



# The ThunderWord

Thunderbird Field EAA Chapter 1217

March, 2005

Scottsdale, Arizona

## **PRESIDENT'S CORNER**

Greetings from my corner of the hangar! The February meeting was one of those meetings you wish every one could be. We had a tremendous turnout of fifty-two people to hear Bob DeFord talk about the full scale, Allison V-12 powered Spitfire replica that he recently finished. Bob's enthusiasm was a real motivator to get out in the shop and work on our projects; which seem slightly smaller by comparison.

I was really proud of the spirit of grass roots aviation that is definately alive in our EAA Chapter, judging from the turnout to help run this year's Cactus Fly-in. Everywhere you looked there were Chapter 1217 members running the show or showing off their planes. A bunch of new friendships and memories were made. The strangest sight was when one of our Chapter volunteers parked his amphib Beaver in the homebuilt area when it was empty of planes at the early hour he arrived. It was soon surrounded with a large number of homebuilts that were all smaller than the pontoons on the Beaver. The owner of a Hummelbird parked nearby said the giant Beaver leaked more oil than his engine held!

I look forward to seeing all of you at the March meeting!

*Curtis*

## **NEW MEMBERS**

Welcome aboard to Bob Chitwood from Casa Grande who joined this month. Bob logged quite a few hours on the big green John Deere at this year's Cactus Fly-in.

## **MARCH MEETING**

The March 2005 meeting of Thunderbird Field EAA Chapter 1217 will be Thursday, March 17<sup>th</sup>. at 7 pm. The location is the Terminal Building at Scottsdale Airport. This month's guest speaker will be Chapter member Bill Unternaehrer. He is going to bring us up to date on emerging technologies for flight instrumentation. He will also talk about the new generation of glass cockpits appearing in planes as small as Kitfoxs! There is always room so bring a friend!

We have lined up Lonnie McClung to speak at the April meeting. Lonnie is President of Groen Brothers Aviation and will talk about their exciting new Sparrowhawk gyroplane, as well as the company's history and products.

## **CACTUS FLY-IN**

This year was the 47<sup>th</sup> anniversary of the Arizona Antique Airplane Association's Cactus Fly-in held at the Casa Grande Airport. Chapter 1217 was a very important part of the success of this year's Fly-in by providing the volunteers to make the event happen. Even low clouds, rain showers, hail and a couple of squall lines couldn't keep the antique planes from descending on Casa Grande. Forty members from our Chapter had a great time parking and judging planes and basically running the show with every job from tractor drivers to bartender. We had a trailer set up both days with free drinks, food, and Fly-in tee-shirts for those who volunteered.

When the clouds parted the Grand Champion was a Clipped Wing Monocoupe restored by Chapter 1217 member George Evans.

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Not to be outdone, Chapter member Julie White received recognition for best Piper for a Reed Clipped Wing Cub she recently restored. Tom Snyder won best Beech with his Bonanza that Julie also maintains. An interesting restoration was the best Cessna, it was a Cessna 140 that was formerly owned by Mike Evans and Paul Bessing, both Chapter members. The new owner is third generation airplane painter Chris Copeland with Arizona Aero Painting in Eloy. It's really

great when a plane that you have been around for twenty years gets such a good home!

Terry Emig, who is our Chapter 1217 Vice-president and also President of the Arizona Antiquers, said that without our Chapter members helping out this Fly-in probably wouldn't happen and our efforts are greatly appreciated.



### **TERRY EMIG IN HIS NEW CAREER AS A TV ANNOUNCER**

### **SPACESHIP ONE AT OSHKOSH**

The public's best chance for an up-close view of SpaceShipOne (SS1), the world's first private suborbital spacecraft, is at EAA AirVenture Oshkosh 2005 July 25-31. The following week SS1's mother ship, White

Knight, will carry the record-setting craft for the last time to its final home, the Smithsonian National Air and Space Museum's (NASM) Milestones of Flight Gallery in Washington, D.C.



**ONE OF A KIND GENERAL ARISTOCRAT FROM SAN DEIGO**



**CHAPTER 1217'S JIM BEAUCHENE'S AMPHIB BEAVER**



**CESSNA 195.**

**Pictures by Brian Ryckmen**

### **CASA GRANDE AVIATION DAY**

Chapter 1217 members are invited to bring their flying machines down to Casa Grande on Saturday March 19th, 2005. The fly-in is to help promote the airport and sport aviation. A local group, funded by NASA, called SEMAA will have NASA displays on hand. There is no formal flying program; just fly down whatever type of plane you have and have fun. The event is open to all types of planes not just homebuilt or antique, modern planes are also encouraged to come down.

Breakfast and lunch will be served at the airport by the local Fire Explorer Scouts.

### **SOLO AROUND THE WORLD**

Adventurist Steve Fossett closed the loop at 1:45 p.m. Central Time, Thursday March 3<sup>rd</sup>, landing safely in Salina, Kansas, to complete his incredible journey around the world without refueling in the Virgin Atlantic GlobalFlyer. He left that very airport Monday evening and remained airborne as he flew east around the world for the next 67 hours, 2 minutes and 38 seconds in the Burt Rutan-designed single-engine jet. Fossett's first

comment after emerging from the cockpit: "That is something I wanted to do for a long time." He thanked Scaled Composites, builder of the aircraft, Virgin Atlantic, and host Kansas State University at Salina. For more postflight information go to [www.virginatlanticglobalflyer.com](http://www.virginatlanticglobalflyer.com).

On Thursday morning during his press conference at Salina mission control headquarters, Virgin Atlantic CEO Sir Richard Branson was asked about what will happen to the GlobalFlyer. "It may be a bit soon to be talking about it, but the Smithsonian has expressed an interest in having her (GlobalFlyer), and I think that's ultimately where she'll go. But...it will most definitely go to Oshkosh in July." Citing the 75-80 million hits on the GlobalFlyer website yesterday, Branson added, "There's an enormous amount of global interest in seeing her. I don't think we'll tuck her away in a museum straight away."

## **SO WHY ARE THEY CALLED “BLACK BOXES?”**

Many of us have wondered aloud why “orange-colored” flight data recorders and voice recorders were called “black boxes.” Tony Moore on the EAA International Staff enlightens us with the following: “During my time as a graduate engineering student in the UK, I was told that during WW II British scientists put analog feedback and control circuits inside Black boxes. These circuits (operational amplifiers) did all kinds of magic inside (solving differential equations). So the name of a box with wires going to and from that does any kind of magic, even DFDRs [digital flight data recorders] have the name (from the Brits) “Black Box””.

Perhaps there are other versions of how the name came to be; and indeed there are according to Duke Taylor in Civil Rights. He cites <http://www.wordorigins.org/> as his source. “Black box is a generic term for a piece of electronic equipment on an aircraft. The term originated in the RAF during World War II. The first black boxes were radar bomb “sights”. Later, the term expanded to include various electronic navigational devices. When the flight recorders started being installed on civilian aircraft in 1958, the name was applied to these devices. The original WWII black boxes were literally black boxes and many pieces of avionics equipment still come in black housings, but the term is applied to all of them regardless of color.” Taylor then proceeds to corroborate Moore’s version as well: “There is another type of black box that also takes its name from these WWII devices. A black box can be a mechanism whose internal workings are not understood, but its function is. If an engineer knows that the device will give output Y if he inputs X, but doesn’t understand why, then that is a black box. This sense dates from at least 1953 and is from the fact that aircrews did not understand how their black boxes worked (the components and processes were closely guarded military secrets), they just knew they did.”

## **AIRCRAFT SPRUCE & SPECIALTY CELEBRATES 40th ANNIVERSARY**

Forty years ago, Flo Irwin began selling cut, aircraft quality Sitka spruce for wing spars and ribs out of her garage. She announced her new business with a mimeographed sheet handed out at local airports and EAA Chapters. Today, Flo’s son, Jim, runs Aircraft Spruce & Specialty, which has a 644-page catalog with over 31,000 products for people who build, restore aircraft, maintain or upgrade general aviation aircraft. 135 employees in the Corona, California, and Peachtree, Georgia distribution centers ship more than 20,000 packages a month, and a half-dozen dealers operate outside the U.S. They’ve added a second catalog for pilots. Both are free and available at [www.AircraftSpruce.com](http://www.AircraftSpruce.com) or call 877-4-SPRUCE.

## **CIRRUS UPS INVESTMENT IN BRS**

Cirrus Design became the second largest shareholder in Ballistic Recovery Systems when it recently exercised options to purchase 650,000 shares of stock, bringing its total ownership to 15.3 percent. “This investment gives us an implicit commitment and will insure this technology is incorporated into additional Cirrus designs”. said BRS President & COO Larry E. Williams. BRS has sold nearly 20,000 of its whole-plane parachute systems in 25 years, with over 177 documented lives saved. For more information, visit: [www.brsparachutes.com](http://www.brsparachutes.com) or [www.cirrusdesign.com](http://www.cirrusdesign.com).

## **NEW ARIZONA AIRPORT?**

Efforts are underway in northern Arizona to create another general aviation airport in Coconio County. If you’d like to add your voice of support for this project please contact Sharon Jones at 928-774-9178 or drop her a note at the following address:

Sharon Jones  
555 Blackbird Roost Unit # 5  
Flagstaff, AZ 86001

## **DENSITY ALTITUDE THERMOMETER**

This is a must for the hangar wall! Estimate density altitude prior to takeoff with Sporty's Density Altitude Thermometer. The 18-inch diameter thermometer displays temperature in both Celsius and Fahrenheit as well as the estimated density altitude based upon the current temperature and field elevation. Specify your airport's field elevation when ordering and a custom decal is affixed to the thermometer to display the estimated density altitude for your airport. Transient pilots will find it especially useful upon departing an unfamiliar field where performance is critical. Available for \$34.95, the thermometer can be ordered at [www.sportys.com](http://www.sportys.com) or by calling 800/SPORTYS.

## **ELECTRICAL THEORY- A TREATISE ON THE IMPORTANCE OF SMOKE**

Written by Joseph Lucas, and translated by Chapter member Tony Holden

All electrical components and wiring harnesses depend on proper circuit functioning, which is the transmission of charged ions by retention of the visible spectral manifestation known as "smoke". Smoke is the thing that makes electrical circuits work. Don't be fooled by scientists and engineers talking about excited electrons and the like. Smoke is the key to all things electrical.

We know this to be true because every time one lets the smoke out of an electrical circuit, it stops working. This can be verified repeatedly through empirical testing. For example, if one places a large copper bar across the terminals of a battery, prodigious quantities of smoke are liberated and the battery shortly ceases to function. In addition, if one observes smoke escaping from an electrical component such as a Lucas voltage regulator, it will also be observed that the component no longer functions.

The logic is elementary and inescapable! The function of the wiring harness is to conduct the smoke from one device to

another. When the wiring harness springs a leak and lets all the smoke out of the system, nothing works right afterward.

Starter motors were considered unsuitable for British motorcycles for some time largely because they regularly released large quantities of smoke from the electrical system.

It has been reported that Lucas electrical components are possibly more prone to electrical leakage than their Bosch, Japanese or American counterparts. Experts point out that this is because Lucas is British, and all things British leak. British engines leak oil, British shock absorbers, hydraulic forks, and disk brake systems leak fluid, British tires leak air and British Intelligence leaks national defense secrets.

Therefore; it follows that British electrical systems must leak smoke. Once again, the logic is clear and inescapable.

Sometimes you may miss the component releasing the smoke that makes your electrical system function correctly, but if you sniff around you can often find the faulty component by the undeniable and telltale smoke smell. Sometimes this is a better indicator than standard electrical tests performed with a volt-ohm meter.

In conclusion, the basic concept of transmission of electrical energy in the form of smoke provides a clear and logical explanation of the mysteries of electrical components and why they fail.

"A gentleman does not motor about after dark." - Joseph Lucas, 1842-1903

# Thunder Ads

## FOR SALE

### 1/3 PARTNERSHIP IN 1973 PIPER ARROW

Hangered at Deer Valley (DVT), TTAF: 4608, Great IFR, King KX-155 (2) (1 G/S), Narco DME190, Garmin 195, PS Engineering PM1000 4 Place, King KMA-24, many speed mods, air conditioning. More info: Tod (602) 549-8786 [www.filjan.com/n56023](http://www.filjan.com/n56023) or [quarterhorses@gmail.com](mailto:quarterhorses@gmail.com)

### CESSNA 140 WHEEL PANTS

Set of wheel paints for a Cessna 140, never installed, back plates, wheel nuts included. \$400 obo. Rich Bursley 623-521-4104.

### GlaStar Fixtures

All fixtures to build a GlaStar airplane. Will take \$150. Bill Grieme 480-998-9164

### Lycoming O-235-C1

673 SMOH, Sky Tec starter, removed from Long Eze for O-320 upgrade. \$6500. Mark Boram 520-883-0672

### RV-3 Parts & Misc

RV-3 wings, flaps, ailerons and wing tips \$1000., 2 US army flight helmets, 8 new David Clark listen only headsets \$100. each, 2 yellow tagged cranks for an O-320 and an O-290-G. Dick Wall 602-788-9848

### COZY 3 PLACE PROJECT

Fuselage finished thru Chapter 8. Have most raw materials to finish fuselage and wings. Includes plans, landing gears, metal kit, epoxy pump, news letters, etc. Asking \$1500 (firm) for all. Jim Stevens 623-872-7531 after 3 pm. Location: Avondale, AZ

### Skybolt Project

Most major work complete. Hangered at DVT. \$10,000. Stuart McDonald 602-954-9343

### JEFFAIRE BARRACUDA PROJECT

Fuselage on gear, wings built. Instrumentants, gauges and a whole lot more. 80% complete. Must sell for only \$9,900. Hangered at Glendale, AZ. Call John 480-704-3250

## SERVICES / WANTED

### Instrument Instruction

Get your instrument rating with a club member J. Robert Moss CFII, expert in Garmin 430 / 530 IFR operations, Cirrus checkouts. Call Jeff 480 699-7447

### Designated Pilot Examiner

Chapter member. Paul Jones 520-251-1251

### Prop balancing, Annuals, Prebuys

Jim Berdick AI 623-581-9152

### Annuals, Restorations, Fabric Work

Eloy Airport Julie White 520-466-3442

### Aircraft Welding and Restorations

Evans Aviation 480-585-3119

### Airmen Physicals

Dr. Henry Givre AME, Chapter member and RV-4 owner. 520-836-8701

### Aircraft Photography

Mike O'Connor CrashOConnor@aol.com 480-515-5105

### BFR's

Fred Lloyd 602-234-1940

### Maintenance and Annuals

Klobe Air, LLC Aircraft Maintenance Service Located at Glendale Airport, southern blue hangars #4 Alice 623-877-9033

### Flight Instruction

Learn to fly, get a new rating, or BFR. Samir 480-518-5346.

### Machine Shop

High quality parts fabrication for homebuilts at a reasonable price. David Leverentz 520-898-4321

### TOOLS NEEDED

I am starting a Zenith 601XL project and need virtually all the tools required for the project. I hope to find them used. I am putting together a list and will have it soon. If you know of anyone that has finished their project and no longer needs their tools, give them my name. The first thing I need are clecos and associated accessories to put them in with. Brian Briggerman [blb7037@cox.net](mailto:blb7037@cox.net)

Want to see your aircraft-related ad

Send an E-mail to





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