TECHNIQUE

SLIPS

A fun way to scrub off altitude

» ***By Ian J. Twombly***

ILLUSTRATION BY CHARLES FLOYD

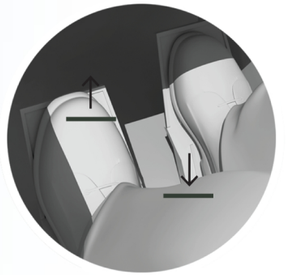
DESPITE YOUR BEST efforts, there will be times when you are too high on final approach. If you've pulled out all the power, dropped all the flaps, and still you don't think you can make the runway, there is one tool left that can help get you there—the slip. Slips are used in all sorts of situations—whether intentionally or not—but final approach is the place to hone the skill and demonstrate it on a practical test. They are great for losing altitude quickly without picking up airspeed.

PLUS / *Watch a demonstration of a slip.*

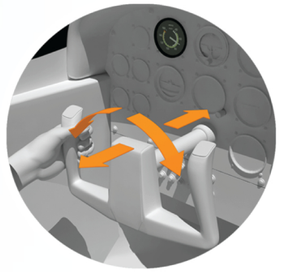
1. Power to idle. It's possible to perform a slip with power, but why would you? The point is to lose altitude, and for that, the power should be at idle.

2. Flaps at pilot's discretion. In most airplanes, slips on final approach should be with full flaps. An exception is some Cessnas, where there is a note in the pilot's operating handbook warning pilots to avoid full-flap slips.

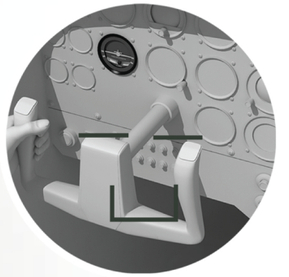
3. Aileron into the wind. In order to easily maintain the extended centerline and get the greatest rate of descent, the aileron should be deflected into the wind.



4. Full opposite rudder. Almost simultaneously, add full opposite rudder. The slip is established at this point.



5. Maintain airspeed and ground track. Maintain airspeed with pitch (push down to speed up, pull up to slow down), and maintain the runway's extended centerline with aileron. Keep the rudder fully deflected and simply turn by using more or less aileron input.



6. Relax. Start the recovery at a safe altitude, say 100 feet or so. To recover, simply relax the rudder pressure and aileron. The airplane will return to coordinated flight quickly.

» PRACTICAL TEST STANDARDS

To determine that the applicant:

1. Exhibits satisfactory knowledge of the elements related to a forward slip to a landing.

2. Considers the wind conditions, landing surface and obstructions, and selects the most suitable touchdown point.

3. Establishes the slipping attitude at the point from which a landing can be made using the recommended approach and landing configuration and airspeed; adjusts pitch attitude and power as required.

4. Maintains a ground track aligned with the runway center/landing path and an airspeed that results in minimum float during the roundout.

5. Makes smooth, timely, and correct control application during the recovery from the slip, the roundout, and the touchdown.

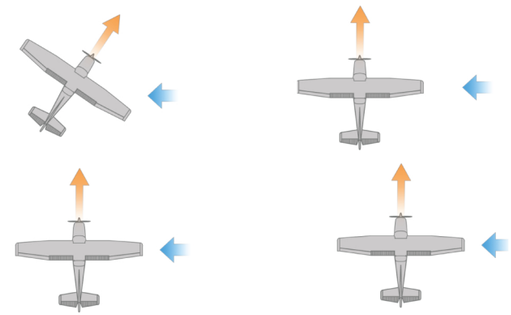
6. Touches down within 400 feet beyond a specified point with no drift, and with the airplane's longitudinal axis aligned with and over the runway center/landing path.

7. Maintains crosswind correction and directional control throughout the approach and landing sequence.

8. Completes the appropriate checklist.

SLIP SAFETY

Slips will likely feel odd the first time you try them because they are an uncoordinated maneuver, meaning the inclinometer shows the ball well outside the center. Normally this would be a treacherous position that close to the ground, but we can do slips safely simply by maintaining a healthy margin over a stall. Stick to the normal approach speed or just a few knots faster and you will be fine.



FORWARD SLIP **SIDE SLIP**

WHICH SLIP?

The slip used on final approach to lose altitude is called a forward slip. A slip used to land straight in a crosswind is called a side slip. Remember the difference by thinking that in side slips you look out the forward window and in forward slips you look out the side window.