



# The Oklahoma Aviator

Your window to Oklahoma Aviation...Past, Present, Future

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October 2003

Oklahoma Aviator, 32432 S. Skyline Drive, Cookson, OK 74427

## Tulsa-Built NASA XV-15 Retired to the NASM Udvar-Hazy Center

by Mike Huffman

A news item caught my eye a few days ago, announcing that NASA had transferred a unique airplane to the new National Air and Space Museum's (NASM's) Steven F. Udvar-Hazy Center at Washington Dulles Airport.

The airplane is the XV-15, the first practical tilt-rotor aircraft, which was designed by Bell Helicopter Corporation in the late 1970s and which was also known as the Bell 301.

Tilt rotors are unique aircraft that feature tilting large-diameter helicopter-type rotors and turbine engines mounted on the ends of the wings. With the engines/rotors pointed upward the craft can take off, hover, and land like a helicopter. Then, by rotating the engines/rotors to horizontal, it flies like a normal fixed-wing aircraft, but at higher speeds and with longer range than a typical helicopter.

R&D using the XV-15 led to the development of the V-22 Osprey tilt rotor and the world's first civil tilt rotor, the nine-pas-



*The NASA XV-15 makes its truly "final" approach to the Udvar-Hazy Center grounds at Dulles.*

senger Bell Agusta 609, now under development and scheduled for delivery in 2007.

The XV-15, after more than 25 years service, made its last flight on Tuesday, September 16, 2003, landing on the grounds of the

Udvar-Hazy Center. As spectators watched, pilots Roy Hopkins and Dwayne Williams transitioned the engines/rotors to the vertical position, made a helicopter-type landing, and entered the final flight in the aircraft log.

Later, the logbook was ceremonially handed over by Claude M. Bolton, Jr., Assistant Secretary of the Army for Acquisition, Logistics and Technology and Dr. Victor Lebacqz, NASA's Acting Associate Administrator for Aerospace Technology to Gen. J.R."Jack" Dailey, NASM Director, as Bell Helicopter CEO Mike Redenbaugh and others looked on.

"The XV-15 was one of NASA's most successful research aircraft and is a prime example of the cutting-edge aerospace research NASA is known for," said Lebacqz, "The transfer of the XV-15 to the National Air and Space Museum continues a NASA tradition of

turning aerospace achievements to the American public."

Dailey, who has test flown the XV-15 for the U.S. Marine Corps, says the aircraft "represents the kind of innovative milestone that makes our museum about more than just history. Visitors to the Udvar-Hazy Center may be seeing the XV-15 for the first time, but its technology will become a familiar sight in years ahead."

The reason this story grabbed my attention is that Oklahomans (including me) played a role in the manufacture and testing of the airplane. In 1974, Bell Helicopter contracted with Rockwell International to build

two prototype fuselage assemblies at Rockwell's Air Force Plant 3 facility in Tulsa. Because the airplanes were to be experimental prototypes built quickly, a special "skunk-works"-type project team was established, to keep from contaminating the strict manufacturing and quality assurance systems for Rockwell's normal commercial, military, and space vehicle manufacturing activities. I was fortunate to be a member of the team.

Bell's involvement with tilt rotor airplanes began in the early 1950s with the XV-3, built under contract to the military. The XV-3 flew over 125 hours and made over 100 successful engine/rotor "conversions" from vertical to horizontal and back. Based on that experience, NASA-Ames, Bell, and the U.S. Army continued R&D efforts toward the next-generation tilt rotor, which culminated in the XV-15 design in the early 1970s.

Unlike the XV-3, which had a very narrow "conversion corridor" –the acceptable range of for-

*continued on p. 5.*



*The Rockwell-Tulsa Bell 301 team, with the first completed XV-15 fuselage. The author is shown near the center of the front row--in plaid pants!*



*The XV-15 ejection seats firing on the ramp at TUL. Photo by Ken Cook, a Rockwell engineer, using a handheld camera. Ken is retired near Lake Tenkiller and recently finished a beautiful Vans RV-4.*

# Oklahoma Aeronautics Commission News



## AIRPORTS GET STATE GRANTS

The Oklahoma Aeronautics Commission (OAC) recently approved over \$1.7 million dollars worth of state grants for improvements at five airports.

The City of Seminole received a \$95,980 state grant on a \$106,644 project. This grant will go towards installing runway lights at the Jimmie Austin Seminole Regional Airport.

"The City of Seminole is taking an \$850,000 cut in our budget this year and this grant could not have come at a better time," said Mike Grant, Public Works Director.

McAlester Regional Airport was awarded \$635,272 of state funds for airport improvements. The Airport has over 40 aircraft based at its facilities and has a total of 21,100 operations per year. Research indicates that this may be the largest state grant in the history of the Commission, and its predecessor, the Oklahoma Aviation Commission. The grant will be used for reconstructing the north 550 feet of the runway, reconstructing the expansion joints, rehabilitating the concrete joints and cracks, cleaning and treating the discolored runway surface, and installing a new electrical transclosure. The total cost of the project is \$705,858.

"On behalf of the City of McAlester, we appreciate the opportunity to join in on this venture and acquire these funds that will address the needs of con-

tinuing aviation in Southeastern Oklahoma," commented Oklahoma Senator Richard Lerblance.

A \$570,584 grant went to the Hobart Municipal Airport for an asphalt overlay of the runway. With this project the runway will now have a usable length of 5,554 feet. The total runway project cost is \$633,982.

"We appreciate the support and help from the Commission staff and we thank the Commission for approving this project," said Wilt Brown, City Manager of Hobart.

Another state grant was awarded to in the amount of \$429,157 for a project at Wiley Post Airport. The total cost of this project is \$476,841. The project will consist of constructing the connecting taxiway from the end of runway 17L to the end of runway 17R. The airport has over 83,000 total operations per year and over 385 based aircraft.

"We would like to extend our appreciation on behalf of the Department of Airports in Oklahoma City for this important project for Wiley Post and we thank the staff for their support," said Scott Keith, Wiley Post Airport Manager.

The City of Medford received a \$6,989 grant towards installing a pilot radio control unit to control the existing runway lights. The total cost of the project is \$7,766.

"We are happy to be able to provide these state grants to our airports. They are vital to the economy of their communities and the state," said OAC Director, Victor Bird.

"I would echo the comments of our Director and add that I am thankful to the Legislature for making these grants possible," said OAC Chairman Kenneth Adams.

For more information contact: Erin Wright at 405-604-6900.

# AIRPORTSPACE- News of OAOA-Member Airports



## OCT 3 OAOA WORKSHOP RESCHEDULED

The OAOA workshop scheduled for October 3 at Metro-Tech in Oklahoma City, and featuring the Red River SMO Non-Federal Program and the SW Region FAA AIP Program, is being rescheduled due to questions concerning continued FAA funding being available pending approval of the reauthorization bill in Congress. The workshop is now tentatively scheduled for November 7 at Metro-Tech.

## HIGGINS INTERIORS OPENS NEW FACILITY AT ARDMORE AIRPARK

Four years ago, on September 10, 1999, a tornado swept through Ardmore Airpark, severely damaging a WWII-era hangar occupied by Higgins Interiors. Higgins, who specialize in paint, upholstery, and interior work for airplanes from homebuilts to Gulfstreams, had been located at the airpark since the late 80s.

Without a place to do business, they made a deal with the city of Ardmore to move into another hangar on the airpark, meanwhile making plans for a new facility. Through negotiations with the city, they decided to locate the new building im-

mediately adjacent to their old location, using the concrete floor and the rounded steel roof trusses from the old hangar. The result was a planned \$1.5 million project, with the costs being shared by the city and Higgins Interiors.

The new facility was recently completed. It consists of a 160-ft by 125-ft main hangar with attached offices and shops, a total of 34,000 square feet. The main hangar contains two paint booths and has 28-foot-high doors, which will accommodate aircraft as large as a Gulfstream V.

Offices and a customer lounge occupy a portion of the adjoining office space and another portion has upholstery shops, sheet metal shops, cabinet shops, and wood finishing shops.

In addition to their own work, Higgins Interiors is also affiliating with other organizations that do complementary work. Field Tech Avionics, with their main location in Ft. Worth, is opening a satellite shop in the Higgins facility. Also, Aircraft Maintenance Services out of Dallas currently has five mechanics doing maintenance and inspection work there.

"The new facility preserves the 1940s feel of the old hangar, but it provides us with a state-of-the-art workplace. It's not that often you see hangars with rounded roofs anymore," says owner Bill Higgins, "We want to set up a one-stop-shop, so customers can get anything needed done right here. We are recruiting other shops that do things we don't locate here."

## THE OKLAHOMA AVIATOR

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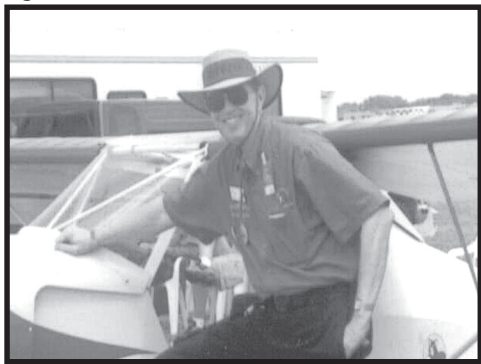
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# Up With Downs

by Earl Downs



## Sport Pilot: A Slow Train, But Still On Track

In March and July of 2002, I wrote about the issuance of the new Sport Pilot/Light Sport Aircraft regulations. The FAA had until September of this year to either keep it moving or let it die. This summer, at EAA AirVenture 2003, FAA Administrator Marion Blakey made the announcement that Sport Pilot is alive and well and continuing through the approval process. Ms. Blakey actually signed the final rule there on July 30. This is a giant step forward, but it is not the final implementation of the rule. It must still be cleared by another section of the Department of Transportation and then receive final approval by the Office of Management and Budget. If all goes well, the new regulations could take effect around New Year. Let's do a quick review of what Sport Pilot/Light Sport Aircraft is all about.

The Sport Pilot/Light Sport Aircraft proposal is a complete overhaul of many regulations. These changes create more than just a new pilot license. They create a whole new way to certify aircraft, maintain aircraft, and train pilots to fly them. They are aimed at the "sport pilot" who flies for fun and pleasure, as well as for limited transportation. I realize that some of you are following this very closely, while others are only vaguely aware of what is going on. There is a lot to it, so I will hit only the high

spots.

First, let's talk about the aircraft a Sport Pilot may fly. Here are the proposed limitations in a nutshell: the aircraft must have a maximum of two seats, (a pilot and one passenger), a maximum cruise speed of 115 knots, a maximum stall speed in landing configuration of 39 knots, and a maximum gross weight of 1232 pounds. It must have fixed landing gear (except an amphibian) and the prop may not be in-flight controllable. There are a few other nuances, but this gives you the basics. The new rules cover weight-shift aircraft, lighter-than-air vehicles, gliders, autogyros, and powered parachutes, as well as fixed-wing airplanes.

A Sport Pilot may fly any aircraft that meets the limits described above. This can include a number of aircraft already certified under FAA's existing "standard category" rules (for instance Piper J-3, Aeronca 7AC, and Luscombe 8A, among many others). It can also include aircraft specifically designed and built as Light Sport Aircraft. The new rule creates two new categories of certified Light Sport Aircraft: "Special - Light-Sport" and "Experimental - Light-Sport." These new aircraft may be factory built or the owner may build them from a kit.

Now let's talk about maintenance of Light Sport Aircraft. For both new Light Sport Aircraft categories, builders or buyers can become certified to perform maintenance and inspections without obtaining an A&P mechanic license. The aircraft or kit manufacturers will provide training programs to accomplish the certification. Current A&P mechanics will also be allowed to perform maintenance and inspections on Light Sport Aircraft.

And last, let's discuss the requirements for being able to fly as a Sport Pilot. There are two ways to do so: 1) be trained for a new Sport Pilot license or 2) use an existing pilot certificate, limiting oneself to Sport Pilot operations.

A new Sport Pilot applicant must be at least 16 years old to solo and 17 years

# Ask the Doctor

by Dr. Guy Baldwin, AME



## Aviators Use of New Medicines

In a recent Federal Air Surgeon's Medical Bulletin, a question was raised about an airman who applied for a First Class medical and listed that he was taking Zetia (ezetimibe), a new cholesterol-lowering agent. My friend Dr. Warren Silberman, Chief of the FAA Aeromedical Branch, wrote the article and because his answer applies to other medications and to all classes of FAA medical certificates, I felt it interesting and important to pass on.

In general, cholesterol-lowering medications are allowable for pilots. However, Zetia is brand-new on the market. Although it has been through

old to obtain a Sport Pilot license. A Sport Pilot must have either an FAA medical certificate OR a valid driver's license. At least 20 hours of flight training will be required, of which at least 15 hours must be dual instruction. A knowledge (written) test and flight test will be required.

The Sport Pilot certificate will not be a "category" certificate. For example, it will not say a Sport Pilot is qualified in an "airplane" or "powered parachute" etc. Specific airplanes (or categories, such as powered parachute) the pilot is approved to fly will be accrued through logbook endorsement after training by an authorized flight instructor. The license itself will simply list the airman privileges as "Sport Pilot."

Sport Pilots will be limited to day-VFR operations. However, some limitations may be removed or modified by receiving training and a logbook endorsement. For example, training for the Sport Pilot license does not include control tower operation; therefore, Sport Pilots cannot normally operate at towered airports. But, by receiving appropriate instruction in tower operations, an instructor can lift the restriction through a logbook endorsement.

Pilots who hold existing pilot certificates can use them to operate as a Sport Pilot by simply following the Sport Pilot rules. This requires the to fly only aircraft that are "Sport Pilot legal." Existing pilots do not need to take an additional FAA check ride to exercise Sport Pilot privileges and the training required

the federal government's approval process to assure that it is safe and efficacious, the FAA Aeromedical Branch has a policy of not approving medications for use by pilots until they have been in general use for a period of one year without adverse side effects being reported. This policy applies to all new medications, not just those for lowering cholesterol.

Therefore, when you visit your family physician (or even your AME), pay attention to the medications he may prescribe. Sometimes it is difficult to know if a medication has been out for less than a year; if in doubt, ask your doctor. The vast majority of physicians are not AMEs and are not aware of the special considerations for pilots taking medication. They generally prescribe whatever medications their sales representatives have touted as being effective.

When in doubt, ask your doctor to call an AME for advice. I get calls on a regular basis on this subject, which of course I do not mind answering. It may be accurate to consider a medicine good and safe, but if it has not been out in excess of a year, you might run into FAA medical certification problems.

If you have any questions regarding this article, please call my office at 918-437-7993.

must simply be enough to make you safe and to comply with flight review requirements.

Existing Certified Flight Instructors (CFIs) can provide Sport Pilot training, but they will need logbook endorsements for the Light Sport Aircraft being used. A new type of instructor, the Sport Pilot Instructor (we will probably call that an SPI) will be created. This instructor will be allowed to train only Sport Pilots and will hold a Sport Pilot certificate.

The new Sport Pilot regulations will make it particularly easy for ultralight pilots to convert to a Sport Pilot certificate. I also expect to see a lot of action in the "retread pilot" department, because it will be so easy for an existing pilot to exercise Sport Pilot privileges. When existing pilots limit themselves to Sport Pilot operations, they will not need an FAA medical as long as they possess a valid driver's license. Remember, your pilot license never expires, even if you have lost it or have not used it for many years. For a \$2.00 fee, you will be able to get the certificate reissued and get back into flying as a Sport Pilot.

I hope the next time I write about this topic, it will be about the actual implementation of these new rules. For more detailed information, check the EAA web site at [www.eaa.org](http://www.eaa.org) or drop a line to me at [earldowns@hotmail.com](mailto:earldowns@hotmail.com). Also, *Popular Mechanics* magazine is running a feature story about sport pilot in the October issue. Good things are a comin'!

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## Skiatook's Pioneer Day and Fly-In

by Chester Reyckert

A hot August day did not daunt the aviators and the public attending Skiatook's Pioneer Day/Fly-In this year. From a four-wheeler-mounted "biplane" to "Tulsa T-6 Bunch" to a bonus of two Vietnam era marine helicopters, the spectators were not disappointed. Even "international aviation" was represented by a Chinese CJ-6.

Formation fly-bys, classic and antique aircraft, along with modern airplanes, kept the admittedly hot air well "stirred." Tractor and car show enthusiasts, model airplane pilots, barbecue cook-off attendees, along with civic and

charitable organizations gave 110% on a day almost equaling a degree of temperature for each percentage point!

The tractor show folks exemplified the festival's cooperative camaraderie, towing the Marine helicopters to a more suitable area for takeoff. With tongues firmly in cheek, the tractor drivers said, "John Deere does it all!"

The Skiatook Rotary Club held another successful fundraiser with a drawing for a WWII biplane ride.

While conflicting dates dictated an August date for this year's celebration, it was the unanimous opinion of everyone attending to strive for the original September time period next year.

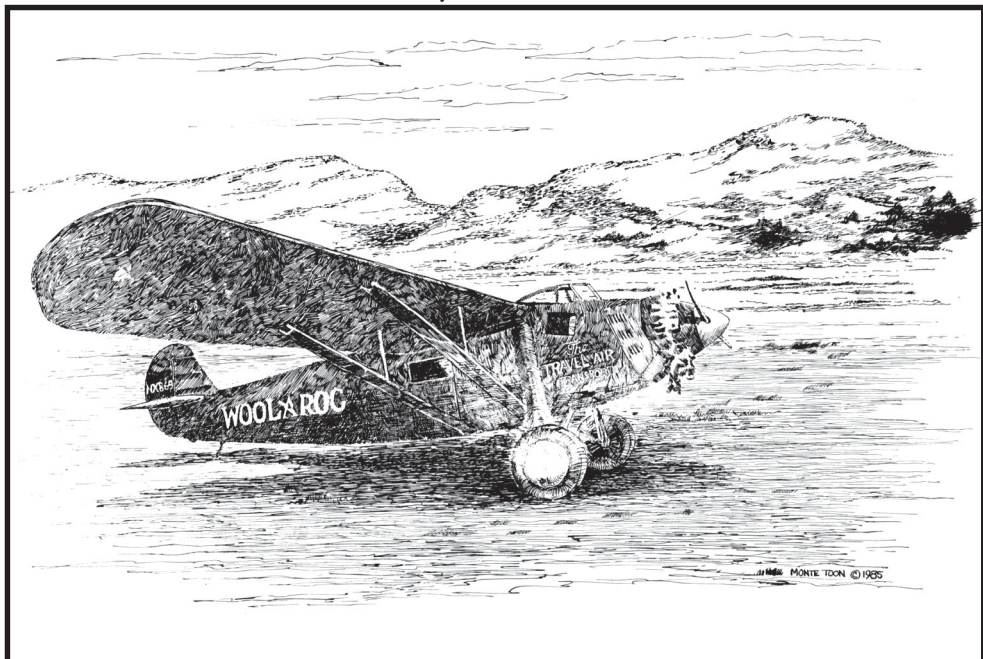


The "Tulsa T-6 Bunch and others. Would you let these guys fly your airplane?"

## Historic Oklahoma Aviation Art

This is the seventh of twelve in our series of historic aviation art prints, created in the mid-1980s by Joe Cunningham and noted Tulsa artist Monte Toon, depicting significant events in Oklahoma aviation history.

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Frank Phillips, founder of Phillips Petroleum, was a great aviation enthusiast. Just five months after the historic Lindbergh flight, he sponsored a small, single-engine monoplane named "Woolaroc" in the Dole Flight from Oakland, California to Hawaii on August 24-25, 1927. Twenty-six hours after takeoff, the Woolaroc landed at Wheeler Field in Honolulu, winning the race. Two years after this historic trans-Pacific flight, the plane was retired to the Woolaroc ranch for which it was named. In 1929, Phillips built an open stone pavilion to house the Woolaroc. Soon other airtifacts were added, the pavilion was closed in, and the Woolaroc Museum was born.

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# NASA XV-15 Retired to Udvar-Hazy Center

continued from p. 1.

ward airspeed for a given engine/rotor angle, XV-15 pilots would be able to convert from hover to forward flight and back in a much less airspeed-critical manner, supervised by onboard computers.

We at Rockwell began building the Bell 301 fuselage assemblies in early 1975, completing the first one in November 1975.

One of our more interesting tasks was to test the XV-15's zero-altitude/zero-air-speed rocket-powered ejection seats.

Depending on the flight environment in which they are designed to function, ejection seats have varying degrees of complication in their sequence of operations. When the pilot pulls the ejection handle, many different tasks may need to occur. Restraints to pull in the pilot's legs, arms, and/or head may need to be activated. Explosive bolts may need to be blown to remove the canopy. Short delays may be needed for various reasons.

Once all the preliminary events have occurred, the seat is initially propelled out of the cockpit by the blast from a large explosive cartridge (gun shell), then a split second later the rocket motor fires, pushing the seat and the pilot upward to gain altitude for the parachute to deploy.

At a predetermined time, the seat and the rocket motor separate and another timed sequence of events occurs to deploy the parachute.

The XV-15 seats were tailored to the operating environment of the airplane. Because of the relatively slow airspeeds and the relatively spacious cockpit, arm and leg restraints were not needed. The plexiglass canopy was to be broken by the seat on its way out, obviating the need for explosive bolts. However, the side-by-side seating arrangement and the presence of the twin rotors swinging overhead presented some spe-



*Dummies under canopy-- an apt description of your typical drop zone?*

cific operating requirements: if either pilot pulled his ejection handle, both of them were destined for a quick ride. One seat would fire first and then, after a very short delay, the second would fire. The thrust line of each rocket motor, acting through the center of gravity of the seat/pilot combination would hopefully take the pilots straight up beyond the rotor blades, then outward away from one another.

The timing of all the operations was done using pyrotechnic logic. That is, when the pilot pulled the ejection handle, he was actually starting a sequence of timed pyrotechnic events—no computers or other electronic controls were used. To monitor the actual timing of events during the firing of a seat, a unique and interesting method was used: large flashbulbs (you remember those, don't you?) were mounted on the seat in various locations. Each flashbulb would fire at the initiation or completion of an event. By filming the seat firing using high-speed cameras operating at known frame rates, the flash bulbs could be seen firing and thus the event timing verified.

So, on the appointed day, the cockpit section of the fuselage, complete with ejection seats and anthropomorphic dummies, was bolted to a fixture on the back of a truck and driven onto the Tulsa International Airport ramp next to the Rockwell building. To verify that none of the dummies' body parts would contact the airplane on the way out, various portions of the cockpit interior were coated with ordinary lipstick; lipstick stains on the dummies' clothing would show any such problems.

Several still cameras and movie cameras running at different frame rates were arranged to photograph the firing. A helicopter was to hover overhead for shots from that angle. Since some of the high-speed

cameras had only a few seconds worth of film, the firing sequence was to be electronically controlled, "with a real countdown and everything!"

As we were making preparations, I jokingly asked Jack Archer, the production supervisor, what his plans were in case nothing happened when the seats were supposed to fire. He thought for a split second and then said, "I don't know—how long you think it would take for that sonofagun to rust down, sitting out there on the ramp?"

At the appointed time, the countdown occurred quite smoothly, but we were all shocked by the prodigious noise, smoke, and flame. It was all over before we could get our minds around it, both seats having fired and reached an apogee of perhaps 200 feet, and both parachutes having opened. The anthropomorphic dummies were under canopy for no more than four or five seconds before unceremoniously plopping onto the concrete ramp. Swallowing hard and thinking about how it would be to take that ride, I was reminded very directly that ejection seats are only a last resort to save one's life.

We at Rockwell-Tulsa went on to deliver both fuselage assemblies to Bell. The first XV-15 made its maiden flight on May 3, 1977. In the decades that followed, a small but very dedicated group of engineers, designers, and pilots from NASA, the U.S. Army, and Bell Helicopter Textron accumulated many world records, industry ac-

colades, and NASA firsts. The XV-15 holds speed and altitude records for its class and awards from the American Helicopter Society and the American Institute of Aeronautics and Astronautics. In 1981, at the Paris International Air Show, the XV-15 became the first NASA experimental aircraft to perform demonstrations before an international audience.

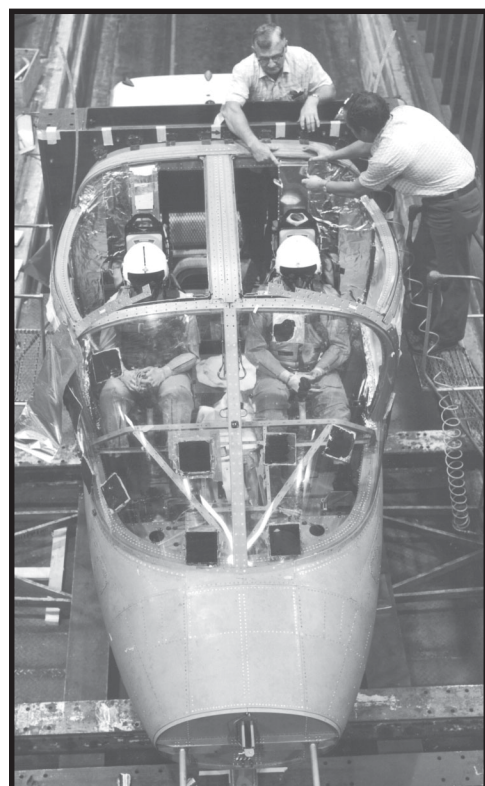
The aviation hangar at the Udvar-Hazy Center will be home to the museum's extensive vertical flight collection, which includes the first helicopter to carry a president of the United States (Dwight D. Eisenhower), the first helicopter powered by a turbine engine, and the oldest surviving helicopter.

The center at Washington Dulles International Airport in northern Virginia eventually will display 80 percent of the national air-and-space collection not currently housed at the building on the Washington Mall or on loan to other museums and institutions. The center opens to the public Dec. 15.

NASM, comprised of the Udvar-Hazy Center and the museum's building on the National Mall, will be the largest air-and-space-museum complex in the world. The flagship building is the world's most popular museum, attracting more than 9 million visitors each year. Attendance at the Udvar-Hazy Center is projected at 3 million people a year.

For information and images of the XV-15, visit <http://amesnews.arc.nasa.gov/releases/2003/03images/xv15/xv15.html>

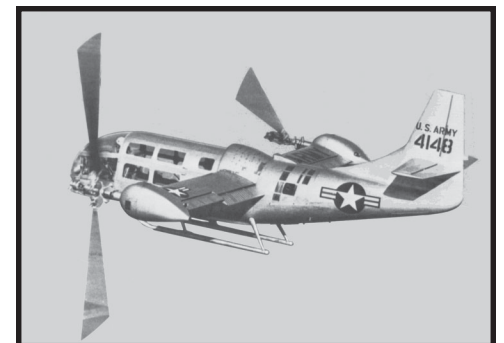
For more information about the Steven F. Udvar-Hazy Center, visit <http://www.nasm.si.edu/nasm/ext/hazycenter.htm>



*The XV-15 cockpit with "crash test" dummies, being readied for test.*



*One of the dummies after landing. Ooooo, that's gonna smart in the morning!*



*The early-50s Bell XV-3 "Convertiplane," the first tilt rotor.*



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# News of the Centennial of Flight

## CAF CENTENNIAL HANGAR DANCE IN TULSA NOV 8.

In keeping with the spirit of this centennial year, the theme of the 2<sup>nd</sup> annual "Celebrate Freedom" big band hangar dance presented by the Spirit of Tulsa Squadron of the CAF Commemorative Air Force (CAF), to be held November 8, 2003, is "100 Years of Flight and 100 Years of Heroes."

The dance will feature the exciting 18-piece Sounds of Music big band playing favorites from WWII. The band's singer, the fantastic Alice Coe, who will be dressed in period attire, adds authenticity to the great sounds of the 40s. During band breaks and pre-show entertainment, other excellent local entertainment will delight you with their songs, including Lindsay Holland, the dynamic 16-year-old singer who delighted last year's crowd. Another group called the Swing-Cats will be dancing the jitterbug just like in the movies—truly a treat to see!

Even if you do not dance, come enjoy the beautiful music, great songs, and the ambiance of a very patriotic décor and atmosphere. The dance is open to the public.

The dance will be held at the beautiful Tulsa Technology Center (TTC) hangar at Jones-Riverside Airport, 901 E. 91<sup>st</sup> Street in Jenks. The hangar is spacious enough to accommodate not only the dance, but also a display of WWII airplanes and memorabilia. Signs will lead you to the event as you enter Jenks. There is also a great silent auction—lots of great items and fun competitive bidding!

On the day of the dance, from 10:00AM to 3:00PM, aircraft, memorabilia, and other exhibits will be on display at TTC. WWII aircraft will flyover and a reenactment group dressed in WWII uniforms will delight the crowds. Included in the displays will be many vintage aircraft, Army vehicles, Marine helicopters, and displays from WWI, WWII, Korea, and Vietnam. As an added treat, the oldest flying WWII four-engine bomber, the B-24 Diamond Lil will also be in attendance. Daytime event tickets will be available Saturday at the hangar. General admission is \$4.00; children 8-12 years are \$2.00.

The evening dance is from 7:00 PM to 10:00 PM. Attendees are encouraged to dress in military uniforms or other pe-

riod clothing, but modern casual attire is fine, too. Along with the big band, the singers, and the swing dancers, other special guests from WWII will be in attendance, including people that built B-24's in Tulsa and pilots, crewmembers, and other veterans of America's conflicts waged in the name of freedom. Doors open at 6:00PM, with the pre-show beginning at 6:30.

Proceeds will allow the Spirit of Tulsa Squadron to continue restoration of their Fairchild PT-19, a WWII primary flight trainer. Dance tickets are \$15.00 each and cover both the daytime and the evening festivities. Tickets can be purchased at Carson Attractions, Tulsa Air and Space Museum, Aircraft Specialties Services, Roadhouse Aviation, Roy and Candy's Music, The Music Store, McGuire's Music, and at the door.

If you have questions, please call Jim Gentry 918-461-2347. For group table reservations, please call Karen Dagg 918-224-6879.

**CAF B-29 "FIFI" TO ACCOMPANY DIAMOND LIL TO TULSA**



Bo  
Ins

On her visit to Tulsa for the CAF "Celebrate Freedom" dance, Diamond Lil, the CAF's B-24, will be accompanied by her larger and more rare stablemate, the CAF B-29 "Fifi."

The two airplanes will arrive Monday October 3 at Tulsa International. Rides will be available in Diamond Lil, as will ground tours of Fifi through Friday October 7. Diamond Lil will fly to Riverside for the dance and Fifi will proceed back to home base in Midland, TX.

Contact Jim Gentry at 918-461-2347 for more details.



As seen in this photo from last year's CAF dance, period attire is encouraged!



Dancers "cutting the rug" at last year's CAF "Celebrate Freedom" dance.

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# Celebrations Across the Country

## Wish of Dreams— Inspired by Freedom

### CENTENNIAL OF FLIGHT STUDENT ESSAY CONTEST ANNOUNCED

Little did the Wright brothers from Dayton, Ohio realize how much their 12-second, 120-foot flight on December 17, 1903 would change the world.

To celebrate this event, and in cooperation with the U.S. Centennial of Flight Commission, the Tulsa Air and Space Museum (TASM) and *The Oklahoma Aviator* are sponsoring the Centennial of Flight Student Essay Contest for homeschoolers and private school students. Students will participate in two categories; grades 4-8 and grades 9-12. Three winners in each category, as well as an overall winner, will be chosen.

Winners will receive a certificate documenting their achievement and a tour of TASM with refreshments. The winning essays will be on display at the museum until December 17, 2003. In addition, the over-

all contest winner's essay will be published in *The Oklahoma Aviator*.

The deadline for submitting essays is October 30. For contest rules and procedures, please contact Kim Jones at 918-834-9900 or Barbara Huffman at 918-527-0430. **US MINT TO OFFER FIRST FLIGHT COMMEMORATIVE COINS**

By Act of Congress, the U.S. Mint has produced a series of First Flight Centennial Commemorative coins, which are now on sale. A portion of the proceeds will support the

First Flight Centennial Foundation and the Wright Brothers National Memorial Park. To view coins designs and place orders, visit [www.usmint.gov](http://www.usmint.gov).

### HURRICANE ISABEL DAMAGE MINIMAL AT WRIGHT MEMORIAL

The Wright Brothers National Memorial at Kitty Hawk, NC suffered only minor damage as Hurricane Isabel marched through. The visitor center and the AOPA-sponsored pilot reception center at First Flight Airport were both spared. Luckily, the damage is being quickly cleaned up and centennial of flight activities, including the big December 17 celebration, are on schedule as planned.

As of September 21, with less than three months to go, 120,066 tickets had been sold, and just over 5,000 tickets remain for December 17th.

Perhaps the worst effect of the hurricane was that the National Air Tour, which

was scheduled to land at First Flight Airport and encircle the Wright monument, was forced to scrub the planned stop, spending an extra day in Atlanta to wait out the storm.

### WRIGHT FAMILY FUND DONATES TO EAA AVIATION FOUNDATION

In conjunction with the centennial of powered flight, the Wright Family Fund, a charitable foundation administered by the descendants of the Wright brothers, has committed more than \$37,000 to the EAA AirVenture Museum, which will enhance the EAA's education and distance learning capabilities.

Amanda Wright Lane and Stephen Wright, the great-grandniece and great-grandnephew of the Wright brothers, respectively, attended EAA AirVenture 2003 at Oshkosh and participated in a special evening program reflecting on the Wright's first flight and its impact on the world. They have also been active in activities for EAA's flight centennial celebration, Countdown to Kitty Hawk, presented by Ford Motor Company.

The Wright Family Fund, based in Dayton, Ohio, is a 501(c)(3) charitable foundation that supports education and innovation programs in America.

The EAA Aviation Foundation, headquartered in Oshkosh, WI, was founded in 1962 and is dedicated to aviation education, preservation, and research.

### NASA SCIENTIST TO VISIT TASM & SPEAK AT LOCAL SCHOOLS

Science teachers and Tulsa families who want to learn more about the space program can visit with Dr. Jack Bacon, space scientist, futurist, and author at the Tulsa Air and Space Museum (TASM).

As part of National Earth Science Week celebration October 12-18, the American Association of Petroleum Geologists is sponsoring a conference for Tulsa area teachers who are seeking unique ways to teach students about earth science. Dr. Bacon will be speaking about the problems and prospects of harvesting the Earth's resources through the conference. Dr. Bacon's TASM visit is sponsored by The

Mid-Continent Section of the AAPG and BRG Petroleum Corporation.

On Friday evening October 10 from 7:30PM to 9:00PM, TASM members and invited guests will have the pleasure of hearing Dr. Bacon speak about futurist work in non-space areas and prediction. A distinguished AIAA lecturer, his duties have taken him to space development facilities all over the world, including previously secret Russian installations. His two recent book publications will be available for purchase and autograph. Reservations for Friday's presentation can be made at (918) 834-9900 or [jmcgough@tulsamuseum.com](mailto:jmcgough@tulsamuseum.com).

On Saturday October 11, Dr. Bacon will be available to personally greet and chat with children at TASM. Other special exhibits that day will include a star gaze in a miniature Planetarium called Star Lab sponsored by STARBASE Oklahoma. Also available will be free space posters, virtual trips on TASM's Spaceplane *Galactic Schooner*, information about Oklahoma's space port in Burns Flat, displays about Tulsa's role in the International Space Station and Space Shuttle, and hands-on learning activities like the Robotic Arm and Space Shuttle launch. The museum is located two blocks west of Tulsa International Airport at 7130 East Apache. Space Day is open to the public.



Breen Emery tries out the TASM A-7 simulator ride, during the recent National Air Tour visit to Tulsa.

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# Calendar of Events

For a free listing of your event, email us at [OklahomaAviator@earthlink.net](mailto:OklahomaAviator@earthlink.net) or call 918-457-3330. To allow time for printing and publication, try to notify us at least two months prior to the event.

WHEN	WHAT	WHERE	CONTACT	DETAILS
1st Thursday	Dinner Meeting- Oklahoma Pilots Assoc dinner and meeting	Wiley Post Airport, Oklahoma City, OK	Helen Holbird- 405-942-6308	
1st Saturday 7:30AM-10:00AM	Fly-In Breakfast- Ponca City Aviation Boosters Club	Ponca City Airport, Ponca City, OK	Don Nuzum- nuzum@poncacity.net Bruce Eberle- 580-762-5735	Held rain or shine
1st Saturday	Aerobatics	Claremore Municipal Airport Claremore, OK	Matt Burton 918-343-0931	Go to Ponca City for breakfast, then come to Claremore for hamburgers and aerobatics!
2nd Monday 7:00PM	Meeting- Oklahoma Chapter 99s	Wiley Post Airport	Poochie Rotzinger- 405-842-9829	
2nd Tuesday	Meeting- Spirit of Tulsa Squadron- Commemorative Air Force	Tulsa Technology Center Jones/Riverside Airport, Tulsa	Jim Dagg 918-224-6293	Restoring 1942 PT-19. Hangar space and workers needed
2nd Tuesday	Meeting- EAA Chapter 24	Aviation Tech Center OKC Airport	Martin Weaver- 405-376-5488 pacer31a@earthlink.net	Start 7:00PM
2nd Wednesday 7:30PM	Meeting- Tulsa Cloud Dancers Balloon Club	Contact Frank Capps	Frank or Cheri Capps- 918-299-2979 aerosportballoon@hotmail.com	
2nd Thursday 7:00PM	Meeting- EAA Chapter 1005	Ada Municipal Airport Ada, OK	Terry Hall 580-436-8190 or adairprt@wilnet1.com	Call or email for exact location for monthly meeting. We occasionally meet off airport.
2nd Thursday 7:00PM	Meeting- Oklahoma Windriders Balloon Club	Metro Tech Aviation Career Center, Oklahoma City, OK	Ron McKinney- 405-685-8180	For all balloon enthusiasts
2nd Saturday	Fly-In Lunch Meeting Kerr County Aviation Association	Poteau Municipal Airport Poteau, OK	Bryan Hoggatt- 918-647-4719	
2nd Saturday 11:00AM	Meeting- EAA Ultralight Chapter 98	Thompson Airport Tuttle, OK	Robert Crawford- 405-381-2840	Visitors welcome!
3rd Saturday	Meeting- Green Country Ultralight Flyers Organization (GCUFO)	Call 918-632-6UFO for location and details	Bill Chilcoat- 918-827-6566	
3rd Sunday	Tulsa Cloud Dancers Balloon Flight	Contact Frank Capps for time/location	Frank or Cheri Capps- 918-299-2979 aerosportballoon@hotmail.com	
3rd Monday	Meeting- IAC Chapter 10	Contact David Koehn for time/place	David Koehn- 918-671-0481 ffav8@sbcglobal.net	
3rd Monday 7:30PM	Meeting- EAA Chapter 10	Gundy's Airport, Owasso, OK	Bhrent Waddell- 918-371-5022 bwaddell@tulsa.oklahoma.net	
3rd Tuesday	Green Country Women in Aviation Meeting	Contact Kristen Esparza for time/location	Kristen Esparza - 918-851-36557	Men and women supporting women in aviation
3rd Thursday 7:00PM	Meeting- EAA Chapter 323	Sherman Municipal Airport Sherman, TX	Billy Dollarhide- 903-868-7609 dollarhide@ti.com	For more information, visit our website: <a href="http://www.eaa323.org">www.eaa323.org</a>
Saturday following 3rd Monday	Pancake Breakfast- EAA Chapter 10	Gundy's Airport, Owasso, OK	Bhrent Waddell- 918-371-5022 bwaddell@tulsa.oklahoma.net	
4th Tuesday 7:00PM	Tulsa Chapter 99s Meeting	Robertson Aviation, Jones/Riverside Airport, Tulsa*	Charlene- 918-838-7044 or Frances- flygr17102@aol.com	*Unless otherwise planned. All women pilots including students are welcome to attend.
4th Thursday 7:30PM	Meeting- Vintage Airplane Association Chapter 10	The South Regional Library, 8316 East 93rd Street, Tulsa, OK	Charles Harris- 918-622-8400	
Oct 3-5	Aerospace America International Airshow	Will Rogers World Airport Oklahoma City, OK	Carl Whittle, Director, (405) 685-9546, csw@aerospaceokc.com	Celebrating 100 years of powered flight with a salute to our military men and women.
Oct 4 5:00PM	Gundy's Airport Ice Cream Social and Hangar Dance	Gundy's Airport Owasso, OK	Roger Wieden- 918-272-7188	Enjoy homemade ice cream and dance to the big band sounds of the Sounds of Music Orchestra
Oct 5 Noon-5:00PM	Gundy's Airport Annual "Wing Ding"	Gundy's Airport Owasso, OK	Roger Wieden- 918-272-7188	Bring a potluck dish and join us for barbecued chicken wings, flying events, games, and other fun stuff!
Oct 11 10:00AM-5:00PM	Elm Creek Airpark Annual Fly-In	Elm Creek Airpark ØTX6 Seguin, TX (4 miles SSW of Seguin)	E. Staley- 830-303-6577 VEStaley@peoplepc.com	<a href="http://elmcreekap.org">http://elmcreekap.org</a> Rwy 14/32 (RP Rwy 32) 2200'x80' turf 122.9
Oct 11-12	2nd Annual Airshow	Silver Wings Field (5A5) Eureka Springs, AR	Errol Severe- 479-253-5008 av1cadet@arkansas.net	
Oct 24	Aviation Music Concert Tulsa Community College	TCC Southeast Campus 81st & Hwy 169, Tulsa, OK	Dr. Barry Epperly- 918-595-7776	
Oct 24-26	Flying M Ranch Fly-In/Camp Out	Flying M Ranch Airport (7TA7) Reklaw, TX	Dave Mason- 936-369-4362	Camp in the woods by your plane. Kids fishing derby. Meals all 3 days. Lots of awards
Oct 29 1:00PM	Ride Into History With Amelia Earhart Tulsa City County Library	Schusterman-Benson Library 3333 E. 32nd Place, Tulsa, OK	Main Library (918) 596-7977	See actor/scholar Ann Birney's portrayal of Amelia Earhart before her final flight in 1937.
Oct 29 6:30PM	Ride Into History With Amelia Earhart Tulsa City County Library	Central Library 400 Civic Center, Tulsa, OK	Main Library (918) 596-7977	See actor/scholar Ann Birney's portrayal of Amelia Earhart before her final flight in 1937.
Oct 30 10:00AM	Ride Into History With Amelia Earhart Tulsa City County Library	Owasso Library 103 W. Broadway, Owasso, OK	Main Library (918) 596-7977	See actor/scholar Ann Birney's portrayal of Amelia Earhart before her final flight in 1937.
Oct 30 3:00PM	Ride Into History With Amelia Earhart Tulsa City County Library	South Broken Arrow Library 3600 S. Chestnut, Broken Arrow, OK	Main Library (918) 596-7977	See actor/scholar Ann Birney's portrayal of Amelia Earhart before her final flight in 1937.
Oct 30-Nov 1	AOPA Expo 2003 Annual Aircraft Owners and Pilots Assn Convention	Aircraft display: Atlantic FBO, Philadelphia Intl Exhibits: Pennsylvania Convention Center Philadelphia, PA	Warren Morningstar- 301-695-2162 warren.morningstar@aopa.org	The premier general aviation convention! See the latest aircraft and equipment. Attend over 80 hours of seminars. Meet and greet pilots & aviation enthusiasts.
Nov 7	OAOA Workshop	Metro Tech Aviation Career Center SW 59th & MacArthur, OKC	Debra Coughlan- 918-838-5018	Conducted by FAA. All OAOA member airports are encouraged to attend.
Nov 8	2nd Annual Aircraft Display Commemorative Air Force	Tulsa Technology Center Jones-Riverside Airport, Tulsa, OK	Jim Gentry- 918-461-2347	See displays of WWII airplanes and military equipment from 10:00AM to 4:00PM. Tickets \$4 adults, \$2 kids
Nov 8	2nd Annual Hangar Dance Commemorative Air Force	Tulsa Technology Center Jones-Riverside Airport, Tulsa, OK	Jim Gentry- 918-461-2347	Big band music and other entertainment. Dance from 7:00PM to 10:00PM. Doors open at 6:00PM. Tickets \$15
Nov 8	51st Annual Fairview Airshow & Fly-In	Fairview Municipal Airport Fairview, OK	Theresa Regier- 580-227-3788	Free breakfast to fly-ins 6-10AM, Airshow 1:30PM. Free turkey to every 10th plane to land!



# Oklahoma Aviation & Space Hall of Fame Inducts Six

OKLAHOMA CITY – Six Oklahomans joined distinguished guests and dignitaries for induction into the Oklahoma Aviation & Space Hall of Fame on September 20 at Omniplex.

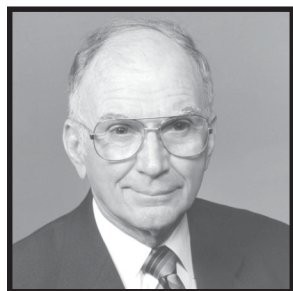
Oklahoma radio celebrity and pilot Dan Stroud served as the master of ceremonies for the 24<sup>th</sup> annual black-tie event, which recognizes those who have made significant accomplishments in aerospace and aviation in Oklahoma. Stroud is a fixture of Oklahoma broadcasting, but his passion has always been aviation. He first soloed a sailplane in Guthrie at age 14 and currently holds Commercial, Instrument, and Flight Instructor ratings, plus Rotorcraft and Sailplane ratings. He has taught and competed in aerobatics for over 18 years.

Stroud welcomed the honored speaker, Wally Funk, a pioneer in the advancement of women in aviation. She is known worldwide for several “firsts,” including being one of the “Mercury 13” women astronaut candidates, the first female FAA inspector, and the first female investigator for the NTSB. She has logged nearly 17,000 flight hours.

“Wally’s enthusiasm and dedication for flying, for teaching others to fly and for pursuing her ultimate goal of space flight are examples of perseverance we could all use as a guide,” said Lu Hollander, member of The Ninety-Nines, Inc and a personal friend. “Wally has been a trailblazer in aviation since she first became a pilot, and she continues to demonstrate that dedication every day in her work with young people.”

The following honorees were inducted:

**John William Boulton.** Oklahoma



City native and resident Bill Boulton has had a passion for flight since seeing his first airplane in 1930 at age eight. An avid flyer since

1940, he flew reconnaissance aircraft in

World War II and took part in the June 1944 D-Day invasion.

Boulton has logged over 4000 flight hour, over 2000 of which were on Angel Flight missions. Since 1987, he has served on the Oklahoma Aeronautics Commission, twice as Chairman.

**Charlie H. Dry.** Born in Ardmore,



Charlie Dry began his career at the China Lake Naval Ordnance Test Range, later working in several other aerospace positions, one of which was with North American Aviation in Tulsa. In 1966, Dry began working at NASA-Houston, his life’s ambition. There, he was involved in several areas of manned space flight.

Dry is also the co-founder of the Aerospace Foundation of Oklahoma, and the Oklahoma Aerospace Academy, which help to further space education in the state.

**Clint Tee Johnson** (deceased). Clint Tee Johnson was commissioned a Second Lieutenant in 1918 and received pilot training at Kelly Field in San Antonio, TX. He



later served in various capacities with the U.S. Army Signal Corps. Between 1941 and 1945, he trained B-26 and B-17 pilots. At the end of the WWII, he transferred to Oklahoma with the reserves and founded an aerial photography company. Later, he became manager of Will Rogers Airport in Oklahoma City and a co-owner of Oklahoma Aviation Services, Inc. Johnson retired to Oklahoma City, where he remained active in community service and several businesses until his death in March 1982.

**Major General Stanley F. H. Newman.** Stanley F. H. Newman, an



Oklahoma City resident and 37-year career veteran with the Oklahoma Air National Guard, flew in three wars. During World War II,

Newman flew 57 missions in P-51 Mustangs. Later, in Korea, he flew another 100 combat missions and went on to fly airlift missions in Vietnam. Newman also worked for NACA, performing primary research on aerodynamic flutter in supersonic flight.

**Robert E. “Bob” Rousselot.** Wag-



goner resident Robert Rousselot enlisted in the U.S. Navy’s aviation cadet program in 1942, entered the Marines, and became a

carrier-qualified fighter pilot. During World War II he flew combat missions in the Pacific in a Corsair from the deck of an escort carrier. While serving in post-war China, he joined Civil Air Transport and became their chief pilot in 1948, flying relief supplies and Nationalist troops from China’s coastal seaports to remote interior areas.

Rousselot organized an airlift that proved crucial to United Nations military operations during the early days of the Korean conflict. He also flew numerous top-secret missions for the CIA in the 1950s. Rousselot later became the Director of Operations for the Civil Air Transport, organized relief missions into Indochina to help beleaguered French forces, and aided the CIA to help anti-Communist forces in Laos. In the mid 1960s, Rousselot settled in Wagoner and became a successful cattle rancher.

**552d Air Control Wing, Tinker AFB.**



The 552d Air Control Wing has had a substantial impact on the air defense of the United States, while maintaining a strong presence

at Tinker Air Force Base in Oklahoma City. In support of combat commanders, the unit is responsible for operations, maintenance, logistics, training, and combat support of E-3 AWACS aircraft. The E-3 AWACS is the world’s premier battle management platform and will continue to support the nation in that capacity well into the next century.

In addition to the 2003 inductees, **Jack Blanchard** was honored with the Clarence



E. Page Memorial Trophy, given to an individual who has shown dedication to the promotion and/or progress of the aerospace industry in Oklahoma. Blanchard began his

flying career as a student pilot at Wiley Post Airport and went on to fly 53 missions “over the hump” in the Himalayas, on the last of which he was forced to bail out of his aircraft.

Later, Blanchard served for 32 years as a FAA flight examiner, formed a flight school and aviation sales business, and piloted a corporate aircraft for George Hales Oil Company.

“This is such an accomplished group of inductees. We are honored to be able to salute their successes and are proud of the representation they’ve given the aviation industry in Oklahoma and around the world,” said Max Ary, Omniplex executive director.

For more information about the Oklahoma Aviation and Space Hall of Fame, log on to [www.omniplex.org](http://www.omniplex.org) or call (405) 602-3673.

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# AOPA Expo 2003 at Philadelphia Convention Ctr Oct 30-Nov 1

FREDERICK, MD - AOPA Expo 2003 will kick off October 30 in Philadelphia's convention center, with a chance for GA pilots to meet the FAA Administrator, Marion Blakey, who will once again address the opening general assembly.

"Administrator Blakey's quick decision to return to AOPA Expo and talk directly with pilots is a certain indication of the importance she places on general aviation in America," said Boyer. "She clearly understands that a vital GA community and industry is good for the country."

At last year's AOPA Expo, Blakey, just

weeks on the job, spoke frankly about the challenges arising out of security concerns that faced both the federal government and the GA community. She pledged to provide graphical depictions of hard-to-understand textual descriptions of temporary flight restrictions (TFRs). In mid-June 2003, FAA lived up to her promise.

More than 500 exhibits will fill the Pennsylvania Convention Center in downtown Philadelphia with just about everything imaginable for general aviation, from the latest in aircraft modifications to the newest headsets.

A short shuttle-bus ride away is the nation's largest general aviation ramp, at Philadelphia International Airport, where visitors will find dozens of aircraft on display with representatives eager to explain the advantages of each.

Visitors to AOPA Expo will have the opportunity to take part in more than 80 hours of seminars. In addition, the AOPA Air Safety Foundation will offer several sessions of its immensely popular Pinch Hitter® Ground School, which teaches frequent right-seat passengers basics of flight and how to be an asset in the air.

Social events include the Opening

Luncheon and Welcome Reception on Thursday, the Grand Finale Banquet on Saturday, and because Halloween falls right in the middle of this year's Expo, an AOPA Halloween Party on Friday Night.

Registration is quick and easy online. Simply visit [www.aopa.org/expo](http://www.aopa.org/expo) or call 888-GO2-EXPO (888-462-3976) between 8:30AM and 6:00PM.

Hotel and travel information is also available from the AOPA Expo 2003 Web page. AOPA is the world's largest civil aviation organization in the world, dedicated to protecting the interests of general aviation pilots and aircraft owners. General aviation, all flight activity except military and scheduled airline flights, is the largest segment of U.S. aviation, accounting for 95% of all U.S. aircraft and 77% of all U.S. flights.

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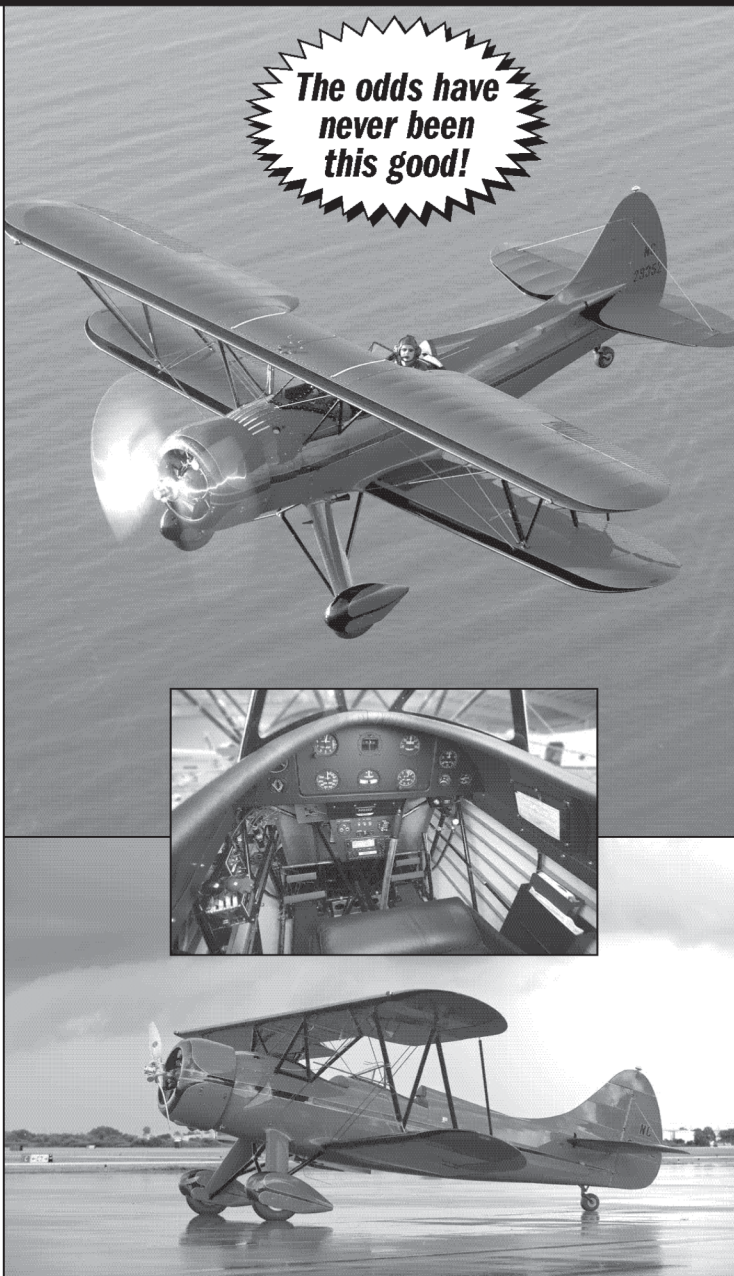
By joining or renewing with AOPA today, you'll **INCREASE** your chances of winning this historic three-seater WACO biplane — worth \$250,000! Plus, if you sign up three friends with AOPA, or if you join the Automatic Annual Renewal program, you'll receive another entry!

Don't miss your opportunity to win the grand prize, or to become one of our monthly winners: spend a day flying a completely restored WACO, and take home an exclusive leather bomber jacket and plaque commemorating your once-in-a-lifetime flying experience!

### So, How Do You Join or Renew?

- Go to [www.aopa.org](http://www.aopa.org) and click on the **WIN A WACO** button.
- Or call **1-800-USA-AOPA** toll free today.

*AOPA's 2003 Centennial of Flight Sweepstakes*



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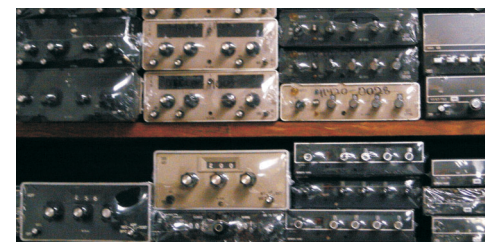
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