



*EAA Chapter 124, 5550 Windsor Road, Windsor, CA 95492*



## MESSAGE FROM THE FRONT DESK...

OCTOBER, 2008

Joe Lacchia, President

**Elections:** Article VII Paragraph A of our By-Laws states that active members shall receive a "30-day notice" prior to elections. Consider it done. Elections are coming up at our November 5<sup>th</sup> meeting and we will be looking for a few good men and/or women to serve over the coming years. In particular we will be electing a President, Treasurer and three Board members. Think about it. It can be a fun job.

**Fly-out:** On Saturday, October 11<sup>th</sup> our Chapter will have a Fly-out to Cloverdale for the Zenith Fly-in. We will meet at the Chapter site at 9:00 am with a 9:30 am departure, weather permitting. This is always a fun event with a lunch cookout at the Zenith hangar and lots of good things to look at.

### Flying Events coming up:

October 11 <sup>th</sup>	Zenith Fly-in, Cloverdale (EAA 124 Fly-out)
October 23 <sup>rd</sup> – 26 <sup>th</sup>	Copper State Fly-in, Casa Grande AZ (KCGZ)
Nov 6 <sup>th</sup> thru 8 <sup>th</sup>	AOPA Annual Convention, San Jose

Happy Flying,  
Joe Lacchia

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### **Question: It is true that some airports are changing from a 24-hour TAF to a 30-hour TAF?**

**Answer:** Yes, starting Nov. 5, 2008, 32 large airports will be changing to a 30-hour TAF (terminal aerodrome forecast) in order to meet ICAO weather formatting standards. All other airports that provide a TAF will continue to cover a 24-hour forecast period.

### **Question: How will the TAF format look after Nov. 5?**

**Answer:** Because some large airports in the United States are changing to a 30-hour TAF, there will be formatting changes, which will include new date and time abbreviations. The abbreviations for weather phenomena, visibility, wind, and sky conditions will remain the same. A current TAF only provides time of day, but because a 30-hour TAF will stretch into a new day, the new format will include date/time information to identify the forecast periods. For example, the valid date will now be 2418/2524. This means that the TAF is valid from day 24 of the month at 1800Z to day 25 of the month at 2400Z. See the new TAF format and learn how to decode it on the National Weather Service Web site (<http://www.aopa.org/epilot/redir.cfm?adid=16935> ).

## **What one maneuver leaves you short on fuel? (Thanks, Paul Reinders)**

I ease the power in slowly. The Pitts tracks the centerline of the runway until I try to raise the tail. At that point directional control rapidly deteriorates and I decide it is time to go flying. I pull the tiny taildragger into the air. With 175 hp, the S-1 responds with gusto and I immediately haul 2RC around to head for Cooperstown, NY, slightly over an hour away from the field in Vermont from which I am departing. Late in the afternoon, the visibility into the sun is terrible due to the haze caused by 99% humidity. The GPS mounted near my left elbow is unreadable in the cramped cockpit so I pull out my Sectional chart and watch the scenery unfold behind the lower wing in the hope that I might at least know where I have been even if I do not know exactly where I am going.

When I agreed to ferry the Pitts I was assured that I could actually get into it, something that I had never managed in other homebuilt models of the plane. As it turned out I had almost an inch of headroom because the parachute had less than an inch of padding below me, but the multiple seat belts, shoulder harness, and backpack took up any additional space that might have existed in the cockpit. I could not shift my weight at all but then I was going to get out of the plane very soon since it carried very little fuel. Simply taking off leaves me short on fuel, and one hour thirty minutes later I had better have the end of the next runway in sight.

Cooperstown meets that criteria AND it also has a turf runway. Since 2RC was determined to “go grazing” on every takeoff and landing, I hope that landing on the grass would have fewer harmful consequences than ending up in the grass after landing on a concrete runway. K23 isn’t all that long, but it is WIDE. The tiny Pitts rolls out like it is on a set of rails when I arrive. One down. If I can find a dozen more wide, grass runways with fuel every 150 miles I might get the Pitts to Houston in one piece. Fuel is not a problem at K23, but the Baseball Hall of Fame nearby rules out finding a room near Cooperstown. I borrow a sleeping bag from a fellow who is curious as to how I ever got into the Pitts...or why. (Answer: I was out of my mind...and the new owner could not find anyone else who would fly it that far.) I roll the bag out under the wing and spend the night.

I launch at seven the next morning making the takeoff from the 3-point position. I do not try to raise the tail and deal with the change in “P” factor. Right down the centerline on the turf runway. Two successful takeoffs. I can see ahead of me since the sun is behind me early in the morning. Well, I can’t really see all that much. I’m crammed in under the canopy with an engine cowl and lots of wings up front...AND one big line of thunder-bumpers. I land at Hornell, NY on concrete...very carefully. All goes well. I wait seven hours for the rain to pass before I launch for Ashtabula, and then Wynkoop, OH, the latter having another turf runway and inexpensive gas. I finally call it quits at sunset near Indianapolis. The thunderstorms roll through during the evening.

I am off for Flora, IL early the next day. Turning final for landing on concrete, I notice a shorter, turf runway. I continue around to land on it. (I may be fearless, but I am not completely out of my mind.) The turf makes me look good again and I am about half convinced that I might survive this trip...if the Good Lord continues to look out for me. (If only this miserable little cockpit had a spare bit of room.) My head rubs the canopy on the first couple of flights each morning until my spine collapses...by which time I have a sore butt and am miserable and too stiff to move.)



## What one maneuver leaves you short on fuel? (continued)

I refuel at Farmington, MO, then launch for Branson, the country/western Mecca of middle America. The weather continues to deteriorate, I'm low on fuel, scud-running at low altitude with limited forward visibility. Not good. I divert and land at Avo, MO. No fuel. Weather too bad to continue to Branson, I fly a few miles back to Mt. Grove. This runway is NARROW...maybe twice as wide as the Pitts. As I round out I can not see any concrete. (If I see concrete on either side, it means I am in the grass on the other side...and that grass is probably three feet high). I really concentrate. "Exciting isn't it?"

The lady pumping fuel for me obviously is a pilot. She is as relieved as I am that I had held 2RC down the centerline. I agree, pay the bill, and pedal very carefully down that same centerline a few minutes later. Dodging the weather over Branson I am forced into Harrison, AR by the next line of thunderstorms where I sit it out for the night. (The weather back east is always wonderful, isn't it? I'm beginning to prefer the weather in Alaska.)

By 0700 I am on my way again, landing at Arkadelphia and then Center, TX for fuel. As I approach the Houston Class B airspace I am low on fuel (as usual) and turn final at Baytown to top off before attempting to run low level around to Pearland in poor visibility (due again to the constant high humidity haze that is so prevalent east of the Mississippi). As I round out over the narrow runway I am unable to see any concrete ahead or to either side. I punch the throttle.

I'm not THAT low on fuel! I wander through the haze, finally spot Pearland, and land with twenty minutes of fuel remaining on a nice wide runway where the new owner is waiting for me...50-year-old student pilot, about my size, maybe a little heavier, has not flown in 25 years, limited experience in a Cessna taildragger. I advise him to take the parachute and GPS mount out of the cockpit before he attempts to get in. I tell him how to start the fuel injected engine and wish him luck.



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## FSS TIP OF THE WEEK: FILE MULTIPLE FLIGHT PLANS

(Thanks to AOPA EPilot)

Planning a long cross-country? Consider filing multiple VFR flight plans...one for each leg of your flight. Filing shorter flight plans gives you an advantage in receiving search-and-rescue (SAR) services should you have an accident or emergency. Flight service contractor Lockheed Martin points out that if your flight plan has a three-hour duration, SAR would begin after three-and-a-half hours. If your flight plan includes the entire trip, with multiple stops, and is active for six-and-a-half hours, SAR wouldn't start for seven hours. Then searchers would have to cover the entire route



## **A fuel-saving announcement from your ASI**

(Article by Dave Hirschman in the August 29<sup>th</sup> edition of AOPA EPILOT)

{ [HYPERLINK "http://www.aopa.org/images/aircraft/080825asi.jpg"](http://www.aopa.org/images/aircraft/080825asi.jpg) } The airspeed indicator (ASI) can tell you a great deal about how to fly more efficiently, but few pilots know how to decode its drag-reducing, fuel-saving, and range-extending message.

According to Jack Norris, an aerospace engineer and technical director for the 1986 Voyager around-the-world flight, a simple, mechanical ASI (and an understanding of the aerodynamic drag chart and an airplane's best rate of climb speed) is all we need to maximize speed vs. drag. Minimizing drag is the key to reducing fuel burn and extending range.

"The airspeed indicator tells us a lot more than just ram air pressure," said Norris, author of *The Logic of Flight*, a self-published book on aircraft efficiency and propeller design. "Your ASI can also tell you the most logical and efficient way to fly without being wasteful of fuel or time."

All pilots learn in ground school that any airplane's greatest flight efficiency is found at L/D max, that point on the drag chart where the induced and parasitic drag curves meet, and total drag is lowest. Pilots seeking peak efficiency can fly at L/D max for the absolute minimum fuel burn. But here in the real world, few of us would ever choose to fly so slowly.

"No one wants to plod along at some low speed with mushy controls," said Norris, a private pilot for 60 years. "You do that if you're flying the Voyager around the world. But even then, it took nine days, three minutes and 44 seconds. What we're really looking for is flying as fast as possible with as little drag as possible."

Norris points to what he calls the "Max Speed vs. Drag" point on the chart. There, pilots can gain 31 percent more speed while paying a paltry 15 percent drag penalty. Since true airspeed (TAS) increases with altitude, at 12,500 feet, for example, pilots can obtain an additional 21 percent payoff for a total 59 percent speed gain over L/D max.

"Who wouldn't want to go 59 percent faster for 15 percent more drag?" Norris says. "Aerodynamics is full of tradeoffs—but this one's a bargain."

The best speed vs. drag point is always 1.31 times VY, (the best-rate-of-climb speed), Norris says. Higher speeds are possible at lower altitudes and higher power settings. But since parasitic drag increases at the square of indicated airspeed, the additional speed carries a high price in dramatically higher fuel consumption and reduced range.

"Very few pilots really understand that the shape of the total drag curve is really a leaning, lazy J," Norris says. "There's a place where the curve flattens out and you can fly much faster for a very small increase in drag. You don't need any special equipment or fancy math to figure it out. All you need to know is your aircraft's VY and add 31 percent."

### **Max efficiency profile:**

Norris recommends the following profile for virtually all piston-engine, general aviation aircraft: After takeoff, simply cruise climb at (1.31 times VY) as high as possible with the throttle wide open.





## **A fuel-saving announcement from your ASI (continued)**

When you've reached the maximum altitude at which you can maintain your target IAS with the mixture properly leaned, you're done.

The pilot's operating handbook for the AOPA's IO-550-powered Beechcraft Bonanza BE36 seems to bear out Norris' IAS-based strategy. At a total weight of 3,400 pounds, VY is 96 knots, making the ideal target IAS 126 knots. On a standard day, with the throttle wide open and 2,500 rpm, mixture set 20 degrees lean of peak, the Bonanza shows 129 KIAS at 14,000 feet, 157 KTAS, and a fuel burn of 10.6 gph. That's about 14 KTAS less than the Bonanza's best-power setting at 6,000 feet where the airplane travels 171 KTAS at 14.4 gph. So, on a 500-mile trip, flying at high altitude and optimal IAS adds less than 15 minutes flying time and saves 8.7 gallons of avgas (or more than \$52 at current prices). Put another way, optimal IAS at altitude reduces speed 8.2 percent while slashing fuel consumption 20 percent.

Norris says his IAS-based approach works equally well for planes with fixed-pitch and constant-speed propellers and all engine sizes. "Flying is subject to the same physical laws, and the drag curves apply to all aircraft," he said. "Airplanes only know indicated airspeed. A wing doesn't know how fast it's moving over the ground, and it doesn't care. Understanding IAS allows pilots to minimize drag, fly more intelligently, and get the most efficiency and utility out of their aircraft." Give it a try.

Environmental factors such as winds aloft and icing levels are sure to influence your aeronautical decisions. One rule of thumb is to climb as quickly as possible when tailwinds are present to maximize the time such favorable conditions can act upon your aircraft. In strong headwinds, lower groundspeeds at altitude can negate any gains in TAS or reductions in hourly fuel burn.

Also, physiological factors and the availability of supplemental oxygen can come into play at the higher altitudes Norris' IAS-based strategy suggests. Federal aviation regulations mandate that pilots use of supplemental oxygen whenever they're above 12,500 feet cabin pressure altitude more than 30 minutes, and at all times above 14,000 feet. (But studies show hypoxia can begin at significantly lower altitudes for many people, and headaches, dehydration, and fatigue are common after prolonged periods at 8,000 or 10,000 feet without supplemental oxygen.)

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When you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return.

---Leonard da Vinci

The airplane is just a bunch of sticks and wires and cloth, a tool for learning about the sky and about what kind of person I am, when I fly. An airplane stands for freedom, for joy, for the power to understand, and to demonstrate that understanding. Those things aren't destructible.

---Richard Bach, *'Nothing by Chance'*

To invest an airplane is nothing. To build one is something. To fly is everything.

---Otto Lilienthal



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### **Question to the AOPA Pilot Information Center:**

**Question:** I lost my airworthiness certificate for my Cessna 172. Is there an easy way to get a duplicate?

**Answer:** You will need to apply for a new airworthiness certificate and must contact your local flight standards district office. When making the appointment with the inspector, you may want to ask what documents he or she will want to see. Typically, the inspector reviews the application for an airworthiness certificate, the maintenance logs, and proof of ownership/registration (i.e., registration card).

### **FOOTBALL SEASON KICKS OFF WITH STADIUM TFRs:**

With football season now under way, pilots need to be mindful of temporary flight restrictions around stadiums. The FAA's blanket notam prohibits aircraft and parachute operations at and below 3,000 feet within three nautical miles of large stadiums. The TFRs go into effect an hour before and extend until an hour after the scheduled events.



### **September 3, 2008 Board Meeting:**

President Joe Lacchia called the Board Meeting to order at 6:30 P.M.

Joe Lacchia, Pres.	P	Charles Nelson, Board	P
Joe Wiegand, VP	P	Dennis McGuire, Board	P
Steve Fredericks, Sec.	P	Brian Cluer, Board	P
John Whitehouse, Treas.	P	Ray Shipway, Board	P
Larry Rengstorf, Facilities	P	Mike Tovani, Board	A
Donna Turrentine, Newsletter	P	Steve Barnes, Board	P

**Minutes:** Minutes from prior meeting are approved.

**Treasurer's Report:** John Whitehouse delivered a report on the usual numbers for the month. Last month he paid the property taxes. John followed up with the Assessor's Office as to whether they needed to look at our rate with respect to the new lease. John also reports that the Chapter has a new IRS form to file as a non profit. The new requirement is tied to the Chapter's cash flow.

**Facilities:** The Board discussed members who are not tenants using the facility for aircraft maintenance. The Board is in agreement that this is a valuable benefit to general members and that the existing policy of allowing it should continue.

**Young Eagles:** Ray Shipway, chairman of the Young Eagles Committee, has decided not to hold a fall event. He and Sher will be directing their efforts to an event this spring. It is his hope that the Chapter's next Young Eagles event will again dovetail with a Pacific Coast Aircraft Museum "Climb Aboard" Day. Last spring's event ran very smooth as the Museum has an excellent facility.

**Old business:** The issue of CAFÉ not requiring its members to be members of EAA (National) or the Chapter was brought up. Ray Shipway and John Whitehouse were appointed to a committee to meet with CAFÉ and discuss this issue. The committee is also authorized to discuss any issues CAFÉ has with the sub-lease arrangement.

Ray Shipway copied and distributed the new lease for the Board member's binders.

Respectfully Submitted,  
Steve Fredericks, Secretary





### **September 3, 2008 General Meeting:**

President Joe Lacchia called the Meeting to order at 7:40 P.M. 40 members were present.

**Minutes:** Minutes from the prior meeting were approved.

**Treasurer's Report:** John Whitehouse delivered the usual reports for the month. The report was approved.

**Announcements:** The 2008 AOPA Expo will be in San Jose, dates are November 6-8.

Copperstate Fly in October 23-26.

Quality Sport Planes will be hosting an Open House on October 11 at the Cloverdale Airport. They have had impressive turn outs at the previous events. A barbeque lunch is in the offerings.

February will be the next oil buy.

**Young Eagles:** Joe Lacchia reminded the assembled that the Board approved a \$1.00 per gallon subsidy for fuel costs for future events. Ray Shipway announced that we will not be holding a fall event this year. He and Sher will be working towards another spring event to be held in conjunction with a Pacific Coast Air Museum "Climb Aboard" Day.

**CAFÉ:** Brien Seeley reported that he went to the Experimental Soaring Society event in Tehachapi. There are some very interesting things are being done with very little power. He was also given a tour of the NASA Dryden Research Center. Meg Hurt presented the Chapter with a plaque as a "thank you" to the members who volunteered and helped make the GAT challenge a success.

Thanks to Kevin Quirk for cooking, Joe Lacchia for doing the shopping for tonight's barbeque, and Donna Turrentine for doing the "veggie prep".

**Tech Counselors:** Kevin Quirk reported that there are two chapter members building RV-8s who are looking for partners. One is an RV-8, the other an RV-8A. He says that they both are being well built. Contact Kevin for more specifics.

**Builders Reports:** David Lynch is working on the canopy of his RV-8A. Still happily reports no cracks.

**Program:** Tonight's program was on Aircraft Air Filtration.

Respectfully Submitted,  
Steve Fredericks, Secretary