



## Using the Cirrus Flight Simulator as a Recurrent Training Tool

by Gil Williamson

**H**ow do you keep current? After discussions with some friends regarding recurrent training (one friend flies 767s for a living and another flies an F-16) my curiosity about the use of simulators was piqued. What really grabbed me was my commercial pilot friend was required to have 16 to 17 hours of simulator time plus classroom and structured self-study every nine months. This is a pilot flying over 700 hours a year, versus my 200.

I heard about the Cirrus simulator on the COPA chat room and shortly thereafter saw it at M-3 in Duluth, where my wife Joyce received a short introduction during Mike Radomsky's "Partner-In-Command" training. After a chat with Jim Clutter from the Atlanta SimTrain organization, I decided to sign up for a session to freshen up on my piloting skills.

I was planning to fly from my summer headquarters in Dayton, Ohio to our home in Hilton Head, S.C. for the Fourth of July weekend, and thought I could make a stop in Atlanta. After a phone call to SimTrain, I was hooked up with Joe Davis, a Cirrus Certified Instructor and arrangements were made. In preparation for the simulator-based training, Joe recommended a review of normal and emergency procedures. The first benefit I received from my simulator training decision was this review. Although the procedures are available on the MFD, I decided to develop an outline version, plus the electrical system schematic and load shedding guide. I laminated these for quick reference as well, in case of loss of the MFD.

We arrived in Atlanta and I was ready to get started. SimTrain's facility was located a few minutes from Atlanta's Cobb County-McCollum Field (KRYF), which is north of Atlanta in the suburb of Kennesaw. Joe picked us up and after a quick tour of the facility, we settled around a table for a review of our objectives, which were to give me a thorough review of emergency procedures and Joyce some stick time and a review of the CAPS deployment sequence.

Joe explained that he has found that the ideal half-day training session consists of two parts, each with a ground and a simulator session. During the first session, time was spent reviewing critical systems and avionics integration information to ensure that I had a sound base of knowledge for understanding the procedures. We reviewed the emergency checklists as we discussed the systems.

We then moved to the simulator area and were briefed on the simulator operation. The simulator consists of a cut-away Cirrus cockpit with video screens in front of the seats. The cockpit sits on a full-motion platform, which is locked into position for entry and exit. Once you're strapped in, it is free to move in response to control movement or simulated external forces. Behind the cockpit is an instructor's console with displays and controls that permit the instructor to simulate normal and abnormal situations, as well as the external environment.

Getting started, a normal take off at your home airport gives you a feel for the controls and the display. The simulator gives you a fairly realistic feeling of the Cirrus flight environment and once you start into the specific training events, you forget that you are not actually flying as you concentrate on the problem at hand. In this phase, Joe caused a single system failure to occur and we went through the diagnosis and response process using a checklist – memorized or referenced. An example would be an alternator failure, where the indicators function as they would in a real failure and respond to your actions. One of the beauties of the simulator environment is that the instructor can shift from playing ATC and chief tormentor, to being an instructor. The instructor can stop the simulation to coach you or give you an alternative approach, and if necessary, take you back to a prior point in your flight. For example, during the engine-out session I was so focused on achieving best glide speed that I delayed locating the closest airport. Joe stopped the simulator, got my head screwed on right and we started over. Approximately an hour-and-a-half in the simulator is spent in this initial phase going through each failure mode, including engine loss, engine fire, electrical fire, electrical system problems, PFD, MFD, avionics failures and so on. Joyce observed from the right seat during this phase and she learned a lot about the aircraft systems and failure modes.

Over a cup of coffee Joe reviewed what we had done and went over those areas where I wasn't as sharp as I should have been, to make sure I understood the correct procedures.

Next it was time for session two, in which we incorporated what we had previously learned into realistic scenarios. Before we went back into the simulator, we discussed Cirrus accident data, Cirrus bulletins, and so on. We then prepared for a simulated cross-country trip getting weather conditions, forecasts, and NOTAMS.

The cross-country was a short flight from Hilton Head (KHXD) to Saint Simons Island (KSSI), normally a very pleasant trip that ends with us enjoying some of Barbara Jean's famous crab cakes. On this trip I lost my appetite after the weather turned lousy and systems – including the PFD – started failing left and right. This left me with one alternative, which was a GPS approach into KSSI. Of course, ATC vectored me around and then asked me to hold



while other traffic did an approach. In an effort to be a nice guy, I started to comply. My guardian-angel instructor stopped the exercise and explained that I was in serious trouble, possibly warranting declaring an emergency. In this situation, I needed to reduce the complexity and get ATC on my side. I successfully completed the approach and landed at Saint Simons where all systems were instantly repaired and the weather improved for my flight back. No time for crab cakes on this trip. So we were off for Hilton Head, and wouldn't you know it as soon as we got settled at cruise, one of the control surfaces partially separated. I sort of got the aircraft back in control and was just thinking about plan B when we experienced a mid-air collision, losing part of the wing. Oh I get it – we are in a spinning descent and it must be time for CAPS deployment. I went through the checklist and pulled the CAPS handle. The simulator gave a good imitation of the real thing including the

**High-Performance Care for Your High-Quality Aircraft**

### Cirrus Authorized Service Center

- ▶ Maintenance & Avionics
- ▶ Routine Inspections
- ▶ All Applicable Service Bulletins
- ▶ Cirrus Factory-Trained Technicians
- ▶ Extensive Parts Department
- ▶ Factory Avionics Upgrades
  - Emax
  - Avidyne PFD/MFD
  - XM Weather
  - Cmax
  - Garmin
  - TAWS and more!

**SATSair**

Visit [www.satsair.com](http://www.satsair.com) to learn more about our maintenance and avionics as well as our innovative Air Taxi service.

Your Cirrus is a sound investment that pays dividends in efficiency, enjoyment and pride. Maximize your returns by making SATSair your partner in the care of your aircraft.

Contact us today at **864.232.9566 x 102** to find out about our first-rate aircraft service.



pitch forward, then stable descent. Joe coached us through the post-deployment checklist and gave us a few quick tips on what to expect at touch down.

We finished with Joyce going through a disabled pilot scenario, doing the necessary communications and deploying the CAPS. The second simulator session lasted about as long as the first.

Joe debriefed us covering areas that he thought we needed to review and we were done. We checked the weather on the SimTrain computer and it looked like our training scenario was becoming real, with a large band of thunderstorms bearing down on Atlanta from the west. We decided that we could afford no delay in our departure to Hilton Head, this time for real. We filed and left for the airport.

After preflight, a candy bar and bottle of water from the vending machine,

we were off. During the flight, while dodging the typical summer build-ups, I reflected on what an excellent investment the morning had turned out to be. The cost of the simulator and instructor was approximately \$450. Atlanta was a short distance out of my way and the only other cost was a night's hotel stay and a cab to the hotel. The concentrated training cost less than trying to do it in the aircraft. Some of the scenarios I practiced would not have been practical or safe in the air. I decided right then that I was going to make a simulator session part of my personal recurrent training every year. This year I intend to do a somewhat longer session – I'll cover the emergency procedures again, but I'll also review some of the less commonly used Garman 430 functions. **COPA**

About the Author: *Gil Williamson retired in 1993 as Chairman and CEO of NCR Corp. after a 30-plus-year career. He and his wife Joyce are originally from California and now split their time between Hilton Head Island, S.C. and Dayton, Ohio.*

**AERO TECT**  
Clear Protection Film

Does your Paint Look's Like This?

- Rock Chips
- Scratches
- Tow Bar Damage

**Forget the Paint & Decal Replacement.**  
*These are the same Pre-cut kits that Cirrus Design now installs at the factory.*

Call AeroTect to locate an authorized installer near you.  
**(866) 388-AERO**  
**www.aerotect.net**

# Cessnas

by Van Bortel

- Always Hangered
- Never Damaged
- No Corrosion
- All Original Logs
- Moneyback Guarantee
- Highest Resale Value

*We Fly the Aircraft to Your Ramp for Inspection by You and Your Mechanic at No Cost or Obligation to You!*

**Proven Safe for 50 Years! 1956 to 2006!**  
2002 Cessna 172R Skyhawk with Nav II  
216 TTSN. Matterhorn White with Hot Red, Concord Purple and Alpine Teal Stripes. Mocha Marquis Fabric Interior. \$149,500  
Ser# 17281066

**VAN BORTEL AIRCRAFT INC.**  
4912 South Collins • Arlington Municipal Airport • Arlington, TX 76018  
Toll free 866-662-3379 • 817 468-7788 • FAX 817 468-7886  
<http://www.vanbortel.com> • e-mail: [accsales@vanbortel.com](mailto:accsales@vanbortel.com)