

May 2013

# TENNESSEE AVIATION



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# Smyrna Airport, East Coast Maintenance Hub for Airships

Van Wagner Airship Group, the world's largest airship operator, chose Smyrna Airport as the east coast maintenance hub for their blimps. According to Van Wagner Chief Mechanic Cliff Horne, it is difficult to find hangars large enough to house the blimps. Additionally, Executive Director John Black, Smyrna Airport, stated, "We're centrally located, making Smyrna Airport within a day's drive of 75 percent of America's population."

One can easily identify with an ant when standing underneath three gigantic blimps. The smaller two, the A60+ are 128 feet long. The largest, the A170, is 55 feet tall with a 912 inch TV screen on the side. Just the screen and equipment for



*The A60+ is clear without the advertising decals. The decals are computer generated and printed and weigh 200 pounds.*

panel compares to an aircraft except for the airship components. Like aircraft pilots, their pilots worry about lightning. According to the chief mechanic, they were in Singapore when one of their smaller airships, A-60+, was hit by lightning on the mooring mast, magnetizing the gondola. The compass would only point to the north. Once they got on the ground they "performed a process called de gaussing, which scrambles the magnetic fields in the ferrous metals," he remarked.

Unfortunately, sometimes people will shoot at a blimp to

see if it goes down like a party balloon, twisting and twirling. Whether they realize it has a crew or think it is remote controlled,



*The largest airship televises sports and other events.*

televising sports and other events weigh 900 pounds. The decals that advertise Directv weigh 500 pounds.

Decals are computer generated and printed. They are applied by squares by a two-man crew on cherry pickers. It takes them about eight days to cover the A170 and is not a job for those afraid of heights. Without the decals, the airship is clear, a non-rigid envelope filled with helium. The helium remains in the chamber, but since some is lost through the skin, it is continually topped off. The A60+ holds 70,000 cubic feet of helium, and the A170 carries 170,000.

The advantage to being similar to a large balloon is if the engines go out, the gondola can float to the ground. The blimp's control



*Photo submitted by Cliff Horne.*

Universal Studios used one of the blimps to advertise their new movie, *Dispicable Me 2*.

they still take pot shots at the huge airship. Horne said they caught a couple of people in Texas who are now in Federal prison under the terrorist laws.

FAA requires an annual inspection of the airships, so they are grounded for a month every year, and each piece is taken apart, inspected and reassembled. A blimp has two engines. Horner said they have constant speed propellers that are reversible, so they can pull it up on the spot. They can use a short landing and takeoff area.

*Continued on page 8*



# From the Director



## A few thoughts...



Bill Orellana

**B**usy time in Tennessee's Aeronautics world – this construction season will see a lot of major projects, the result of great efforts by Airport Sponsors, Consulting Engineers, and our Aeronautics Division Project Managers. Last summer we all focused heavily on executing our Federal and State funding to make system-wide improvements – it will be exciting to watch the important

changes at many of our airports.

One big focus area – every month we receive project funding requests later than our published cut-off dates. We want to support as much activity as possible, but funding decisions require budget balancing and deliberation. This takes time – at a time when we are all extremely busy executing projects in almost every airport across the state. Airport Sponsors can help a lot – make sure your requests are timely. Use the BlackCat system to process and minimize mail delays. Get with your Project Manager and plan ahead. It helps everyone.

Excited about new teaming with TN Aviation Association to plan the next TN Airports Conference – March 2014 in Murfreesboro. See more details in this newsletter.

Lots of Activity – Lots of Progress – Exciting Times.

## TENNESSEE AIRPORTS CONFERENCE

### MARCH 17<sup>th</sup>, 18<sup>th</sup> and 19<sup>th</sup>, 2014

AT THE EMBASSY SUITES IN MURFREESBORO, TN

The Tennessee Division of Aeronautics is excited to announce a new partnership with the Tennessee Aviation Association (TAA) for the Tennessee Airports Conference!

This year (2013) will be a year of transition for the Conference to a new venue, new time of year and new group (TAA) producing the event. You will be receiving more information in the near future about the event and opportunities for attendance and sponsorship.

If you have questions, please contact Jo Ann Speer, President, Tennessee Aviation Association at 731-885-1221 or [ESRA@estewartregionalairport.us](mailto:ESRA@estewartregionalairport.us). We look forward to seeing you at the next Tennessee Airports Conference!




# Copperhill in the Spotlight



Whitewater Aviation Corporation in Copperhill was listed in the February Tennessee Business Spotlight, a feature on the Secretary of State's web site that showcases some of the state's businesses that create jobs, produce quality products and give back to their local communities.

Benefits from doing business in Polk County include friendly and helpful citizens, good tax climate and support from other businesses. Fringe benefits are the Blue Ridge Mountains, hiking, whitewater rafting, golfing flying.



Whitewater Aviation Corporation in Copperhill was highlighted in the February Tennessee Business Spotlight, a feature on the Secretary of State's web site that showcases some of the state's businesses that create jobs.

**Tennessee Aviation**  
**Tennessee Department of Transportation**  
**Aeronautics Division**  
[www.tn.gov/tdot/aeronautics](http://www.tn.gov/tdot/aeronautics)

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<b>John Schroer</b>	<b>Commissioner</b>
<b>William Orellana</b>	<b>Director</b>
<b>Lyle Monroe</b>	<b>Chief Pilot</b>
<b>Tom Burgess, P.E.</b>	<b>Chief Engineer</b>
<b>Brian Caldwell</b>	<b>Chief Planner</b>
<b>Terri Tanner</b>	<b>Grants Program Mgr.</b>
<b>Jackie Hernandez</b>	<b>Editor and Publisher</b>



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# Operations at Non-Towered Airports

By David Dermanette

Summer is the time of year when general aviation activity is at its peak. Many more pilots of light general aviation aircraft will be taking to the skies, so now is the time for all pilots to have a quick review of operations at non-towered airports.

At non-towered airports, it is wise to remember that aircraft may operate without having a communications radio. Any pilot operating in the area must maintain a constant watch outside the aircraft and use proper techniques for entering and exiting the traffic pattern. Radio equipped aircraft should make standard radio calls beginning at least 10 miles from the airport. A good rule of thumb is to listen to the common traffic advisory frequency at a minimum of 20 miles from the airport. This will give you a chance to listen for other aircraft that may be in the traffic pattern, so when you are ready to make your first radio transmission at 10 miles out, you will have a good mental picture of the other aircraft operating in the area.

The AIM says you should not enter the traffic pattern by descending into it. If you are approaching from the pattern side of the field, it is a good idea to make sure your aircraft is at a pattern altitude at five miles from the airport, and then enter on a 45 angle



to the downwind leg. If approaching from the opposite side of the airport, the AIM recommends overflying the airport at a minimum of 500 feet above pattern altitude. This will give you a chance to view the airport and any traffic that may be in the traffic pattern. After passing over the airport, it is a good idea to fly approximately five miles beyond the airport before making the descent to traffic pattern altitude. Once at that altitude, you can turn around and join the flow of traffic by entering on a 45° angle to the

downwind leg. Once in the pattern, be sure to make all radio calls letting the other aircraft in the area know what leg of the pattern you are on and what your intentions are at all times.

When departing VFR from a non-towered airport, the AIM tells us the proper way to exit the traffic pattern is by departing straight out on runway heading or by making a 45° turn out towards the traffic pattern side of the airport. After clearing the traffic pattern and climbing to an altitude at least 500 feet above pattern altitude, it is now safe to turn on course.

As far as determining pattern altitude, direction of turns and CTAF frequency, a quick check of the Airport Facilities Directory should be a part of your preflight planning. So remember to listen up and look out for other aircraft, and above all be courteous to your fellow aviators, and everyone can have a fun and safe flying season.

## 2012 Tennessee Aviation Maintenance Technician of the Year

Tom Duncan, Knoxville, was named the 2012 Tennessee Aviation Maintenance Technician of the Year during the 46th Annual Tennessee Mid-South Aviation Conference.

Duncan has 47 years of aviation experience. He started his aviation career in the USAF. He later spent 30 years at Stevens Aviation where he worked his way up from mechanic to assistant manager. He currently is employed by Standard Aero where he is director of maintenance. He specializes in minor reworks on the AE3007 engine.

Mark Ratliff, Standard Aero Human Resources Office, said, "Tom Duncan is a vital asset to Standard Aero and especially

our AE3007 program. He is a one-man show in the minor reworks area. There is no doubt that Tom's knowledge, passion and excellence have been a contributing factor

**Tom Duncan is a vital asset to Standard Aero and especially our AE3007 program.**

*Mark Ratliff,  
Standard Aero Human Resources Office*

to our success here at Standard Aero, Maryville.



*Photo by Cliff Beckwith*

*Tom Duncan, Knoxville, recipient of the AMT award with 47 years of experience.*



# Outlaw Field Keeping up with Clarksville's Growth

Recently released census figures show Clarksville as being the second fastest-growing metropolitan statistical area (MSA) in the nation from 2011 to 2012. Outlaw Field certainly is making every effort to ensure that aviation in Clarksville is keeping up with that growth.

Airport Manager John Patterson is a mover and shaker, and under his guidance, Outlaw Field is becoming a major player in the community. "In order to survive, you have to get involved in the community," he said. Patterson is a spokesperson for the airport in schools, businesses, organizations, anywhere he is asked to go.



Airport Manager John Patterson is a mover and shaker at the airport.

The new \$4.85 million terminal also is generating more community involvement with the airport. The multi-media center is a big source of revenue. It is fully-equipped with the latest technology including Wi-Fi. It also has a catering room, a full bar area and holds 100 people and is rented out for conferences, training sessions and meetings.

One of Outlaw Field's neighbors and associates is Fort Campbell. The army base is home to the 101st Airborne; their aviators utilize the airport on a daily basis. They practice take offs, landings and parachuting. The 160th Special Operations Aviation Regiment (Airborne) also referred to as "Night Stalkers" runs special ops helicopter drills. The Night Stalkers are an elite unit known for using night-vision and infrared devices. Their top-notch pilots fly at very low altitudes and high speeds.

In addition, the U. S. Army Golden Knights Parachute Demonstration Team do tandem jumps with Gold Star families. A Gold Star Family is one who has lost a spouse, parent, sibling or child serving in the



The new \$4.85 million terminal is generating revenue for the airport.



military. Special Forces also practice parachute maneuvers over the airport.

In liaison with other local businesses, Patterson has set up a joint training initiative at the airport with the Clarksville-Montgomery County School System. Math and science teachers will participate in a summer externship in various work settings in preparation for making their subjects in the classroom relative to real life. As he pointed out, daily activity at an airport encompasses many subjects — fuel management, accounting, grants, retail, customer service and more.

In conjunction with North Central Institute, the airport is planning a huge community day on October 5. "Just Plain Fun Days" will feature food vendors, large inflatables for the kids, band, static display and more.

Patterson wants to see it get bigger and better with more public involvement including the Industrial Development Board and the Chamber of Commerce.

Not only is Outlaw Field increasing community relations, it also has an increase in traffic and fuel sales. They had 4,686 flights through January. Of military, privately owned and corporate flights, the greatest increase was in corporate. Fuel sales went to \$82,700. "Where we compete is in services and facility; every airport has a runway," Patterson commented.



Replica of a Beechcraft D17 "Staggerwing" hangs overhead inside the new terminal.



# 2012 Inductees into the Tennessee Aviation Hall of Fame

Four new inductees were honored for their enduring contributions and service in the field of aviation during the 11th Annual Induction Gala at Embassy Suites Hotel and Convention Center in Murfreesboro on November 3, 2012.



**Robert E. "Bob" Minter, Sr.**, is a steadfast advocate for general aviation, an accomplished aviation policy strategist, marketing and technical consultant. He co-founded the Tennessee Aviation Association and founded the Tennessee Aviation Hall of Fame. He was the director of Development and Operations for the TDOT-Bureau of Aeronautics where he oversaw the

development of airports across Tennessee. He has represented AOPA for more than 35 years and is currently employed as AOPA's Southern Region Manager in eight states in the Southeast.



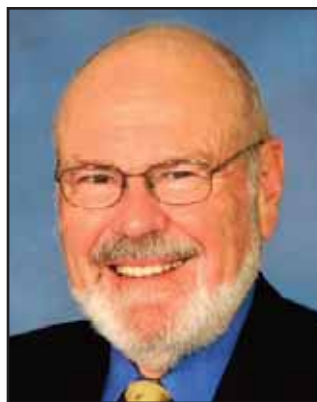
**Joseph R. Fleeman** is renowned for his expertise in restoring and rebuilding antique aircraft. He has won numerous awards for his meticulous craftsmanship. He dismantles the

aircraft until it looks like a jigsaw puzzle and then replaces or replenishes every part, down to the screws and washers. His dedication and devotion to the preservation of aviation and the quality of his work set a standard of excellence without parallel in aviation. Fleeman owns a flying service which offers flight instruction. He has former students across the globe that share the same passion for aviation.



The late **Gen. Bruce K. Holloway, USAF**, commanded the U.S. Air Forces in Europe in July 1965 until his appointment as vice chief of staff of the U. S. Air Force on August 1, 1966, and later served as commander-in-chief of the Strategic Air Command from 1968-1972. As commander of the Air Force's first jet-equipped fighter group in 1946, Gen. Holloway performed service in this new

field of tactical jet air operations. He was a fighter pilot with the famed "Flying Tigers" of the American Volunteer Group during WW II. During his tour in China, he earned status as a fighter ace.



**Morris W. Ray, M.D.**, was a flight surgeon, flying medical missions during his tour in the U. S. Army. His research with the FAA on the effects of flight on the neurological systems of the human body has greatly benefited the aviation community across the United States. Morris has competed and performed as an aerobatic pilot. He continues his dedication to aviation as a formation and safety training specialist,

instructor and check pilot for the Commemorative Air Force, designated pilot examiner for the Memphis Flight Service District Office and chief flight instructor at Downtown Aviation in Memphis, Tennessee.



# BNA's Exceptional Rental Car Facility

**N**ashville International Airport (BNA) is the fourth fastest growing among the top 75 airports in North America.

Perhaps one reason for that growth is their customer satisfaction. BNA offers many services and conveniences. Travelers don't have to take a tram to their gate; they can walk a short distance. The terminal has been totally renovated with many new vendors and excellent restaurants. CONRAC, their rental car facility is exceptional and located across the street from the terminal.

The 1.2 million-square-foot facility consolidates nine rental car operators under one roof.

Covered walkways lead to the terminal, and there are moving sidewalks. The building is well-lit and has heaters to fight off the cold.

The \$70 million project



was finished in 2011; it houses 2,400 vehicles. The three-level building frees hundreds of spaces in the short-term garage. The entire process of renting a car is expedited by the close proximity of the center.

Emily Richard, assistant vice president of communications and external affairs, said, "The number of cars rented continues to rise over the last few years, however, so have our

enplanements."

In addition to the functional aspects of the building, the design has aesthetic appeal as well as an intriguing art piece,

"Wind Reeds," on the outside of the building, designed by renowned artist Ned Kahn. Hundreds of hinged aluminum elements attached to the building sway with the wind.



Covered walkways lead from the rental car center to the terminal. The well-lit building contributes to the safety aspect.



# Impressive New Ground Transportation Center in Memphis

**M**emphis's new ground transportation center, a seven-level consolidated parking and car rental facility, opened in March. Together with the magnitude of FedEx Express, the prominence of the FAA air traffic control tower, the sleek design of MEMpark certainly adds to the wow factor of Memphis International Airport. The music note reminds visitors that Memphis is renowned for blues and being the home of Elvis Presley.

The center houses rental car counters, service functions and up to 1,250 rental cars on the bottom two floors. There are 4,500 public spaces for passenger parking on the upper five

attractive weather-protecting fabric canopies lead travelers from the terminal. This also cuts down on traffic congestion.

Memphis is the global "Super Hub" of FedEx Express, the second largest cargo operation by volume of any airport worldwide.

The 336-foot-tall air traffic control tower is the third tallest in the south. It was built to be safer in the event of an earthquake; it sways in really strong wings. It is equipped with the next generation air transportation system technology.



Aerial shot by Aerial Innovations. floors. A series of 840-foot-long moving sidewalks under



Computer design rendering of the recently opened ground transportation center in Memphis.



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## Blimp Hub in Smyrna *Continued from page 2*

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According to Horne, sheer patches hold everything to the envelope - gondola, fins, nose dish, etc. "The large 'fan' patches, that hold the gondola to the envelope via catenary cables are rated to around 10,000 pounds," he stated.

Airships have an excellent safety record. Requirements are stiff for an airship pilot. They must have a twin-engine rating, be instrument rated and a commercial pilot. "We train pilots

internally, at least six months before they can take command, Horne said, "There are more astronauts than blimp pilots."

The airship flies from one place to



*Interestingly, sheer patches hold the gondola under the envelope (body). Each one of these patches can hold 10,000 pounds.*

another and usually parks at an airfield. It travels approximately 350 nautical miles in a day. If the crew is flying toward an airport, they prearrange to have the helium waiting there. Ninety cubic feet helium bottles are used for replenishing the chamber. Normally about five of them are used in a week.

A blimp requires a big crew. The envelope and ballast are checked continually to make sure the proper equilibrium is

maintained. The company has a total of 200 employees with an administration office in Orlando, corporate office in New York City and of course, the hub in Smyrna.



*Van Wagner Chief Mechanic Cliff Horne has been with the company 15 years and been in 28 countries.*

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