

## Slips and Skids

Depends whether or not it's a straight slip, or a slipping turn. Also depends on the airplane and how that airplane is loaded and configured.

Classic cross-controlled slip: rudder points toward the sky (i.e., above the horizon).

Classic cross-controlled skid: rudder points toward the ground (below the horizon).

It's also possible to be cross-controlled but neither in a slip nor a skid: yaw while holding the wings level.

By its nature and propelled by human nature, the skid is spin-prone; let's call the transition a skid-spin.

In contrast, and properly managed, the slip is less spin-prone. In fact, as Tim and others know, you can perform a power-off stall in a straight slip in a Citabria or Decathlon, all the while maintaining your original track. Those airplanes will oscillate into and out of stall buffet without the tendency to spin "over the top" toward the deflected rudder.

It's also possible to perform a power-off stall in a straight slip in a Cessna 172 with two people on board, flaps up and not spin. The 172 so loaded does lose some rudder authority; thus, it begins a stalling, slipping, spiraling descent in the direction of the low wing. There's sufficient rudder to prevent spinning in either direction, but not enough to maintain the original track. You can sustain this behavior for 90 or more degrees of heading change.

An A36 Bonanza, on the other hand, will matter-of-factly roll over the top toward a spin departure. But consider the process in the context of the classic slip and skid referenced earlier: slipping has the rudder pointed skyward; skidding, the rudder pointing earthward. Thus, the A36 transition is slip-skid-spin — just as Tim described it.

As for the skid-spin, it is not always necessary to have the controls crossed. In fact, many airplanes will readily tuck into an under-the-bottom skid-spin departure merely by feeding in more bottom rudder along with additional aft elevator — no opposite aileron needed. More likely than not, this is how a lot of accidental skid-spins are triggered, with the pilot applying opposite aileron only as or once the airplane departs toward the spin.