

## FOUNDATIONS OF FLIGHT

### BREAKING OFF FROM A BELLY FORMATION

**AXIS**  
Flight School



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

One of the most important things a jumper can do to ensure safety during a group skydive is to properly track away from the formation at breakoff time (see “Tracking—Theory and Application” by Niklas Daniel and Brianne Thompson, September 2010 *Parachutist*). However, performing a straight, flat track alone is not enough. All jumpers also need to turn 180 degrees *from the center of the formation* to ensure that their paths won’t cross and that they won’t be too close to one another when it is time to deploy.

#### Performance Objective

Efficiently turn 180 degrees from the center of the formation and quickly get into a flat, straight track.

#### Purpose

- ▶ To move safely away from a group of any size
- ▶ To provide adequate horizontal separation between jumpers at deployment time
- ▶ To minimize the chance that jumpers will collide or cross paths during breakoff

#### Theory

When jumpers approach a formation, they should do so in a straight line toward the centerpoint (called “approaching on their radials”) and then reference that point throughout the skydive by looking across it at their clones (see “Foundations of Flight—Big-Way Approaches,” January *Parachutist*). Therefore, jumpers should already be aware of the centerpoint when it is time to leave a formation and should envision tracking on a straight line that leads directly away from that centerpoint. However, it is important to understand that not all jumpers will *turn* 180 degrees to begin their tracks.

Jumpers’ positions relative to the center vary, so the degree to which they’ll need to turn will also vary. For example, many

formations cause some of the jumpers to be in half-star positions perpendicular to the centerline (90 degrees from facing center) at breakoff time or even outfacing (already 180 degrees from center). Jumpers in a half-star position need to turn only 90 degrees to track away on the proper line, and out-facing jumpers won’t need to turn at all.

#### Execution

When it is time to break off, make a turn of the necessary degrees to ensure that the centerpoint is directly behind you. During this time, keep an eye on the jumpers to either side of you to get an idea of their trajectories. Begin tracking by extending your legs and simultaneously flattening out to get lift. Once you’ve initiated forward movement, sweep your arms back to really get going.

#### Helpful Hints

Be sure to sweep your arms back only *after* initiating lift with your torso. Sweeping your arms back too early can result in a steep dive rather than a straight, flat track.

