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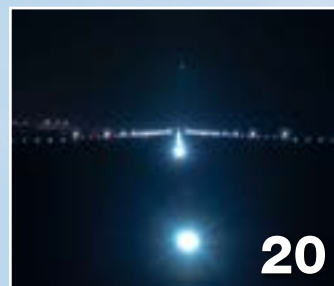
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Foggy Bottom



Still in the sunshine as the gear and first flaps went out, it looked as if the arrival was proceeding normally. The airport's landmarks were coming out of the haze, obscured somewhat by the early sun angle. Wisps of morning mist filled the valleys under us, but they should be dissipating with solar warmth.

Sliding down final, the runway first came into view, then became less distinct as we grew lower, then disappeared as we started to flare for the touchdown. Whiteness wrapped around the aircraft as I struggled to maintain orientation. Somewhere, there's a bottom to this, was my initial thought. Then, I began to worry about picking up the centerline so I could track the runway on rollout. Cripes, one runway light at a time is all I can see flashing below me.

Power up, positive rate, gear up and we popped back up into the sunlight. The non-homogeneous ground fog hadn't appeared threatening, but at touchdown height it obscured forward vision enough to remove needed references. The solution was to orbit the field to approach from the opposite direction, where the sun's lessened glare, and perhaps thinner fog, left the runway in sight during the flare.

My good friend and mentor Dennis Shattuck once told me a similar tale, about an after-midnight arrival in his Mooney. He could see the runway lights from directly above, but found they disappeared in a 50-foot layer of ground fog when he tried to land. After two attempts, he gave up and went elsewhere—a very wise choice.

Do not rely on glowing prognostications you obtained prior to departure. As we are forced, more and more, to rely on our own weather research in the absence of a friendly human briefer, it's even more important to keep multiple alternates in mind. Because the FAA is discontinuing area forecasts (the old FA), they are no longer describing regional outlooks. We'll have to check prog charts against hourly METARs and determine if the TAF is likely to be working out. All the more so when the destination is both non-towered and has no weather reporting. Legalties aside, you ALWAYS need an alternate.

Clear sunny or starry skies notwithstanding, a dab of moisture when the temperature drops to the dew point is all it takes to turn routine into irritating. At that point, you need to revisit what it means to be Pilot In Command.

The lesson is that no flight's conclusion is assured until the tires stop rolling. The bottom of a descent can get foggy at the last second. As pilots, we need alternates, and the resolution to exercise them, even when we think we're practically home. Life is like that; just when you are sure nothing can go wrong, the road develops a curve.

When you encounter a foggy bottom at the end of your descent, be prepared to execute survival actions. Know your options, switch to Plan B, and communicate your intentions to all concerned. That's just being a pilot, staying thoroughly flexible to the end.

LeRoy Cook, Editor



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By LeRoy Cook



BARON

Turns Fifty



The Beechcraft Baron C55, the first of the Baron line to use Continental's big-bore IO-520 engines, achieved certification on August 18, 1965. In the half-century since, it continually retained its status as the foundation of fast personal transportation, and was eventually expanded into stretched-cabin and pressurized variants. Further upgrades with a new panel and 300-hp engines came along with the 1984 Baron 58.

The C, D and E version of the Baron 55 is often overlooked, viewed as something thirstier and heavier than the smaller B55 but less capable than the Baron 58. Given that it's not as suitable for a six-seat mission, it is, in all other aspects, a great business and family traveling tool, often priced near, or below, single-engine competitors. Admittedly, its upkeep and training needs are fully multi-engine requirements. But older Barons still represent near-turbine capability in a compact package with relatively simple systems.

To review, the foundations of the Beech Baron were laid in 1957, when Beech Aircraft certificated its first

true "twin Bonanza", in the form of the Model 95 Travel Air, originally called the "Badger" until someone realized NATO had tagged a Russian bomber with the same name. To create the Model 95, the Bonanza airframe was given the T-34 trainer's tail and a 180-hp Lycoming on each wing. A good little airplane, the Travel Air was limited by its small engines, but its type certificate #3A16 was later amended, in late 1960, to create the Model 55 (technically, 95-55) Baron, with a massive swept tail and 260-hp Continental IO-470 engines.

Going Up A Size

Growth, in the go-go days of the 1960s and 70s, was a given. By 1964, Continental had reworked the IO-470 into the IO-520 and, suddenly, everyone building Continental-powered airplanes had more horsepower to work with. The Baron C55 was introduced as a 1966 model with a foot-longer nose than its B55 sibling, a one-piece windshield and 200 pounds more gross weight. The tail span was increased to 16 feet, versus the B55's 13.75. The better-looking profile and extra useful load made it a hot seller from the outset.

The C55 was changed to a D55 designation in 1968 and the E55 came along in 1970, concurrent with the introduction of the Baron 58. A steady seller, the E55 remained in the line until production ended in 1982. Some 1,200 C55 through E55 Barons were made (serial number prefix "TE"), most of them produced at a 150-200 per year clip in the first four years, before the Baron 58 drove annual demand down to 25 or so in the 1970s.

Our subject airplane is the personal transport of Kansas City entrepreneur Chris Hall, a stock 1966 Baron C55 which has seen careful tending over the past five decades and still serves splendidly. Hall flies a King Air

C90 in his business, but uses the C55 for proficiency and for runs requiring only one or two seats. He is an A&P, so he's able to keep up with the occasional aging issues, like the recurring spar web inspection on the wing's carry-through section, a balky heater and intermittent instrumentation. As a well-populated aircraft, with strong type-club support from the American Bonanza Society (www.bonanza.org), service and parts are readily available.

The IO-520/550-powered Barons are distinguished from the IO-470-driven airplanes by a small induction



air scoop atop the nacelles, missing on the B55. A large electrically-adjustable cowl flap is under each engine. The tight cowlings feature hinged side panels for maintenance access; the two batteries are in the lower portion of the nose. Three-blade propellers were an option on the early Barons, although ultimate efficiency was actually found with two-blade props. Many 1960s Barons had alcohol de-iced propellers, along with a windshield spraybar, and non-FIKI pneumatic boots were on the wings and tail. Landing/recognition lights are located in the outboard leading edges, with a taxi light on the nosegear strut.

While using many Bonanza-derived components in the wings, cabin and landing gear, the Baron C55 had more robust structure to handle its 5,300 gross weight. The electrically-actuated flaps have extended chord length beyond the outboard trailing edges; the left aileron has an adjustable trim tab, with servo action to lighten yoke forces. Fuel is contained in interconnected bladders, using leading-edge cells like the Bonanza but with added tankage behind the spar. The de-facto optional system holds 136 usable gallons, 74 in the mains and 62 in an auxiliary selection. Starting in 1974, the E55 eliminated the auxiliary tank management with a 166-gallon interconnected system.

The electrically-operated landing gear zips up and down in 4.5 seconds with 28-volt power, carrying 6.50 x 8 main tires and a 5.00 x 5 on the nose. As with the Bonanza, the gear is fully enclosed when stowed, the inboard gear doors opening and reclosing as it cycles. Backup extension is via a manual crank.

A large baggage door (optional but always ordered) is aft of the boarding wingwalk, allowing aft baggage or fifth and sixth seat occupants to be loaded. Typically, 55-series Barons are operated with one or both rear seats removed, due to the difficulty of ingress. Most baggage goes in the 300-lb capacity nose compartment, accessed by a swing-up door on the right side. The prominent mast under the nose carries a still-installed ADF sense wire that extends aft to another post under the tailcone.

The impressive Baron tail stretches 9.2 feet into the air and spans 15.9 feet. Dual elevator trim tabs are fitted for symmetry, augmented by small fixed tabs. The rudder has its own trim tab for engine-out conditions. A fresh-air inlet is located in the large dorsal fin, feeding the cabin's overhead vent system. Heating is supplied by a 50,000-BTU Janitrol combustion heater in the nose.

Fast Flying In The 1960s

Boarding via the wingwalk, we entered the time-warp cabin of N48SC. The dual control wheels are mounted on a single crossbeam, obscuring much of the lower panel. Bonanzas and Barons frequently came with a single throw-over yoke, giving more room for the front passenger, as evidenced by fold-away rudder pedals, with

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no brakes, on the right side. The tight confines of the Baron cockpit is the secret to its 200-knot top cruise number. Accordingly, power controls had to be placed high in the center panel.

Much has been made by self-appointed correctionists over the odd placement of cockpit controls, to which Walter Beech would have said “what’s odd about it?” The Baron’s throttles are in the center of the quadrant, with props on the left and mixtures on the right; the gear knob is right of the yoke, with flaps on the left. This arrangement was bequeathed to the Travel Air and Baron from the Twin Bonanza, which had carried it forward from the Beech 18, itself patterned after the front offices of 1940’s two-pilot airliners. It remained so until the 1984 redesign of the Baron 58. One adapts easily enough.

The fuel selectors are beside the knee, giving main, aux and crossfeed settings with schematic portrayal. Ignition and starting switches are on the left sidewall, guarded by a key-operated master switch. Trim wheels are on the lower quadrant, with cowl-flap switches on the subpanel. The electric cowl flaps were changed to manual levers midway through the E55’s production, to eliminate maintenance. Dual-needle power instruments are located directly above the levers controlling them, at eye-level for easy scanning during takeoff.

The door absolutely must be checked for latching before takeoff; if it pops open in-flight the noise level is dramatic and it cannot be closed without landing, although the airplane is safely flyable. The middle windows feature Bonanza-style prop-open ventilation for ground operation, and double as emergency exits if a release pin is pulled.

Starting requires boosting up a bit of fuel pressure, then beginning cranking with throttle at idle and advancing it slowly until the engine catches. An adroit application of boost pump overcomes reluctance and the second engine follows in due course. Taxiing is a pleasure with positive nosegear steering, although the tall glareshield presents some challenge. At runway end, the usual piston-engine checks are best followed by reviewing a checklist, due to the 1960’s scattering of target items. Controls, cowl flaps, trims, doors and windows are confirmed, followed by a runup, beginning with prop exercise at 2,200 rpm, reducing to 1,700 for mags test, and reduced further to 1,500 rpm for a feathering check.

Takeoff Planning

While the big-engine Barons are about as capable as any piston twin under engine-out conditions, takeoff planning should always begin with consideration of “what if...” Early Barons were grandfathered out of the airspeed indicator markings of Vmca and Vyse, but most have been retro-marked. On N48SC, a blue radial

SPECIFICATIONS

1966 Beech Baron C55

Powerplants	Seats	6
	Fuel	142 gal. usable
Performance	Service ceiling	20,900 ft.
	Single-engine ceiling	7,100 ft.
	Max. cruise speed	200 kts.
	Stall speed	67 kts
	Takeoff distance (50 ft. obstacle)	968 ft.
	Landing distance (50 ft. obstacle)	1,414 ft.
	Max. range (w/reserve)	955 n. mi.
	Climb rate-2 engines	1,670 fpm
Weights	Climb rate-1 engine	335 fpm
	MTOW	5,300 lb.
	Landing	5,300 lb.
	Empty	3,015 lb.
	Useful load	2,285 lb.
Dimensions	Wingspan	37.8 ft.
	Height	9.2 ft.
	Length	29 ft.
	Cabin length	11.75 ft.
	Cabin width	3.5 ft.
	Cabin height	4.2 ft.
	Baggage	420 lb.

denotes the 100-knot Vyse, but there's no red line for the Vmc of 80 knots. Knowledgeable Baron pilots pitch up to a climbout attitude comparable to that attained at single-engine best-climb speed, accelerating rather than zooming skyward exuberantly. Barons don't like to stay on the ground near liftoff, tending to wheelbarrow if held down, so lifting off at close to the Vxse of 96 knots and getting the gear up with positive rate places the aircraft in safe territory. Beech's handbook numbers, on the other hand, are based on liftoff at Vmc + 5 knots.

The Baron climbs well, particularly if lightly loaded with both engines on duty. Expect 1,500 fpm or more at full chat, brisk enough that one pulls power back to 25 square and accelerates into a cruise-climb of 130-140 knots to prevent ear-popping pressure changes. Quickly reaching optimum cruising altitude in the 8,000 to 10,000-foot range, the cowl flaps are buttoned up and


trim is fine tuned. The superlative 200 knots supposedly comes at 75% power and 6,500 MSL, but most trips will see 185-190 knots on 65% power, where fuel burn runs 28 to 30 gph.

While a stable, comfortable cruiser, the Baron C55 seriously enjoys being maneuvered, with light controls and quick response, particularly with the aerodynamically-boosted aileron circuit. Beech always built nice-flying airplanes, and the big Barons, even the 6,000-lb 56TC, are all fun to fly.

Slowed down, the Baron C55 handles well, even at 80 knots; approach flaps and gear can go out at 152 knots and full flaps are allowed below 122 (the C55 was certificated around mph indications, which will be used in equivalency for its operation). Even an approach stall was tolerated well, coming at about 70 knots.

An approach and landing starts by leveling at 140 knots, often with first-flaps extended to improve visibility, putting the gear down to initiate descent and using 120 knots for pattern maneuvering, then slowing to 105 on final and perhaps 95-100 over the fence. Barons roll out enthusiastically and, while an 1,800-foot landing over a 50-foot obstacle is quoted, doubling that distance is a wiser policy. Precision, however, is easy to achieve with the responsive handling.

If one is prepared for its geriatric maintenance requirements, a 50-year-old big-engine Baron is a great old traveling machine. With modern avionics, it delivers fine value and performs as it always has. There is a 500-hour recurring AD inspection for cracks in the center-section spar web that can be eliminated with a kit, the rest of the maintenance depending on the state of neglect and wear. Beechcraft products are well built, but parts can be pricey.

A half-century seems to come along before we realize it. It's worth taking note of such a milestone, recognizing a great airplane. 





Winter Wisdom

Flying through the pit of winter, when life-threatening wind chills and unusable runways are distinct possibilities, is not for the faint of temperament. It takes devotion to the cause to tug an airplane out onto a slippery ramp in the dark, perform a perfunctory preflight with numb fingers, and race snowstorms to the destination's final approach course. Wintertime flying is a tiresome chore, and if you live in the balmy southlands but make occasional trips northward, you are going to be doubly challenged.

Dealing with winter's difficulties calls for an annual renewing of dormant skills. It's a time to dig out the engine covers that have been piled in the corner of the hangar, put the tire chains back on the tow tractor, and apply ICEX to the boots and/or recheck the deicing fluid's level, if you haven't fired them in anger lately. Most importantly, you'll need to refresh your own winter-flying talents and methods.

Summertime flying is a much more casual affair. Convective weather notwithstanding, one expects to go on schedule, with little preparation. Airports are always open, daylight is in the majority, ramp attire is the same shirt you wore in the cockpit. Winter, by comparison, demands respect. You had best be prepared, or you'll be punished.

A wise old north-country pilot once told me "Son, never fly over country you aren't prepared to walk out of." He meant you should carry a parka, wear boots instead of loafers, have headgear and gloves, and upgrade the survival kit in the baggage compartment. Carry some blankets for the passengers, in case the cabin heat goes inoperative. Take winter seriously.

And Then, There's The Weather

Weather patterns in wintertime move rapidly. You may have one day of ideal CAVU conditions, during which you'll make plans to go flying tomorrow, replaced the following day by a nasty front, which then turns into another clear day before the next system arrives. Winds, both aloft and on the surface, can be strong and shifting as high pressure and low pressure alternate over a steep gradient. The jet stream dips south of its summer tracks, and triple-digit headwinds play havoc with medium-altitude flight planning.

Our airplanes can cover a lot of territory in a few hours, often taking us from one type of air mass to another, so an easy departure might be followed by a tight approach. Going into the northern tier of states requires added preparation and rethinking of one's options. Flying over or through multiple weather systems can require careful planning. Going east or west can

mean dealing with tomorrow's or yesterday's weather, as well as today's.

The good weather days are the ones that are cold and clear, miserably frigid under domes of high pressure. Warmer weather brings cloud layers and the threat of precipitation. Most of the time, you'll find it relatively easy to top the lower layers of cloud, since the clear air is waiting no higher than the low teens. The bad news is that, if there's any moisture about, you won't want to linger during the climbout. Icing is going to be found at some level in those clouds, maybe even on the ground under them. Depart without delay, with everything turned on to ward off ice, and expedite your ascents and descents. Do not fool around with "just a little ice", and don't count on it sublimating away in the clear, particularly if the sun angle is low or non-existent.

Winter precipitation is much more schedule-threatening than summer showers. Light rain is hardly cause for concern, only dropping visibility to a couple of miles unless the air becomes saturated. Light snow, on the other hand, can immediately result in a quarter-mile of whiteout visibility, and it only takes a cloud layer as thick as a handkerchief, it seems, to generate significant snow. Down low, a snow-covered landscape blends into an indistinct cloud base with dangling tentacles of snow. Reported ground visibility might be enchantingly

optimistic, compared to the forward flight visibility seen from the cockpit. Sure, you can always see the ground straight underneath the airplane in snow, as long as you're clear of cloud, but as the intensity of falling snow picks up that circle of visibility shrinks.

When flying near significant bodies of water, be cognizant of the lake effect snowfall on the downwind side of the moisture source. As an otherwise-mild change in air mass moves across the water, it picks up moisture it can't hold and readily dumps it the form of airport-closing amounts of snow to the south and east. Chose an alternate on the dry side of the water or far to the south.

Circling approaches are particularly risky when snow is falling; there's nothing much in the way of visual reference to maintain orientation. All of the cockpit aids on the panel need to be supplemented with old-fashioned caution when you're groping for an airport that passed by under the side window.

It's quite common to encounter temperature inversions during the cold season. Cold air pools at ground level overnight, leaving the previous afternoon's relatively-warm air floating along a few thousand feet AGL. Pollutants are trapped in the cold layer and cannot rise through the cap of warm air, reducing visibility. When moisture-laden warm air moves over the top of the stubborn cold air, raindrops falling into the sub-

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freezing temperatures below will become supercooled, remaining liquid until they contact a surface like your airplane, where they turn into clear ice. This freezing rain is instantaneous trouble and must be exited without delay; climbing into the warm air is traditionally the best escape, but it doesn't always work. If trapped on the ground while freezing rain is falling, waiting it out in a heated hangar is about the only option.

Airports That Aren't Always There

In winter, you'll have to deal with the reality of runway closures and perhaps entire airports shut down. The storm may have moved on, but the airport remains closed while snow removal is underway. General aviation is prized for its ability to use smaller fields, giving us more destination options. However, small-town airports don't have the big snowplows and manpower of big-city aerodromes, and they may not recover from a big storm for several days. Snow removal is an even-lower priority where it seldom occurs. Those freak snowstorms that hit the upper southland now and then can wreak havoc with trip schedules; the only plows in the county are busy clearing freeways, leaving the airport for already-overworked contractors.

Up in the snow country, of course, clearing the airport is a routine chore. But that doesn't mean ramps

and taxiways get as prompt attention as runways. Calling before you go is the best advice for winter operation. Find out if the FBOs are ready to receive traffic and what is their best estimate for the airport reopening. If you're going to want a hangar or deicing services, get in line by making your needs known in advance.

Runway conditions are pretty much a known quantity in summertime, other than for some ponding of standing water after a rainstorm. Summer's wet pavement adds to the stopping-distance requirement, but not by as much as the slickness of wintertime conditions. Braking action reports are to be taken seriously; know the friction-meter readings that mean trouble, starting at about 40 and above. Yes, you can land on a snow-covered runway, but how much more room will you need to get stopped? How much snow depth can you tolerate? What if you hydroplane on locked-up brakes? What if your brakes freeze from snow accumulated during parking? These are all valid concerns for winter operations.

The point is, runways can be quite variable in suitability during the winter. If you're counting on dry pavement to meet your needs, be sure that is what's waiting for you. Don't forget that patches of frozen stuff may be lingering on part of the runway,

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even after it has been plowed.

And, have a care when taxiing. Late in the winter, some pretty impressive mountains of pushed snow will have been accumulated on the ramp edges and around the smaller taxiways. Don't hook a wingtip on one of these moguls, or turn into a winter-tightened taxiway that can't accommodate your wingspan as well as in summertime. Moreover, always taxi as if you had no brakes; you might not.

Be especially careful on days with flat lighting, as encountered under a gray overcast that leaves no shadows, particularly deceptive after a fresh snowfall has rendered everything a tidy shade of white. The old snowpiles fade into invisibility, allowing you taxi right into them without knowing they're there. Fingers of loose drift accumulate downwind of these piles of used snow, and you can roll into a foot of fresh snow without ever seeing it. Throw on your taxi lights to create some shadows, even though it's daytime.

Can we operate in the winter, safely and effectively? Sure, but it'll take some effort to deal with the vagaries of old man winter. Operate with caution and keep your options open. **T&T**



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From the Flight Deck Guide My Sleigh

by Kevin R. Dingman

This past fall, I made several trips in the Duke that needed the WAAS GPS discussed in the September *T&T* article “Old-School”: a Garmin 430W coupled to a Century IV autopilot and flight director. In fact, one leg would turn out to be critical – more on this in a bit. The trips were right around the time when a weather system coming off the Atlantic produced strong winds along the Eastern U.S. As explained by the weather channel, some of us learned an additional application for the word “fetch” – other than the ones involving a tossed stick or a spousal request. Apparently, fetch can also be used to describe the effect of strong, sustained winds traveling a long distance over a large body of water. The phenomenon created hefty surf, flooding and plenty of low IMC.

Unless we’re taking someone to a major airport to use the airlines, our final destination can normally be reached more efficiently by landing at one of the thousands of GA airports around the country. During the weather systems’ influence, WAAS GPS allowed me to fly the Duke into airports in the Carolinas previously served only by traditional non-precision approach procedures. Looking back at those approaches, we can shake our heads and reflect as we compare not only the inaccuracy of their lateral and vertical guidance, but the stability of the procedure, the navaid and the avionics displaying the information. GPS, modern avionics and NextGen procedures have turned another page in aviation history. GPS approaches with LPV minimums, to thousands of airports that were previously accessible only through VOR, NDB or circling approaches, offer a substantial increase in utility and safety.

Biblically Speaking

And since we celebrate a pivotal and culturally-momentous event in December, I can seasonally and politically correctly add that the increases in safety and utility are of Biblical proportions. With cooperative terrain, we can descend as much as three or four hundred feet lower than before – usually to a DH of 200-250 feet AGL. And, with proper approach or runway lighting, to visibilities in the $\frac{3}{4}$ mile range. These minimums are pretty much what you get on the average ILS. This significantly increases our options. And when your back is up against The Red Sea, options are a good thing – biblically speaking. Another momentous feature provided by modern electronic gadgetry is current weather and fuel prices at airports along our route. That’s immensely more efficient than asking center to dig up the weather or locating the



frequency of an in-range FBO for fuel information. With the touch of a finger, we can see current METARS and fuel prices. Although normally involving self-serve stations, the fuel cost icons on electronic charts help us locate less-expensive fuel at out-of-the-way fields.

Wet Head and Wet Pants

Have you noticed, though, that the self-serve fuel pumps are typically nowhere near the public restrooms? Or any shelter for that matter. Picture progressive taxi instructions to a remote, wind-swept ramp out near the landfill. And sometimes the pumps require a checkride, sign-off and training-completion code before they’ll work. While WAAS may help us to get into more airports with bad weather and cheap fuel, the fact that you needed LPV minimums in the first place indicates that the METAR likely includes OBSCD, FG, BR, RA, TSRA or SN – sometimes with a plus sign in front of them. These visibility restrictions dampen my bald head on that unsheltered, wind-swept ramp out by the landfill. We must now consider not only the approach available, the distance/cost of going off-course for the cheaper fuel, but the wet-head component. We must also consider how urgently we and our pax need the public restroom. After remote fueling, we sometimes need to restart the motors and taxi back to civilization and the indoor potty.



New considerations go into flight planning these days – all because of those darned LPV minimums and fuel price displays.

Two Different Animals

I've read articles discussing the question of increased risk associated with GPS/LPV approaches. Although we may not be up to low-IMC approaches as a regular diet, are we flying into or over lower IMC than before, simply because our electronic magic makes us more comfortable? There are several sides to this dilemma. Number one, we can plan and fly trips in which the weather will be 400/1, knowing that the approaches we need are available most everywhere. Two, we can fly the trip with weather that is better (say 600/2), knowing that, if the forecast was wrong or the weather deteriorates, we can still find those magical LPV minimums nearby. And three, we can more comfortably fly over an extended area of low IMC, feeling secure that, if we need to land immediately, many airports with LPV minimums are under our wings. All valid points, but I can tell you from experience, perhaps the point of this article, that having LPV minimums available along your route of flight, and actually flying a single-engine, single-pilot approach to those minimums, are two different animals. Add night time or icing to the picture and things could get very uncomfortable. And I'm not talking about a wet head or pants. We must decide before we launch: are we the pilot to fly that approach on one motor to LPV mins? Which brings us back to my comment in the opening paragraph and the newly installed Garmin 430W providing a critical capability.


There I was, on a dark and scary night, a dot low and inverted on the glideslope, two inches of ice on the wings, both motors coughing. Sorry, that's an old joke about trying to make our stories sound bad to highlight that they got our attention. Most engines will cough if you fly

inverted and what's one dot among friends anyway? This event did get my attention though; all of it. Due to the "fetch" phenomenon, the weather within an hour in any direction was 400/2. It was daytime, the ice was trace-rime at cruise and "only" one motor had an issue. I consider my instrument crosscheck to be very thorough because that's what others tell me. My flight instrument and navigation crosscheck is professional, but my engine crosscheck is constant and concentrated. I can't afford to hurt the engines in the Duke and, after three engine failures at work, I watch the parameters closely. It paid off. As you know, analog gauges make it easy to notice when the left and right needles are not parallel. The right engine oil pressure gauge was about one-quarter scale lower than the left. Unstrapping from my seat, I slid over to the right seat and looked at the motor – no visible clues. After moving back to the hot-seat, I looked at the gauge again: even lower and slowly decreasing. Damn, this isn't happening.

How Slow? Don't Ask

Pulling the throttle back didn't help, as the pressure continued to drop. The last thing I wanted was for it to seize and throw a prop blade or break an engine mount. So I did it: prop to feather, mixture to cutoff. I declared the emergency, ran the rest of the checklist and selected an airport: Lancaster, Ohio, an uncontrolled airport, paved runway with HIRL, VASI, and a GPS approach with LPV minimums of 200 and ½ mile. This would be only the fifth or sixth approach to LPV mins with the new 430W and the first in weather all the way down. And my first real-life, IMC, single-engine approach in a GA airplane. Like most piston twins, a go-around from low altitude is a 50/50 proposition and likely not possible after gear extension—this would have to be done right the first time. I porked the final approach course intercept because I forgot to execute the approach mode. By

the time I noticed, it was too late to salvage the approach. During the 360 to re-intercept final, I got slow. How slow? Don't ask, but I can tell you with one throttle at idle, the gear warning and stall warning use the same horn. The landing was fine, but to say the approach was sloppy would be generous. It turned out to be a loose oil line. Four quarts (out of ten) remained after landing. Mechanics Darrell and Jim found the leak in minutes, fixed it, added oil, cleaned it up and that was that; less than \$200. After a night in the local hotel to contemplate life, death and clean out my shorts, the next day found the Duke back in the soup, headed home.

The Feds (who happened to be there the next day doing a bird-strike investigation), pilot friends and family all said, "well, you landed out of it, with crappy weather on one motor, and didn't bend any metal – good enough." I suppose so. But I pray to never fly so poorly again. I'm grateful to have had WAAS GPS to help guide my sleigh. It's even better than a glowing red-nosed reindeer. Now that winter is upon us, with the associated low visibilities and runway contamination, remember to evaluate and manage the risks – including an honest look at your fitness and proficiency. I know I will. 



Kevin Dingman has been flying for over 40 years. He's an ATP typed in the B737 and DC9 with 21,000 hours. A retired Air Force Major, he flew the F-16 then performed as a USAF Civil Air Patrol Liaison Officer. He flies volunteer missions for the Christian organization Wings of Mercy, is employed by a major airline, and owns and operates a Beechcraft Duke. Contact Kevin at Dinger10d@gmail.com

Confirmation Bias

by Thomas P. Turner

You can beat confirmation bias by employing a little healthy skepticism when briefing yourself for an approach (or a visual night landing)

While on a night instrument approach to a non-towered airport, the aircraft collided with the airport's perimeter fence and terrain. The fence and perimeter road were parallel to, and about 750 feet east of, the runway. The last radar plot was at an altitude of 1,200 feet MSL, slightly east of the runway, and approximately 435 feet from the accident site. Sheriff deputies reported that the weather was "foggy". The pilot was flying an RNAV (GPS) approach. The published minimums for the approach are a 400-foot ceiling and one mile visibility. The automated weather station about 33 miles northwest of the accident site reported calm winds, temperature 41°F, dew point 41°F, visibility less than 1/4 mile and a Runway Visual Range (RVR) of 600 feet variable to 1,200 feet in fog and an indefinite ceiling. An examination of the airplane failed to reveal any anomalies with the airframe, structure, or systems. Under the conditions at the time, the pilot appeared to have mistaken the east perimeter road for the runway landing point. The NTSB's probable cause: The pilot's decision to continue the approach below minimums without visual references, and subsequent collision with the perimeter fence/terrain.

We tend to see what we want to see. And we tend to believe what we want to believe, especially under stress (like on a night approach in low IMC when we're on a schedule to get to our destination). Research has shown this to be a common trait across all cultures and societies. We suffer from a psychological predisposition called confirmation bias.

Science Daily calls confirmation bias "a phenomenon wherein decision-makers have been shown to actively seek out and assign more weight to evidence that confirms their hypothesis, and ignore or under weigh evidence that could disconfirm their hypothesis. As such, it can be thought of as a form of selection bias in collecting evidence." If information or an observation does not match our mindset, we tend to discount, or even completely ignore, the contrary evidence.

Now, the pilot on this fateful night was not a newcomer. A 28,000-hour ATP/CFII, he was highly experienced in the type of airplane being flown and had

logged over 150 hours in the previous six months. During the flight, the pilot received the weather conditions at his intended destination and several tower-controlled alternates from Air Traffic Control. He stated that he'd do the RNAV (GPS) runway 31 approach at his filed destination, and if he couldn't make it in, then he'd go to an alternate about 50 miles away.

Nearing the airport, the pilot contacted Center and said: "I believe I've got (the airport) in sight right now, but I'm gonna go ahead and do the approach to make sure." The controller replied, "All right, that's good, yeah, (the alternate is) showing clear, let me look and see what that weather was at (the closest reporting station). Yeah, it's almost an hour old, but it was showing just a hundred there with quarter-mile visibility and fog." The pilot responded, "All right, I've got the prison (near the airport) in sight, I know that, and it's right there by the airport, I can see the lights at the prison." There were no further transmissions from the accident aircraft. As the NTSB report states, the radar track and the wreckage makes it appear the pilot mistook a road for the runway.

The airport in this event was equipped with MIRL (Medium Intensity Runway Lighting) and no touchdown lights. *AirNav.com* (a commercial airport guide), listed the runway markings as "in poor condition," according to the NTSB.

Another NTSB report:

During a localizer back course approach, the airplane collided with four electronic transmission cables located 75 AGL and approximately 7,000 feet

short of the runway. The crew executed a missed approach and landed uneventfully at an alternate airport. The NTSB found that the crew did not adequately review the approach chart. The First Officer (pilot not flying) misidentified lights on the ground, which influenced the captain's subsequent misidentification (of highway lights for the runway environment).

This was another case of confirmation bias, in this event the captain's willingness to believe that lights not aligned with the runway were the runway lights he was looking for. The point is that even high time professional airline crews can fall victim to confirmation bias. That, in turn, "confirms" that single-pilot operators need to actively work to avoid it as well.

Beating confirmation bias

You can beat confirmation bias by employing a little healthy skepticism

when briefing yourself for an approach (or a visual night landing). Check what pattern of approach and runway lights you'll see when you first have visual contact, from the Airport/Facility Directory, *airnav.com* or similar sources, and on the airport view of instrument approach charts (figure 1). Compare the pattern to published examples (figure 2), and finally the runway stripes you expect to see (figure 3).

On final approach, watch for the specific patterns and make these callouts to yourself as you progress down final. Say them aloud; there is strong evidence that speaking aloud supports good operating technique:

"I have the approach lights in sight."

"I have the runway edge lights in sight."

"I have the runway markings in sight" (this may not occur until your landing light illuminates the

pavement, or not at all if the runway is covered in snow).

"Runway in sight, landing."

It's not enough to see lights at the Missed Approach Point; you need to see the correct lights. If you don't see the expected sequence of lights and markings on short final, miss the approach and climb out safely to try again or go to an alternate. If the runway lights or markings are minimal, don't combine low-light and poor visibility conditions—wait for the sun to come up or the weather to improve, or go land somewhere else. Don't just think you see the runway. You've got to know you see it. **T&T**

Thomas P. Turner is an ATP CFII/MEI, holds a Masters Degree in Aviation Safety, and was the 2010 National FAA Safety Team Representative of the Year. Subscribe to Tom's free FLYING LESSONS Weekly e-newsletter at www.mastery-flight-training.com.

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“After you land... Call This Number”

By Kevin Ware

It is 112 degrees F. on the ramp at North Las Vegas (KVG T), our Citation 560 is facing southwest into the afternoon sun and we have a GPU hooked up with the air conditioning going full blast – but the inside of the airplane still feels like a pizza oven. In addition to being uncomfortable for us, we know avionics can do really odd things when they get hot, so we are anxious to get airborne and cooled down before something untoward happens.

But then, in the middle of squinting, panting, and sweating our way through the checklist, the ramp attendant suddenly walks off, making an engine start ill-advised with the GPU hooked up. While hoping he will soon return, we temporize by calling for our IFR clearance back to Bellingham.

The clearance comes back with a garbled ...”cleared to Bellingham... Right Turn Two departure...flight plan route...climb via ...departure...

except for 6,000.” We write on wet paper with slippery pencils, pushing the hot headset cushions uncomfortably close to our ears to get it all down, and after a couple of tries, our readback is accepted. We then start entering the routing into the Universal FMS and Garmin back-up system.

About halfway through this, the ramp guy shows up and we hurriedly get the engines started, fearing he might again disappear. With engines running and the GPU disconnected, the AC seems to work a little better, but it is still well over 100 degrees in the cockpit as we ask for taxi clearance. While rolling out, we respond to three separate calls from the ground controller, asking us to confirm we have indeed been assigned the Right Turn Two departure. Each time we look at our scrawled notes, check that the correct SID is pulled up on our iPads and entered into the avionics, then confidently reply “affirmative.” We

approach the hold line for runway 12R with all FMS data entered, plus all checklists complete, and tell the tower we are ready to go. Thankfully, we are immediately cleared for takeoff.

On this leg I am the pilot flying (PF), and after getting airborne I start a right turn to heading 250 in order to intercept the LAS 313 radial out to the RUZCO intersection as the SID requires. Passing through 1,500 feet, I turn on the autopilot and hit NAV, and ask the pilot not flying (PNF) for the after-takeoff checklist. About halfway through the checklist, he says “hey, Kevin, where are you going?” I reply that I am flying the published departure, and expect to start a right turn to intercept the 313 radial shortly. He says, according to the Flight Director on his side, we just passed through that radial. I look over, and sure enough we have an avionics discrepancy. Problem is, which one is correct?

The easiest thing to do at that point would be to call the radar controller, announce that we have an avionics problem and request she confirm our position. But, she is talking non-stop to airline traffic departing Las Vegas International and we cannot get in a word edgewise. Luckily, it is severe VFR, and there is no traffic nearby on the TCAS. And so, as the airplane levels off at our assigned 6,000 feet on heading 250, we have a brief CRM-type discussion about the problem. For several reasons, we decide the Universal system on the PNF's side is probably putting out the correct information, and I switch the autopilot back to 'heading' and start a right turn to 360 to re-intercept the 313 radial.

While I am doing this, the PNF is waiting with his finger on the transmit button for a break on the frequency to announce our situation. But, at the very end of a sentence while talking to another aircraft, she suddenly says "Citation XXX, were you assigned the Right Turn Two departure?" The PNF replies with a professional "affirmative", and adds that we are correcting to return to the 313 radial. The controller responds with an abrupt and tersely worded series of heading and altitude changes that leaves him no time for further explanation. As we leave her frequency a few minutes later she says..."when you land, call this number, 702..."

We complete the trip without any further incident, and after landing my fellow pilot volunteers to look into the airplane issues, if I call the 702 number. I dial it up and am surprised to be switched to the exact same lady controller we had back in Nevada. She seems in a hurry, and not at all interested in hearing our side of the story. She says she needs to complete a computer form and just wants my name, address, phone number and pilot's license type and number...the rest she says I can talk to the FAA about. This does not sound at all good, so upon getting home I promptly fill out a



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NASA Aviation Safety Reporting System via computer (<http://asrs.arc.nasa.gov>), and then start checking the daily mail with more interest than usual.

Three weeks go by and nothing happens, but then an official-looking letter bearing the FAA logo arrives from Las Vegas by certified mail. It is dated two weeks prior to its arrival, yet it requests a reply in 10 days. The phrasing has a definite legal ring, as if written by a prosecuting criminal attorney, although it is signed by an Aviation Safety Inspector. It has a clear editorial bias that says we did indeed do something seriously wrong and enforcement action is being considered. The third paragraph even has a Miranda-type warning that any response I choose to make could be used against me.

The "guilty until proven innocent" tone makes me quite uncomfortable, and so I call a pilot acquaintance who was formerly employed as an attorney with the FAA and describe what happened. His attitude is actually not that concerned. First, he says promptly filing the NASA ASRS form was definitely a good idea, as the outcome of these events is often hard to predict.

Second, when he worked for the FAA, the FSDOs often deliberately sent out letters later than they were dated, because they thought it made a prompt response more likely. Third, the Las Vegas area has one of the highest



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rates of ATC pilot deviation reports in the country, and he thought this might have something to do with why we were questioned three times by the ground controller about our SID clearance..."getting it on the tape."

Finally, on a more positive note, he says the FAA is definitely in the business of weeding out "bad" pilots, but, at the same time, they know only a very small percentage of pilots fit that description, and, in addition, they generally do not hold pilots in violation for ATC deviations that are equipment-based. His concluding advice was that I should describe what happened in a letter, send it in as a reply, then see what happens.


I draft a reply which is almost identical to the ASRS report I had already submitted to NASA. To cover my bets on the timeline, I send it off to the FSDO inspector in Las Vegas by e-mail, fax and USPO. A week of silence follows, and then one morning my cell phone rings with none other than the Aviation Safety Inspector from Las Vegas on the line.

Unlike the tone of the letter bearing his signature, his attitude is quite different, being both friendly and courteous. We chat a bit about our flying backgrounds before getting down to the business at hand. He then says he has a long computer form to fill out, and he would appreciate my help with that. The form has some questions one would expect, such as time of day and weather conditions, but most are completely irrelevant to our operation, such as those about rest periods and multiple time zone flights. When the long data-entry process is finally over, he says, given that there appeared to be an avionics discrepancy, he would assume the airplane was sent to the shop and a repair entry made in the logbook. If so, and if I could send him a copy of that entry within the next five days, he should be able to just close the file.

I contact the maintenance shop and find that after our return both the avionics and the faulty air conditioning were indeed worked on. I call the mechanic and he says they never found out exactly what was went wrong with the avionics, but he understood the airplane had been heat soaked and that can often cause software and wiring connection problems that are difficult to reproduce. He says they removed the boxes, reprogrammed the software, tightened all connections, re-tested the systems and now they all operate normally. The AC system was also charged with Freon, and

(I was very glad to hear), all of this had been properly entered into the aircraft's logbook.

I promptly obtain copies of the log and send these via e-mail to the Las Vegas-based FAA Aviation Safety Inspector. A week later, I get a return e-mail saying, "I closed out the investigation with no action, since you provided documentation showing the avionics discrepancy involved in the pilot deviation was repaired".

Who says the FAA is always unreasonable, or that all heat-soaked avionics failure stories necessarily have bad endings? 



Kevin Ware is an ATP who also holds CFI, MEII and helicopter ratings, and is typed in several business jets. He has been flying for a living on and off since he was 20, and currently works as a contract pilot for several corporations in the Seattle area. When not working as a pilot, he is employed part-time as an emergency and urgent care physician for a large clinic in the Seattle area.

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Sierra Industries introduces improved, re-designed entry step for Cessna Citations

Cessna Citation modification firm Sierra Industries is proud to introduce Version 2.0 of its Citation cabin step. Designed with significant improvements in functionality and appearance over the original factory step, the “SkyStep” improves safety and utility at a highly competitive price. Manufactured at Sierra’s PMA-approved facility in Uvalde, Texas, the SkyStep is applicable to a wide variety of classic Citation aircraft.


Improved features of the new step design include:

- Precision machined from aircraft aluminum to eliminate cracking and breaking
- Enclosed back & sides to prevent slipping and improve passenger security
- Three evenly-spaced steps instead of two, for enhanced ease of entry
- First step is closer to the ground; no need for a separate first step in the nose
- Pneumatic cylinders softly deploy the door, preventing damage to door sill and toes

- Inertia reel cable with T-handle makes the step easy to retract from inside the cabin
- STC approval (pending) for Citation models 500, 501SP, 550, 551SP, S550, 560 (V, Ultra, Encore), 525 (CJ, CJ1, CJ1+), 525A (CJ2, CJ2+), 525B (CJ3, CJ3+)
- Options such as integral lighting, custom paint and tread finishes are also offered.

The SkyStep is now available at an introductory price of \$15,500 installed, a superb value, compared to the cost of the stock Cessna Citation replacement step. Sierra’s price includes onsite (continental US) installation by Sierra technicians. A discount of \$1,500 applies if installed at one of Sierra’s MRO facilities in Uvalde or San Antonio, Texas.

A video is at: <https://www.youtube.com/watch?v=87DZmg3wmCw&feature=youtu.be>

More information can be found on the Sierra website: <http://www.sijet.com/skystep> or via toll-free phone at 1-888-835-9377. 



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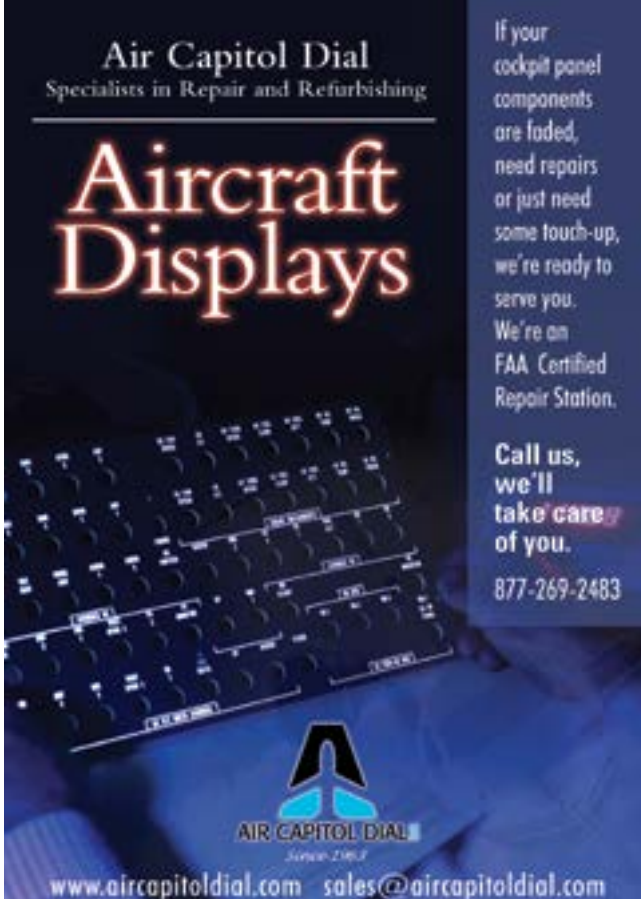
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TBM Owners and Pilots Association Convention Brings Daher Turboprop Family Together

The TBM Owners and Pilots Association (TBMOPA) announced a record attendance at its latest annual gathering, held October 7-11. Over 100 TBMs – including 20 of the new TBM 900s, as well as the predecessor TBM 850s and TBM 700s – arrived at Charleston Executive Airport (KJZI) in South Carolina.

TBMOPA's meeting included three days of dynamic learning sessions customized for the TBM aircraft family, featuring presentations by industry leaders and Daher, the aircraft manufacturer, along with TBM vendors such as Pratt & Whitney Canada.

While the program included presentations specific to the TBM very fast turboprop product line, there were topics covering more general areas – such as airmanship and safety. This year's topics included ADS-B, training, a Pratt & Whitney engine update and a safety review, among many others.

Attracting almost a quarter of the entire North American TBM fleet, the 2015 TBMOPA annual convention remained the largest fly-in convention dedicated to a single-engine turbine aircraft or small private jets – registering an increase in attendance of four percent from last year. The 2015 TBMOPA Convention attracted more than 100 TBM 700/850/900s to historic Charleston, South Carolina; 150 owners, 30 vendors and 325-plus attendees were present at the event.

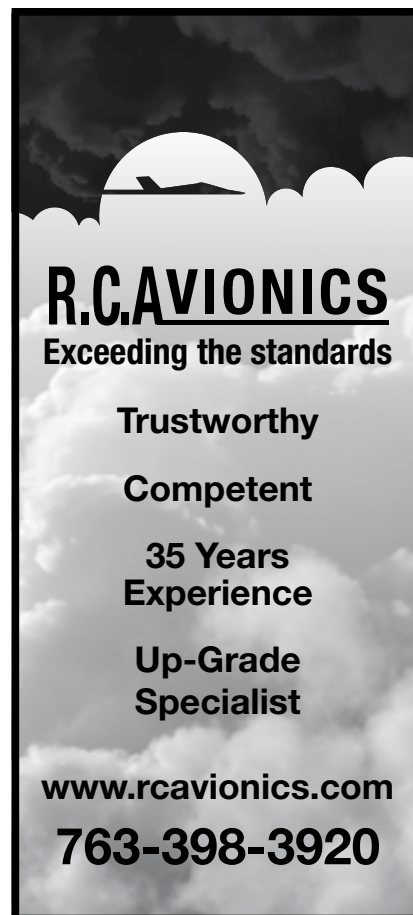
“Year after year, the TBM gathering continues to improve in quality as well as numbers of attendees, and we are proud to bring our support to this high-level flying community,” commented Nicolas

Chabbert, Senior Vice President of the Daher Airplane Business Unit. “This 12th TBMOPA Convention maintained the event's ascension under the direction of Chairman Frank McKee, with its organization remarkably managed by Bill Alberts and Andrew Knott.”

Chairman McKee noted that the 2015 convention enabled the TBM family to take part in much-appreciated safety seminars, especially in the field of high-altitude training, while other sessions were devoted to operational techniques. “Once again, our annual event offered an excellent way for owners to learn and socialize with each other, meet with vendors, and talk with personnel from Daher,” McKee added. “The social events encouraged further discussions about flying and offered the means to develop friendships. My thanks also go to the vendors who participated, providing support and financial contributions for the TBMOPA's charitable foundation.”

Among the 2015 gathering's highlights was the presence of two French Army TBM 700 pilots, Captains Dupont and Michiels, who flew one of the service's aircraft from their Rennes, France base – marking the 20th anniversary of this cornerstone TBM version's service entry in their unit. In addition, the pilots performed an aerial demonstration with their TBM 700 as an introduction to the TBMOPA's gala dinner, held on the deck of the retired aircraft carrier Yorktown.

Featured speakers at this year's event were retired USAF Col. Mark Tillman, who related his experiences as the former Commander of Air Force One, NASA Astronaut Storey Musgrave, and Dr. David Strahle, who discussed preflight weather



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planning and the Next-Generation Radar/NEXRAD network). Joining the guest speakers was a well-known orator for many TBMOPA members – famed ferry-pilot Margrit Waltz, who has circled the world in TBMs.

Sessions on the important topic of high-altitude hypoxia awareness training were organized by Airdocs, in conjunction with Western Michigan College of Aviation, focusing on state-of-the-art aviation hypoxia awareness training.

As with the association’s previous annual conventions, participation in the technical sessions qualified members for savings on insurance premiums that are exclusive to TBMOPA.

Pilot companions were offered activities at the South Carolina event as well, including a “pinch hitter” flight training program designed for non-pilot companions and a visit to Boone Hall plantation – a preserved historic mansion of the Old South’s golden age.

The TBMOPA has fixed the date of next year’s convention, which is slated for Phoenix, Arizona, September 21-25, 2016. 

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JetProp Announces Upcoming Delivery Of 300th Aircraft

Jetprop, LLC of Spokane, Washington, is pleased to announce that one of the newest JetProp owners was honored during the Malibu/Mirage Owners and Pilots Association (MMOPA) annual convention in Coeur D'Alene, Idaho, held from September 16th to 19th.


The 300th JetProp is currently in the manufacturing process and being converted to a PT6A turbine-powered Malibu/Mirage. Mr. Ricky Lennard of Shreveport, LA, received an engraved plaque to commemorate the delivery of the 300th PA-46 conversion since JetProp began.

"I love my Piper Mirage! With the performance and reliability of the PT6 turboprop, I feel like I'll have the best plane in the world", commented Lennard.

"For 20 years, JetProp and Pratt & Whitney Canada have teamed up to provide operators and pilots of piston-powered aircraft, such as Mr. Lennard, the improved power to weight, efficiency, reliability and safety of the PT6A", said Denis Parisien, Vice President, General Aviation, Pratt & Whitney Canada. "We congratulate

JetProp on reaching this milestone and wish the team many more years of success".

The parent company, Rocket Engineering, started bringing four STC's to the aviation marketplace in 1990, and JetProp joined Rocket in 1996 to bring several more PT6 turbine conversion STC's to the market. They have received full certification from the FAA, EASA and ANAC, with over 570 certified aircraft flying in over 20 countries worldwide.

JetProp operates its aircraft manufacturing facility at Spokane's Felts Field airport. The JetProp team can be contacted online at info@jetprop.com or at 1.509.535.6445. 



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Blue Sky Network Unveils Satellite Tracking System

Blue Sky Network has unveiled its HawkEye 7200A, the most advanced satellite tracking system yet. Paired with the feature-rich accessory, the HawkEye 100A, this device adds an even more powerful dimension to Blue Sky Network's line of tracking and management solutions specifically for aviation assets. The HawkEye 7200A is FAA-certified with an AML STC and features pinpoint tracking with GNSS precision, optional Bluetooth connectivity, and future ICAO GADSS qualifying specifications.

"We are tremendously proud to have participated in ICAO discussions regarding the future of aviation tracking," stated Jon

Gilbert, Blue Sky Network's CEO and President. "Drawing on this vision of GADSS, we have developed a new generation of hardware that is physically efficient and concurrently cost-effective. Blue Sky Network has always been a complete solution provider, and with this sophisticated HawkEye 7200A device coupled to SkyRouter, there is no reason for any company to delay deployment of this important safety tool."

The New Standard

The HawkEye 7200A meets and exceeds the proposed International Civil Aviation Organization (ICAO) Global Aeronautical Distress Safety System (GADSS) required performance criteria for Transport

Aircraft. Over the next several years, Air Transport Operators will be required to equip aircraft with enabling hardware products that are married to back-end services to support the ICAO GADSS vision. These units will have to autonomously identify abnormal circumstances in flight and may also have to be "tamper-proof" with independence from the ship's power.

With the HawkEye 7200A and SkyRouter, the industry leading cloud-based web portal, there is no reason to wait—the building blocks are available now. Blue Sky Network offers operators a "best-in-class" ICAO GADSS solution designed to meet all the expected requirements.



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Light As Air, More Powerful Than Ever

Supported by Iridium's powerful global network, the HawkEye 7200A weighs only one pound and boasts the most advanced technology on today's market. Its high-grade GNSS receiver incorporates GPS and GLONASS for double-level tracking with exceptional accuracy.


Blue Sky Network's flexible firmware platform also allows for easy remote upgrades to onboard hardware as the evolution of performance based GADSS criteria changes. The unprecedented small form factor of the HawkEye 7200A was designed to allow the unit to replace the required #2 ELT (a pending ICAO proposal).

Stay Connected At All Times

SkyRouter—Blue Sky Network's advanced cloud-based web portal—

brings another unrivaled quality to the HawkEye 7200A. Through SkyRouter, operators can easily view, manage, and communicate with aircraft at any location in the world at any given time. Maximizing the power of SkyRouter gives operators complete control and visibility of aircraft activity.

If an aircraft has an event defined by the operator as abnormal, SkyRouter will monitor these and route alerts locally and via SMS or email as instructed. With the occurrence of a distress event on the aircraft, while in flight, the operator will receive reports at an accelerated rate—everything is customizable at the discretion of the operator.

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by David Miller

The Art Of The Preflight

Preflighting your airplane is a pretty routine event, but it can be handled in many different ways. Back in my Falcon 10 days, I was based at a Fortune 500 flight department. They had a team of mechanics that accomplished the preflight duties and actually “released” the airplane on a written form. That did not relieve me of the ultimate responsibility as PIC, but it was great to have an extra set of eyes to look for things gone awry. For the vast majority of us, however, we are all alone on the ramp.

Weather conditions can alter our routine. I like to do most of the items in the hangar the day before departure. Things like systems checks, oil levels, etc. This allows me to take some extra time that might be compromised with early arriving passengers or inclement weather at departure time.

Darkness, and a two person crew, can add an element of surprise. Like rolling down the runway at Addison (KADS) one very early morning years ago, only to realize that both pitot static covers were still firmly covering their masts. “I thought you got those?” we both said to each other after an aborted takeoff at about 80 knots.

If your airplane was towed from the last place you parked, it may have experienced a “bump in the night” that never got reported. And as for fueling, it is good practice to oversee that task in person. I can’t say that I have always followed that policy. And for you piston drivers, disastrous results have occurred on more than one occasion when jet fuel was accidentally dispensed to a “turbine looking” airframe.

The most important preflight is the one right after any maintenance. Did the guys change any cockpit switches? Important ones, like the hydraulic pump circuit breaker? How about the oil filler caps?

My favorite story, of course, involves Stuart Fred and his beautiful CJ4. Stuart is a meticulous pilot. On second thought, he is downright anal. Prior to every leg, he runs every systems check, conducts a complete walk around, and loads his flight plans while on a power cart. He does it the same way every time. Many times he flies alone and departs early in the morning from hot, humid, Houston, Texas. Often, he is completely soaked in perspiration after the extensive inspection and he then jumps into the shower right before departure.



With 6,000-plus hours in his logbook, David Miller has been flying for business and pleasure for more than 40 years. Having owned and flown a variety of aircraft types, from turboprops to midsize jets, Miller, along with his wife Patty, now own and fly a Citation CJ1+. You can contact David at davidmiller1@sbcglobal.net.

So, picture Stuart on a very warm, dark morning as he prepared the CJ4 for our trip this summer to EAA and Oshkosh. I was along for the trip, as were some VIP passengers, including three men and two ladies. Stuart was up at 0530 doing his usual preflight. Everything was perfect as I opened the hangar door to let the passengers in.

Did I mention it was dark?

The ladies and gentlemen gathered with their bags in hand while Stuart finished his work. Completely satisfied with his preflight, Stuart entered the hangar holding his towel, a bar of soap, and his hair brush.

“I will jump in the shower, and we will be ready to go,” he said in his professional pilot voice.

As he walked by, I heard the shocked wife of one passenger comment to her husband, “Honey, I don’t think he has any pants on.”

Stuart was standing in his underwear.

The best preflight is the one we do the same way.

EVERY TIME.

Fly safe.

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