

Owner's Corner:
Cessna 340

Editor's Pics:
New Photo Feature

Altered States:
The All-Nighter

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Photo Courtesy of Tigre Pickett

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A Time for Remembrance and Celebration

This time of year is so exciting. It's still May as I write this brief. EBACE is going on, and news is coming out of Europe daily. Memorial Day and Independence Day are celebrated in the U.S. and are right around the corner, so EAA's Airventure at Oshkosh is also coming soon.

Sustainability is one of the major themes at this year's European Business Aviation Convention and Exposition. eVTOLs, EcoJets, and various sustainable jet fuels are a big focus. And Cessna has gotten into the game with its Citation Ascend, a new iteration of the venerable 560XL series of midsize jets, now claiming an entry fee of around \$16M with a promise of sustainable fuel compatibility and loads of upgrades.

Global Jet Capital sees softening business jet demand, yet Jetcraft forecasts swelling demand and increased preowned aircraft values. It's a mixed bag and there are many unknowns right now.

One of my other day jobs (I have a few) is as executive director for the Pinnacle Air Network, a consortium of FBOs, MROs, aircraft sales, and aircraft charter organizations. We have our annual meeting this month, and we look forward to receiving insights from our partners, some of the industry's best in observing and forecasting markets and business aviation consumer trends. StandardAero, JSSI, VSE, and JETNET are a few partners providing the Pinnacle members with updates at the meeting. I'll give some insights gained in next month's Editor's Brief.

Memorial Day is a time of remembrance for those who have sacrificed for the United States. So many of us have family or friends who have died in the line of duty. My grandfather on my Mom's side, an Army Air Force aviator from Dallas who flew the P-47 Thunderbolt in the European theater during WWII, lost his life in his aircraft. Send me a note and let me know about your family or friend who sacrificed for their country.

In this issue, we hear about an owner of a Cessna 340. Cessna's 300-series twins get overlooked due to the



My grandfather, Lt. Lynn Hair, stands in the center of his 370th fighter squadron composite.



HOMELIKE—First Lieut. Lynn W. Hair, 8131 Eustis, who is stationed with the Eighth Army Air Force in England, got a thrill when little Hazel Zipfel, English schoolgirl, climbed in the cockpit of his Thunderbolt fighter. Lieutenant Hair has a daughter in Dallas about Hazel's age.

400-series' capabilities, speed and range. But let me assure you, the 340, and its unpressurized sibling, the 310, are no slouches in the twin performance category. I accomplished my multi-engine rating in a 310Q, a well-worn training vessel, and let me tell you, it was a beast in the Florida heat doing single-engine NDB approaches to Okeechobee. Raise your hand if you've been there, too.

In April, we learned about Bose's new A30 aviation headset. This month, T&T author, Tigre Pickett, takes the Lightspeed Delta Zulu through its paces and provides a comparative analysis.

Joe Casey, a professional aviation instructor and T&T author, tells us about his experience dealing with braking system symptoms and fallout from failure.

His personal experience can save lives and help us understand what to look for and how to mitigate risks from system malfunctions.

Sleep and fatigue are perennial issues for pilots. Kevin Dingman once again provides us with common-sense ways to be at our best in the cockpit by maintaining fitness for flight and awareness of the pitfalls inherent in our aviation environment. And David Miller shows us how one group of pilots uses landing data to compete with one another, not for some random prize but for tangible safety benefits.

Please enjoy this issue of Twin & Turbine.

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LIGHTSPEED

DELTA ZULU HEADSET

by Tigre Pickett

When my Co-Captain, Rich Pickett, was offered a pre-release Bose A30 headset for review, I contacted Lightspeed's marketing department to see if they would provide their newest active noise reduction (ANR) headset: The Delta Zulu.

Lightspeed released the Delta Zulu in late 2022, creating a new niche in aviation headsets: the safety wearable. Still boasting the ear protection of passive and active noise reduction, Lightspeed added two safety features: carbon monoxide monitoring and alerting and customizable hearing profiles via their HearingEQity™ feature in their iOS app.



Carbon Monoxide Monitoring & Custom Hearing Profiles

Of these two new safety features, I found the most important was CO monitoring. When I'm not flying CitationJets, I am usually in our family's Cessna Turbo 206 or one of the many club Cessna 172s at Plus One Flyers. Older single-engine pistons are notorious for leaky exhaust pipes sending poisonous CO into the cabin. Odorless CO gas can quickly impair pilots with headaches, drowsiness, and possible death.

I tested the headset in a few piston aircraft and, fortunately, did not discover any hidden CO leaks like other Delta Zulu owners have found. And I didn't have the opportunity to test this safety feature in an actual CO environment, so I can't comment on its efficacy. But with its iOS app, pilots can program the controller's smart button to take CO readings to help monitor levels and provide peace of mind.

The other safety feature, custom noise level profiles, didn't make much of a difference in my experience with the product. Lightspeed says that the hearing test and setup helped users identify hearing issues, and they've found the feature to help, but I didn't see any marked difference with it on

or off. I also found it frustrating that I had to retake the hearing test after I went back to adjust a high-frequency level. However, I can see how, in the future, after a few thousand hours of flight time and idle jet engines and APUs blasting on tarmacs, I could benefit more from this feature.

Best New Feature: Rechargeable Battery Pack

The new feature that I appreciate the most is the lithium-ion rechargeable battery pack. No longer will you need spare AA batteries when your battery dwindles; connect the Universal Accessory Connector (UAC) plug and recharge from your plane's power via a USB-A port. Note that you must purchase an additional cable if you want to go UAC-to-USB-C.

Lightspeed proudly boasts that Delta Zulu "is the first headset to adopt the UAC plug." They will likely be the last. Why so gruff? Because in an age of attempting to consolidate plug types, Lightspeed requires us to use a non-ubiquitous plug to recharge our headset battery. So, now that means three cables in the flight deck to handle my iPhone (Lightning), iPad (USB-C), and now one for the Delta Zulus (UAC).

Other pilots have griped about this issue, and I agree with them. Switching from a UAC plug to USB-C

is wise for future versions (and yes, certification costs may prevent that from happening soon).

If you wish to forgo the rechargeable battery pack, Lightspeed includes a battery pack cartridge for those who would rather rely on two AAs to power their headset's ANR, safety features and Bluetooth functionality.

An App — But for Only Half of Us

Another new feature is the Lightspeed App, but currently only for iOS users. The ANR, CO monitoring and Bluetooth work independently of the app, but you won't be able to use the HearingEQity™ hearing test and profiles, nor will features like safety metrics or audio recordings and playback be available.

If you don't own an Apple iOS device, and you do wish to customize the hearing test for your unique inner ear architecture, you'll need to ask an iPhone buddy to download the app for you and borrow it for about 10 minutes as you pair, setup, and run the audio test.

As an iPhone user, I could use all the available features of the Lightspeed App as of this test. The audio recording function was a big draw for me since we record lots of videos; capturing quality audio is important and sometimes frustrating. The





from sitting for so long — depending on my head position — I would experience a noticeable decrease in the ANR functionality and different sound intrusions.

This ANR experience became very distracting during my last flight with the Delta Zulu in our Turbo 206. Somehow the flight deck noise and how the ANR reacted to it produced loud wah-wah-wahs in my ears. Combined with my already sensitive eardrums due to the drum

quality of the audio recordings was very impressive and true-to-source and seemed better than what we captured with our inline headphone jacks.

Controls for recording, waveform monitoring, and the app's propensity to continue recording even when the headset is powered off were frustrating. Thankfully, the app doesn't require FAA oversight, so their bug fixes and update timing should be faster than a UAC plug conversion. And I have heard of an upcoming drawing pad feature I'm itching to use.

But How Do They Feel?

Ah, the fit! I feel for any product manufacturer attempting to make a one-size-suits-all headset. Pilots' heads, jowls, mustachioed parts, and ear bits are all shaped differently. The Delta Zulu felt good on me and my slightly smaller head and narrower skull. The clamping force was similar to Bose A20s but more than the new A30s. I'm not a fan of the headband spring providing the clamping force. We own an old Lightspeed Zulu 2, and that headband has given up the ghost and won't clamp securely. Compare that with the spring-controlled clamp of the A20/A30s. The Bose products don't change in clamping force over many years.

The boom mic is fixed to one side (the left) and isn't swappable like Bose's headsets. The boom is also shorter. The mic picks up audio well, given that it's not centered in front

of my mouth, but I prefer the Bose boom length.

The ear cups feel fine, but the drum-like design was a big issue for me. Both Rich and I noticed that any tap or strong cord tug produced an irritating vibration on our eardrums.

It's hard to describe in words, but imagine putting a cup over your ear and tapping the bottom of it. Your eardrum will receive those vibrations. Maybe we're super sensitive with our hearing (don't confirm that with our wives), but I did the same taps and cord taps/tugs with my A20, and the effect was not as irritating or painful as in the Delta Zulu.

ANR and Sidetone

The critical component justifying the high cost of any aviation headset these days is ANR/ANC and Bluetooth functionality. The latter was excellent. Bluetooth powers on immediately when you turn on the unit, pairing was smooth, and the audio quality was excellent.

However, the ANR was not an enjoyable experience. What I found for myself (note: my head and experience may differ from yours) was a varied noise reduction experience. As I moved my head to look for traffic, talk to others, or adjusted my aching body



effect, I removed the headset for the remainder of the flight and put on my trusted A20s.

Lightspeed's customer support replied that it may have been an ear cup fit issue, but I tried the same movements with the A20 headset, and while variations were present, they were not as distracting or irritating as they were with the Delta Zulu.

Lastly, the sidetone (the way you hear yourself while talking into the mic) had a slight yet perceptible delay and a distorted sound to it that both



of us found unpleasant. The Bose products do not have this delay or distortion in our flight tests.

Are Delta Zulus for You?

All my issues aside, the Delta Zulu headsets are likely excellent — for the right head and ears. I am a bit biased, too, I have used the A20 for

many years, and its active noise-cancellation tech is remarkable.

I was genuinely excited to try out all the new features and see if Lightspeed had improved on prior Zulus. Unfortunately, I didn't have that experience, and I will stick with Bose until a future Lightspeed revamp

comes along. And I'll be excited again to give them another shot.

Should my findings rule this headset out for you? No way! All headsets react differently to each of us and the aircraft we fly. I may have a head that loves Bose's form factor, or my ears may be too sensitive. Please refrain from any verdicts until you try the Delta Zulu at your local pilot shop, or borrow them from a friend and see how they work for you. **T&T**

Tigre Pickett is a commercial single- and multi-engine pilot type rated in the Citation 525-series jets. With his father and Co-Captain, Rich Pickett, Tigre manages multiple CitationJets in southern California. Tigre has a passion for aviation and loves to fly various aircraft, exploring new destinations with his family in their Cessna Turbo 206. You can follow his exciting journey as a professional pilot alongside Captain Pickett on their YouTube channel and find more aviation content on **PersonalWings.com**.



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Right Brake, Wrong Decision

by Joe Casey



I was once a “flying salesman,” one of the coolest job titles ever. But when I took that job, I was hung up on the word “salesman.” I had never considered myself in sales, but it took me about a year to understand how great it was. A flying salesman gets to use an airplane to shake more hands, do more deals, and create more sales. And someone else pays for the flying. How cool is that?

I worked for a coatings manufacturer in East Texas, and my job was to use a Piper Mirage to fly all over the USA to visit manufacturing facilities that dipped, sprayed, or poured our paint during the final steps of their manufacturing process. I flew more than 500 hours a year in that Mirage, visiting clients who have become some of my best friends. I dovetailed aviation into work and loved every minute of it. At least I loved it until I made a poor decision one day. A decision that cost me my magic carpet.

On the last two trips in my Mirage, I experienced softness in the brakes upon landing. The brakes were firm when taxiing for takeoff, but upon landing, there was a softness that I knew was not wanted. So, I took my Mirage to the

mechanic, who then bled the system, reported no issues, and handed me back the airplane.

I flew another flight, and the same problem happened again, soft brakes upon landing. I returned the airplane to the same mechanic who bled the system again, tightened all the nuts and bolts related to the brake system, and handed me the plane again with a clean bill of health.

I then loaded up my wife and three young boys in that Mirage and flew from the Cherokee County Airport (KJSO) to the Piggott Airport (7M7) in Arkansas, an airport that sports a 2,500ft runway, a few open t-hangars, and some crop dusters. Those crop dusters support the many farming communities in this gem of a small town located in the nutrient-rich soil of the Mississippi River floodplains. And the deep ditches on the sides and end of the 2,500 ft runway at this little crop-dusting aerodrome didn't concern a vastly experienced (and entirely humble) pro pilot such as myself -- even after the soft brake issues.

The Piggott Airport is within walking distance of my objective, the L.A. Darling Store Fixtures Manufacturing

Facility. The plan was to arrive at 7M7 for lunch at the Darling factory, which used our paint in manufacturing. I planned to get pizza and drinks for the paint crew, shake hands with the managers, and then leave with my family for the East Coast for a combo vacation/business trip.

I had landed at Piggott more than 50 times before and never had a problem with the short 2,500 ft runway. To be forthright, it was a piece of cake. I'd landed there so often that this beautifully clear, no-wind day would be a no-brainer. And it needed to be because, you guessed it, I left my brain back in Texas.

I approached Runway 18 and touched down just past the road bordering the north end. The approach was normal, on speed, full flaps, and the touchdown was particularly nice. But, upon touchdown, the left brake went entirely to the floor with no braking effect, while the right brake worked perfectly. The airplane lurched right, and I added left pedal to keep the Mirage on the pavement. I added right brake and more left pedal, doing everything I could to maintain directional control and stop the airplane before the pavement ended. It was an unpracticed dance on the top of the right pedal and bottom of the left pedal, and I was not dancing well.

There was a 20-foot ditch at the end of the runway and a more shallow one on the right side of the runway. With the tiny bit of brain that I brought on this flight, I quickly deduced that I would not stop before the runway ended. I thought briefly about shoving the throttle forward and doing a touch-and-go, but that seemed impossible since I was already so slow. I committed to doing everything I could to stop.

Time seemed to slow down more than the airplane, and I can remember the whole scene in slow-motion. But, I could not apply enough "slow motion" to the big Piper, as it just didn't have enough braking action to stop before the end of the runway. At the very end, I applied enough right brake to cause the airplane to depart the pavement and dive into the ditch on the right side of the runway.

I wasn't going more than five mph when I went in the ditch, but you'd have thought I was going 100 mph with the resulting force. The front of the airplane hit the opposite side of the ditch and came to an abrupt stop. The wings held the aircraft up, lying in the mud on the opposite embankment, both main wheels suspended above the trench.

I looked up, and everyone in the airplane was okay -- until we all saw the blood coming from my forehead. In those milliseconds between my head traveling with the rest of my body and when the aircraft came to an abrupt halt, the soft area of my head between my eyes impacted the glare shield. Blood was now spurting wherever I turned my head. My 7-year-old son was just

fine until he saw me bleeding. That's when the screaming started. Nevertheless, I moved to the back of the airplane, opened the door, and ushered everyone out. We were all okay, except for me and the one-inch gash between my eyes. It was a superficial wound, but that part of the face bleeds a lot and was hard to stop.

Outside the airplane, I got the first glimpse of my handiwork. It was the first time I had bent metal on any aircraft, and I was in a state of shock. All sorts of terrible thoughts entered my mind. Was my career over? Will I ever fly again? Will insurance pay? How do I face my family again?

I didn't have much time to ponder those thoughts before the whole world showed up. At first, there were police cars, then news cameras, and then people just began pulling off the nearby road to do some rubbernecking. They were actually driving onto the runway to see what had happened. It was only a short time until 20 to 30 cars were on the runway. All the drivers were looking at me, taking pictures, and seemingly pointing out to everyone else whose fault it was for this tragedy. A good crowd for a little town like Piggott, eh? If you cause a scene in Small Town USA, you might as well do it right. I did right, alright; there was not enough "left" on this landing.

And then some friends began to show up. The gawkers departed, realizing the show was over. The police scurried people away from the scene, the civil air patrol came to turn off the ELT (yes, it worked), and then a guy with a crane showed up. A few local pilots gave me some "we understand" affirmations. I've got some neat mental pictures of that Mirage being lifted out of the ditch, and it warms my heart thinking of how good people came to help. Soon the airplane was sitting on the small tarmac on the north end of the airport, and I was embarrassingly riding in an ambulance to the Piggott Hospital. I was fine, but the police said I should go just in case. They performed a C.T. scan of my head (and found a brain). I had brought it with me; I just failed to use it. Thankfully, my only medical problem was the permanent scar between my eyes.

That night I found a small hotel and lay awake, reliving scenes from the accident. After a sleepless night, I awaited the FAA Aviation Safety Inspector (ASI) to arrive the next day. The ASI showed up, just as he said he would, and I met him at the airplane. He asked me a bunch of questions,



almost all of those questions having to do with my emotional recovery (nice guy), and then he proceeded to enter the airplane. He climbed up into the left front seat and pushed on the brakes. I'm so thankful that the left brake went to the floor as it did on my fateful landing. That was all the ASI needed to see to determine that I was not fabricating a story. His report listed the crash as a "brake failure," and I took pride that it didn't say "pilot error."

I kept my sanity by telling myself that it wasn't my fault, that I was a good pilot, and that this could happen to anyone. For years I kept up this talk whenever the story of the crash would come up in conversation. But, as every pilot should hope, our emotional maturity increases, and we can see a tragedy with a clear set of eyes. With more maturity and emotional health, I can describe what caused that crash. And it was not a brake failure.

The cause of that crash was that I didn't perform a brake check. That's it. It is as simple as that—a brake check. Every pro pilot knows that a brake check is mandatory before every landing. Read any checklist from any airplane built in the last 50 years that can have a single point of failure (nearly 90 percent of planes flown by readers of this article!), and in that landing checklist will be a brake check. A pilot should know the condition of the brakes before every landing.

Why? Aside from plain old good aviation technique, a brake check is required in every pressurized airplane

with one tire on each trunnion because the pressurized air in the cabin tries to equalize air pressure at all times, and it will gladly take any path of least resistance. Air can escape through the seal along the door, through the rubber gaskets at the openings where the flight controls travel, and that same air will fill a brake cylinder if there is a crack in the rubber o-rings surrounding the shaft entering the wheel cylinder.

That happened to me. A 30-cent o-ring had cracked, allowing pressurized air to enter the left brake cylinder and fill it with air. When I pushed on the brake, the compressible air compressed, and there was no braking action on only the left brake. 30 cents. OMG. A failure in a 30-cent part caused my Mirage to crash.

It was a contributing factor, but it was not the deciding factor. At the end of the analysis, the deciding factor was me. I should have chosen a different airport than the Piggott Airport. I'd used that airport successfully many times, but it only took one time for Murphy to show up and spoil the party. When operating in an environment with little margin, everything must be right. There's no way I should have considered landing at Piggott with a known soft brake. I could have easily landed at Kennett Memorial (KTKX), which had a 5000 ft runway (along with super-cheap fuel) and was only 15 miles away.

But I was in a rush. I had a lunch engagement to meet. I was ready to serve pizza and shake hands. I was prepared



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to take care of the paint business, not the business of flying the airplane.

That brings us to your aviation story. Do you operate with little margin? Are you operating at max gross weight on every flight? Are you landing at the end of fuel range frequently? Are you pushing weather minimums routinely? Are you flying single-engine piston aircraft at night or over mountainous terrain? Do you fly over the Great Lakes without a raft? Do you get a cheapo-BFR each year, never really being challenged? Are you flying late in your circadian rhythms? Have you practiced an engine-out event lately? Do your O2 systems have sufficient pressure? Are you wearing your shoulder harness on takeoff and landing?

I operated on a short runway with a heavy airplane and left myself with no outs. If anything went wrong, I was going to be in the ditch. One o-ring on the left brake was all it took to put me in the ditch.

Where can you add margin to your aviation life? Where can you add margin so you don't end up in the ditch?

I'm happy to report that my beloved Mirage is flying today. It got a new wing and engine and has flown many hours for subsequent owners. I occasionally hear my old familiar N-number on the radio as I fly around Texas, and I check on it now and then on FlightAware and see that it is serving its owners well. That airplane was so good to me for so many years. I can only wish I had been as good to it as it was to me.

I never knew about the problem of pressurized air getting into the braking system, and it bothered me that I had flown with some great instructors and never learned this nuance. Upon reflection, they probably did make me aware, but I most likely forgot or overlooked that important training. So, I began to teach others about my crash. Most other pilots did not know about this potentially devastating brake system issue. I decided to be a better CFI and open up my own flight training company, mostly because I wanted to help others who didn't know what they didn't know.

I turned this terrible crash into a career that still serves me today. I dedicated myself to training the owner-flown community of pilots, and that niche of beautiful people has been so good to me over the years. Without this crash, I'd probably still be that arrogant pilot who thought only idiots could crash an airplane. I am far more understanding, more humble, and a less judgmental pilot because of that crash. It prepared me to be a better CFI.

Good things can come from an awful event. What good can you create in your life after reading my tale of woe that turned into a story of goodness? Where can you add margin to your life? **T&T**

Joe Casey is an FAA-DPE and an ATP, CFI, CFII (A/H), MEI, CFII, CFIH, as well as a retired U.S. Army UH60 standardization instructor/examiner. An active instructor in the PA46 and King Air markets, he has accumulated 16,000-plus hours of flight time, with more than 5,200 dual-given as a flight instructor. Contact Joe at joe@flycasey.com or 903.721.9549.



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Cessna 340



Sushee Perumal of Ontario, Canada, has owned a 1977 Cessna 340A since 2020

Sushee Perumal, a technology-focused entrepreneur from Ontario, Canada, is the proud owner of a Cessna 340A. He has owned this pressurized six-seater for three years, during which he has accumulated over three hundred hours in the plane.

Perumal has been a pilot for over fifteen years, which he thought would be out of reach as a child. Since becoming a pilot, aviation has defined much of Perumal's life. Flying has enabled him to experience the world from a new vantage point.

"I have had the aviation bug for as long as I can remember. But without family or friends in aviation, I didn't

know the path to becoming a pilot – so I just put it off. I never really thought about [doing] it; maybe one has to be super-rich or privileged to become a pilot. Luckily, my first job out of graduation had me working within view of Billy Bishop Airport (CYTZ) by the waterfront in Toronto. I saw planes doing touch-and-goes all day long," Perumal recalled.

"So, out of curiosity, I signed up for a discovery flight. I learned this is completely attainable financially, as you can stretch out the ten to twenty thousand dollars it takes to get your private pilot for a year or even two years. As expensive as that is, it's more about the

discipline to study; the time commitment it takes (weekends, evenings) are the bigger factors for people. Also, the accessibility – it's all about the instructors and the aircraft, so being close to a good flight school really helps."

Perumal had found that not only was becoming a pilot initially a sacrifice, but this commitment towards training is also an ongoing endeavor. His mindfulness towards being a proficient pilot expanded in 2020 when he purchased his first aircraft – a 1977 Cessna 340A. At the time, he was considering a Cessna 310R, but the several models he went after didn't pan out, and the opportunity



Hope Air, a non-profit that provides medical transportation to people living far from medical care in large cities, like Angel Flights. The timing hasn't yet worked out for any flights, but it's a great organization, and I'm happy to be part of it," he advised.

"For personal trips, I was in New York for a day with my family a couple of weekends ago during Easter. We love Maine and did that a couple of times last summer, and we will be going camping this summer there, as well as Cape Cod and a day trip to Nantucket and Martha's Vineyard (as it's impossible to find reasonably priced accommodation there). I discovered the Bahamas for the winter

With Perumal's hundreds of hours spent in his plane, traveling between Canada, the United States, and the Caribbean, he understands its average performance well.

"With 65% power, [you see] 180 knots true in the 7,000 to 10,000 feet range, 190 knots in the teens, and 200s above FL200. I see fuel burns of under 19 gallons a side at cruise, so 38 gallons. I plan on no more than 3 to 3.5 hours [worth of fuel], which comfortably gives me around 500 nm depending on the headwinds. Of course, we have those times when I did 280 knots and 740 miles with over 1.5 hours of reserve," he happily recalled.

Perumal flies roughly a hundred hours annually, including time spent with instructors and fellow pilots in the right seat. He noted that the practice of flying with others is one of the ways that he works to stay sharp in the cockpit.

"I got a commercial ticket, too, to advance my training. I am also working on an ATPL, so I can keep up to date and keep it all fresh. Flying is such a perishable skill. Just flying, and then the knowledge as well. If you don't use it, you lose it! I have a couple of friends who are instructors, as well as one who is a 30,000-hour-plus pilot who I go up with frequently. He keeps an eye out on me and calls things out

to purchase another great 300-series Cessna presented itself.

"I've owned the 340A for what's coming up to three years now. It was very well equipped. It has mid-time RAM VI engines (300 and 700 hours each), spoilers, S-TEC 55X, and an updated interior. I did some avionics upgrades when I first got it, as it didn't have ADS-B Out, and I wanted Flight Stream 210 to integrate with the flight maps on the iPad. This just makes it so much easier to upload routes. I also got the taxi and landing lights replaced with LED lights and the locks replaced."

Currently, the twin fits all of Perumal's boxes; he flies for business and recreation – with his family of four.

"I think as the kids grow, I'd like to upgrade to something with more range and speed. I haven't quite decided what that is, but it will be pressurized and be a turbine. There are planes out there with incredible value, like the Conquest, and also, there are planes that are more updated, sexy, and new, like Citation M2s. It will all depend on the mission and the budget three years out."

"I fly in the Northeast [United States] mostly for business and mini-family getaways. I also volunteer with

months, so that will be an annual trip from now on," Perumal stated.

"With so many destinations I discovered through tribal knowledge, I created an app, fly2places.com – which allows pilots to discover destinations. It also has an itinerary builder for people to instantly put in parameters and get an hour-by-hour itinerary for their destination."





I'm constantly updating my checklists. I don't think checklists are supposed to be static; you need to add to them."

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as an informal instructor, as he has enough experience to tell me if I'm being sloppy or need some correction."

"Also, I'm constantly updating my checklists. I don't think checklists are supposed to be static; you need to add to them. I had watched a video on someone who mentioned this idea, and ever since, even before, I have been ensuring that my checklists were always updated and reordered. The checklists for my plane were written in the 1970s, and not that there's anything wrong with them – but you just find your own things to add to them. Flying the plane each time is a great part of plane ownership because you can find its nuances and the things you should add to a checklist."

Perumal has found that a frequent piece of advice Twin Cessna owners give prospective ones is to not rush into owning the aircraft.

"Don't jump into one without experience. It's about the quality of experience, like my extensive IFR cross-country experience for a decade on the [Cessna] 182. It's about skill stacking; putting a pilot into busy IFR airspace in a new high-performance machine is too much. I am not smart enough to handle it all on day one."

Naturally, insurance demands also determine when it's appropriate for a pilot to jump into twin ownership, he noted.

"Expect insurance to ask for twenty-five hours in type with an instructor. I initially did around fifty hours with an instructor, including cross-country time. Also, a good sim program is a must. I did mine with Aircraft Simulator Training (AST) in Burnet, Texas, specializing in Twin Cessna training. They throw everything at you and give you lots of nuanced information about your Twin Cessna. That's invaluable."

Perumal concluded his thought, "Twin Cessnas have incredible value. Even for a million [dollars], you can't get the pressurized cabin class plane that goes at flight levels. So, expect similar maintenance and know you are getting into the restoration business. Do a good pre-buy and know what you are getting into. But don't



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Continued on Page 20

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100%

TOTAL MARKET COVERAGE

JETS - 21,487

CHIEF PILOTS & OWNERS

COUNT AIRCRAFT

66	AIRBUS A300S
8	ASTRA 1125
39	ASTRA 1125SP
48	ASTRA 1125SPX
23	BEECHJET 400
239	BEECHJET 400A
228	BOEING BBJ
18	BOMBARDIER CRJ
745	CHALLENGER 300
286	CHALLENGER 600
68	CHALLENGER 601-1A
94	CHALLENGER 601-3A
325	CHALLENGER 604
62	CHALLENGER 650
3	CHALLENGER 800
58	CHALLENGER 850
6	CHALLENGER 870
354	CIRRUS VISION SF50
118	CITATION 500
339	CITATION 525
303	CITATION BRAVO
182	CITATION CJ1
96	CITATION CJ1+
231	CITATION CJ2
225	CITATION CJ2+
458	CITATION CJ3
216	CITATION CJ3+
383	CITATION CJ4
178	CITATION ENCORE
75	CITATION ENCORE+
370	CITATION EXCEL
10	CITATION I
241	CITATION I/SP
408	CITATION II
46	CITATION II/SP
140	CITATION III
145	CITATION LATITUDE
43	CITATION LONGITUDE
312	CITATION M2
489	CITATION MUSTANG
124	CITATION S/II
313	CITATION SOVEREIGN
108	CITATION SOVEREIGN+
268	CITATION ULTRA
260	CITATION V
25	CITATION VI
108	CITATION VII

297	CITATION X
37	CITATION X+
256	CITATION XLS
310	CITATION XLS+
1	DIAMOND I
23	DIAMOND IA
17	DORNIER ENVOY 3
310	ECLIPSE EA500
17	EMBRAER LEGACY
20	EMBRAER LEGACY 450
78	EMBRAER LEGACY 500
102	EMBRAER LEGACY 600
64	EMBRAER LEGACY 650
15	EMBRAER LINEAGE
332	EMBRAER PHENOM 100
475	EMBRAER PHENOM 300
86	EMBRAER PRAETOR
55	FALCON 10
23	FALCON 100
13	FALCON 200
248	FALCON 2000
5	FALCON 2000DX
25	FALCON 2000EX
135	FALCON 2000LX
126	FALCON 2000LXS
24	FALCON 20C
16	FALCON 20C-5
15	FALCON 20D
1	FALCON 20D-5
16	FALCON 20E
45	FALCON 20F
71	FALCON 20F-5
171	FALCON 50
5	FALCON 50-4
8	FALCON 50-40
99	FALCON 50EX
262	FALCON 7X
53	FALCON 8X
161	FALCON 900
26	FALCON 900C
17	FALCON 900DX
322	FALCON 900EX
85	FALCON 900LX
152	GLOBAL 5000
6	GLOBAL 5500
202	GLOBAL 6000
22	GLOBAL 6500
55	GLOBAL 7500
244	GLOBAL EXPRESS
25	GULFSTREAM G-100
110	GULFSTREAM G150
203	GULFSTREAM G-200

252	GULFSTREAM G-280
10	GULFSTREAM G-300
9	GULFSTREAM G-350
21	GULFSTREAM G-400
294	GULFSTREAM G-450
95	GULFSTREAM G-500
596	GULFSTREAM G-550
68	GULFSTREAM G-600
383	GULFSTREAM G-650
15	GULFSTREAM G-I
13	GULFSTREAM G-II
10	GULFSTREAM G-IIB
81	GULFSTREAM G-III
152	GULFSTREAM G-IV
290	GULFSTREAM G-IVSP
174	GULFSTREAM G-V
27	HAWKER 1000A
5	HAWKER 1000B
1	HAWKER 125-1AS
1	HAWKER 125-600A
9	HAWKER 125-600AS
36	HAWKER 125-700A
5	HAWKER 125-700B
65	HAWKER 4000
203	HAWKER 400XP
43	HAWKER 750
105	HAWKER 800A
14	HAWKER 800B
346	HAWKER 800XP
43	HAWKER 800XPI
82	HAWKER 850XP
167	HAWKER 900XP
2	HAWKER-3B
168	HONDA JET
2	JET COMMANDER 1121
1	JET COMMANDER 1121B
2	JETSTAR 731
6	JETSTAR II
4	LEARJET 23
4	LEARJET 24
1	LEARJET 24A
1	LEARJET 24B
13	LEARJET 24D
6	LEARJET 24E
6	LEARJET 24F
1	LEARJET 25
15	LEARJET 25B
1	LEARJET 25C
22	LEARJET 25D
1	LEARJET 28
23	LEARJET 31
152	LEARJET 31A

19	LEARJET 35
380	LEARJET 35A
20	LEARJET 36
34	LEARJET 36A
118	LEARJET 40
214	LEARJET 45
200	LEARJET 45XR
89	LEARJET 55
8	LEARJET 55B
6	LEARJET 55C
244	LEARJET 60
114	LEARJET 60XR
13	LEARJET 70
109	LEARJET 75
17	LEARJET 7T
119	PILATUS PC-24/45
272	PREMIER I
6	SABRELINER 40A
1	SABRELINER 40EL
2	SABRELINER 40R
4	SABRELINER 60
8	SABRELINER 60ELXM
38	SABRELINER 65
4	SABRELINER 80
1	SABRELINER 80SC
1	SUKHOI SBJ
3	SYBER JET SJ30
49	WESTWIND 1
1	WESTWIND 1123
12	WESTWIND 1124
38	WESTWIND 2

TURBOPROPS - 13,856

CHIEF PILOTS & OWNERS

COUNT AIRCRAFT

174	AVANTI
2	AVRO RJ70
5	BRITISH AEROSPACE 146
486	CARAVAN 208
2109	CARAVAN 208B
137	CHEYENNE I
13	CHEYENNE IA
202	CHEYENNE II
45	CHEYENNE III
35	CHEYENNE IIIA
61	CHEYENNE IIXL
37	CHEYENNE IV
214	CONQUEST I
264	CONQUEST II
74	DAHER TBM-700A
86	DAHER TBM-700B

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124 DAHER TBM-940
4 DAHER TBM-960
163 DE HAVILLAND DHC
25 EPIC E1000
1 FOKKER 100
1 FOKKER 70
20 JETSTREAM 31
68 JETSTREAM 32
66 JETSTREAM 41
29 KING AIR 100
442 KING AIR 200
20 KING AIR 200C
13 KING AIR 200T
238 KING AIR 250
23 KING AIR 260
175 KING AIR 300
14 KING AIR 300LW
629 KING AIR 350
91 KING AIR 350C
34 KING AIR 350ER
375 KING AIR 350I
6 KING AIR 350IER
41 KING AIR 360
7 KING AIR 90
195 KING AIR A90-1
6 KING AIR A/B90
69 KING AIR A100
162 KING AIR A200
28 KING AIR A90
95 KING AIR B100
1030 KING AIR B200
117 KING AIR B200C
105 KING AIR B200GT
6 KING AIR B200SE
8 KING AIR B200T
40 KING AIR B90
281 KING AIR C90
35 KING AIR C90-1
181 KING AIR C90A
358 KING AIR C90B
68 KING AIR C90GT

96 KING AIR C90GTI
137 KING AIR C90GTX
13 KING AIR C90SE
234 KING AIR E90
147 KING AIR F90
29 KING AIR F90-1
4 MERLIN 300
14 MERLIN IIB
4 MERLIN III
23 MERLIN IIIA
42 MERLIN IIIB
17 MERLIN IIIC
2 MERLIN IV
12 MERLIN IV-A
32 MERLIN IV-C
78 MITSUBISHI MARQUISE
13 MITSUBISHI MU-2F
1 MITSUBISHI MU-2G
11 MITSUBISHI MU-2J
30 MITSUBISHI MU-2K
11 MITSUBISHI MU-2L
20 MITSUBISHI MU-2M
21 MITSUBISHI MU-2N
23 MITSUBISHI MU-2P
45 MITSUBISHI SOLITAIRE
68 NEXTANT 400XT
1 NEXTANT G90XT
939 PILATUS PC-12 NG
604 PILATUS PC-12/45
202 PILATUS PC-12/47
278 PIPER JETPROP
82 PIPER M500
193 PIPER M600
1 PIPER MALIBU
578 PIPER MERIDIAN
255 QUEST KODIAK 100
1 ROCKWELL 680T TURBO
5 ROCKWELL 680V TURBO II
5 ROCKWELL 680WTURBO II
4 ROCKWELL 681 HAWK
5 STARSHIP 2000A
45 TURBOCOMMANDER 1000
22 TURBOCOMMANDER 690
126 TURBOCOMMANDER 690A
130 TURBOCOMMANDER 690B
61 TURBOCOMMANDER 840

22 TURBOCOMMANDER 900
21 TURBOCOMMANDER 980

TWIN PISTON - 8,807

OWNERS

COUNT AIRCRAFT

38 BARON 56 TC
1446 BARON 58
1 BARON 58 PA
363 BARON 58P
102 BARON 58TC
3 BARON A56TC
320 BARON G58
181 BEECH DUKE B60
292 CESSNA 414
388 CESSNA 414A
34 CESSNA 421
28 CESSNA 421A
272 CESSNA 421B
615 CESSNA 421C
109 CESSNA 310
165 CESSNA 340
553 CESSNA 340A
53 CESSNA 402B
BUSINESS LINER
125 CESSNA 402C
28 CESSNA 404 TITAN
292 CESSNA 414
388 CESSNA 414A
34 CESSNA 421
28 CESSNA 421A
272 CESSNA 421B
615 CESSNA 421C
57 CESSNA T303
111 DIAMOND D42
120 DIAMOND DA
84 PIPER 600 AEROSTAR
3 PIPER 600A AEROSTAR
45 PIPER 601 AEROSTAR
4 PIPER 601B AEROSTAR
203 PIPER 601P AEROSTAR
24 PIPER 602P AEROSTAR
581 PIPER CHIEFTAIN
26 PIPER MOJAVE
304 PIPER NAVAJO

257 PIPER SENECA
12 ROCKWELL 500 SHRIKE
23 ROCKWELL 500A SHRIKE
83 ROCKWELL 500B SHRIKE
47 ROCKWELL 500S SHRIKE
4 ROCKWELL 500U SHRIKE
12 ROCKWELL 520
COMMANDER
3 ROCKWELL 560
COMMANDER
9 ROCKWELL 560A
COMMANDER
5 ROCKWELL 560E
COMMANDER
6 ROCKWELL 560F
COMMANDER
11 ROCKWELL 680 SUPER
3 ROCKWELL 680E
10 ROCKWELL 680F
COMMANDER
11 ROCKWELL 680FL GRAND
COMMANDER
4 ROCKWELL 680FLP
GRAND LINER

HIGH PERFORMANCE MOVE-UP SINGLES - 6,873

OWNERS

COUNT AIRCRAFT

446 CESSNA 182
55 CESSNA 206
426 CESSNA P210N
22 CESSNA P210R
57 CESSNA T182
1106 CIRRUS SR20
3594 CIRRUS SR22
21 MOONEY ACCLAIM ULTRA
12 MOONEY OVATION ULTRA
235 PIPER MALIBU
183 PIPER MATRIX
472 PIPER MIRAGE

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expect a perfect machine; just look at the maintenance pedigree and how often it has been flown.”

Perumal highlighted that regardless of an airframe's particular maintenance pedigree, pilots and owners of Twin Cessnas benefit from being technically minded.

“When you own any Twin Cessna, you are in the restoration business, so I keep up with the maintenance, not deferring anything. You need to be there for the diagnosis and keep up with the maintenance, with all the different schedules, and make the decisions. When the A&P calls and wants to discuss something with you, try not to get in the way by trying to be an expert, but be collaborative and pipe in if they need you to. With any A&P, it's about your relationship with them. And that's the underrated thing about owning your own plane; the number of partnerships you build. It really does take a village.”

Perumal clearly enjoys the aircraft ownership journey. He frequently contributes to various online Twin

Cessna forums, discussing the pitfalls and joys of ownership with other aviators.

“Without aviation, my life wouldn't be nearly as exciting. Both professionally – for the meetings I attend and the relationships I build to advance my business, and for the weekend getaways with family. Aviation makes this corner of the world smaller, and there are so many amazing destinations, many off the beaten path. Without aviation, business growth would be slower, and I couldn't give my family the depth of travel experience they now enjoy.”

Perumal added that he enjoys storytelling and has been making home movies for nearly twenty years. Consequently, he created a YouTube channel to relive his flights and share aviation with family, friends, and those wanting to get involved with aviation. **T&T**

Perumal's adventures can be found under the channel name @susheeperumal.

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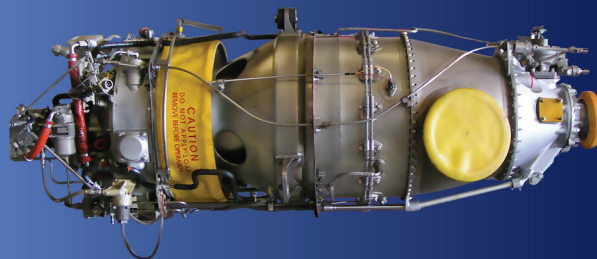
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From the Flight Deck

by Kevin R. Dingman



Altered States

Flying the all-nighter—without reverting into a Neanderthal



The airplane doesn't know if it's nighttime or if the weather is bad.

Fa-tigue. fuh-teeeg – *noun*

Extreme tiredness, typically resulting from mental or physical exertion, sleep deprivation or illness. Known to cause irritability, poor judgment and blabbering like a caveman.

The first time I flew while tired (the word fatigue wasn't in fashion then) was as a teen flying a Cherokee 140 from Kalamazoo, all-night to Billings, MT. Having survived unscathed, later that summer, I flew another all-nighter to New Bedford, MA, and then several to Denver — that would be Denver Stapleton when it still existed. My fatigue exposure in the military also came while flying long distances after midnight: Nellis AFB, NV to central Florida in a practice run for the 1986 Libya bombing, Vegas to Italy for a NATO exercise (see "Passing Gas," T & T January 2011) and another to deliver four, factory-new F-16's from the General Dynamics factory in Texas to Greece. While young and bulletproof then, this retired airline and newbie Citation captain is no longer knobby-kneed nor Kevlar coated. With COVID (kinda) in the rear-view mirror, all manner of travel has resumed, and long days and nights of flying lie ahead.

A Hard Day's Night

– The Beatles, 1964

When I first upgraded to Captain on the MD-80, my low seniority forced me to fly all-nighters. I'd flown plenty of them as an F.O. in L.A. 17 years earlier, mainly to the East Coast and Guadalajara, Mexico, but I quickly discovered the trips to be more painful than I remembered. My young(er) F.O.s attributed it to my age. Of course, they were right, those insensitive whippersnappers. Then, after integrating our two airlines and transitioning to the B-737, I found myself junior once again, returning to ORD from SFO, PDX, SEA or LAS at 5:30 a.m. I'd arrive tired and grumpy like I'd battled a woolly mammoth. Luckily for those around me, unlike the Air Force missions, the arrivals were without ordnance or that sticky thing from my Passing Gas article. I've found myself in the Citation after midnight just a few times, but respect for flexibility and fatigue will be needed as we all attempt to squeeze more work and play into each flying day.



Be prepared for 'post-meal' fatigue if you eat inflight.

It doesn't have to be dark outside to feel fatigued.



Stupid is, as stupid does

– Forrest Gump (Tom Hanks), 1994

Having no choice but to be flexible and adapt when faced with an all-nighter, I've often embraced the philosophy of the famous shrimp boat Captain and long-distance runner: Professor Forrest Gump. Not the box-of-chocolate axiom; the epistemological philosophy of stupid is, as stupid does. To ensure proper rest, my layovers no longer include all-day leisure events like stupid-golf or stupid-tours of the city. And no stupid-socializing and staying up late to have dinner and drinks with the F.O. But our new editor will still benefit from my elucubrating over articles written at that

not-so-stupid hotel in Marco Island (as demonstrated by his need to edit my incessant use of parenthetical statements, creative as they may be, my grammatical legerdemain and the ingenious application of made-up words). Strategic time management, and the boredom pursuant, have usurped this geriatric Part 135 captain's eating/playing/writing regimen. Perhaps with fewer parenthetical statements (such as this) and a power nap, I can transform from a blabbering, cryptograph-chiseling caveman to Professor Gump's humble and contrite persona to finish this story.

The Power Nap and Sleep Inertia

Do they work? Well, the FAA, airlines, and military have considered allowing cockpit napping for some time—with strict guidelines for the pilot(s) who remain awake in such a scenario. A fine idea but extremely difficult to sell to the flying public—especially in part 135, where the crew would be visible as they snore, drool and talk in their sleep. The AOPA Air Safety Foundation related the story of a G.A. pilot whose "power nap" ended when he awoke unhurt in a cornfield. And then another when a CFI's micro-nap on final allowed his student to collide with a snow bank. Obviously, strategic napping should only be employed with another awake and alert pilot able to monitor the airplane. At one point, official guidance for power napping was to rest until a pencil would fall from between your fingers. More recently, it was shown that 15-20 minutes is needed to put us at the proper place on the sleep sine-wave chart without developing "sleep inertia" — that is, feeling worse after the nap than if you hadn't napped at all. Without the luxury of a power nap, how do we combat fatigue to

avoid missing a radio call, forgetting a checklist item, or waking up in a cornfield? Here's a list that is so easy a caveman could do it:

- Get 7-8 hours of sleep every day
- Limit alcohol
- Avoid a large meal
- Stay hydrated
- Use a noise-canceling headset
- Bring along a pax, or better still, another pilot
- Turn on the overhead lights
- Tell the other pilot/person you are sleepy
- Park the plane by 10 p.m.

Obstructive Sleep Apnea (OSA)

Even if we do all the right things, physical and mental demons may lurk in the sleep-inducing realm of fatigue. Apnea and hypopnea can be defined as total and partial airway obstructions. When you stop breathing while asleep, your brain sends a wake-up call after about 10

seconds. Time zone changes and alcohol can delay that wake-up call by 30 seconds or longer. This can result in significant fatigue and long-term health issues. Why did the Feds get all wound up over sleep apnea a few years ago? Because OSA can result in strokes, depression, arrhythmia, high blood pressure, congestive heart failure, obesity and impotence. That last one shouldn't affect our flying much, but it's nice to know that the Feds are concerned about our performance. OSA can be diagnosed through a sleep study, and corrective actions include: losing weight, adjusting sleeping posture or environment, using dental appliances or a CPAP (continuous positive airway pressure) machine, and surgical remedies. Notice that neither alcohol nor sleep-inducing pharmaceuticals are on the list of treatments.

Body Clock

Summer means pancake breakfasts, poker runs, golf fly-ins, camping with the plane, and the airshow season--along with the accompanying carnival-like food. It brings longer days; we may start flying at sunrise and not put the airplane to bed for another 10-15 hours. A disruption to our normal sleep cycle is inevitable. This means a tired, sunburned and dehydrated pilot, with a tummy full of marginal food, at the controls of a high-performance T & T airplane making the decisions. Circadian rhythm is a physiological cycle. It's the involuntary result of our



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“

Late night or early morning landings can be a bear if tired.

need to regenerate for about one-third of each twenty-four hours. It recurs naturally, even in the absence of light fluctuations. There is no way to immediately adjust that rhythm to the needs of our schedule. Current thinking is that it takes one full day to move the cycle by one timezone. Continuing activity into the sleep portion of the cycle increases the risk of fatigue. Also, darkness changes the rules and the risks. Our visual inputs are less at a time when we have been awake longer. Let's admit it: night flying is more like instrument flying, even with a full moon or visible horizon. Add a disruption of our circadian rhythm, and the resulting degradation to our performance can turn nighttime into a nightmare.

A Normal Procedural Decision; Get A Room

Sometimes we try to squeeze as much recreational time or business efficiencies into the trip as possible before we head home, and it's easy to let our judgment become distorted. Fatigue is similar to hypoxia; we don't notice or care as much as we should. And we can convince ourselves that fatigue has a value that is worth the risk. A few years ago, one of our readers mailed me about his fatigue experiences. While driving home one night from the airport, he found himself following the centerline of a road as we would in our airplanes while taxiing. On another flight, he stopped short after recognizing his fatigue. We've all been that tired, usually finding a rest stop for a few hours while driving or landing short of our destination when flying. Like practicing a go-around or a divert, once you have landed short a couple of times to sleep, the consternation of adding a day to your trip becomes less of a conundrum and more like a regular procedural decision.

Don't Get Eaten

The days are getting longer, and a duty day from sunrise to sunset is long. The airplane doesn't know that the

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weather is crap or that it's 11 p.m. and you're falling asleep. It also doesn't know that you overflow your destination during the power nap. If you become fatigued, rest. If you don't, risks increase exponentially, and bad things can happen. To survive among carnivorous predators, the early hominids learned that stupid is, as stupid does. Fatigue can put you into an altered state of consciousness like one induced by sensory deprivation and revert you to a blabbering Neanderthal. Don't fly fatigued and be the one that gets eaten. **T&T**

Authors note: An acknowledging head-nod (from me and the attorneys) to Ken Russell's 1980 sensory deprivation film, *Altered States*, starring William Hurt, as well as the one-hit-wonder by A-Ha that it inspired: *Take on Me*. Also, to Tom Hanks in Winston Groom's *Forrest Gump* and the Beatles for 1964's *Hard Day's Night*.

Kevin Dingman has been flying for more than 40 years. He's an ATP typed in the B737, DC9 and CE-650 with 25,000 hours in his logbook. A retired Air Force major, he flew the F-16 and later performed as an USAF Civil Air Patrol Liaison Officer. He flies volunteer missions for the Christian organization Wings of Mercy, is retired from a major airline, flies the Cessna Citation for RAI Jets, and owns and operates a Beechcraft Duke. Contact Kevin at dinger10d@gmail.com.

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Editor's Pics

by Lance Phillips



Back in December of 2013 (I can't believe it has almost been ten years), I was looking for some compelling photo opportunities, and, well, Wichita, Kansas, just isn't one of those places you think of when trying to come up with unique, photogenic locations.

But let's back it up a little. A year or so earlier, I had been itching to up my camera game (if you consider upgrading from a phone camera upping my game, that is). I watched lots of YouTube videos about tech stuff, and one guy seemed to have a good handle on the techy world, Marques Brownlee. At the time (and to this day), Marques

was pumped up about a little camera from Sony, the RX100. It wasn't inexpensive, so it took some thought to consider if a purchase was the right path, so I did more research. It turned out that the tiny point-and-shoot was getting rave reviews from everyone. Somehow Sony had packed a lot of the capabilities of its larger, pro-level cameras into the RX100 and kept the size small. The lens fully retracts into the camera's body, which is small enough to fit in a pocket. The one-inch sensor and Zeiss zoom lens are phenomenal. I took the plunge into digital photography with that RX100. In 2013, Sony was on the Mark II version. Currently, they're



on the Mark VII version, but you can still buy a new Mark III on Sony's website for almost half the cost of a VII.

So, I had this pocket powerhouse of a camera but not a lot of things to take pictures of in Wichita. At least, that's what I thought. I then read a story about the Kansas Aviation Museum in the old Art Deco terminal building adjacent to McConnell Air Force Base, south of Highway 54. The building alone was something I could get excited about photographing.


It was a cold December afternoon around 4:30 p.m. Yes, the metadata from my images in Adobe's Lightroom software

still shows the exact time I took the photo. The sun was at a perfect low angle, still bright but casting deep shadows on the old building. Once I checked in and paid the attendant at the museum, I immediately went to the aircraft display outside on what was the old terminal's tarmac. I was the only person visiting the museum that afternoon.

Beechcraft's Starship model held a place in the hearts and minds of many people in the 1980s. Like the Lamborghini Countach or Porsche 911 Turbo to car enthusiasts, the Starship lit a fire in pilots. I followed all the magazines (no Internet back then). I learned every detail about the composite design, led by Burt Rutan's Scaled Composites, the 1,200-shaft-horsepower Pratt & Whitney PT6A-67A powerplants, the noise damping, and the "cutting-edge" Pro Line 4 avionics from Rockwell Collins. It was the future of aviation, and for a kid in college beginning an aviation career, it meant we were seeing the future built in real-time.

Fast-forward back to 2013 again. To my surprise and pleasure, there happened to be standing proudly on that old tarmac NC-41, a Starship model 2000A. The 2000A models began with NC-29 and offered better noise reduction in the cabin, better short-field performance, and increased maximum and zero-fuel weights, which meant better range and payload. NC-4 through NC-28, model 2000s, were upgradable to 2000A specs. The light that day, the shadows on the beautiful old Art Deco terminal, and the Starship all together provided an image I often return to and enjoy. I even framed it. Here it is for you, captured perfectly in black and white by the RX100.

Since immersing myself in digital photography with that Sony, I got the camera bug for real — some call it gear acquisition syndrome (GAS). Around 2015, Leica came out with a compelling compact, full-frame camera, the Leica Q. It had a fixed 28mm Summilux lens, similar to my RX100's wide end of its zoom range. The Q retailed for around \$4,000, which is also not inexpensive. But if you compared it to Leica's digital M camera with the 28mm Summilux lens, for which you'd have to spend around \$10,000, there was a compelling value to this new Q, and it came with autofocus and optical image stabilization, departures (and arguable upgrades) from the M series of Leica cameras. Needless to say, I acquired a Leica Q, and I have been quite prolific in taking photos with it.

Between 2020 and 2023, I got another type of GAS; film photography grabbed me, like many others, during the pandemic. I acquired a Nikkormat 35mm first. It was one of Nikon's consumer cameras in the 1970s. That led to a Nikon FE2, then an F3. I was hooked. Then I sought relatively rare film cameras, like the Contax G1 rangefinder and Hasselblad 500C/M medium format camera. I sold them all this year except the Hasselblad and added a Pentax 67 medium format SLR. In addition, I dove into Leica's renowned digital rangefinder, the M10. The lineup is complete for now. Enjoy this series, Editor's Pics, as I display some of my favorite photos throughout the years with my various digital and film cameras. 

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-Henry Maier, President and CEO, FedEx Ground



Ruthless Competition

"Do you need any help with your bags," I asked Charlie Precourt, CJP's safety committee chairman.

"Maybe, but first I need to check my FOQA (Flight Operational Quality Assurance) scores," he replied as the door to his CJ1+ opened. Charlie had just landed in Wichita and wanted to ensure his landing performance was up to snuff.

There's a sea change happening in the single pilot community, and it's all about data.

The folks at TBMOPA, the owner group for TBM's, started the effort in 2017 to track landing mishaps. Then MMOPA, the PA-46 owner group, joined the fray, and many more followed. Charlie used his NASA experience with four shuttle launches to stimulate his quest to improve the accident rate in Citations.

Almost three years ago, CJP corralled ten owners to install small collection devices from AirSync tied into Citation data busses. A wealth of in-flight information was always there, but retrieving it quickly and cheaply was not.

Almost 100 parameters are recorded every second, like true airspeed, bank angle, G forces, you name it. Charlie worked with his safety committee to decide which data was most meaningful. Consulting with the creative folks at CloudAhoy, they developed an app that could transmit performance scores within seconds of landing. The effect has been immediate and impressive.

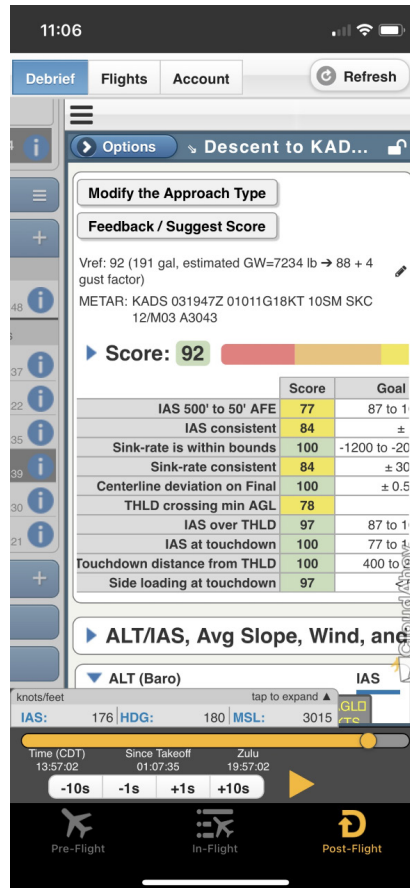
It turns out that pilots are a competitive group. Who would have known?

Although individual scores are transmitted only to the pilot, the aggregated data appears on a dashboard for all to see. But emails and texts started flying between the "competitors."

"What did you score on that visual approach to Scottsdale?" said one.

"There must be something wrong with my box 'cause it said I was 20 knots fast," said another.

Nope. The box was correct. And so was the data. Instead of pilots "feeling" they were flying a stable approach, they can see the actual flight in



multiple formats on their iPhones 30 seconds after engine shutdown.

Charlie usually scores 100. I am trying to get close to that.

This competition is leading to safer flying. CJP commissioned a study conducted by the Presage Group to find out exactly why pilots of Citations make decisions on approaches. That data showed new SOPs tested in FlightSafety simulators by 20 CJP members flying over 200 approaches. The result is their new Safe to Land Initiative. And the scorecard for the initiative is FOQA data.

Sometimes the changes are subtle. Sometimes dramatic. A Midwest flight department submitted their data to Charlie for a fleet of Citations. He noticed many were landing well past the 1000-foot marker on virtually every landing.

"Why?" Charlie asked their chief pilot. After a pilot meeting, it turned out that there was an unwritten competition to see who could get the most applause on landing. The crews floated their airplanes down the runway to achieve the softest touchdown. And nobody knew it was happening.

That competition has been channeled to see who can achieve a stable approach every time.

Pretty cool.

Fly safe. **T&T**

David Miller has owned and flown a variety of aircraft from light twins to midsize jets for more than 50 years. With 6,000 plus hours in his logbook, David is the Director of Programs and Safety Education for the Citation Jet Pilot's Safety Foundation. You can contact David at davidmiller1@sbglobal.net.

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