



**STEVE KROG**

COMMENTARY / THE CLASSIC INSTRUCTOR



# Personal Minimums

Go or no go

BY STEVE KROG

**SEVERAL MONTHS AGO**, an incident occurred near our airport that created a good deal of weekend coffee drinking and hangar flying discussion. An aircraft bound for Hartford, Wisconsin, encountered some difficult icing conditions and was forced down a couple miles short of the airport. Thankfully, the pilot was unharmed, but the airplane was totaled. The discussion led to questioning all present if they had personal minimums by which they determined a go or no-go decision to fly.

Some of the participating pilots were familiar with and had established personal minimums, while others really didn't pay much attention to establishing flight

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parameters. Since that Saturday afternoon discussion, I've taken the opportunity to ask several pilots about personal minimums. The responses caused me to delve into this subject further.

What exactly are personal minimums? According to the FAA, personal minimums are an individual's set of operating criteria, procedures, rules, or guidelines used to assist that individual in making personal flight decisions.

The FAA preaches "know your minimums." It does a relatively good job in trying to get pilots to understand the importance of this phrase as it applies to the individual's ability to make safe flights via the acronym of PAVE (pilot, aircraft, environment, and external pressures). Many pilots are familiar with this acronym, but I've found that many more are not. Designated examiners I've used are well-versed with this simple program and stress it during the oral portion of a checkride.

# APPAREO

## AVIATION

### PAVE

**P = Pilot.** It is meant for the pilot to review their readiness for the intended flight. What is the pilot's total experience? Recent experience? Current level of proficiency? And legal requirements? Other concerns may include the pilot's physical and emotional condition prior to the flight. Is this the first time the pilot has flown an extended cross-country? Is it the first time for mountain flight?

For example, years ago, my college flying buddy, Stephen DeLay, and I were flying from eastern South Dakota to Southern California. The first thing we did upon reaching the Rocky Mountains was land and talk to several of the locals, including a flight instructor, to get a briefing on what to expect and how to fly in the mountains. Our total flight time, if you added both of our acquired hours, amounted to less than 100 hours, and all of it was done in the flatlands. It proved to be a wise decision and gave us the confidence and input needed to make the flight safely.

**A = Aircraft.** What are the hazards or risks associated with the aircraft as they pertain to the intended flight? What are the fuel requirements, including fuel reserve, to make the flight? What is the overall condition of the aircraft? Is it equipped properly and legally for the intended flight? How experienced are you, the pilot, with this aircraft, especially if it is a rental? Have you flown it recently? Do you understand the operation of all electronic equipment on board?

With the advances made in aircraft electronics, it is quite easy to get into an aircraft today and only have a limited understanding of how much of the glass panel works. This lack of understanding has been the cause of several incidents throughout the country. If you were to take a private pilot checkride in this aircraft today, the examiner would insist that you demonstrate how to use all functioning onboard electronic gear installed in the aircraft.



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#### STEVE KROG

**V = Environment.** Have you, the pilot, obtained a good weather briefing and understood the potential for environmental risks along your route of flight? These risks include knowledge of both the departure and destination airports, runway conditions, terrain, obstacles, surrounding airspace, and most importantly, the weather elements that may be encountered during the flight, including winds aloft. If flying VFR, can you maintain VFR conditions throughout the length of the flight?

What if the temperature and dew point at your destination indicate a 2-degree separation and there is a stationary front within a few miles of your destination airport? The planned arrival is expected to be just before sunset. Do you go or not go?

Based on my experience working with students nearly every day, as well as conducting a number of flight reviews, weather is the most misunderstood portion of the equation for determining whether or not to fly. Yes, most everyone can identify cloud formations from the NASA charts, or demonstrate to the examiner how cold or warm fronts are depicted on weather charts, but what these fronts do to affect weather along the desired route of flight is not readily understood.

**When establishing your own personal minimums, be honest with yourself and jot down what you're comfortable with.**

**E = External Pressures.** Personal, family, and work pressures can significantly influence your level of proficiency and your ability to make and abide by good decisions. For example, were you up all night prior to making the flight trying to get everything done at work in order to have today and the weekend off for flying?

I see and experience the influence of external pressures when flying with students. One day a student may be sharp in performing maneuvers, takeoffs, and landings. But the next day, they have a hard time flying straight and level. This shows up within minutes of becoming airborne. As soon as I've picked up on the situation, I'll ask the student if work was particularly stressful today, or if someone at home was ill. Most often the answer is yes. With that response, we conclude the flight and have a discussion — on the ground — about external influences and how noticeably they have affected the student's concentration and ability to fly well.



# 2019

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#### WHAT IS YOUR COMFORT LEVEL?

A former student of mine, now flying for an airline but still doing a lot of pleasure flying, stopped at the hangar several months ago. When I asked about his personal minimums, he provided two sets. Proficiency is of utmost importance in the airline industry. He is involved in under-going proficiency training every six months, as most airline pilots are. And once every 12 months they undergo a full proficiency check. This procedure keeps the pilots current, safe, and proficient.

When flying for pleasure, both VFR and IFR, my former student follows the philosophy of doubling the minimum altitude as well as doubling the fuel reserve when flying IFR in the boot-equipped Cessna 310 if he hasn't flown it in the past 30 days or so. Just because he can fly a Boeing 767 to CAT II minimums on a regular basis does not make him automatically proficient in any other aircraft. He also added that if the outside temperature is 10 degrees Celsius (50 degrees Fahrenheit) or cooler with visible moisture, he will wait and fly the 310 another day. He's established sound personal minimums and abides by them.

#### ESTABLISHING PERSONAL MINIMUMS

How does a pilot flying for pleasure establish personal minimums? I've been asked that question many times. My response is generally a series of questions to which the pilot must provide an honest answer.

- How many hours of total flight time have you accrued?
- How many hours in the past 90 days? In the past 30 days?
- Have all the total accrued flight hours happened within 50 miles of the home airport other than when meeting the sport or private pilot minimum requirements?
- What is the strongest crosswind that you have had to fly?
- Was it with an instructor or was it solo? How long ago did this flight occur?

- Have you primarily been an early morning or late afternoon fair weather flyer and not really experienced any significant crosswind takeoffs and landings since your primary training?
- How many flights have you intended to make in the past year but ended up canceling due to the wind?
- What is your comfort level regarding ceiling and visibility? Are you comfortable flying in 5 miles and haze? If the ceiling is 1,500 feet with a broken cloud layer, are you comfortable in that situation? Class E airspace requires a minimum of 3 miles' visibility and that you remain 500 feet below, 1,000 feet above, or 2,000 feet horizontally away from clouds. Are you comfortable conducting flight under Class E minimums?

When establishing your own personal minimums, be honest with yourself and jot down what you're comfortable with.

When did you last fly and how often do you fly? What are the ceiling, visibility, and wind limits that you're comfortable with? When was the last time you flew the aircraft you're about to fly? Are there any outside influences that may affect your flight proficiency today or any future day?

Now that you've honestly answered these questions, a base line can be determined. This base line may be quite conservative today, but by summer's end, it may have been expanded by quite a lot depending on how dedicated you are toward becoming a safe, competent, and proficient pilot.

One final suggestion for helping to define personal minimums is to review the FAA's personal minimums guide, available online via [www.EAA.org/extras](http://www.EAA.org/extras). You'll find it quite helpful as you develop your own. *EAA*

**Steve Krog**, EAA 173799, has been flying for more than four decades and giving tailwheel instruction for nearly as long. In 2006, he launched Cub Air Flight, a flight training school using tailwheel aircraft for all primary training.