

# EAA MILE HIGH CHAPTER



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THIS MONTH'S MEETING: The meeting this month will be held on Saturday, September 14, 1991 at 7:30 P.M. in the downstairs room on the Southeast corner of the large white building (B-8) which is located to the Southeast of the control tower at Jefferson County Airport. This is where the Deli is. The program will be a slide presentation by several Chapter 43 members on Oshkosh 1991. The new owner of The Deli has offered to stay open on our meeting night from 5:00 P.M. until 7:00 P.M. in case any of us would like to come a little early and eat before the meeting.

THIS MONTH'S CAFE 43: The Fly-Out this month (note the new name) will be to The Buena Vista Airport for lunch on Sunday, September 15, 1991. This is the Sunday after our normal second Saturday meeting. Please note the change from the normal CAFE 43 schedule. We will meet at The Buena Vista Airport at 11:00 A.M. Ken Lysek is coordinating the monthly CAFE 43 (which stands for Culinary And Flying Expedition), so contact him at 457-9769 if you have any questions or have an extra seat to offer or are in need of a ride.

LAST MONTH'S CAFE 43: No one called to let me know whether they had flown to Cheyenne to help Cheyenne Aero Tech out with their Open House. If anyone went, I hope they had a good time.

LAST MONTH'S MEETING: With 60 members and guests in attendance, the meeting of August 10, 1991 was called to order at 7:50 P.M. by President Kirby White in Building B-8 at Jeffco Airport. The minutes of the July meeting were approved as published in the Newsletter.

Guests: A brand new member who was born on August 6 and was only four days old made her very first Chapter 43 meeting. Daphne & Herrill Davenport proudly showed off their new baby, Amelia Michele Davenport. Everyone gave them a nice round of applause to congratulate them. Mother and baby were doing just fine. Guests present were Vance Franks of Aurora, Bob Prince of Longmont, Glenn Grove of Arvada, Art Pontow of Thornton, Joe Swoverland of Arvada -- who is starting a new aviation program at Arvada Senior High School this fall, and Doug & Tange Stimpson -- who run Colorado Aircraft Services, Inc. (CASI) at Jeffco in the same building as our monthly meetings.

Old Business: Kirby brought up the subject of Oshkosh. He announced, to the amazement of everyone at the meeting, that he had made it there for three years in a row! Kirby told the story of one of the highlights from his Oshkosh trip. He and Fred Seal attended a Forum on Air Racing in the 1930s given by Steve Wittman. After the Forum, Steve graciously stayed and talked to those who wanted to meet him. Fred was one of the last in line, and asked Steve if he would still be willing to sell a set of his V-Witt plans. Steve said yes, and told Fred to come over to his house across the runway in about an hour. Fred and Kirby arrived on time, and were invited into

OLD BUSINESS cont: Steve's den where the plans were. The three of them ended up talking about airplanes for a relaxed hour and a half. Kirby said he found Steve to be a very nice and kind man. He was most unpretentious and unassuming, which Kirby was impressed by, considering Steve's fame and many accomplishments. While Kirby was sitting in Steve's den looking at all of the airplanes and people across the runway, he imagined how many thousands of them would absolutely love to be in his place. Steve had some other guests, so unfortunately there wasn't time to take a tour of Steve's hangar and see some of the famous airplanes that are in there. If this had not taken place during the Oshkosh Fly-In, Kirby felt that Steve would have showed he and Fred around some more. Mark Graf brought in some pictures of Oshkosh that he had taken for everyone to look at during the break. Jim Thompson announced that Trade-A-Plane was running a special subscription offer at Oshkosh. Instead of the normal three issues per month, they were reducing the number to one issue per month, for a yearly rate of \$13.00. Jim wasn't sure if the offer would be valid other than at Oshkosh. Several members said they had gone to the RV dinner on Tuesday night at Oshkosh. One of the new items that was brought up was that the Nigerian Government was considering using the RV-6 as a trainer. This brought up the question whether those airplanes would then park in the Warbird or the Homebuilt section at Oshkosh? Doug Bloomberg announced that he had gone to the Chapter Officers Forums at Oshkosh. One thing he found out was that any purchases made from Headquarters through the Chapters receive a 20% discount.

CAFE 43: Ken Lysek was not at the meeting, so Kirby reminded everyone to meet at The Cheyenne Airport for Cheyenne Aero Tech's Open House on the following Sunday, August 11, 1991, for lunch. Kirby asked for suggestions on the CAFE 43 location for September. Several ideas and dates were discussed, and it was voted to change the normal third Saturday CAFE 43 to the Sunday following our Chapter 43 meeting and fly to The Buena Vista Airport for lunch. No bad weather alternate location was decided on for this month.

New Business: Bob James brought in a number of recent Trade-A-Planes, and told everyone to help themselves. Chuck Ogden announced that the Colorado Wing of the Confederate Air Force would be hosting a WWII Aircraft Display and Demonstration on September 7-8, 1991 at Front Range Airport. He said that over 25 airplanes would be there, including the CAF's B-24 & B-29. The Phil Card Fly-In at Aurora Airpark was discussed. It was scheduled for Saturday, August 17, 1991 from 7:00 A.M. until dusk.

Gene's Corner: Gene Horsman reported on several upcoming aviation events, such as the Colorado Ninety-Nines 1991 Mile High Air Derby on September 21, the Blakesburg Fly-In, and the Steamboat Springs gathering. Gene also talked about a MiG-29 barnstorming tour to seven U.S. Airshows in late summer and fall. The asking price is \$10,000 for a ten minute ride in the two-seat Fulcrum! For those who can't afford a ride, the Soviets will sell MiG-29-related T-shirts and pins at the Airshows.

Progress Reports: Chuck Graf brought in two ailerons from the RV-6 that he is building. One of them was finished. The other was still partially open so that everyone could see how the ribs and spars go in. Chuck wanted to show that an airplane is not that mysterious, and if it is built one part at a time the project can be completed by anyone who puts their mind to it.

A&F: The business portion of the meeting adjourned for coffee at 8:25 P.M. After the break, Doug Stimpson, who is the President of Colorado Aircraft Services, Inc. (CASI) stood and welcomed all of us to his FBO hangar. He said that he was very happy that we were now meeting there, and let us know that we are all important to him and his employees, and that he would do anything he could to help any of us out. He related some of his past experiences with less than kind and helpful FBOs, and vowed that his would not be run that way. His good attitude was appreciated by everyone at the meeting. Doug then started his presentation on aircraft accident investigation. He talked about some of the cases that he is and has been involved in, and how he came to determine the cause of the accident. He made a point to relate the building and inspection of homebuilt airplanes to the work he does on larger factory-built planes. He said to be very careful in looking for problem areas when working on our own planes. Doug's talk was informative and enjoyable, and everyone gave him a nice round of applause for taking time out of his busy schedule to talk to us.

MARKETPLACE: For Sale: U.S. Flags, Right and left, Ultraviolet stable, Vinyl adhesive backside, 9"x16" are \$9.50 per pair, 12"x18" are \$12.50 per pair. Ron Espejo 666-8252

For Sale: Little Toot all metal biplane project, Fuselage and tail complete, Cessna gear, Needs wings and engine, Price negotiable. Glenn Nicholls 321-7532

For Sale: Complete 1961-1962 Oldsmobile 215 cubic inch V-8, Aluminum block, Running good when removed from car, 200,000 miles, Needs to be rebuilt if installed in aircraft, Price negotiable. Tom Eichhorn 494-6690

For Sale: Runout Lycoming O-320-E2A, TT 3518, SMOH 2018, Includes Slick mags & starter & carburetor, \$3,500 negotiable. Also selling complete Continental C-90-12, Disassembled for major, \$2,000. Call Morris Trimble in Forest City, Iowa at 515-581-2880.

For Sale: Pitts Special, Lycoming IO-320 with 21.6 hours on chrome major, Sensenich Model 74d M6-O-60, Christen inverted oil, Spring steel bungee on landing gear, 5" Cleveland wheels and brakes, Toe brakes, Wheel pants, Solid rubber Maule tail wheel, All metal fuselage, Wings and tail section covered with Stits -- fabric is riveted on with pop rivets, Symmetrical wings with full ailerons, Cockpit upholstered in white, Vinyl cockpit cover, Luggage area behind headrest, F-4 military stick grip, External power jack, Full instrument panel (no gyros), 360 channel comm radio, 9.0 gallon inverted fuel tank, 23.0 gallon total fuel capacity, Painted white with red and blue sunburst, Freshly packed parachute included, Tach time 21.9 total, Selling due to death from cancer of builder, Alice Sellers, 3525 McClaflin Drive, Enid, Oklahoma, 73701, 405-237-7406

Wanted: Lycoming O-360-A2A or A4A or engine convertible to same or serviceable crankshaft for same. For Sale: Lycoming O-320-E2D, 400 since new. Call Mike Atkins in Montrose at 303-249-6903.

Wanted: Complete Lycoming O-360-A1A (or similar model) for RV-6, No propeller strikes, Dynofocal mount preferred, Price and condition negotiable. Mas Yoshida 421-2776

Wanted: Hangar space for 1959 Cessna 150, Would like to share with someone who has an opening, Jeffco preferred. Bob Campbell 425-1384

AVIATION HAPPENINGS: September 20-22, 1991 Sixth Annual Intermountain Fly-In in Heber City, Utah  
October 5-6, 1991 Copperstate Fly-In in Prescott, Arizona

# CITY LIMITS

## AIRFIELD OF DREAMS

It's grabbing all the headlines, but Denver's new airport isn't the only grand scheme lifting off in the minds of local aviation officials. They have another high-flying vision: a "vertiport" in the Platte Valley, dispatching furies of helicopters and futuristic tilt-wing aircraft up and down the Front Range.

For years, the downtown facility has been little more than a gleam in the eye of planners. Now it's about to get a major boost. Spurred by a grant from the Federal Aviation Administration, the city is studying whether to build a major air station just beyond the outfield fence of the new baseball stadium.

Why now? Mainly because the FAA is spreading money around, encouraging cities across the country to base area helicopters in central locations and make room for their high-tech cousins, "vertical takeoff and landing craft" that fly straight up like a copter, then swivel their propellers forward to fly like an airplane. The federal agency shelled out \$2.2 million to build an experimental model in Indianapolis and is gun-ho for other cities to follow suit. Denver officials, who've been mulling over a heliport since the idea was endorsed in a 1986 study by the Denver Regional Council of Governments, are listening.

For the time being, the city seems more concerned about choppers than the still-in-development VTOL craft. Denver has seen a "proliferation of small helicopters operating in neighborhoods," says Ken Wells, an operations manager at Stapleton International Airport. Everybody from TV and radio stations to hospitals, businesses and the National Guard is buzzing around up there—and the city "doesn't want all those little heliports in everybody's backyard." According to the DRCOG report, there were seventy working helipads in the city five years ago. A more current estimate should come in six months, when a hired consultant completes a feasibility study of the concept and identifies the best place to build it.

"The idea is to try and concentrate all that activity in one location," says city planner and heliport fan Gordon Appell. Since "most of the comings and goings" are in the downtown area, he says, that's where the city has been looking. Possible sites have been identified near the Auraria campus and along the Platte River. However, the planning department's preferred location is a piece of old Union Pacific Railroad land just east of where the ballpark is slated to go up.

Centralizing operations isn't the only aspect of the project Appell and Wells find exciting. They say a vertiport could spark a new era of commuter travel in Colorado. Businessmen and



other time-sensitive travelers could hop a copter from Denver to Colorado Springs or Cheyenne and avoid freeway traffic. "All the little towns the commuter airlines used to serve through Colorado could be revitalized with helicopter service," says Wells.

There could even be shuttle service to the state's ski areas. "We don't envision hordes of traffic, people lined up on final approach in helicopters," Wells admits, but the city would see revenue from user fees. "We're not just pie-in-the-sky dreamers here," says Appell. "We're trying to plan for the future in a long-range way."

However, the notion of a giant chopperport added to Denver's already sizeable list of civic projects leads some to wonder whether planners have their heads in the clouds. "I haven't seen a need for it, but I don't own a helicopter," says a dubious Debbie Ortega, whose city council district includes the area around the stadium. "I guess I'd like to see what they've done that determines there is a demand for this."

Actually, the project was born of economic boosterism—not unlike the new airport. In the mid-Eighties, before the FAA got into the financing business, "What was originally intended was to fill the vacant office buildings downtown," Wells recalls. "Business people were concerned that all of our corporate headquarters were going to the winds."

That fanciful argument has since been retired—along with the exotic idea of perching helicopters atop downtown office buildings. The skyscraper scenario was a tall order for Appell and Wells, who imagined errant pilots plummeting into the pedestrian-filled canyons of 17th Street. The appropriate place to land, they say, is an industrial zone, where there's plenty of extra room.

But residents around the preferred site, near the stadium property at 20th and Blake streets, aren't so sure. Jerry Erlich, who developed the Silver Square lofts at 33rd and Blake, says the thought of aircraft zipping in and out of his neighborhood makes him airsick. "I don't know how it could be

positive," he says. Adds Silver Square resident Sharon Brown, "Suffice it to say we're not thrilled about the prospect."

And as word of the project gets around, the political flight path could become more turbulent. Already, Ortega is shepherding through council

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a zoning change widening the required buffer zone around helicopter landing pads. She's also insisting that a neighborhood resident be appointed to the committee that will select a consultant to study the issue.

Choppers are a lot quieter now than they used to be, insists Appell. "It's not at all like the army helicopters used to be with the big 'wop-wop-wop.'" The consultant will be required to hold meetings with residents and consider the noise factor when making recommendations, adds Wells. Then the city council will have the final say: "It's not something anybody's going to jam down somebody's throat."

The council could decide to ground the project, acknowledges Appell. But he and Wells are keeping their fingers crossed. "The thing that people have not grasped is how congested our road system is going to be," he says. "The advantage of getting above that is going to be extremely valuable."

The question is whether that will stick with elected officials. Taxpayers are already footing the bill for the ballpark, a new library and a \$240-million package of municipal bond projects. Even though the FAA could conceivably pay three-quarters of the cost of an urban airbase, convincing the council and the Webb administration that the city can soar to the future on whirlybird wings—and should pay anything for the privilege—would be a fancy piece of flying.

—Andy Van De Voorde

# Digital OAT Probe Location Important

by Dean M. White

While grounded during the recently completed top overhaul of my Tiger's engine (courtesy of the previous owner's inattention to engine baffles), I found myself in need of activities which were at least somewhat related to flying. Due to my personal background and experience in the assembly of various electronic gizmos, I was attracted to the RMI MicroEncoder. For those of you not familiar with it, the MicroEncoder goes in the VSI hole in your panel, replacing that instrument while also providing altitude readout and encoding capability, airspeed readout and digital OAT. From this basic information, true airspeed and density altitude are also available, as well as a number of airspeed and altitude alert functions. This is truly a very capable instrument which will set you back some U.S. \$800 and keep you amused in its assembly for quite a few evenings (20 hours, plus or minus).

On installation, things went relatively smoothly. Recalibration of the pitot/static system showed that the primary altimeter in the Tiger had outlived its usefulness since it could not come close to the instrument shop's recently-calibrated test system or the RMI instrument. Several hundred dollars later, all of the pitot/static instruments in my "new" panel agreed with each other and I was good for another 24 months.

Happily flying along the next day, I noticed that my two OAT readouts did not agree. That is, the factory OAT probe penetrating the windshield did not agree with the digital OAT readout on the MicroEncoder. Temperature sensing for the digital OAT was coming from a probe mounted in the "standard" location in the NACA inlet on the pilot's side. I noticed that the readout on the digital was 6 to 8 degrees higher than the windshield probe on a regular basis fairly soon after startup after being within two degrees of equal prior to startup. Obviously, this did not please since all those neat little calculated functions were inaccurate if the temperature input was off.

Having occasion to talk with Neil Rice of Fletcher the next day, I relayed my concern that I was leaking heat to the temperature probe from the airplane. He indicated that he had believed that my "standard" location for the OAT probe was used quite regularly, but that some recent experience of another customer of his indicated results similar to mine (his included considerable icing with a +5C temperature readout). After comparing notes we decided to do a research project and try a few different probe locations.

I hustled out to Radio Shack and bought a little digital indoor/outdoor thermometer with

about 10 feet of lead-in wire for about \$15. I checked it against a known good thermometer and then went to work. To check the windshield probe against the Radio Shack thermometer, I taped the latter probe to the windshield temp probe mast, ran the line into the cockpit and took off. Results at temperatures in the 10 to 22 degree range were in exact agreement so I proceeded to check the RMI digital probe. Testing it a bit more completely, I observed that the readout of the Radio Shack probe matched the RMI unit within one degree also and that westbound (probe on the sunny side of the plane) the digital readouts were 7 to 8 degrees high and that eastbound the digital readouts were 5 to 6 degrees high. Therefore, I believe that the increased temperature was due to both solar heating of the skin due to both the dark blue stripe in the area of the fuselage and heat leakage from the cabin and/or engine.

I therefore needed to find an OAT probe location that would be out of the sun and away from the engine, along with satisfying all of the other concerns for protrusions from the aircraft. I got lucky on the first try at a location which had been suggested by Neil. Temporarily taping the probe to the fuel tank drain blister on the bottom of the left wing, I took to the air again. Flying west, east, high and low, that location consistently gave me a Radio Shack probe reading even with or one degree lower than the windshield probe. Since the windshield probe is in the sun, I decided that the digital was

probably closer to the truth and considered the location good. The permanent installation runs the OAT probe wiring in with the other electrical wiring in the wing and I am happy to report that my MicroEncoder now has all bells and whistles functioning.

This article is written in the hope that others may select their digital temp probe locations a little more carefully than I did, thereby having more initial success and considerably more confidence in their temperature readings.

## 5000 Feet Density Altitude

by Delos Johnson

After reading Bill Marvel's article entitled "What's Happening to Our Exhaust Valves?" in the July-August 1991 issue of *The American STAR*, I pulled out the old flight computer and calculated the temperature and pressure altitude combinations necessary to equal a density altitude of 5000 feet. The following table is a result of those calculations.

As you can see, the only time that one will begin leaning at 5000 feet pressure altitude is when the outside air temp is around 40 degrees F. During the spring and summer months leaning can begin at much lower altitudes and in the fall and winter leaning must wait for higher altitudes.

OAT		PRESSURE ALTITUDE FOR DA = 5000	OAT		PRESSURE ALTITUDE FOR DA = 5000
F	C		F	C	
0	-17.8	7290	55	12.8	4283
5	-15	7005	60	15.6	4021
10	-12.2	6723	65	18.3	3771
15	-9.4	6443	70	21	3522
20	-6.7	6165	75	24	3247
25	-3.9	5890	80	26.7	3002
30	-1.1	5617	85	29.4	2759
32	0	5509	90	32.2	2509
40	4.4	5078	95	35	2260
45	7.2	4814	100	37.8	2015
50	10	4548			

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# '91



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