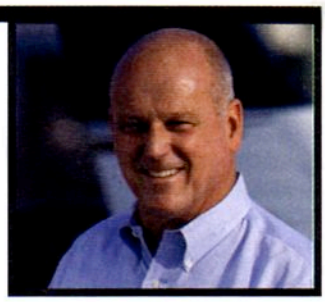

Time for change

Integrated instruction should be history

By Ralph Butcher

In the early 1960s, instrument flying accidents involving instrument-rated pilots were on the increase. Consequently, the FAA introduced *integrated instruction*, a training technique that requires instructors to use instrument references as well as visual outside-the-cockpit references during initial flight training with student pilots. Prior to this time, visual references were the principal reference. I, like many others, accepted the change, but in hindsight that decision was wrong. Integrated instruction spawned a new problem: stall-spin accidents.

In the early 1980s, companies started producing general aviation flight simulators. Those with enclosed cockpits that represent a class of airplanes to include the aerodynamic responses of those airplanes are now called flight training devices (FTDs). Other companies developed personal computer-based aviation training devices (PCATDs), but under current FAA rules they have more restrictive time limits than do FTDs.

Can you cover the six flight instruments and fly all of the private pilot and commercial pilot maneuvers? If not, you are an airplane driver, not an aviator.

I spent years teaching instrument flying in airplanes, but because the student wore a view-limiting device, I could not observe the student's eye movement. In an FTD, I could watch eye movement, and what I saw was shocking. Most students and rated instrument pilots spent a great deal of time scanning nonessential information.

I quickly realized that I could far exceed the intent of integrated instruction by using this resource, so I eliminated integrated instruction from my private and commercial pilot syllabi. I returned to the days of placing primary emphasis on the visual outside-the-cockpit references. I teach students to understand the wing and the significance of attitude and power. I show them how to use their physical senses—eyes to evaluate the six types of motion that pilots must deal with, sound to monitor power output, and control feel to monitor aircraft response and airspeed.

The result is this: Stall/spin awareness is maximized, and by using an FTD for instrument training, instrument-flying knowledge, habit patterns, and awareness are also maximized. That's a bases-loaded home run in my book.

I interview and fly with many flight instructors who are seeking employment. What I see is sickening. Heads down, heads down! They stretch their neck to maximum limits trying to see over the nose during landing. They don't clear a turn before turning or don't clear the airspace before starting a maneuver. If they don't do it, you can be certain that their students will not do it either. It goes on and on. I must add that some of these people are graduates of university training programs.

Another burr in the saddle is the commercial student who says, "I see no reason why I must learn to fly those stupid chandelles and lazy eights. I'll never use them." Oh, sure, he learns to do them using instrument reference and therefore misses one of the greatest educational segments that non-aerobatic aviation training has to offer.

Can you cover up the six flight instruments and fly all of the private pilot and commercial pilot maneuvers? Can your instructor? If not, you are an airplane driver, not an aviator.

A pilot senses the airplane, feels the airplane, and uses the aerodynamic forces to his or her advantage. Chandelles and lazy eights help to assure that a pilot is acutely aware of rolling, pitching, and yawing, and that he or she can use the flight controls to adjust those rates of attitude change so that the target pitch and bank attitudes are reached at specific points.

When approaching for landing, a pilot doesn't dive the airplane toward the runway; he establishes the proper pitch attitude and power setting so that the airplane settles toward the runway, on glide path and on speed. He knows that this technique will save his bacon when he makes night approaches to runways with unusual lighting situations that often play tricks on the human eye.

Don't fly with an instructor who teaches you to be an airplane driver. Find one who will teach you to be an aviator. That instructor can fly any maneuver and make any takeoff or landing without instrument reference. When you learn to do it, you'll feel like you're a part of the airplane, and your insights and confidence will soar.