

Waypoints: Proficient flight

BY THOMAS B. HAINES (From *AOPA Pilot*, July 2002.)

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Look in the mirror to see the cause of three-quarters of the general aviation accidents each year. As a rule, the airplanes are safe; pilots are the weak link in the system. We obsess over the latest backup systems and weather detection gear. If we focused equal emphasis on maintaining proficiency in all phases of flight, think what a dramatic impact we could have on the accident rate.

Simulator training provides an excellent way to easily and efficiently improve proficiency. Everyone from the insurance companies to the airlines recognizes the need for quality simulator training and yet few pilots of light general aviation airplanes take advantage of the technology revolution that has reshaped the simulator or "flight-training device" arena. Today's simulator isn't the creaky tabletop dinosaur that many of us remember from instrument training days. Instead, you have your choice of PC desktop systems that offer assistance in reviewing procedures to the multimillion-dollar hydraulically actuated monsters operated by companies such as FlightSafety International, Pan Am Simcom, and SimuFlite.

In between these two extremes is a new generation of simulators that offer enough realism that the FAA allows them to be used for logging instrument time and complete instrument proficiency checks. These room-size nonmotion devices are simpler than the full-motion simulators used by corporate operators and the airlines, but much more capable than the desktop computer models.

Staring at age 40 last year, Wisconsin native and longtime pilot Greg Plantz decided he'd had enough of his job in the technology business. With an understanding wife at his side, he chucked the day job in favor of his dream of working in the aviation industry. The result is Proficient Flight, a Waukesha, Wisconsin, simulator-

based training company. To start his company, Plantz investigated all of the available simulator devices for piston-powered aircraft. He ultimately settled on one from Frasca.

Mention Frasca and many of us think of the dark hulking simulator sitting broken and unused in the back of a flight school somewhere. Today's Frasca, however, is an amazing piece of technology. The model Plantz bought can simulate just about any GA airplane from light singles through cabin-class piston twins. The simulator cab looks like the cockpit of a good-size GA airplane. Behind the pilot's seat is a station for the sim operator. Out front through the windshield are five large-screen televisions arrayed in an arc around the cab. Five networked personal computers manage both the visual system projected across the televisions and the instruments, avionics, and control feedback inside the sim cab.

Plantz houses the sim in a small suite at an office complex located next to the Waukesha County Airport, a few miles west of Milwaukee. Two hotels and two nice restaurants sit next to the building, making it a convenient place for pilots to fly into and spend a day or two training.

Insurance companies normally require pilots of cabin-class twins to attend some sort of annual recurrency training. Several insurance companies have reviewed and blessed Plantz's two-day recurrent training program, meaning that pilots of such aircraft attending Proficient Flight courses meet the annual insurance requirements. The fast-paced course includes a signoff for an instrument proficiency check, emergency and system training, regulatory and flight manual review, and eight hours in the simulator.

With an eye toward pilots flying smaller aircraft, Plantz, the owner of a Piper Cherokee Six, also developed a curriculum for a one-day IFR refresher. After that course, a pilot walks away with an IPC and a lot of experience in realistic vacuum and gyro failures and at least four hours of sim time.

For VFR pilots, Proficient Flight offers a four-hour course that includes an introduction to IFR flight and emergency procedures

training. This course has proven popular with flying clubs and other small groups that can train and observe together in the simulator, learning the nuances of VFR into IMC and spatial disorientation.

I spent a day at Proficient Flight in mid-April in sort of a modified one-day course that exposed me to parts of all of the curricula. Plantz programmed the sim to replicate my Bonanza from a power-setting and performance standpoint, and it was fairly convincing. Most convincing is the visual system, which replicates day, night, and twilight settings very well. A few minutes into the flight you will forget that you are sitting in a stationary cockpit replica. The huge screens show nearly 180 degrees of visual reference, easily tricking your inner ear into believing that you are moving. My instructor for the day was Mike Sullivan, an experienced corporate jet pilot who holds Gold Seal CFI, CFII, and MEI certificates. Plantz recognizes the importance of one-on-one training and only hires highly experienced instructors — those who instruct because they love to teach, not those just building time for an airline career.

While at first blush the cost of simulator training might seem expensive, from a time-commitment standpoint it is not. Proficient Flight's two-day course costs \$1,095; the one-day course is \$595; and the VFR emergency training course is \$350. You can't fly a cabin-class twin for eight hours for \$1,095; nor can you fly a high-performance single for four hours for \$595 — yet that is how much sim time you get in each of the courses. In addition, for that same price you will be "flying" with a first-rate instructor and you will accomplish much more than you ever could during those same hours in the real airplane.

Once completing an approach in the sim, you instantly can be back at the outer marker or any other location for the next approach or procedure. In the real airplane, you'll spend a minimum of 10 minutes setting up and repositioning for the next approach — and that would be at the same airport. With the sim you can fly approaches at any airport. Have a question? Hit the big red Freeze button on the panel. It stops the sim so you can ask a question or so the instructor can make a point. Try that in the real airplane. In addition, the sim is wired with cameras

connected to a video recorder. You can instantly see on one of the screens ahead of the cockpit how you screwed up — or not — on the last approach. Plus you can take the tape home and relive the flights, bragging to your hangar buddies about how well you flew — or not.

In just a day's time, I flew every conceivable approach from DME arcs to VORs, ILSs, and ASRs. I also experienced gyro and vacuum failures and engine-out scenarios, and practiced procedures for returning to the airport after an engine failure. This was in addition to a thorough review of the regulations and the flight manual. It was certainly a day well spent.

There is no doubt that such simulator training could help pilots of all experience levels improve their skills and at the same time whittle away at the accident rate.

<http://www.aopa.org/members/files/pilot/2002/wp0207.html>