



**Stuff Happens.
So Play with
Your Plane**

Stuff Happens. So Play with Your Plane to Be Prepared

By Mike Jones

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Winter is almost over and your plane has been hangered for a long, cold nap. Finally a sunny but breezy Spring day arrives. You take your baby a few times around the patch. It isn't pretty: you're behind the plane; couldn't quite program the GPS; missed a few items on the check list; were clumsy on the radio and bounced a few landings. It happens, you think to yourself. Just need to "knock the rust off."

How do we do that? The most common mode is to simply "bang it around the patch." Another option is the hundred-dollar hamburger flight — usually CAVU, not too distant, lots of cholesterol. Both are lousy educational environments because they are not focused on specific skills and goals. We reinforce our bad habits.

The cockpit is a terrible learning environment. It's noisy, it's bouncy, there are a zillion distractions; do it wrong you're gonna die. How much trig would you have learned in high school if your chair wobbled every few seconds? Probably even less than you did.

Plus, much of what we need to practice are extreme scenarios; such as weather minimums, unusual attitudes, and various emergencies. I recommend we take some guidance from young carnivores in the wild. If you think flying is

difficult to learn, how about learning to hunt for your food? It's a tough final exam: pass the test or starve to death. Rabbits don't grade on a curve.

Scientists repeatedly have observed most juvenile carnivores spend significant time playing and practicing the skills they need as adults. For example, wolves and coyote pups spend a substantial portion of their days play-fighting, wrestling, and pouncing. Young lions spend hours stalking each other — a crucial technique they will need. (Interestingly, most herbivores spend very little time at play.)



The natural habitat for our rugged Cessna planes isn't some retired B-52 base with runways that stretch to the horizon. The real place our planes want to be is on some shaggy turf at a nobody's-ever-been-here-before kinda place. Not only is graduating from tarmac to tundra great fun, it can be a life-saving skill. Here, old N7591N touches down on the grass in central North Carolina.

Educators call this “physical literacy.” It features the fundamental moves needed for success in a particular skill. The movements may be instinctive but proficiency is not, which sounds a lot like flying skills.

But first: a probative tale from Jonesy's “*Logbook of the Unexpected*” which pretty much comprises most of my sordid flying career.

In the Air

Years ago I was bombing along in my Skylane, confidently VFR over northern New Jersey, getting flight-following through the fantastic New York airspace. I wasn't thinking much about flying; my focus was on meetings and

to-do lists. The rugged Continental rumbled contentedly. I'd be home in Connecticut in thirty minutes.

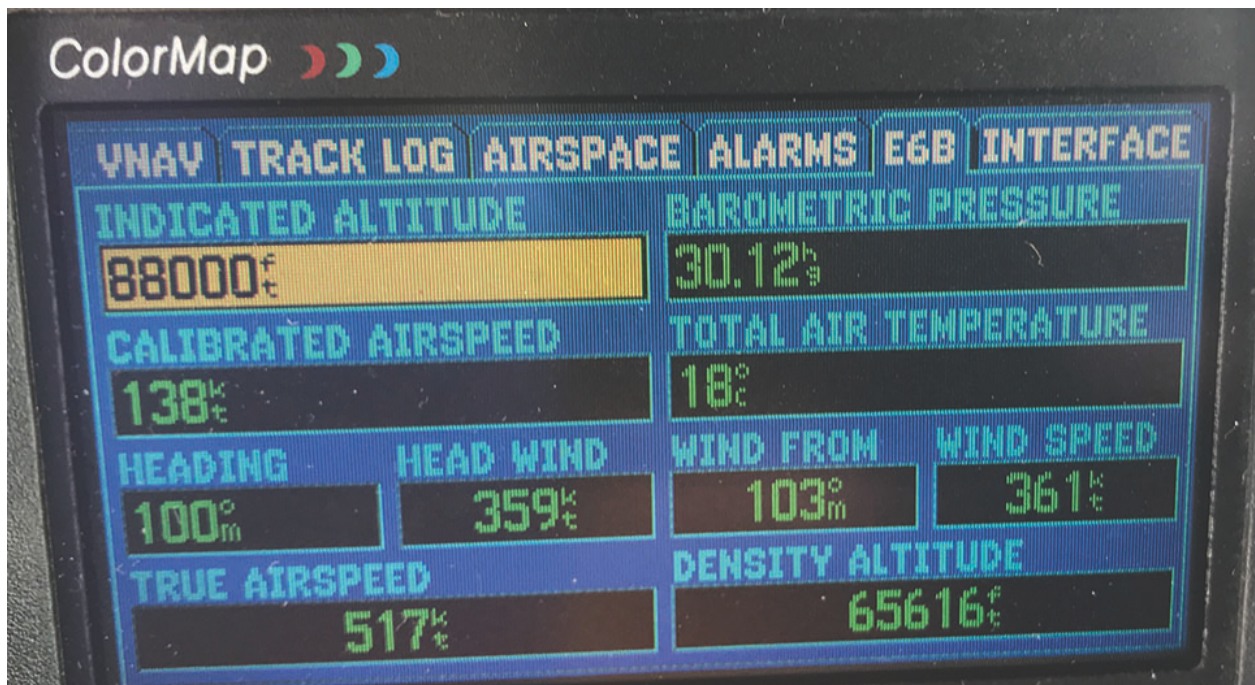
Suddenly, everything electronic on the airplane died.

No radios. No lights. No transponder. No autopilot. No VORs. No GPS. No nuthin'.

This was so unexpected I simply sat there "gobsmacked," as my British friends would say. No one had ever mentioned that every single circuit board on an airplane could die simultaneously.

I pulled myself together. The plane was flying; the engine was running; I had hours of fuel on board. I thought to declare an emergency but... ah, right, no radios.

Squawk 7700... no, that won't work either. Hmmm.



It was a bouncy day along V16. I was using my GPS to compute true airspeed when an air pocket added 80,000 feet to my altitude. This is a great example of playing with the avionics to be understand the relationships between the numbers, specifically look at how true airspeed jumps even though my indicated airspeed was a reasonable 138 knots. I became so fascinated with putting in odd-ball numbers I missed my next turn and caught a "gotcha" call from Atlantic City approach. My apologies, guys!

My next plan simply was to do what ATC expected me to do, which was to fly onward to Plainville. I maintained my course and speed while thinking hard.

The sun was setting. In thirty minutes, Robertson Field in Plainville would be in darkness. Without a radio I could not activate the pilot-controlled lighting. I'd also be transiting the busy New York-to-Boston flyways with no radios, transponders, or lights. Not good. I needed to get on the ground before sunset. Memo-to-self: buy a hand-held radio.

Westchester Airport was off to my right, just north of New York City. This is a busy reliever airport with commercial carriers and charter operators. But it has long runways, a control tower, and emergency services. "A bird in the hand" I thought — just the ticket.

I steered easterly, toward the airport. About ten miles out, I flew a triangular pattern, hoping the tower at KHPN would notice. But the sun was setting, so after two cycles I started in-bound to Runway 11. I saw a regional jet trundle down Runway 16. Not a worry — land-and-hold-short operations are easy in a Skylane.

Time to descend. Power back. Mixture rich. Prop full. Carb heat on. Cowl flaps open. Drop the flaps.

Whoops!

The flaps are electric. They didn't budge. My Skylane thumbed its nose at my ineptitude.

Now I was high and fast. Needing to lose speed and altitude, I jammed that plane sideways, slipping more aggressively than I had ever attempted in training; my wings were nearly vertical and I was falling sideways out of the sky. I can imagine the chagrin of the tower controllers as they looked to the setting sun only to see my silhouette diving for the runway at a crazy angle. I

made the altitude but, crossing the numbers, I still was well over 100 knots. I floated... and floated... and floated some more. That fat Skylane wing generates lots of ground effect at 100+ knots.

Finally the wheels touched. I jumped on the brakes, smoking like a Vegas gambler on a losing streak. The Skyland and I crossed Runway 16 firmly on the ground but rolling fast. For another thousand feet I kept pumping the brakes and burning rubber. I thought about ground-looping but things seemed to be slowing. Normalcy returned. I taxied off the runway. I shut down. I sat on the warm concrete, legs wobbly, and thought about changing hobbies.

My wife drove me home that night.



Dan Pagliolo is an experienced flyer in the Raleigh, NC area. He had the misfortune to run into a flock of seagulls in a rented Piper while departing Johnston Regional Airport (KJNX) in central North Carolina. The Piper suffered serious damage but Dan's expertise enabled him to wheel the plane around and return to base, more or less uneventfully. This is a great example of being prepared for the unexpected. If all Dan did was fly straight-and-level from one long runway to another he might not have had the savvy to survive a surprise like this. Photo courtesy Dan Pagliolo, used with permission.

But here's the punchline: A few weeks before the ill-fated flight, I had been chastised by one of my favorite instructors at Robertson Field. This lady is a formidable pilot and took no foolishness from me, two decades her senior. She demanded I leave the comfort of Robertson and try different airports, different configurations, and even landings without flaps. In short, get out and play with the plane.

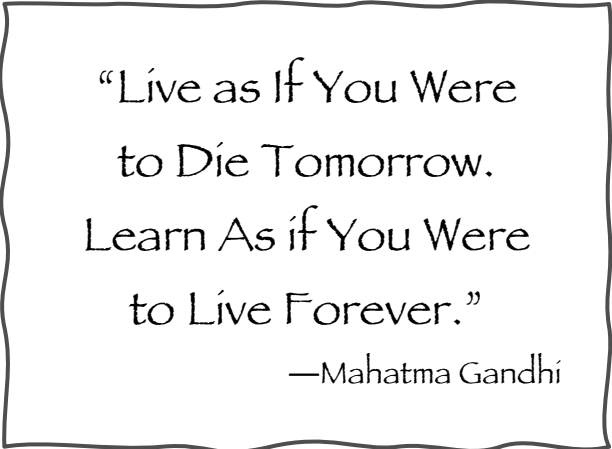
Taking her advice to heart, I spent a busy Saturday morning playing with slips, no-flap stalls and no-flap landings. I became familiar with the airplane's sounds, attitudes, speeds and behaviors. I am certain her coaching prepared me for that evening over Westchester.

My suggestion is that we all need to spend more time in structured play with our airplanes before the inevitable emergency arises. Rather than vaguely banging around the patch, hoping to build some skills, we need a safe environment and practice specific missions designed to learn the limits of ourselves and our steed. Like a lion cub, we need to practice so extreme actions become familiar and accustomed.

Play to Learn

The easiest and safest place to start playing is to spend thirty minutes on back-up power. The object is to refresh our memory on the equipment without the distraction of actual flight.

We all know where the throttle and mixture are located. But where is alternate static source? Where is the low vacuum warning? Where's the gear pump circuit breaker? What's the lowest barometric pressure you can put into your altimeter? If you dial in an altimeter setting that's off by one inch, how big is the error on the altimeter?



“Live as If You Were
to Die Tomorrow.
Learn As if You Were
to Live Forever.”

—Mahatma Gandhi

Many of us have new ADSB transponders. My Garmin GPS has six sub-menus. What's new in your panel?

Our GPS navigators are amazing but complex. Build a new flight plan in the GPS. Store the flight plan. Compute your density altitude. Pretend your destination went below minimums — find to an unexpected alternate. Imagine you just lost your engine. Identify the nearest acceptable airport and find a heading towards it. Set up for an instrument approach. Then, change to a different approach. Plug it all into the autopilot. How long did all this take?

Feeling confident? Ok, let's preflight this puppy and get some wind beneath our wings. We're going to play at some very specific skills.

Slow Flight. I have a friend who won't practice slow flight without an instructor on board. That's nuts, because slow flight is fun and essential. Start at a generous altitude and pull the power back to the bottom of the green arc. Let the airspeed bleed off. Add a little power until you're holding your altitude, nose high, hanging on the prop. In a strong headwind, you can actually hover or fly backwards. Gentle turns using the rudder earn you extra bonus points.

Steep Turns. This is the sweetest skill. Start with 45° of bank but don't stop until you can handle 60°. Use lower power settings — I like 55% — with lots of rudder to keep the ball centered. A little nose-up trim will keep the nose from descending. Your eyes should be on the horizon and your butt should be talking to you if the plane climbs or descends. Practice in both directions. Zero altitude deviation allowed. Try to catch the bump of your prop-wash at the completion of the turn.

Unload the Wings. This is a very gentle and graceful maneuver which simply allows the airplane to descend at its trimmed-up airspeed. Pull back your power and hold altitude. Once your airspeed is below maneuvering speed, start one of your 60° bank turns but this time let the nose drop. Keep the ball centered and you'll feel the plane make a smooth, scythe-like swash through

the air, dropping smoothly in a 180° turn. Roll-out on your chosen heading with a bit of power.

One-Wheel Landings. Many pilots flop both main wheels on to the runway, but you don't have to. Instead, side slip to the runway, keeping aligned with the centerline. Instead of releasing the slip during your flare, just hold it in. The



Some pilots are just glorified passengers, accepting whatever results the plane gives them. Real pilots turn the tables: they have the talent to get the airplane to do what needs to get done. Here, a skilled flyer gently balances an eighty-year-old DC-3 on one wheel and races down the runway at Oshkosh 2017. It's actually a gentle maneuver and easily practiced by anybody who can side-slip their airplane. This image is a screenshot from a video prepared at AirVenture by Ryan Sundheimer and David Jacobson. My thanks to them and their website team, AirshowStuff.com (which is another great website), for permitting me to share this.

lower (upwind) wheel will touch down first and begin rolling. Add a touch of power and you can keep the other wing high, rolling down the runway dramatically. When you're ready, convert it into a touch-and-go or pull the power out and make a full stop. Either way, people will be applauding.

Kiss the Grass. I am an enormous fan of unpaved runways and you should be, too. Some are splendid, like the 7,000 foot putting green at Triple Tree; some are rough and even soggy. Unlike Cirrus aircraft, our Cessnas love them. They have much to teach us. A quick Google search will reveal dozens of turf runways within the range of one tank of fuel. In the approach, get your speed

down and then hold it, nose high, and let the grass slap at the bottoms of your tires. Keep the weight off the nose wheel and let 'er roll. It's real flying.

Learn to Live

Talent is given by chance, and luck is heavenly but undependable. Like lion cubs, we need to practice new skills so they are available when we unexpectedly need "to hunt for our dinner." I mean this sincerely: I learn something new every time I start up my plane.

Play with your plane. The learning never ends.

About the Author



Dr. Mike Jones is a 4,000 hour commercial-rated pilot who takes both his Cessna Centurion and his light sport taildragger to grass runways whenever he can find them. You always can reach him at PilotMike2012@gmail.com.