

## FOUNDATIONS OF FLIGHT

### PROPERLY APPLYING FRONT-RISER INPUT



**AXIS**  
Flight School



Brought to you by AXIS Flight School Instructor Niklas Daniel at Skydive Arizona in Eloy. Photos by Niklas Daniel.

#### Purpose

Learn correct hand placement while applying front-riser input to:

- ▶ Avoid dropping a toggle
- ▶ Increase awareness of a canopy's control range
- ▶ Initiate a heading change
- ▶ Change the canopy's profile to increase descent rate and correspondingly increase airspeed
- ▶ Allow a greater range of mobility within the landing pattern relative to other canopies (promote vertical separation)

Jumpers should not perform these front-riser maneuvers to fly relative to other canopy pilots (flocking, canopy formations, etc.) or execute high-performance landings unless they have received

professional coaching on how to do so safely. These exercises should cease at the pilot's decision altitude or no lower than 1,800 feet above ground level.

Before executing a maneuver under canopy, a canopy pilot should check for canopy traffic and know his altitude and his position relative to the landing area.

#### Hand Placement

It is critical to maintain a clear distinction between the toggles and dive loops while holding them. Always keep your hands in your toggles. Put your entire hand through the toggles and place them in your palms. Then secure the toggles with your pinky and ring fingers. Next, grab the dive loops with your index and middle fingers only. This way, you can quickly release the front risers and immediately apply brakes if necessary. By holding the dive loops with only two fingers, you will be far less likely to drop a toggle as you let go of the dive loops, a mistake that can cause serious injury or even be fatal if it occurs near the ground.

#### Execution

Once you have grabbed the front risers, pull them in the direction of your chest. In doing so, you are pulling on the A and B lines simultaneously, causing the lift vector to shift forward. This increases your

descent rate and airspeed by changing the canopy's profile to curve up in the back (concave at the front and convex at the back). Notice the increase in wind noise.

#### Performance Objectives

Work on applying front-riser input correctly while manipulating your descent rate as you're flying straight and as you're initiating turns (gradually going from 90- to 180- to 360-degree turns). Remember to look for canopy traffic before starting any heading change.

#### Helpful Hints

If you are flying a canopy that has heavy front-riser pressure, try going into three-quarter brakes for five seconds, which will shift the lift vector to the rear. As the canopy momentarily climbs, you will feel your body swing forward. You will now be able to take advantage of this pendulum effect (the canopy's equilibrium) to pull down on the front risers for a longer period of time.



To view the instructional video, use the QR code to the left or visit the Foundations of Flight page at [parachutistonline.com](http://parachutistonline.com).