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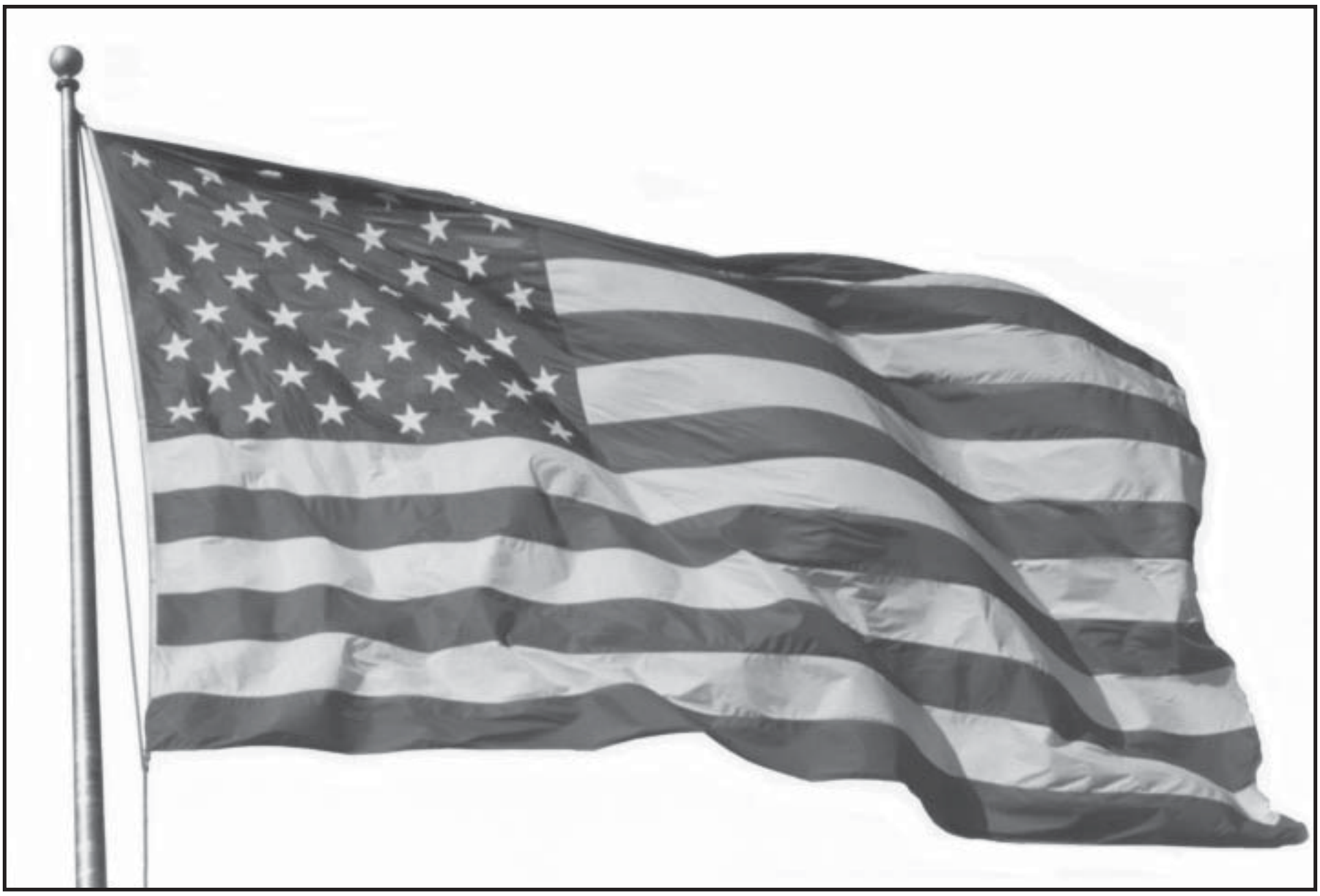
Oklahoma Aviator

Vol 19, No 10 | Your window to Oklahoma Aviation...Past, Present, Future | October 2001

God Bless America...



...and All the world

From Mike...

As I sit to write this month's editorial, I am in a quandry. It is already early October and I should have had this issue to the printer a week or more ago. And yet, I have procrastinated.

Several factors have conspired to create this situation, the most signicant of which was obviously the September 11th terrorist attacks on the World Trade Center.

When Barbara and I began publishing the paper almost two years ago, I made myself, and you who are reading this, a promise that the Oklahoma Aviator would be a positive voice for aviation. I promised that we would run only positive, uplifting stories that promote this activity that we hold dear.

I made that promise for at least three reasons. First, there were already too many negative aviation voices out there, and I felt the need to offset the negativity.

Second, aviation has been so important in my life that I did not want to say anything bad about it.

Third, and perhaps most importantly, being positive is the way Barbara and I have decided to live our lives.

We have stood by that promise. For instance, we decided not to print accident statistics, even though it would have been an easy way to fill column space each month.

And then, September 11 happened. In the following week or so, like everyone else, I was in shock, so struck by the immediacy, the immensity, and the horror of it all, that nothing else seemed important.

After the schock began to wear off, we all started to think once more about returning to "normal," whatever that would mean. I began thinking about our October issue and, thus, my quandry began.

Aviation has always beckoned me to things higher and better. "Higher" perhaps because my vantage point at cruising altitude has always occasioned loftier, more philosophical thoughts about the world, the people that fill it, the ultimate purpose in life, and so forth-- all the "big questions."

"Better" because I have had to learn more and be more to engage in aviation. First, just learning to fly was the challenge, then came additional ratings, each one requiring that I "step outside myself" a little to gain mastery of it.

Then, over twenty five years ago, I undertook the design and construction of my very own homebuilt airplane. I cannot tell you how many times I came up "against a wall," facing a design problem that seemingly had no solution, having to reconcile myself to the possibility of failure. But each time, after sleeping on it, a solution would magically appear. By the time the airplane finally made its first flight, I had come to have more faith in myself and in the operation of the universe. That life-lesson has been one of the most important I have ever learned.

And, as I told you about last month in my column on parachute jumping, aviation even allowed me the opportunity to find out how I would react in a real life-or-death situation-- and fortunately live through it.

So, one part of my quandry had to do with becoming reconciled to the fact that airplanes, things for which I have a special love, were used for such a heinous purpose. It seemed to tarnish the overall reputation of aviation.

Another aspect was quite practical: in the days and weeks that followed the attacks, aviation news happened daily, even hourly! How could our monthly publication print anything of value? Would the situation stabilize to the point that this issue could summarize it? Would that summarization be of any value, in view of the immediate television and Internet coverage all of us have already seen?

(At this point, I want to express my gratitude and thanks to Internet aviation news magazines like AvWeb and AeroNews.net. Some of you may remember Jim Campbell, editor-in-chief of Aero-News.net; Jim lived in Tulsa in the late 70s and took flight training at Harvey Young airport. Those organizations performed a valuable service in keeping us informed about the fast-paced changes that have occurred in the last few weeks.)

However, once the shock started to wear off, I realized that one of the things we all need to do is to get back to some semblance of life as we knew it before the attacks. It seemed that idea would serve more than one purpose. It would bring much-needed familiarity and comfort while we decide how best to respond. But at least as importantly, it would show the rest of the world, including the terrorist organizations that attacked us, that we will continue, we will survive, and we will prosper.

Thus, I found my way out of the morass to a new conviction: the Oklahoma Aviator will continue to operate in the mode that we have. Apparently, you the readers find value in what we have done. We are not a real time news organization, nor should we try to be. Our mission is to print information that draws the Oklahoma aviation community together, to continue to emphasize the positive aspects of aviation. I believe that influence is needed now more than ever.

Albeit late, this issue will reach you sometime in October, representing a return to our normal schedule. Isn't this the very best way to show the terror-mongers that they have failed?

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PLANE POTPOURRI
Bob Richardson

The Home Airport

[Editors Note: Bob Richardson has long been a regular contributor to the Oklahoma Aviator. Bob has 0had a long career in aviation dating back to the 30s. Here's his story about how he got interested in aviation, back in his home town of Butte, Montana. We will continue to print Bob's stories about his aviation career.]

The bright sunny days of late July and early August are Butte's best. Butte a place where the natives often grumble about the weather and are famous for saying, "Butte only has three seasons-- July, August, and winter!"

Hot afternoons meant longer takeoff runs due to something we now call density altitude. Heat- and wind-induced "whirley-gigs" often drifted across the runways, bedeviling landing lightplane plilots on those otherwise pleasant days. At 5500 feet elevation, Butte was a good place to learn to fly and the old hands would tell you, "If ya learn flying in Butte, and ya do good, ya can fly anywhere!"

Our airport was one of the WPA's major improvement programs accomplished at Butte during the last years of the Great Depression. The work consisted mostly of runway extension, fencing, pouring concrete ramps, and hard-surfacing the runways. It was a "dig here and fill there" construction project, with large amounts of earth removed from one area to fill and level low spots in the developed portion where existing hangars, parking lots, and public spaces were located.

The WPA failed to provide taxi strips on our airport and, after landing, it was necessary to taxi in the dirt along the side of the runway to get back to the hangars. Some dared to taxi back on the runways, provoking the volunteer airport manager into a cursing fit.

I had spent the previous six years working at airports, airfields, and air bases, in and out of the United States Army Air Force, but I thought our airport was great and was "damn glad" to be on board in post-war 1946.

My first trip there was in 1927 when my father took me to see Charles Lindbergh and the Spirit of St. Louis. I did not get to see Lindy, but I did get to see the "Spirit" and was very impressed with the airplane. I figured that if an unimposing-looking contraption like that could really carry a man non-stop to Paris, France-- which I knew was a long ways off-- it had to be a marvelous machine. I wanted to know more and be part of it when I grew up.

Butte was a mining town, or as some said, it started as a "mining camp" and was then still a mining camp, and would always be a mining camp! It was also a commercial center, railway cross roads, and cattle-raising headquarters. An aviation town it was not!

To the people of Butte, flying was better left to the birds. For them, aviation was a passing fancy that received as much attention as the Cole Brothers Traveling Air Circus, which came to town every summer for a ten-day stand. When it was over and gone, people never gave it another thought. Miners, plumbers, and butchers the residents could understand, but aviators were akin to stunt men, grandstanders, or shameless promoters.

And yet, in spite of the indifference of the citizens, beginning the the early twenties, a small group of pilots, businessmen, and well-heeled sportsmen created a modest aviation community, built a hangar, set up shop, and began an aviation enterprise that exists today.

In 1928, the headquarters of the National Parks Airways (NPA) was established at the airport, dragging the mining town into the aviation transportation age, whether it wanted to or not. A large hangar and office facility was built at the airport and a number of local people were hired to work for the airline. The mining-oriented townspeople were skeptical. It wouldn't last, they thought, "Just a passing fancy."

In the end, the naysayers were right-- the air carrier was gone by 1937, merged with the California-based Western Air Express (WAE), which promptly took over the NPA facilities, but moved the headquarters to the WAE base in Los Angeles. A short time later, Northwest Airlines was also operating their Lockheed 10-A Electras out of the WAE operations area.

The City of Butte, for better or

continued on p. 3.

Up With Downs

Earl Downs

Learning From My Students

I have been actively training pilots for about 40 years and more than once I have been asked, "Why do you keep instructing, don't you want a real job?" I guess by "real job" they mean something like an airline pilot or corporate pilot or fighter pilot or about anything other than being an instructor. To me, training others to enter the realm of aviation or to improve their aviation skills is a real job. As a matter of fact, I think it's about as rewarding as it gets.

I love to teach. Better yet, when I teach pilots I get immediate rewards--and I am not just talking about money. The pride I feel when a student first soloes is such instant gratification for the work I have performed in teaching this student how to fly. I am rewarded when a newly certificated instrument student relates the experience of his first IFR pilot in command instrument flight. I share the joy and excitement when a pilot makes the first test flight of a homebuilt plane after I have prepared him for the event. You just can't beat being an aviation instructor for reaping the emotional rewards of your hard work.

I may have thousands of hours teaching others but my students never fail to teach me as well. They teach me about human behavior and I learn lessons that range from humor to humility. I thought I would share some of these lessons with you.

Paying Attention - Back in the "good old days," we didn't have headsets or intercoms-- we just used the cockpit speaker. I would have to listen very closely to hear my student's communications with the tower. On one training flight I heard the tower ask if we had our traffic in sight. My student replied, "Positive." The tower asked the question again and, once more, he replied, "Positive." I asked why in the world he was saying "positive" to the tower. He replied that if the word "negative" means "no" then the word "positive" must mean "yes!" He was simply affirming that we did have the traffic in sight. Perhaps I should have spent more time teaching him radio phraseology.

Complacency - I was teaching a student in a Piper Tri-Pacer. We were well along in the training and she was doing fine, or so I thought. During some takeoff and landing practice everything was going great and I was just relaxing and going along for the ride. I was feeling confident enough that I sort of pulled one foot back by the seat and the other was stretched out between the rudder pedals. Then it happened! For some reason, she lost directional control during a landing rollout and I needed to take over. Much to my chagrin, the foot I had curled back against the seat was caught in the seat understructure and I had to regain control by using my one remaining foot. There I was, stomping back and forth between the left and right rudder pedals with one foot trying to keep one of the world's easiest airplanes to fly straight on the runway. I got us back under control but I learned it is possible to be a little too relaxed.

Payback - Cessna 150s have a fuel valve located between the seats, which requires you to move your leg to be able to see it. This feature allows perfect cover for me to sneak in a simulated engine failure by switching the fuel off without my student seeing me do it, or so I thought. I always did this at higher altitudes while practicing airwork. On this flight, I switched it off while we were practicing steep turns and I was sure this student would use the correct procedure and quickly find the problem. When the engine quit, he screamed in terror, grabbed the microphone and started yelling "Mayday! Mayday!" I completely ignored the plane and made a grab for the microphone. He hung onto the microphone with a death grip and continued yelling for help until I turned off the radio. At this point he calmly hung up the microphone and turned the fuel back on. He then handed me the unplugged end of microphone cord and started laughing. I had "been had." Years later he was flying as an airline captain and I always wondered how many copilots he had tormented with his humor.

Resourcefulness - During the years I operated my FBO at Cushing airport I employed several ramp service helpers and offered them flight training as partial pay for their work. One of these helpers was a 17-year-old high school student who wanted to learn to fly my Aeronca Champion. He was an outstanding student and one of the few people that I allowed to solo my Champ. After one solo flight he commented about how much he loved the slow speed and good visibility that the Champ is renowned for. Yes, I said, it provides a wonderful place for looking at the countryside. He responded that it was not just countryside that he was looking at. He said he used the Champ to reconnoiter farmer's ponds so he could figure a way to sneak in and go fishing. Now that I own a small farm with a pond I pay more attention to low flying planes!

Caught - The 1960s were a time of turmoil and trouble, but they also gave a gift to all men that will never be forgotten. That gift is, of course, the miniskirt. I was assigned to fly with a new student that turned out to be a "pert" young lady wearing a perfect example of that fashion trend of the day. The other instructors at the school looked on with envy as I walked out to the Cessna with her. After we settled into the little C-150, I explained the cockpit preflight, paying special attention to that fuel valve just under your legs between the seats. Fuel is very important, you know. I told her about the use of the rudder pedals and brakes for taxiing. I watched her foot movement very carefully to make sure she was using the proper steering technique. Things seemed to be going just fine until I decided to look out the windshield to see where we were going. To my shock, we were only inches away from striking the right wing tip on a hangar. I hit the brakes and avoided the collision, but was so close to the hangar that my only choice of action was to shut down the engine and push the plane back away from the hangar. Like a true gentleman, I had her remain in the plane while I pushed it back. By this time, all the other instructors and several students had lined up beside the hangar to watch the show. You don't suppose she knew what happened, do you?

Comments or questions? E-mail me at earldowns@hotmail.com

The Home Airport, cont'd

continued from p. 2.

worse, then had east-west and north-south airline service, whether the average citizens cared or not. Enough business people wanted the service to make it worthwhile for both carriers.

My second trip to the old airport, after my Lindy visit of 1927, was in about 1935. After that, I was a frequent visitor, biking all of the five miles from home until I graduated to automobiles in 1937. My father's milk truck was my first means of driving to see the Curtiss Robins, Airsedans, Curtiss-Wright Juniors, Travel Air 2000s, and a Ryan Brougham or two.

It was during my airport visits that I had my first chance to do some aircraft maintenance. My father let me "moonlight" from my dairy chores long enough to help a cantankerous old WWI pilot called Shorty renovate a very tired and equally-cantankerous OX-5-powered Waco 10.

Off and on, the job took weeks, and Shorty gave me a lifelong respect for the structural integrity of a flying machine and it's powerplant. Thanks to my time with Shorty, I am now a proud member of the OX-5 Pioneers Club, which honors pilots and mechanics who flew or maintained aircraft powered by the famous Curtiss OX-5 engine prior to 1940.

I always took my 110 Kodak with me on those airport visits and still have many of the old aircraft prints in my photo files. The 110 folding camera was a must for the airplane photographer in the late thirties and early forties.

Regardless of my many airport visits, airplane washings, hangar sweepings, and various other ploys to promote an airplane ride, it wasn't until the summer of 1938 that I got my first ride in the big front seat of a Waco Taperwing, with a very frightened young lady whose husband dared her to ride in the airplane. Donald Thompson, a baker by trade from the nearby town of Anaconda, was the pilot. Donald barnstormed in his Waco on weekends. It was a good ride and I fell in love with the Taperwing, an infatuation that has lasted to this very day.

By then, the new generation of light training planes were beginning to appear on the flight line. The Piper Cub, tandem Aeroncas, and Taylorcrafts were foremost in our part of the country.

We had already seen the Aeronca C3 and Model K, which were not good performers due to our high altitude. In 1938, a young local man flying an Aeronca K was killed in a nearby valley-- the first fatal aircraft accident I had personal knowledge of. The incident got a lot of publicity and convinced my father that flying was the unsavory business he had always thought, but my mother was more understanding and encouraged me to pursue flying if I wanted to.

During that time, a local pilot named Ramsey bought a Curtiss-Wright Moth and began flying it around Butte. We all were intrigued with the biplane, which was a British design-- a very popular trainer known there as the Gypsy Moth. It was manufactured in the U.S. by the Curtiss-Wright Company under license from the British DeHavilland Company. At about the same time, someone showed up with a beautiful Waco F (an RNF with a 110-hp Warner engine) which flew beautifully and performed well at our high field elevation.

From my meager dairy earnings, I managed to save $100 and invested it in learning to fly. My first logbook entry is dated July 12, 1939, in a 50-hp Piper J-3 Cub NC21887, for a 15-minute lesson, doing straight and level flight and gentle turns. My teacher, John W. Fox, Commercial Pilot Certificate Number 3659, was a hard man, but was a good aviator and a respected flight instructor. He was very embittered by the hard times and the struggle he had endured, trying to make a living in the flying business.

My flight training continued in a haphazard way, fifteen to thirty minutes at a time until my money ran out in December 1939. I had not soloed and would not until August 1946, as an ex-GI enrolled in the GI Bill training program. I have always been able to boast that I had spent my first $100 in savings on flying lessons, and that is some consolation.

AOPA's Airport eDirectory Now Available for PCs and PDAs

FREDERICK, MD - AOPA's popular airport directory is now available in electronic form. AOPA's Airport eDirectory may be installed on both personal computers and personal digital assistants (PDAs) using the PalmT operating system. The Airport eDirectory is free to AOPA members.

"You can now literally take AOPA's airport data with you in the palm of your hand," said AOPA President Phil Boyer. "And you can be sure that you'll have the most up-to-date data available."

AOPA's Airport eDirectory allows members to install AOPA's complete airport data directly on their computers. This database includes pertinent preflight information for more than 5,200 public-use airports, seaplane bases and heliports in the U.S., plus more than 6,000 FBOs and aviation service companies.

The database includes thousands of listings for restaurants (on airport and nearby), lodging, transportation, and local services and attractions.

The data available for each airport include all communications frequencies, navaids, runway information, traffic patterns, pilot controlled lighting, listings of all FBO services, telephone numbers for nearby restaurants and hotels, and much more.

The software offers a powerful search engine and data filters. Pilots can set the filters to display all of the airports on a sectional or enroute chart, all of the airports in a state, or all airports within a selected radius of a particular airport.

The search function is a great way to find spots for the "$100 hamburger." For example, a pilot could set search criteria of all airports within 100 nautical miles of Frederick (Maryland) Municipal Airport that have a runway longer than 3,000 feet, a restaurant on the field and an FBO that offers the AOPA FBO rebate. The system will display airports meeting those parameters.

Filters offer a practical means to select which data will be sent to the pilot's PDA during a "hot sync." The entire nationwide database takes up only 4 MB of PDA memory, but most pilots will likely choose to load into their handheld devices only the airports in the area where they fly.

The filter option can also be used to load airports for a particular trip. For example, a pilot planning a trip from St. Louis to Ft. Lauderdale, Florida (site of AOPA Expo 2001 November 8-10), could tell the system to load all of the airports on the St. Louis, Atlanta, Jacksonville and Miami sectionals into the PDA. Downloading every bit of available data for every airport on those sectionals would use only 550 KB of PDA memory.

Pilots can also opt to load only selected information about an airport to further conserve PDA memory.

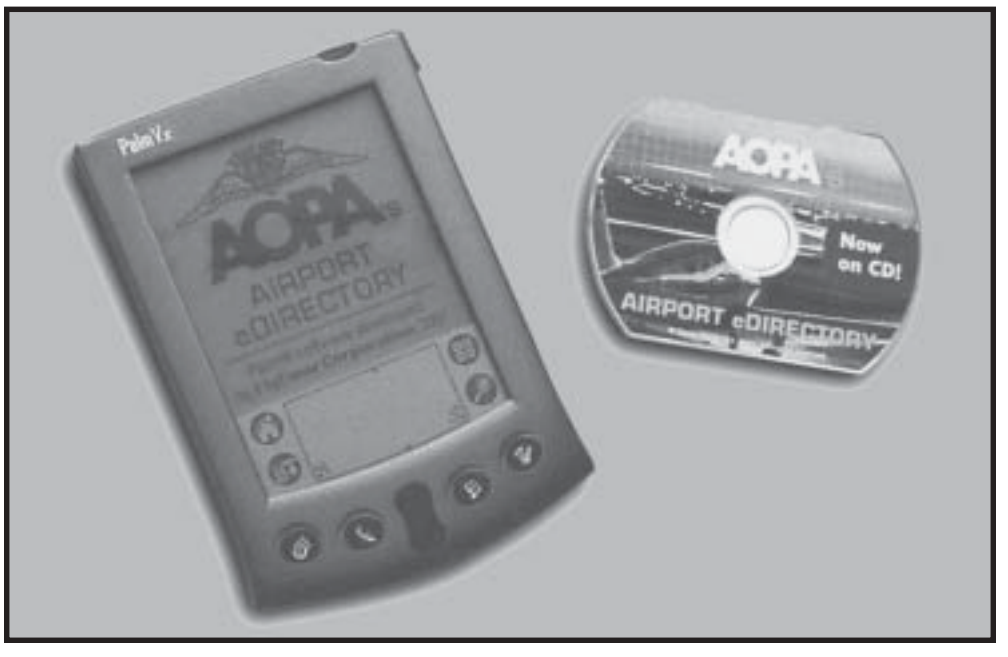
AOPA updates the airport and FBO databases on a regular basis, and posts the updates on its Web site. A full update is about five MB, but to minimize download times, pilots can chose to update only the records for specific states.

AOPA's Airport eDirectory PC and PDA software, and the airport and FBO databases, can be downloaded from AOPA's Web site at http://www.aopa.org/members/airports/edirectory.cfm. The complete 19 MB package will take about 50 minutes to download over a 56K connection.

Members who don't want to download the package can order AOPA's Airport eDirectory on CD-ROM by calling 800-USA-AOPA. There is a $7 charge for production and mailing costs.

A free copy of AOPA's Airport eDirectory is also included in AOPA's Membership Guidebook on CD-ROM. The Membership Guidebook is mailed when a pilot joins AOPA or renews AOPA membership.

The 375,000-member Aircraft Owners and Pilots Association is the world's largest civil aviation organization. More than one-half of the nation's pilots are AOPA members.



EAA Flight Planner™ Offers Fast, Detailed Internet Flight Planning

EAA AVIATION CENTER, OSHKOSH, Wis.- EAA, The Leader in Recreational Aviation, has launched EAA Flight PlannerTM, a new Internet tool that offers pilots the fastest and most detailed flight planning services available. This new service is available free to all EAA Members through the EAA web site (www.eaa.org).

With EAA Flight Planner, pilots can create a complete flight plan just by entering the identifier for their departure and destination airports. That flight plan includes digitally generated sectional maps, flight planning "wizards" for more flexibility, NOTAMs and weather conditions along the route, DUATS interfaces and a weight-and-balance calculator.

"When we began the EAA Flight Planner project, our mission was to create a system that was unmatched in capability and flexibility, and could be offered to our members for no additional cost," said Stephen Lark, Director of Web Development for EAA. "Aviators as a group are more 'technology savvy' than the general population, so it was important to meet their needs with any flight-planning system. EAA Flight Planner does exactly that, with an easy-to-use system that includes the vital aeronautical information necessary to safely and successfully plan and fly any trip."

Working with AeroPlanner.com, a subsidiary of Navigational and Planning Services (NP&S) and a leader in the flight-planning field, EAA created a system that can be as simple or as detailed as any individual pilot wishes. Once a member registers and completes an aircraft profile, any number of specific data can be added to establish a complete flight plan.

Included in EAA Flight Planner are a number of exclusive features not found on any other on-line flight planning system. Among those features are:

•Interactive Sectional Maps: Display your flight plan directly on current U.S. Sectional Maps.

•Auto Routing: Just enter a departure and destination airport and let EAA Flight Planner do the rest.

•Weather: Overlay your generated flight plan with the latest weather.

•DUATS Interface: Store, retrieve, and file your flight plans with an easy-to-use interface to DUATS.

•Enroute NOTAMs: All enroute Airports, Navaids and NOTAMs within a 20-mile corridor of the intended route are listed.

•IFR and TAC Charts: Enroute high- and low-IFR charts are included, as are large-scale terminal-area charts.

•IFR Approach plates: Current IFR approach plates are available for viewing and printing.

•"My Waypoints": Customize any flight plan with waypoints selected by the pilot, with each waypoint carrying its own name and description.

•Expanded route storage: Up to 100 routes can be stored, each containing an unlimited number of waypoints. All stored routes can be easily searched, retrieved and viewed.

EAA Flight Planner also offers a highly expanded premium package, which includes additional features at a lower price than available through AeroPlanner.com anywhere else. Premium services are also available on a single per-use basis. The premium package includes capability to generate a complete flight plan in an easy-to-use PDF Package, including charts, airport info, approach plates and weather, in one easy-to-download file.

In addition, the Premium service allows your computer to import and export flight plan data with most handheld GPS units; import chart images for use with moving map programs; import FAA and worldwide navigation databases for airports, navaids and navigational fixes in to handheld GPS units; and software that allows aeronautical charts to used in Palm Pilots in conjunction with GPS units.

"The premium membership allows you to turn virtually any GPS into a GPS for aviation use, and turn a Palm Pilot or a Pocket PC into a moving map display," said Mark Munsell, President of AeroPlanner.com.

The basic EAA Flight Planner system is available free of charge to all EAA members through the EAA web site. Premium packages are priced at $89.95 per year, a 10-percent discount from the regular AeroPlanner.com price. Premium features are also available to EAA Flight Plan subscribers on a free trial basis and a single-use price basis.

EAA is an international association with 170,000 members and more than 1,000 local Chapters. For more information on EAA and its programs, call 1-800-JOIN-EAA (1-800-564-6322) or explore EAA's World Wide Web site (www.eaa.org).

Moon Facts

by B Mann, Tulsa Aviation and Space Museum

"That's one small step for a man; one giant leap for mankind." That is the world-famous statement made by Neil A. Armstrong on July 20, 1969, as he became on the first man to set foot on the moon.

The moon, the Earth's nearest neighbor, was humankind's first space exploration target. Traveling at speeds of 4,000 to 24,300 miles an hour, it took our astronauts more than two and a half days to reach the moon.

Astronauts brought back samples of lunar rocks and soil and left scientific instruments on the moon. Compared with Earth rocks, the samples from the moon contain more of some elements (such as titanium), and less of others (such as gold). The ages of the moon rock samples range from about 3.1 to 4.5 billion years-- the time when the lava plains formed. The whole surface of the moon is coated with a layer of rock fragments and smaller "soil" particles. The layer may be several feet deep in the highlands or as little as a few inches.

The moon, a ball of rock roughly 2,160 miles across, has no discernible atmosphere. There is no weather - no snow, rain, clouds, or fog. It is a desolate, uninhabitable place. During the lunar daytime-- which lasts slightly more than 2 weeks-- when the sun is shining on the lunar surface, the temperature is higher than the boiling point of water. During the lunar night-- another 2 weeks-- the temperature drops to nearly -300 F.

There are three quite distinct kinds of terrain on the moon, which can all be seen from the Earth. There are charcoal gray plains or maria (seas), which occupy about 15% of the surface, mountainous highland areas, which cover about 85%, and walled plains.

The maria, named by 17th century astronomers who thought they were actually seas, give the moon its distinctive "Man in the moon" appearance. The maria were originally deep basins, which later filled with lava during a period when the moon was active volcanically. The lava set into flat, relatively unmarked plains with a dark gray color, darker than the surrounding areas. The broadest of the moon's craters often are called walled plains because their sides are much like steep cliffs rising out of the bottom to mountain heights.

The biggest of the plains earned the title of "ocean." It is called Oceanus Procellarum (Ocean of Storms) and is about 900 miles across. Some of the smaller plain areas were named marshes, swamps, bays, and lakes. There are more than 20 seas on the moon. Some of the more prominent are:

- •Mare Imbrium (Sea of Rains)
- •Mare Serenitatis (Sea of Serenity)
- •Mare Tranquilitatis (Sea of Tranquility)
- •Mare Vaporum (Sea of Mists)
- •Mare Frigoris (Sea of Cold)
- •Mare Nubium (Sea of Clouds)
- •Mare Nectaris (Sea of Nectar)
- •Mare Fecunditatis (Sea of Fertility)
- •Mare Crisium (Sea of Crises)

The moon's surface is pockmarked by thousands of craters-- bowl-shaped cavities or pits. Some are more than 100 miles wide, and one is at least 29,000 feet deep. Solid space bodies called meteoroids crashing into it caused most of the craters on its surface. Many astronomers classify the moon's craters according to their sizes and conformations, using names such as ringed plains, craterlet, cratercone, and craterpit.

The moon orbits the Earth from west to east, but because the Earth is rotating on its axis from west to east faster than the moon is traveling in orbit, we are passing the moon.

The moon takes 27 days, 7 hours, 43 minutes, and 11.47 seconds to make one trip around the Earth. This is not actually the time from new moon to new moon. It takes the moon about 2 ¼ more days to return to its starting position relative to the sun. On the average, the time for the moon to make the circuit from new moon to new moon is 29 days, 12 hours, 44 minutes, 2.78 seconds. The time may vary by as much as 13 hours.

During the moon's full circuit, its appearance varies greatly. It looks different because, while one-half of the moon is always lighted by the sun, we cannot always see all of the lighted side. Just before and after the new moon we see a slender crescent, a sliver of the side of the moon facing Earth. As the moon moves around the Earth, it appears half-lit and then finally fully lit (the" full moon"). After the full moon, the shape changes back to half and finally to a thin crescent. It then disappears for a few nights ("new moon") and the process begins again. As the moon grows from crescent to full, it is called the "waxing moon." As it shrinks back to a crescent, it is called the "waning moon."

The moon shines because it reflects sunlight, although poorly-- only 7% of the sun's light that strikes the moon is reflected. Moonlight is simply the Sun's light reflected off the white dust on the moon's surface. By contrast, the Earth is a fairly good reflector, reflecting about 40% of the sun's light, and appearing very bright to astronauts viewing it from the moon.

Also, the moon's position in the sky is slightly different each day at the same hour. It rises later each night. The reason is that, while the Earth is making one full rotation to mark its day, the moon also is moving in its orbit. Each night finds the moon about 13.2 degrees farther to the east. The Earth has to turn more than one revolution to "catch up' to the moon. The moon is moving slowly away from Earth at the rate of an inch per year.

Like all planetary bodies, the moon's orbit around the Earth is an ellipse, or slightly flattened circle. At its apogee (farthest from the Earth), it is 252,710 miles away. At its perigee (closest to the Earth),

continued on p. 7.

ASK THE DOCTOR

BY DR. GUY BALDWIN
Senior Aviation Medical Examiner
ATP, CFII-MEI

MISTAKES HAPPEN

This month's column is about mistakes that we make and what has to be done to correct them.

First, I want to correct a mistake we made in last month's Oklahoma Aviator column, in which we got the definitions of Type I and Type II diabetes mellitus switched. In reality, Type I diabetics are dependent on insulin to regulate blood sugar, while Type II diabetics only require proper diet or medications. Ah, well…

Second, I would like to talk about how mistakes by doctors can really complicate getting and maintaining an FAA medical certificate. Our story starts with a high-time elderly pilot whose blood pressure is elevated. When the time came for him to renew his medical certificate, he knew he would need a report on his condition, so he went to his cardiologist in Dayton, OH. The cardiologist apparently got the airman mixed up with another of his patients, and his report stated that the airman had hypertension, coronary artery disease and a stent to repair a partially blocked artery in his heart.

Obviously, when the FAA got the information, the airman was grounded for having a cardiac event. The normal time to be grounded is 6 months, and then numerous reports and tests are required to be considered for a renewal of the medical certificate.

The airman sent letters to the FAA about the doctor's mistake. After numerous tries with letters and phone calls, all to no avail, a mutual friend suggested he call me to see if I could work out the mess.

Boy what a mess! First, I arranged for all the reports required to deal with the airman's (true) hypertension. Next, I called the office of the doctor in Dayton to verify the alleged mistake. His physician's assistant remembered the mistake in dictation, so we got that straightened out. However, to further complicate the problem, the airman had become monocular ("one-eyed"-- see the April 2001 issue of the Oklahoma Aviator for a description).

Finally, with corrected reports on his hypertension, a report regarding the eye problem, and a phone call to the FAA, his medical will be forthcoming.

Moon Facts, cont'd

continued from p. 6.

it is 221,463 miles away. Its average speed is about 2200 miles per hour, faster at the perigee and slower at the apogee.

Two forces are at work keeping the moon orbiting around the Earth. Sir Isaac Newton, was one of the greatest scientists in history; his First Law of Motion talks about inertia-- it says that a body at rest tends to remain at rest and a body in motion tends to continue to move at constant speed, along a straight line, unless it is acted upon by an external force.

The second force acting on the moon is gravity, a force which causes every body in the universe to attract every other body. The strength of the attraction depends on two things: the masses of the two bodies and their distance. Working together, the laws of inertia and gravity result in the moon orbiting the earth.

Both orbiting bodies affect one another. Earth's gravity has pulled on the side of the moon that faces Earth, causing a bulge several miles high. Similarly, the moon's gravity, along with that of the sun, causes ocean tides on the Earth. The moon's pull produces a bulge in the ocean beneath it, causing a high tide. At the same time a corresponding bulge and high tide occurs on the far side of the Earth since the moon's influence is weakest at that point. The bulges move around the Earth as it rotates, producing two high tides and two low tides in just over a day. When the Sun is in line with the moon (at the new moon and full moon), the gravitational forces reinforce on another, producing spring tides. When the moon and the Sun are at right angles, the gravitational pull of the Sun partially cancels out that of the moon, producing neap tides.

Like the Earth, the moon rotates on its own axis, making only one revolution in the 27.3 days it takes to make a circuit around the Earth. It is for this reason that only a little more than half of the moon's surface is ever visible from the Earth. During the course of a month, we can see almost 60 percent of the surface. This is due to a slight swinging of the moon caused by its irregular speed around the Earth and to the fact that its equator is tilted at a small angle to its orbit around the Earth. The far side of the moon cannot be seen from Earth.

Remember: Aerospace Education Touches the Future!

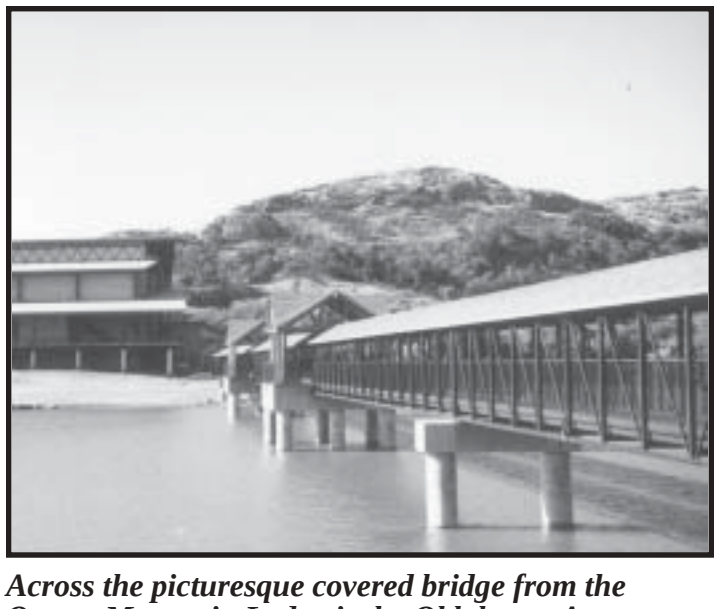
A Summertime Trip to The New Quartz Mountain Lodge

by J. Thomas Pento, Ph. D.

My wife, Maureen, and I decided to extend our Fourth of July holiday this year with a weekend trip to Quartz Mountain Lodge, which was completely rebuilt and recently reopened. Quartz Mountain is approximately 15 miles north of Altus on the western most edge of the Wichita Mountain Range that extends from Lawton to Altus. July 5 was a beautiful clear day with just enough high cirrus to keep the thermometer below 100° F. We rose early to beat the heat and departed into smooth air, with unlimited view in all directions. Approaching Altus Municipal Airport from the east, we were treated to a magnificent view of the Wichita Mountains, which seem to rise miraculously out of the Oklahoma plains. On that day the Altus TARSA was still closed for the holiday so that it was not necessary to contact Altus approach; however, when approaching Altus Muni from the north, south or east it would normally be necessary. After landing at Altus Muni (AXS), Airport Director David Scott was very friendly and helpful in getting the plane tied down and providing directions to the Lodge.

The brand-new Quartz Mountain Lodge, rebuilt on the site of the original 1950s lodge, which was destroyed by fire. The architecture and artwork in the high-ceilinged main lobby are spectacular!

A short drive north of the airport on Rt. 283 over flat farmland, leads to a cluster of western Wichita Mountains, which marks the entrance to Quartz Mountain State Park. Entering the Park, the drive winds for several miles past a swim park, golf course, camp grounds, the Nature Center, around the Quartz Mountains, to finally arrive at Quart Mountain Lodge on the southwestern shore of Lake Altus-Lugert. The beautiful new 120-room Lodge seems to blend into the surrounding granite boulder mountain landscape.



Across the picturesque covered bridge from the Quartz Mountain Lodge is the Oklahoma Arts

The original Lodge was built in the 1950's as part of the Oklahoma State Lodge system. Several years ago a fire destroyed most of the original building. Because of public interest in the natural beauty of the area and because of the Oklahoma Arts Institute, which makes extensive use of lodge facilities, the State Parks and Recreation System decided to rebuild the lodge on the original site. This past spring the new Quartz Mountain Lodge was completed and reopened to the public.

The towering main lobby of the Lodge has the feel and rugged elegance of an "Adirondack" style hunting and fishing vacation retreat with massive hand-hewn beams. High up in the lobby's center are unique circular chandeliers decorated with animal shapes and stained glass. Comfortable overstuffed leather sofas, Native American paintings and artifacts adorn the central lobby. Paintings, sculpture and other evidence of the arts institute are scattered about the lobby, central hallways, library and dining area. The rooms are decorated in earth tones and also continue the rich Native American motif found throughout the Lodge. Across the inlet from the Lodge, and connected by a covered bridge walkway, is the Arts Institute.

The Sundance restaurant at the Lodge features entrees ranging from quail to prime rib to rainbow trout, all served in the ambience of a hunting lodge, with a magnificent view of Lake Altus and a huge stone wood-burning fireplace. For dinner, I chose the restaurant's signature rotisserie half chicken, slow roasted over apple wood with lemon, garlic, and fresh herbs while Maureen selected grilled shrimp pasta with wild mushrooms, bell peppers, and toasted pine nuts, all tossed with a basil cream sauce. Our entrees were served with chef's choice of vegetable, waffle-cut fries or mashed potatoes. We shared a salad of mixed field greens, blue cheese, sun dried cherries, candied pecans, and carrot strings tossed in a raspberry vinaigrette dressing. It was truly a delicious meal, served in a picturesque setting.

Certainly one of the memorable highlights of this trip was the magnificent view of the lake from the restaurant, shimmering golden red in the setting sun and surrounded by the Wichita Mountains.

The next morning we arose with the sun to hike the mountains before the heat of the day. With the sun just above the eastern horizon we climbed over the boulders on the New Horizon Trail which begins near the Nature Center. The pinkish/brown granite rocks and boulders provided good traction in spite of the early morning dew. The sky was completely clear and it quickly became very warm climbing in the morning sun. Near the summit we found the perfect rock and sat back to enjoy the view of Lake Altus-Lugert, the surrounding Quartz Mountains, and the turkey vultures soaring effortlessly in the morning thermals. The view was definitely worth the climb.

After breakfast and the short drive back to Altus Muni, it was time to depart for home. I contacted Altus Approach at 125.10 on the ground to obtain a squawk before departure. On this clear, bright day there was a lot of heavy military traffic in the pattern at Altus AFB practicing touch and go's. We departed to the north to have one last look at Quartz Mountain Lodge. Circling at 3000 ft. MSL, the Lodge appeared as a string of natural jewels washed ashore in the foothills of the Quartz Mountains. The flight home at 6,500 ft. MSL was cool and smooth. A perfect ending to our discovery of this Oklahoma mountain resort.

An aerial view of the Quartz Mountain Lodge complex. On the right, the lodge and four buildings with guest rooms surround a lovely central courtyard. On the left across the bridge is the Oklahoma Art Institute.

[Tom Pento is a commercial pilot with an instrument rating. He is a professor of pharmacology at the University of Oklahoma. As a freelance aviation writer, he has published a number of flight destination articles. To obtain more information on other flight destinations, visit the Author's web site at: http://moon.ouhsc.edu/jpento/.]

Fairview Sets 50th Annual Fly-In

by Theresa Regier

On November 10, the Fairview Flight Club, Fairview, OK, will again sponsor our annual Fairview Fly-In and Airshow. This is our 50th year and we are excited! We are anticipating another beautiful day and we are hoping to have 300 planes fly in, as in the past.

As usual, the day starts with a free breakfast to those who fly in ($3.00 for those who drive in), available from 6:00-10:00 AM. A free turkey is given away to every tenth airplane that lands. We usually have a lot of antique, experimental, warbird, and classic aircraft fly in.

The American Legion will have a Veteran's Day ceremony at 10:45 AM. Lunch is available from 11:00 AM to 1:00 PM-- hamburgers, pizza, pies and pop.

Our main event, the airshow, starts at 1:30 PM, with the field closing at 1:00 PM. Jim Franklin in his Waco Mystery Ship will be back with wingwalker Carol Pilon. Also flying in our show is Randy Harris in his Skybolt, Tony Wood in his Sukhoi SU-26M, and more.

On Friday night, we will have a banquet at Becky's Country Cupboard in Fairview to celebrate our 50th Fly-In. Our speaker is Chirold Epp, manager of the Entry, Descent, and Landing projects office at the NASA Johnson Space Center. He is currently working on the "Man to Mars" project. The title of his talk will be "Human Space Flight: Past, Present, and Future." Tickets are $15.00 at the door, or in advance, available through the Flight Club. For tickets and information call (580)227-3788 or (580)227-2760.

Jim Franklin's big Waco during the airshow. Note that the jet engine will not be on the plane for the show.

Jim Franklin with his wing walker, Carol Pilon, in front of the Waco. Can you imagine what wingwalking is like?

Calendar of Events

For a free listing of your event, email us at ok_aviator@mindspring.com or call 918-496-9424. 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
2nd Tuesday 6:30PM	Meeting- Women In Aviation	Spartan School of Aeronautics Jones/Riverside Airport	Laura Yost- 918-831-5354	
2nd Tuesday	Meeting- EAA Chapter 24	Aviation Tech Center OKC Airport	Martin Weaver- 405-376-5488 pcaer59f@juno.com	Start 7:00PM
2nd Wednesday 7:30PM	Meeting- Tulsa Cloud Dancers Balloon Club	Martin Library Tulsa, OK	Frank Capps	
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
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	Franks Capps- 918-299-2979	
3rd Monday	Meeting- IAC Chapter 10	Contact Joe Masek for time/place	Joe Masek- 918-596-8860 RHR jem@yahoo.com	
3rd Monday 7:30PM	Meeting- EAA Chapter 10	Gundy's Airport, Owasso, OK	Bhrent Waddell- 918-371-5022 bwaddell@tulsa.oklahoma.net	
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- flygrl7102@aol.com	*Unless otherwise planned. All women pilots including students are welcome to attend.
4th Thursday 7:30PM	Meeting- Vintage Airplane Association Chapter 10	South Regional Library, 71st & Memorial, Tulsa, OK	Charles Harris- 918-622-8400	
Oct 5-6	Planes on the Prairie Fly-In Cessna 172/182 Club	Wiley Post Airport Oklahoma Cityi	Debbie Jones- 405-495-8664	
Oct 6	"Pie in the Sky" Fly-In	Tahlequah Municipal Airport Tahlequah, OK	Fred Barrs- 918-431-4139	Pie giveaway, pie in the face contest, and many more fun activities!
Oct 6-7 10:00AM-4:00PM	2nd Annual Claremore Air Show	Claremore Regional Airport Claremore, OK	Sherry McKenzie- 918-343-0931	Airshow begins at noon. Tom Klassen, astronaut Frank Borman, Greg Shelton, wing walkers, children's activities, and more!
Oct 10	Annual Membership Meeting, Tulsa Air and Space Museum (TASM)		918-834-9900	
Oct 12	Annual Membership Dinner Tulsa Air and Space Museum (TASM)		918-834-9900	
Oct 13 1:00-4:00PM	NWOSU Homecoming Airshow,	Alva Regional Airport Alva, OK	Paul Settle- 580-327-1754 after 8PM	Hot air balloons, AC-47 Vietnam-era gunship, and other attactions
Oct 13 9:00AM-3:00PM	Pioneer Day and Fly-In	Skiatook Municipal Airport- 12 mi at 300 degrees from TUL VOR	Chet Reychert- 918-396-1309	Lunch provided for pilots & crew. Awards for best EAA, warbird, and oldest airplane. Craft shows, antique cars, games, and more!
Oct 13 11:00AM-4:00PM	Wagoner Fly-In	Wagoner Airport (G68) Wagoner, OK	Tim Francis- 918-485-2803	Vintage airplanes, warbirds, classics, autos, free barbecue at 11:00AM
Oct 19-21	5th Annual Cedar Mills Seaplane Fly-In	Cedar Mills Harbor and turf strip (3TO), Lake Texoma	Rich Worstell- 913-523-4899	Flying events, airplane rides, FAA Wings and Seawings seminars, manufacturers seminars, great food and lodging.
Oct 23 6:30PM	EAA Chapter 24 Workshop- Woodworking	Canadian Valley Tech Center El Reno, OK	Martin Weaver- 405-376-5488 pcaer59f@juno.com	
Nov 3	"Wind Beneath My Wings" Benefit Silent Auction			
Nov 3-4	EAA Sport Air Workshop	Shawnee Municipal Airport Shawnee, OK	EAA- 800-967-5746 www.sportair.com	Courses include Fabric Covering, Composite, Sheet Metal, Electrical Systems & Avionics, Test Flying Your Project, and Introduction to Aircraft Building
Nov 8-10	AOPA Expo	Ft. Lauderdale/Broward County Conv Ctr, Ft. Lauderdale, FL	Warren Morningstar- 301-695-2162 warren.morningstar@aopa.org	
Nov 10	50th Annual World's Oldest Free Fly-In & Airshow	Fairview Airport Fairview, OK	580-227-3788	Free breakfast to fly-ins 6-10AM, airshow 1:30PM
Nov 27 6:30PM	EAA Chapter 24 Workshop- Woodworking	Canadian Valley Tech Center El Reno, OK	Martin Weaver- 405-376-5488 pcaer59f@juno.com	

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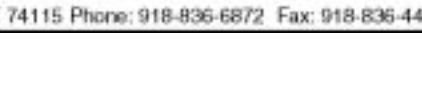

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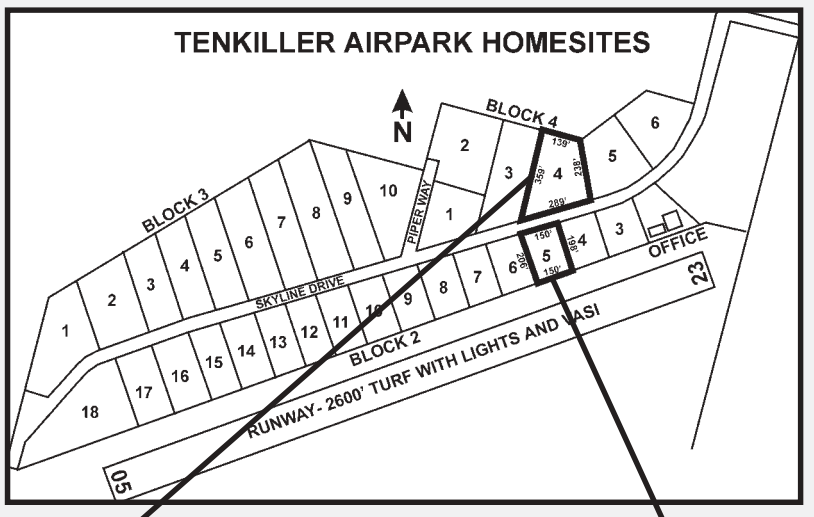

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