

A photograph of two young women sitting in the front seats of a small aircraft cockpit. They are both wearing blue aviation headsets with microphones. The woman on the left is wearing a bright yellow-green shirt and is smiling broadly at the camera. The woman on the right is wearing a maroon shirt and has a neutral expression. The background shows the interior of the cockpit, including the instrument panel and windows. The text "Personal Minimums and Your Flying Experience" is overlaid in the center of the image in a white, italicized, sans-serif font with a black outline.

*Personal  
Minimums and  
Your Flying  
Experience*

# *Personal Minimums and Your Flying Experience*

*By Mike Jones*

*Cessna Pilots Magazine, originally published: July 2022*

It's fun to chat about airplanes with non-flyers. Inevitably, the question of safety pops up. "Have you ever had a scary situation?" they ask breathlessly, like the crowds at NASCAR waiting for the next crash. Uninterestingly, with over 3,500 hours in the logbook, I have not.

Over the past thirty years, my roster of "semi-scary" aviation events is remarkably brief. Most memorably, my Cessna T210 once threw an exhaust valve through the turbocharger. That was exciting. But the engine continued to run (very rough) to an uneventful landing at a regional airport. It was inconvenient and expensive, but safety was never at risk.

I had two instances in which the landing gear failed to produce that cheery green glow, causing me some consternation. Both false alarms; both landings were completely ho-hum. Flying a Cessna 182 from New Jersey to Connecticut the electrical system went "Tango-Uniform." No radios, no transponder, no lights, no warning. Since the sun was setting, I diverted to Westchester Airport north of New York City and all went well.

As a very young pilot, I was flying westbound at sunset in the summer and flew into a wall of haze. The surprise of instant and total IMC was tense and challenging, but it only lasted a few minutes and no harm done. Lastly, a few

years later I was coming back from the Midwest and unwisely chose a fuel stop with just a single runway suffering a 19-knot direct crosswind. But the winds were steady (not gusty) and the rudder on the T210 is the size of a house. I touched down firmly, right on the center line and never worried about crosswinds again.

And that's just about it. Six events in thirty years. Barely enough for a postcard.



*I'm not sure who snapped this photo, but it was captured minutes after I landed in Fayetteville, NC. On this flight an exhaust valve had decided to depart the airplane through the turbocharger. I had five female guests on board and pilot Eileen Malaan (shown) was riding shotgun. Once we were on the ground, one of the ladies turned to me and said, "This was so exciting. Can we do it again?"*

Which brings me to an email from my friend David, who wrote:

*I would be interested in your thoughts as to reasonable personal minimums for a young pilot flying solo. Eric is just a couple weeks into his private pilot's license. Flight hours are 55. He is starting instruments and is planning to fly weekly.*

Teenagers are unlikely to listen to Dad, and a pilot is even less likely to take advice from a non-flyer. Hence David's conundrum: what guidance could he plausibly offer his teenager that would help keep him safe until his experience caught up with his ambition?

That is a very good question, and one that challenges every pilot. But the question is too big, too broad, too complex to answer neatly. Let's break it

down into a couple of general rules-of-thumb. But before we do that, recall the most famous of inexperienced pilots: John F. Kennedy, Jr.

## Dinner at the Waldorf

I briefly met John F. Kennedy, Jr. in the Spring of 1999. My wife and I were representing our mutual employer, a large telecom company, at a black-tie fund charity raiser at the Waldorf Astoria Hotel in New York. Good heavens, that was a glamorous night! The chandelier-filled ballroom held several thousand people. All the guests were in tuxedos and gowns. The diamonds in the room would have impressed Mr. Tiffany. Annie wore the most elegant gold dress and we arrived in a limousine our employer provided. Paparazzi lined the sidewalk. Senators, governors and ambassadors were a dime-a-dozen. It was thrilling.

Mr. Kennedy and his wife were the guests of honor that evening. They truly were American royalty: incredibly famous, respectably rich, stunningly beautiful and dedicated to good works. After dinner, the two of them patiently came to every table in the room to thank the participants for their time and donations. Mr. Kennedy and I had a brief chat about flying and they moved on, duty calling, as we all basked in the glow of their charm.

A few months later, they both were dead.

On July 16, 1999, Kennedy crashed his Piper Saratoga while flying from New Jersey along the coastline of Connecticut out to the airport on the island of Martha's Vineyard.<sup>1</sup> In my opinion, Kennedy was killed by his inexperience. He “didn’t know what he didn’t know,” to paraphrase Donald Rumsfeld.<sup>2</sup> Kennedy’s

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<sup>1</sup> You can read the complete NTSB report on this accident at:

[https://www.nts.gov/about/employment/ layouts/15/ntsb.aviation/brief2.aspx?ev\\_id=20001212X19354&ntsbno=NYC99MA178&akey=1](https://www.nts.gov/about/employment/ layouts/15/ntsb.aviation/brief2.aspx?ev_id=20001212X19354&ntsbno=NYC99MA178&akey=1)

<sup>2</sup> If you haven’t seen this interview, it is truly worth watching.

[https://en.wikipedia.org/wiki/There\\_are\\_known\\_knowns](https://en.wikipedia.org/wiki/There_are_known_knowns)

plane didn't let him down; his engine ran strong; his fuel load was adequate. But he made six simultaneous mistakes and the cumulative effect was deadly:

1. The visibility was very poor, reportedly five to eight miles, with haze. The NTSB reports most visual landmarks would have been obscured. VFR flight was legal but unwise.
2. He was flying in the dark on a moonless night. Due to passenger and air traffic control delays, they finally lifted off at 8:30 or so, nearly a half-hour past sunset.
3. He was flying over featureless water. As the plane moved over 30-miles of ocean to Martha's Vineyard he lost the visual cues a VFR pilot needs.
4. He was relatively inexperienced. Kennedy only had 310 total hours, was not instrument rated, and he was new to the airplane. The aircraft had a functioning autopilot which Kennedy could have used when he became disoriented. He also had the wrong frequencies set on his radios. Rookie mistakes, but deadly ones.
5. He was flying in super-busy airspace. He had flown the route a number of times before, but never received a weather briefing, did not file a flight plan, never used ATC for flight following, and he never requested help nor declared an emergency. Kennedy flew sufficiently close to an American Airlines flight that his plane activated the TCAS system on it. Flying at night without ATC support through some of the most congested airspace on the planet was a terrible plan.
6. He may not have been fit to fly. Kennedy had fractured his left ankle paragliding six weeks before. His cast had been removed just the day before his flight. He walked with a limp at the airport and used crutches while loading luggage. One wonders if this impairment affected his ability to use the rudder to optimal effect.

The National Transportation Safety Board (NTSB) concluded that Kennedy became spatially disorientated flying over water at night in haze. It remains a tragedy of the highest degree, first because of the loss of life but equally because it was 100% avoidable. Kennedy needed better decision-making skills.

You see, safe flying isn't about eye-hand coordination. It's about decision-making under pressure. My friend Vance is a B-777 captain, and he told me, "I'm the guy who's paid the big bucks to say 'no.'"

John Zimmerman, the Editor-in-Chief of Air Facts and the president of Sporty's Pilot Shop, would agree. He recently wrote, "At some point in a pilot's flying career, usually around 250 hours, the primary challenge [of flying] shifts from a physical one to a mental one. When you finally master crosswind landings and learn how to use all the avionics in your airplane, what's left is the never-ending task of making good decisions."



*Here is a great example of a flight that a newly-minted pilot can accomplish adroitly, and in so doing build both confidence and hours. I took this photo over the Hudson River in the 1990s, flying the "Hudson River VFR Corridor." It was exhilarating, and with a safety pilot on board it was both safe and fun. As we were transiting up the river, a historic B-17 flew southbound!*

The FAA is fanatical about "aeronautical decision-making" and is including the term in their new Airman Certification Standards. A special Advisory Circular (AC 60-22) describes the process. Predictably and tediously, the FAA training quickly degrades into acronyms and abbreviations; the PAVE list, SRM and CRM practices, and so on. I would suggest that good decision-making is easy once extraneous distractions are removed from the rookie pilot.

I propose that rookie pilots should consider four incremental steps in their efforts to build experience safely, moving from the basic stick-and-rudder skills to the much more nuanced talent of making strong decisions.

## Steps on the Ladder

First, I would strongly recommend against flying with ANY passengers before accumulating one hundred hours or so. Yes, it's wonderful to take friends to the airport to demonstrate your new skills. But it's amazingly dangerous. Passengers are self-loading distractions and new pilots can't handle them at this stage of their experience. By keeping the cockpit "sterile" we



*These charming young ladies are Dinky (in green) and Caroline, and they flew a Young Eagles flight with me in 2012. Be careful with passengers. I've had them freeze, grab the controls, urgently need a bathroom, scream so loudly I couldn't use the radio, burst into tears, and on one memorable occasion became violently sick. One pulled the carb heat out on take-off, asking, "What does this do?" More problematically, they talk too much during critical phases of flight, such as take-offs and landings. I highly recommend that passengers (excluding safety pilots) are for more experienced pilots with over 100 hours.*

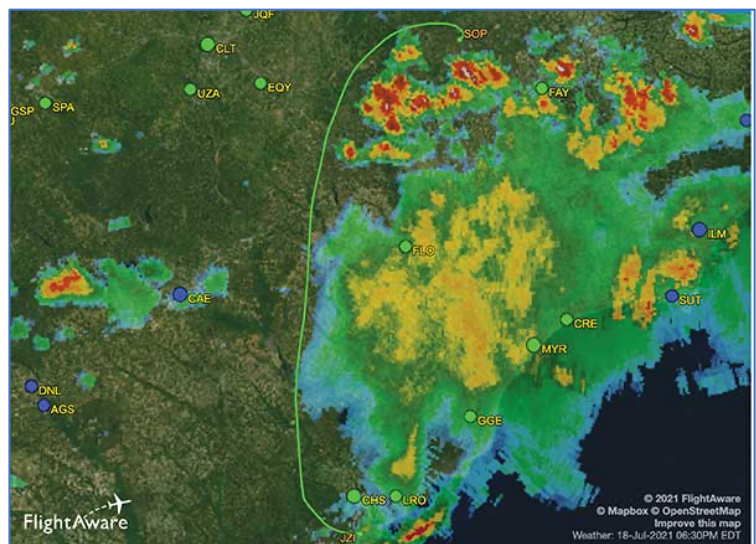
eliminate those distractions and enhance safety. This will allow a new pilot to gain experience without risk to others or himself. In short: passengers may be legal but they're not safe.

After 100 hours: Start expanding the weather envelope. Weather and airport conditions are a snap to obtain these days using Foreflight or Garmin Pilot. In fact, I wouldn't fly any more without one. I would look for three things: precipitation and/or convective activity, visibility and/or ceilings, and winds.

A rookie should restrict flying to only the best weather days. My personal definition of suitable weather would be (a) good visibility (10+ miles), (b) absolutely no precipitation, (c) at least 3,500 foot ceilings, (d) low winds (<8-10

knots, mostly down the runway) and (e) those conditions must be forecasted to remain unchanged for at least two hours after the time the young aviator expects to be back on the ground. In my experience, pilots can raise the crosswind limit two knots for every 50 hours of flying added to the logbook.

After 200 hours: The third step on the ladder stretches your skills with airplanes. Yes, flying the same plane over and over is convenient and comfortable. It also avoids the expense of a check ride in a new bird. I understand. But experiencing different airplanes is an important part of a pilot's growth. Where are the switches, the gauges, the GPS and radios? How differently do they operate? How does the airplane's performance compare? How is the visibility from the cockpit? What's this "Johnson bar" thingy between the seats? I have flown over 40 different aircraft, but I consider myself to be a relative novice at transitioning to new hardware. It's a great skill and vital aspect of our growth as professionals.



*This was a memorable flight, and it shows excellent judgment from a pilot (me!) with decades of flying experience. The storm featured strong convection and was drifting from the west to the east across my route of flight. ATC advised me that other planes were transiting the storm without problems, but I felt this was too much risk. I parked in South Carolina, went to lunch with some charter pilots flying a Lear, and then flew around the back of the storm. I was home for dinner and scarcely got wet.*

After 250 hours: The fourth step of the ladder is to visit unfamiliar airports. It's very important a novice get away from their comfort zone and start to explore more distant airports; cross-country skills are perishable and need to be practiced. Every pilot needs to know the procedures, sight-lines, and feelings for short fields, narrow fields, grass fields, and crowded fields with Air Traffic Control towers. These are vital skills to perfect, when the weather is right and both the plane and pilot are ready.

Now I'm really going to go out on a limb, and probably earn a blast of email wrath, but I make this final suggestion. Despite having proven your skill at night-flight while earning your PPL, do not fly at night, at all, under any circumstances, unless you have a safety pilot on board, 250 hours of experience, or an IFR ticket. There are lots of dead pilots who tried to land in the dark of night. It's wicked hard unless you're using instruments.



*Here's a great example of a pilot incrementally expanding the skills envelope without demanding too much too soon. In 2009, I attended a spin-training seminar with über-pilot Admiral Bill Finagin. At one point, we did a spin with 17 turns, dropping thousands of feet and popping out of it exactly when the time was right. An excellent experience.*

## The Peak of the Risk Curve

In my opinion, the real danger for rookie flyers peaks at about the 250-300 hour point, as Mr. Kennedy proved. By then most pilots have developed substantial skills and real expertise, albeit in a very controlled environment. This early success builds confidence that is not truly deserved; the

airplane is just letting you get comfortable before it drops a bomb on you. In a sense, the pilot has not had enough time yet to experience all the things which can (and will) go awry.

Examples: what will the newly minted aviator do when the forecasts have gone wrong? The new kid needs experience with engine problems and airplane failure. Bald tires? Rough-running mags? Overheating oil? Hydraulic leaks? I've had them all. He or she also will need more experience working comfortably with Air Traffic Control. There's lots to learn, and the only way to get good is to build the experience one shallow step at a time.

## Good Advice

Remember we're mostly not professional pilots with ATP certificates, flight dispatcher assistance, and 60,000 horsepower strapped to the wings. We're mostly amateurs, distantly trained, and rarely re-evaluated. Our planes are not as capable as commercial aircraft. Our equipment is not as comprehensive. We usually lack a co-pilot. It's usually good enough, but not great.

As such, allow me to offer one last tip, developed over the years of many hard knocks. This one phrase has saved me gallons of aggravation. I'm not even going to charge you for this. Whenever dealing with friends or associates while planning a G.A. flight, preface your commitments to the flight with the phrase, "Weather permitting..."

It sounds like this: "Hey, guys, weather permitting I'd love to fly us to Tampa next week and see Tom Brady in that game. That would be great. But let me check the weather."



*In a similar manner, here are two examples of the type of advanced training more experienced pilots should get as they approach several hundred hours in their logbooks. Learning the tricks of flying from grass runways opens a big, wide world to novice flyers, and our Cessnas handle grass with aplomb. Similarly, handling busy airports with control towers, departure and arrival procedures, and machine-gun fast radio work bolsters confidence and teaches important skills, like knowing what you are going to say before pushing the microphone button. The grass runway is Triple Tree, SC, while the conga-line of departures is Peachtree-Dekalb in Atlanta. Both are great airports but very different experiences.*

That way, if the weather ain't permitting, the pilot-in-command has already defined the contingency conditions to his passengers. It's all about managing expectations.

So, to wrap up: No passengers until after 100 hours, and the flight MUST be in perfect weather conditions for at least two hours after the rookie is expected to return home. Then start flying unfamiliar airplanes, and then start going to unfamiliar places. By 300 hours, you should be putting your big-boy pants on and flying confidently, with solid decision-making to protect you and your passengers.

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## *About the Author*

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Mike Jones is a 4,000 hour commercial-rated pilot who has more than 50 aircraft types in his logbook. His pride and joy is a Cessna T210, which has carried him to every corner of the U.S. and Canada for more than twenty years. He's always accessible at [PilotMike2012@gmail.com](mailto:PilotMike2012@gmail.com).

