



STEVE KROG

COMMENTARY / THE CLASSIC INSTRUCTOR



Improving Your Proficiency

What have you done lately?

BY STEVE KROG

AS YOU READ THIS ARTICLE, we're in the midst of the 2019 general aviation pleasure flying season. You may have already attended a couple of pancake breakfasts and several \$100 hamburger evening flying events that have become quite popular throughout the country. Once again, after knocking off a bit of rust, you may feel reasonably comfortable at the controls of your trusty aircraft. However, have you truly polished or enhanced your flying skills? Are you proficient or just current?

Other than washing, polishing, and flying your airplane on light wind VFR days, have you done anything to improve your proficiency? A good, conscientious, and safe pilot should always be in a learning mode and striving to improve their skills.

SIMPLE EXERCISES IMPROVE PROFICIENCY

I like to do several exercises if I haven't had an opportunity to fly for a while. All are quite easy and safe to perform and are meant to improve proficiency. You may think that these exercises are so simple they are a waste of your time, but bear with me.

The first item on the list is improving the takeoff and climb-out. Did you keep your airplane straddling the runway centerline during the entire takeoff roll? Or did you let it drift a bit to the left? If so, you were a bit rusty or slow applying left rudder and offsetting engine torque and P-factor. Try another takeoff. This time, concentrate on staying ahead of the airplane and making it remain on the centerline. Anything less is not considered good enough. Did you stomp on the right rudder pedal (like hitting the brake pedal on an old tractor), causing the nose to veer to the right? Or was your rudder input smooth and fluid so that a passenger would never have noticed your control inputs?

Next, after lifting off, establish and trim for an exact best rate or angle airspeed. In smooth air, can you make the aircraft fly hands off and maintain your attitude and constant airspeed? If not, trim accordingly and try hands-off flying again. I've given numerous flight reviews, and many pilots struggle with this simple maneuver.

Were you able to maintain a constant heading during the climb? Again, I find many pilots allow the aircraft to drift toward the left rather than being able to hold a precise runway heading. Slight but constant right rudder application during the climb will allow you to hold an exact heading.

If you strive for perfection and want to be a better pilot, make this exercise of climbing while holding an exact heading something you do every time you fly. Good enough is not acceptable.

After climbing to a safe altitude, the next exercise on my proficiency enhancement list is the medium or 30-degree bank turn to heading while holding an exact altitude. Can you perform this simple maneuver, first using smooth, coordinated control inputs, especially on the rudder, and then holding altitude at plus or minus 100 feet until completing a 360-degree turn? Did you roll out exactly on your heading — or miss it by 20 degrees? Something so simple, and supposedly learned on your second or third dual instruction flight, can be a challenge

until practicing it a few times. You'll find your rudder inputs a bit ragged, your bank angle varying, and your altitude fluctuating until you truly concentrate, focusing on improved proficiency.

Now try the medium bank turn, but just for 90 degrees to an exact heading. Then, immediately reverse the turn to the opposite direction for 90 degrees. Don't stop the turns at a wings-level attitude, but rather keep the airplane in a turning motion from left to right. The goal here is to maintain constant bank angles, altitude, and coordinated control inputs while striving to hit your headings exactly. A 10-degree heading deviation is not good enough, nor is a 50-foot altitude deviation acceptable. Strive for improved proficiency.

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If you really want to test your turning proficiency, perform 720-degree left and right turns using medium bank. Set the same parameters as stated above. If you can do so, you should fly through your own wake while making the second turn.

If the medium bank turns become too easy for you, then take it up a notch and perform the same 90- and 360-degree turning exercise using a 45-degree steep turn bank angle.

Next on my list is slow flight. After clearing a practice area, pick an altitude and heading. Then, establish slow flight maintaining both with no more than a 50-foot altitude deviation and a 5-degree heading deviation. If you're uncomfortable performing slow flight with the stall warning horn clicking in and out, increase your airspeed by 5 mph (this is the new slow flight airspeed suggested by the FAA). Then, perform shallow bank 90-degree turns to heading while maintaining a constant altitude and airspeed. I use an approximate 10-degree bank angle for this maneuver. Trim the aircraft to see if you can maintain pitch in a hands-off configuration. In some airplanes, you may not have enough trim to do so.

A new twist has been added to the slow flight maneuver that is now required on all sport and private pilot checkrides. Once slow flight is established, the pilot must be able to demonstrate a shallow climb and a shallow descent while maintaining a constant airspeed and heading. If you've not done this before, try it. It isn't difficult, but it will require you to know your airplane better and improve your proficiency.

Although many airplanes we fly today are equipped with a navigation radio and VOR display, many pilots ignore it and use a GPS for navigation, following the magenta line on the moving map. But, by flying in this manner, do you truly get a sense, feel, or understanding for the effect of the wind direction and velocity on your flight path? The next time you're flying for fun, dial in an area VOR, establish your "to" reading with the needle centered, and fly the course and allow little or no needle deflection. This requires you to establish an understanding of the wind direction and velocity and make corrective heading changes. It isn't hard to do, but you'll soon find how lax you've become depending on the GPS.



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PRECISE OR SPOT LANDINGS

Finally, complete your proficiency improvement flight by doing several landings. I like to first fly a normal pattern and approach, but strive for touching down on an exact spot on the runway. Don't make it easy by targeting the numbers, though. Pick a spot one or two center stripes beyond the numbers. When you can touch down on your selected spot within 100 feet on each of three landings, it's time to tighten the parameters. Using the same spot on the runway, try spot landings using an idle power, 180-degree turning or circling approach.

A word of caution — don't compromise safety when performing this maneuver. First, make sure other pattern traffic is aware of your intentions. Also, be very conscientious about using good aileron and rudder coordination throughout the 180-degree turn. Don't try to correct overshooting or undershooting the runway by using the rudder to skid or slip in the turn. If you feel your approach is coming up a bit short, don't try to stretch the glide by

raising the nose. Don't compromise safety just to prove a point.

And, for the last proficiency-enhancing maneuver, try performing a short-field obstacle landing. You may not have had to perform this landing since your initial checkride, so now is the time to give it another try. If your aircraft does not have flaps, a good hard slip will be needed. If you have flaps, use the recommended flap settings to safely handle the approach and landing.

Flying general aviation aircraft for pleasure and fun should never be taken lightly. Therefore, it is the responsibility of all pilots to fly safely to protect this freedom. Strive to be a better, more proficient pilot every time you fly.

Every flight must be fun, safe, and challenging! *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.

