



FLYING LESSONS for July 22, 2021

FLYING LESSONS uses recent mishap reports to consider what *might* have contributed to accidents, so you can make better decisions if you face similar circumstances. In almost all cases design characteristics of a specific airplane have little direct bearing on the possible causes of aircraft accidents—but knowing how your airplane's systems respond can make the difference in your success as the scenario unfolds. So apply these FLYING LESSONS to the specific airplane you fly. Verify all technical information before applying it to your aircraft or operation, with manufacturers' data and recommendations taking precedence. **You are pilot in command, and are ultimately responsible for the decisions you make.**

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This week's LESSONS:

I'll take a "little" different tack this week as I, like many of you, prepare to travel to Oshkosh....

Little Moments of Mastery

I have a good friend* who owns a Beech Debonair, which is a conventional-tailed lower-cost version of the Bonanza that Beech introduced in the early 1960s to compete with the Piper Comanche. I took it up the other day on what I call an "oil circulation" flight—since my friend had not been able to fly it lately he asked me help keep it exercised and blow out the condensation.

**Good friend [gud` frend] Noun Someone who lets you fly their airplane*

Such flights keep my skills "lubricated" too—while many pilots may see such a flight, or one before an engine compression test, or a short repositioning flight as a simple takeoff, level off, maybe sightsee a bit then land, I usually pick a type of maneuver or two and practice "since I'm up there anyway." On this day I decided on my drive to the airport that I've focus on my favorite maneuver: steep turns.

I usually hold myself to Commercial completion standards: a coordinated 360° steep turn with approximately a 50° bank followed by a 360° steep turn in the opposite direction (I use the old 55° ± 5° from the old Practical Test Standards, so at the "high end" of that five-degree tolerance in bank does not exceed 60°, generally considered the realm of the acrobatic). Maintain the entry altitude ± 100 feet, airspeed ± 10 knots, bank ± 5°, and roll out on the entry heading ±10°, per the current Airman Certification Standards (ACS). Next this day I would make a series of 180° steep turns along a straight road for a full one-mile section, left turn/right turn, left turn/right turn, and reversing to do the same back down when I reached the end...basically, steep S turns across a road done at altitude.



At some point on this flight things were working out just right early that warm but smooth summer morning and it occurred to me...this one of those **little moments of mastery** that I strive for, and more often than not these days at least come close to achieving. But not always. And that's why these moments mean so much to me.

It made me think of some of the other **moments of mastery** that make for an extremely satisfying flight. Things I try to do that, if I succeed, confirm that my practice is (at least for now) working.

Here are a few of the **little moments of mastery** I try to attain each time I fly:

- Hand-fly the transition from climb to cruise and accelerate to cruise speed while holding altitude within 20 feet.
- After each transition in phase of flight is complete (takeoff to climb, climb to cruise, cruise to descent, descent to approach, etc.), refer to the checklist to confirm nothing was missed (note: it's more important to have forgotten something but found it on the checklist than to have remembered everything but not used the checklist to confirm).
- Completing a 360° steep turn, bounce through my own wake turbulence. As I put it to my students who do this, "hitting your own wake turbulence isn't a completion criterion. But it sure feels good."
- While monitoring air traffic control frequencies, recognize when I've been called out as traffic to the pilot of another aircraft, and then I reverse the positional relationship in my head and spot that aircraft...without glancing at the ADS-B display (I've been able to do this most of the time since well before traffic displays and moving maps).
- From downwind to landing, power reductions as needed but no addition of power (of course I add power if needed, but that is less, well, **masterful**).
- Land on a preidentified touchdown target on the runway centerline with no side drift.
- Roll the wheels on more than land. We may put too much emphasis on the quality of a landing to the exclusion of either equally or more important things. Still, a glassy arrival is a **moment of mastery** that even our passengers and observers outside the airplane understand. In fact, my intention was to take two or three trips around the circuit when I returned to land. The first touchdown was so incredibly smooth that I decided I couldn't risk losing the feeling. So I made only the one, **masterful** landing to conclude my flight.
- Taxi at a walking pace with no use of brakes making the last turns into parking or when being marshalled on the ramp (again, if safety demands use the brakes, but that's not **mastery**. Try to use steering and managed rolling energy alone).

Some of the **little moments** come from things I have in my logbook. For example, shortly



before I sold my 1946 Cessna 120 in the early 1990s I recall practicing [wheel landings](#) one calm summer twilight that resulted in my entry in my logbook, "**squeaker wheelies at dusk.**" I don't know whether the memory of the landings makes me think of the log entry, or the memory of my log entry makes me remember **how those landings made me feel** vividly nearly 30 year later. Either way, it's a great memory of

a time when **my practice honed my skills and the conditions were just right** for me to use them. I was, for that moment in time, **master** of the aircraft.

See <https://www.youtube.com/watch?v=8yF-hG2Ws-o>

Next time you shut down at the end of the flight and tie the last tiedown or close the hangar door, ask yourself, "**what did I do just right on this flight?**" "**What did I master, even if only this once?**" "**What about this flight made me feel good?**"

If you're a flight instructor, even on a student's very first flight, would it make a difference in your student's flying life if you began each postflight debriefing with a question: "**What made you feel good about this flight?**"

I've had many more little moments of mastery. But **I'd like to hear yours.** What are the things you practice that feel so good when you do? What lets you know when you are "in the zone," that at least for a moment **you** are total **master** of your aircraft?

What are your **little moments of mastery**? Let us know at mastery.flight.training@cox.net.

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Debrief:

Readers write about recent *FLYING LESSONS*:

In the [July 8 LESSONS](#) I posed a question to instructor and safety advocate Jeff Woffard in response to his Debrief item from the week before:

With no oversight board or supervisory authority, how can SMS work for the single-pilot operator?

Jeff responds:

I'm glad you asked that question concerning SMS. SMS is one of the most misunderstood concepts in aviation. Hopefully, I can clear things up a little bit. While a "Safety Deviation Reporting System" is part of a large formal SMS program it is not the main part of the program, merely a part. At its core SMS revolves around four areas:

- Safety Program
- Risk Mitigation
- Program Assurance (audit)
- Safety Promotion

The most important thing to remember is that **SMS is scalable**. You wouldn't expect someone operating a C182 to have a robust and complex system like an airline or large corporate operator. But, that small operator/individual can build a workable SMS scaled to his/her operation. Here's an example of a simple SMS:

- **Safety Program:** Write a **basic operations** manual where you describe how you are going to operate the airplane. Include preflight planning (aircraft and pilot, use IMSAFE as an example). Include Training/recent experience requirements, Personal Minimums Checklist, develop SOPs (checklists and other procedures) and any other important data you want to include.
- **Risk Mitigation:** Learn to **use a Flight Risk Assessment Tool (FRAT)**. There are many examples you can use and there are several Apps that are nice and easy to use. In this section, describe how you will use IMSAFE, FRATS, and Personal Minimums to assess and then mitigate any risks associated with the flight to an acceptable level.
- **Program Assurance:** You have several options on this one. (1) You can sit down after each flight and **review the flight and make sure you followed the process that you said you would** in your manual. (2) You can **ask another pilot to work with you and review** what you're doing and you can reciprocate. (3) You can **form a cooperative pilot group** (yea, I know this is a stretch) **and work from a similar manual, designate one person as the safety guy** and let him help with auditing each member, This role can be switched around on a regular basis so that everyone is involved.
- **Safety Promotion:** This is the easiest part. Just get involved! **Start a safety program at your local airport**. Get involved with the FAA Safety Team. Help someone else develop a safety program for their operation. **Just DO SOMETHING** to promote safety.

While the simple SMS I have described here may not meet the requirements of the FAA Chapter 5 SMS Program or pass an IS-BAO audit, it will help you **build a simple, and safe program for you to use** to operate your aircraft. At an absolute minimum, using tools like IMSAFE, Personal Minimums, and following SOPs and checklists, will go a long way to make you safer. There is a lot of information out there on ADM, SOP development and SMS,

you just have to dig a little bit. The NBAA safety Committee is working on several SMS tools that will help everyone from light GA to large corporate operators.

Last but not least, remember that *your aviation career, whether private or commercial should involve constant learning and improvement*. If you think you have it all figured out and don't need any more training or learning, please throw the airplane keys in the trash and walk away.

Tom, I hope this helps a little bit.

It does, Jeff. Thank you.

See <http://www.mastery-flight-training.com/20210708-flying-lessons.pdf>

Questions? Comments? Send them to mastery.flight.training@cox.net.



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If you'll be at AirVenture and swing by the [American Bonanza Society](#) display (across the street from Theater in the Woods), where I work; at the Type Club Coalition annual meeting if you're part of that working group; or at the NAFI breakfast Thursday morning...or run across me somewhere else on the grounds (I can't get out of the tent much); then say hi and let me know how I can make *FLYING LESSONS Weekly* better and more useful for you. If you're not going to be there or don't catch me there, you can always [email your suggestions](#). Thanks!

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