam-filled cushions completely encircled my ears and provided very little pressure to the sides of my head. So little, in fact, that

it took some getting used to not feeling like the headset would fly off if I moved my head rapidly. The secure fit was enhanced by the general balance of the unit and an apparent center of gravity that must be somewhere near the middle of the wearer’s cranium. Gone was the “top-heavy” pendulous feeling I had with the Series I/II and the

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LightSpeed series of ANR headsets. Also gone was the “squeeze” that made the David Clark headsets feel like a vise (vice?) after a couple of hours. Even the Sennheiser, which I had frequently worn for up to 8 hours at a time, pressed harder on my melon than the X. The comfort was enhanced by judicious use of a sheepskin-like material at the center-top of the headband that distributed the load and prevented “hot spots” common to earlier designs.

The compact electret microphone and foam wind muff was mounted on a flexible boom that was, in turn, mounted on one of the earcups. The single cord running to the battery box and plug assembly emanated from the base of the mic boom, which made for a very neat installation with no protruding or loose wires to snag on clothing or airplane



parts. The mic boom assembly could be switched to either earcup by loosening two screws on it, and the corresponding blank plate on the other side. Since the Sennheiser earcups and headband are “ambidextrous”, switching the mic from right to left was a simple matter of rotating the boom to the desired side with your fingers and reversing the

headset on your head. The X requires a tool (screwdriver) to do the switch, which is a detractor if you routinely switch seats in the airplanes you fly. Most pilots, however, would likely “set and forget” the configuration.

Another possible negative feature was the size/configuration of the battery system. The Bose® X is sold either as a battery-powered unit, or one that is connected to a power/audio jack mounted in the aircraft panel. The headset can be changed from one configuration to the other by purchasing a new mic boom/cord assembly for about \$150. Then, using the afore-mentioned screwdriver, the desired assembly can be installed. For most pilots this is not an issue since they either rent aircraft (requiring a battery configuration) or own/fly a single airplane (leading to an “installed” configuration). The size of the battery box was not insignificant at roughly 2x3x1.5 inches. This was approximately twice the size of the battery box on the LightSpeed units and, in a cramped cockpit, could be an annoyance. The box housed the single 9-volt battery, a mono/stereo switch, a power switch, and a clever retractable volume rotary knob that allowed separate adjustment of each channel of audio. The normal two-plug avionics connectors were attached to this box by about 8 inches of strain-relieved wire and there was a spring-loaded clip on one side to secure to clothing or some appropriate airplane part. Battery life was claimed at 20 hours and I can vouch for at least that much time from the AirVenture 2002 expedition. Battery life was indicated by a flashing green LED on the battery box. When approximately 4 hours of life remain, the LED alternates with red and green flashes.

Speaking of battery life, it was important to keep a spare handy in the cockpit. When the ANR quits on this

beauty you really know it! On most other active headsets some level of passive noise reduction is evident even when the unit’s electronics are off. Because of the inherent design of the acoustic channels of the Bose® earcups, when power is interrupted the noise level is virtually the same as if you had removed the headset and tossed it into the back seat! Audio communication is degraded by all the previously cancelled noise that is running around your ears. I would recommend keeping a close tab on battery life after the red LED begins flashing to avoid a startling increase in background noise level should the ANR quit suddenly during a critical phase of flight. Changing batteries in flight was not a challenging act, though it required two hands and the ability to keep track of the battery case cover in a moving airplane.

I can say that after about 40 hours of use, including 4 days when I had the headset on my head for 8 or so hours, that the Bose® X was, unquestionably, the most comfortable headset I’ve ever worn. No, I can’t say truthfully that I “forgot I was wearing it”, but even after long flights the same even pressure and secure feeling remains with no hot spots or irritation. I remember noticing my flying partner making repeated adjustments to his LightSpeed near the end of our long travel days (yes, Russ, I was watching) and thinking that it just wasn’t necessary with the X. (*Gee, I never even paid attention to that...*)

As for audio quality, well, if you’ve ever listened you Bose® stereo speakers in a quality audio system, you will recognize the clarity and accuracy of the sound reproduction. Listening to digitally recorded music piped through the PS600MS audio panel in the Skywagon, the audio quality was comparable to a high-end pair of headphones plugged into your home stereo (except of course, for those rude interruptions by ATC about some airplane about to hit us). The increase in quality was noticeable over the Sennheisers, which were also very high quality sound reproducers.

One recurring theme in other reviews of the Bose® X which I have read involves the change in tone of the wearer’s own voice in the headset. Basically, you don’t sound quite like yourself. According to Bose® this is an artifact of the microphone’s audio response settings that was driven by the Technical Service Order (TSO) under which the unit was certified. Indeed, for the first hour or so I did notice that my own voice tended to sound somewhat tinny and faded, but I quickly adjusted to it. At no time did I receive any negative comments from people hearing it from outside the airplane or from fellow intercom users. (*Didn’t sound any different to me...*)

There is one complaint common to many high-quality ANR systems and evident in the X. That is, that the noise level is so low in your headset that there is a tendency to talk softly on the radio, causing an occasional “say again” from ATC.

The final negative aspect of the Bose® X is the cost. Yes, it is just under \$1000. Furthermore, I’ve never seen it discounted. That is a lot for a headset and every potential customer will have to balance the pros and cons of the unit against the others on the market and make his or her own

decision. I've been flying over 30 years and, fortunately, have suffered only minor hearing loss despite the antics and ignorance of my youth. I hope to fly 30 more years so I justified the expense; rationalizing that this unit is my best defense against hearing damage and that the quality of the unit will enhance my performance and safety in flight.

Besides, I got 30 days free use...

- Gary Aldrich

Kommandant

Toy Meister

(I just checked the Bose® website—you don't have to be the Kommandant of a famous EAA Chapter to take advantage of the 30 day "Test Flight"—it's still available and open to all)

A. A. A. D. D.

(This was sent to us by Gary Sobek—obviously he's not talking about himself, since he did actually finish building an airplane...)

Do you have A. A. A. D. D.?

I have recently been diagnosed with A. A. A. D. D. (Advanced Absentminded Attention Deficit Disorder)

This is how it goes:

I decide to wash the car; I start toward the garage and notice the mail on the table. OK, I'm going to wash the car, but first I'm going to go through the mail. I lay the car keys down on the desk, discard the junk mail, and notice the trash can is full. OK, I'll just put the bills on my desk and take the trash can out, but since I'm going to be near the mailbox anyway, I'll pay these few bills first. Now, where is my checkbook? Oops, there's only one check left. My extra checks are in my desk.

Oh, there's the coke I was drinking. I'm going to look for those checks. But first I have to put my coke further away from the computer, or maybe I'll pop it into the fridge to keep it cold for awhile.

I head towards the kitchen and my flowers catch my eye; they need some water. I set the coke on the counter, and uh oh. There are my glasses. I was looking for them all morning. I'd better put them away first. I fill a container with water and head for the flower pots. Uh oh...someone left the TV remote in the kitchen. We'll never think to look in the kitchen tonight when we want to watch television, so I'd better put it back in the family room where it belongs.

I splash some water into the pots and onto the floor, I throw the remote onto a soft cushion on the sofa and I head back down the hall trying to figure out what it was I was going to do?

End of the Day: The car isn't washed, the bills are unpaid, the coke is sitting on the kitchen counter, the flowers are half-watered, the checkbook still only has one check in it and I can't seem to find my car keys.

When I try to figure out how come nothing got done today, I'm baffled because I KNOW I WAS BUSY ALL DAY LONG!!!!

I realize this is a serious condition and I'll get help, but first I think I'll check my email.....

Project Police Aircraft Spotters Quiz

Once again, our first correct response was from **Project Police Plane Spotter Jim Piavis**, who had already responded before most of you had even opened your newsletter. He said:

"Hummmm...

How about a Max Holste MH1521 Broussard...See <http://www.utility-aircraft.com/planes/max-holste.htm> or <http://www.warbirdalley.com/mh1521.htm>."

If you couldn't figure it out, don't feel too bad—neither could the line boy at Hays KS. He told us (by description) that this airplane had been through Hays right before we got there.



Bear Repellant

(This came out on the Bearhawk list in response to a question about what was the best caliber weapon for defense against angry Alaskan bears)

The best caliber for survival in northern Canada is large modified Macintosh apples. You take and core out the centers and fill them with cayenne pepper. When a bear approaches you roll an apple or two his way, he will take the apple over a smelly old bush pilot every time. The reaction is every bit as fast and severe as any .450 marlin. It is advisable to not stand anywhere near the rear of the bear as they quite often do not have a copy of Kitplanes readily available. Upon departure the bear leaves a clear indication as to his direction of travel so you can choose an alternate route. The apples can also be used as an emergency food source as bush pilot stomachs are well conditioned to this type of food. I know this works on black bears, it took 2 days to clean up our tent as we did not have it aligned correctly, so I am assuming this system will work as effectively on all bears. If any of you Alaska pilots have a chance to test this system out on grizz could please let the group know (1)- was the effect immediate or is there a time delay with grizzly. (2)- who left the best trail - the grizz or the pilot.

Web Site Update

As of 7 Sep 02, the hit counter stood at **76273**, giving a hit rate of 35 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

Sep 12-15: Reno Air Races
 Sep 14: Just An Old Fashioned Fly-In V, General William J. Fox Field, Lancaster, CA. (661) 948-0646
Sep 17: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., High Cay, 4431 Knox, Rosamond CA. (661) 609-0942
 Sep 21: **Operation Rubidoux Sundown X**, Flabob International Airport. (661) 256-3806
 Sep 21: Young Eagles Rally, 8:00 a.m. General William J. Fox Field, Lancaster, CA. (661) 822-0806
 Oct 1: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646
 Oct 8: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942
 Oct 10-13: Copperstate Regional EAA Fly-In, Phoenix Regional Grand Valley Airport (A39), Phoenix AZ
Oct 15: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942
 Oct 19: Young Eagles Rally, 9:00 a.m. Tehachapi Municipal Airport, Tehachapi, CA. (661) 822-0806
 Oct 24-26: AOPA Expo 2002, Palm Springs CA
 Oct 26: Edwards AFB Open House
 Nov 5: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646
 Nov 12: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942
Nov 19: 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:
 FORMATION FLYING @ HIGH CAY 17 SEP
 OSHKOSH 2002 REPORT
 BOSE® X HEADSET REVIEW
 BEAR REPELLANT**



The Leader In Recreational Aviation