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COMMENTARY / THE CLASSIC INSTRUCTOR

What Do You Do to Improve Your Confidence and Proficiency?

Challenge yourself
BY STEVE KROG

FLYING, ESPECIALLY GENERAL AVIATION flying, should always be safe, fun, and challenging. Otherwise, why do it? There are days, though, when we are a bit lax. We need a challenge to expand our envelope of experience, continue having fun, and become more proficient.

Challenges in a positive or controlled environment are good for improving flight proficiency. Some pilots perform the same flight every time they leave the ground. These pilots are sometimes referred to as pilots with one hour of experience repeated over and over. There is nothing wrong with this type of flying. But what happens if the repeated flight routine is disturbed by rapid wind or weather changes, flight traffic surprises, or mechanical issues? Are you prepared and proficient enough to handle these unforeseen situations safely?

CHALLENGE YOURSELF

When was the last time you performed a power-off, 180-degree turning approach to a spot landing? The response by many would either be never or when I had to demonstrate one for a checkride. If you have not done one in a while, why not give your proficiency a test and practice once or twice? Let us assume you're flying an aircraft with no flaps for this discussion.



A power-off, 180-degree spot landing accomplishes several things that lead to improved proficiency and safety. Knowing the proper power-off glide attitude and speed first comes to mind. Once established, do you know your sink or descent rate for the aircraft you are flying? At one time you probably did, but that was a long time ago. Without that knowledge tucked in the back of your mind, the power-off spot landing is destined to be something less than what you should be striving toward.

Did you remember to consider the wind direction and velocity and the impact on your ground track and groundspeed? Probably not on your first attempt. Five knots of wind can play a significant role in where you begin your 180-degree turn for the approach to land.



The correct nose attitude and airspeed are critical when on the final leg portion of the approach to land. If your nose attitude is properly established, does it appear that you are gliding directly to your aim point? If not, do you know how to correct for it? The runway end will visually appear to be rising and moving away from you should you be below the proper glide path. If you are above the glide path, the runway will appear to be dropping and moving toward you.

Sometimes while giving dual in the pattern, I have students intentionally come in too high or too low when approaching to land. It is much easier for them to understand the meaning of the sight picture if they can see it and experience it.

To measure your proficiency when trying the 180-degree spot landing, the area on the runway for touchdown should be from the top of the numbers out to two white centerline stripes beyond the numbers. If you can consistently touch down in this span, your spot landing proficiency is particularly good. Airport traffic activity permitting, try one or two spot landings at the conclusion of a pleasure flight from time to time to keep yourself both sharp and safe.



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FORCED LANDING SIMULATION

When did you last practice a simulated forced landing? If your most recent flight review was thorough, you probably had to demonstrate one. Otherwise, the last time you attempted a simulated forced landing was probably years ago on either a private or commercial pilot checkride. You might find you are a bit rusty if you tried one today.

The next time you make a pleasure flight, pick an open field away from a populated or congested area and practice a simulated forced landing. Give it a bit of thought first. What is the best glide speed for the airplane you are flying? What is the expected descent rate at this indicated speed? What direction is the surface wind coming from and how strong was it? Is the field you selected positioned so that you can land into the wind? Are there obstructions to be considered? Did you conduct the emergency landing cockpit checklist?

How many times did you change your mind while picking a field in which to land? As instructors, we try to instill in every student pilot to pick a field and commit to it. Otherwise, you will run out of options, altitude, and airspeed with nowhere to go but into an area other than an open field.

Many of us pleasure flying pilots would probably forget or overlook several of the items mentioned while making the first practice forced landing attempt. However, I believe that most of these things would quickly come back to you after the first attempt. Make a go-around, collect your thoughts, and then pick a different field and try it again. This exercise will definitely help you develop self-confidence and personal proficiency.

STEEP TURNS

For whatever reason, I have found many pilots to be apprehensive about performing steep turns. I even had one individual claim that he had been led to believe a steep turn could easily cause the airplane to tip over or go into a roll!

A good maneuver to practice for enhancing proficiency is the steep 45-degree bank, 360-degree turn both left and right. The new FAA Airman Certification Standards allows a fair amount of deviation, but I require a pilot to be able to perform a 360-degree steep turn, maintain a bank angle of plus or minus 5 degrees, and an altitude deviation of no more than plus or minus 20 feet. And the pilot needs to be able to perform the steep turn in both directions.

Can you maintain a constant bank throughout the 360-degree turn? Can you hold your altitude plus or minus 20 feet in both directions? If not, you may want to challenge yourself. Once you can accomplish these steep turns within those parameters, it is time to up the challenge and try a few 720-degree steep turns using the same guidelines. This maneuver is required of commercial pilot candidates when taking their initial checkride.

One thing you will notice when performing a 720-degree maneuver is the bump you'll experience during the second turn or rotation. This is nothing more than flying through your wake from the first 360-degree turn. You may be surprised by it the first time you feel it, but think of it as a sign you are holding proper bank angle and altitude.

SLOW FLIGHT

Practicing slow flight is something no one ever really does except on the initial checkride or during a flight review. This lack of practice really shows, too. I have observed that pilots can usually get the airplane slowed to the desired airspeed, but altitude control is quite another matter.

Performing slow flight properly, a pilot should be able to transition from cruise speed to slow flight airspeed and maintain a constant altitude while doing so. Then the pilot should be able to hold this attitude, airspeed, and altitude during straight and level flight as well as during shallow turns left and right rolling out on assigned headings. Following, a pilot must be able to

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transition back to straight and level cruise flight holding an exact heading and altitude.

To pass the private and/or commercial checkride, we all could perform this maneuver as stated above. But could you do it today? It will probably take some practice before reaching a satisfactory level of proficiency. When attempting slow flight, first set some parameters like plus or minus 10 mph and plus or minus 100 feet. As you become better at it, tighten the parameters to plus or minus 5 mph and plus or minus 50 feet.

Now add to this challenge a full 360-degree shallow turn, first to the left and then to the right, rolling out on an exact heading. Then maintain that heading for a minute. When you can perform this to the tightened numbers stated, you will have significantly improved your proficiency and your knowledge of the airplane being flown.

Flying an airplane is one of the most fun, challenging, and self-confidence-building endeavors one can do in a lifetime. As pilots, we all must assume the responsibility to conduct our flights as safely as possible, be they for pleasure or business. This requires maintaining a level of proficiency. Do your part and help keep flight safe and fun for all! *EAA*

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