

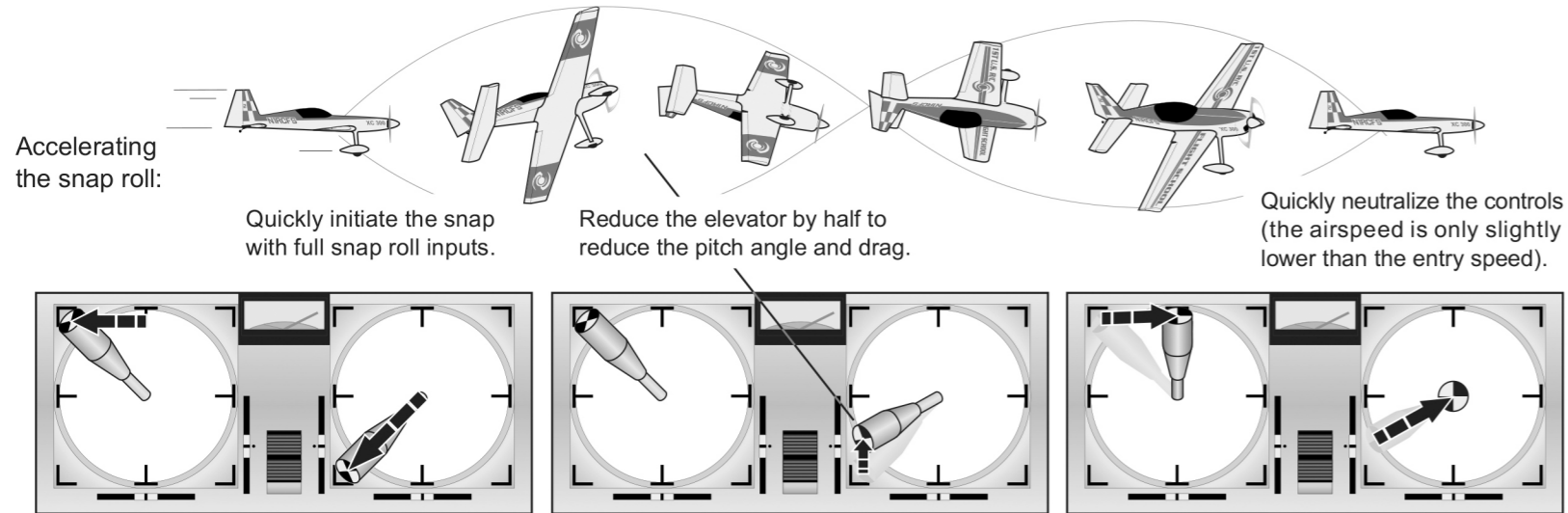
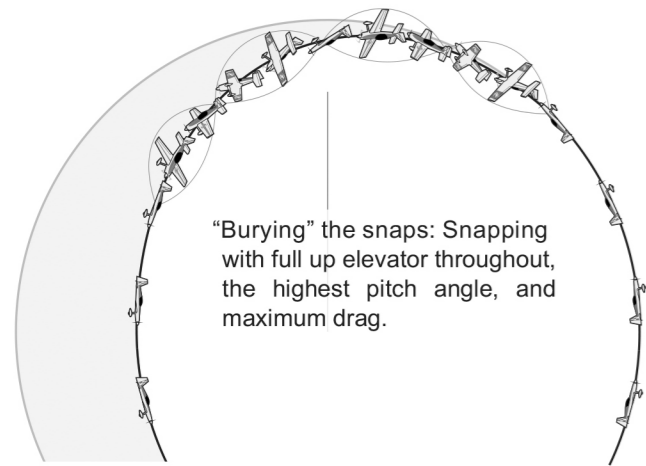
## Accelerated Snap Rolls

When performing snap rolls as part of larger maneuvers, minimizing the speed loss during the snaps will improve control afterward. E.g., If the airplane decelerates so rapidly during a double snap avalanche that it falls out of the loop, it

will be necessary to reduce the elevator and the pitch angle while snapping to reduce drag and maintain the proper shape of the maneuver — a technique known as “accelerating” the snap rolls.

1. Use full up elevator to get the plane stalled (break the airflow’s hold on the wing) and snapping as quickly as possible, because any delay before the stall is reached will result in the airplane veering off course. Without going into the lengthy details of *auto-rotation*, know that once the snap has started, it doesn’t take as much elevator to keep the plane snapping.
2. As soon as the plane starts to snap, reduce the elevator to half, and then direct all your attention to stopping the snaps at the point that the maneuver calls for. The speed and control after should be considerably greater compared to “buried” snaps with full elevator throughout.

When there is cause to accelerate a single snap, e.g., a low entry speed, you will find that the only way to initiate, accelerate, and stop the snap fast enough is to apply the inputs in one continuous coordinated movement....



## Snap Roll: Opposite Rudder Heading Correction

In the time, albeit brief, that it takes the wing to achieve critical angle of attack while initiating a snap roll, a plane tends to turn a little before it snaps. Consequently, if the snap is to the left, the plane will exit the snap heading left of its original course. Although the deviation is typically not great, it can amount to a noticeable deviation if not corrected early. Applying *opposite* rudder immediately after the snap corrects this deviation before it becomes an issue.

A snap roll both develops and rotates slower at lower airspeeds. The tendency for the airplane to change course at the start of the snap(s) is therefore greater over the slower top of an avalanche than it is when the plane is rapidly picking up speed on a downline for example. Anticipating this, quickly apply opposite rudder (opposite the snap roll) immediately after the snap(s). The amount required to do the job will have to be worked out in practice. Each time, commit to a specific rudder input, e.g., 1/2", and then adjust the amount until you find what works best for your airplane. Of course, this is all moot if the pilot is thinking so much about the rudder that he over-rotates the snap. Consequently, prioritize stopping the snap with the wings level, and then correcting the heading with rudder.

In training, stopping the snap, pausing to make sure everything is at neutral, and then inputting opposite rudder is initially taught. A *snap master* stops his snaps by returning the controls to neutral, except the rudder, which passes right through neutral into opposite rudder. That technique develops naturally as the familiar sequence of executing a snap roll begins to flow in rapid succession, not by rushing!

Immediately after inputting opposite rudder, start smoothly taking it out. Note that the tail may wag and cause a deviation if the rudder is taken out too quickly.

Tip: If the deviation after the snap is so severe that you end up having to use a very large amount of opposite rudder to reestablish the proper heading, try inputting a slight amount of right rudder leading up to left snaps to help reduce the amount of deviation afterwards.

