

■ FOUNDATIONS OF FLIGHT | FORWARD DRIVE ON THE BELLY

Brought to you by Niklas Daniel and Brianne Thompson of AXIS Flight School at Skydive Arizona in Eloy. Performed by Brianne Thompson. Photos by David Cherry. Information about AXIS' coaching and instructional services is available at axisflightschool.com.

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Purpose

The ability to drive forward is a fundamental skill that flyers need in order to be effective in several disciplines. Jumpers use forward drive to reach another jumper or a formation and to move around in the formation from one point to the next. In addition, jumpers can use forward drive to neutralize a backward drive in order to stop.

Execution

Novice jumpers typically learn to extend the legs (press the shins into the wind) and sweep the arms back to drive forward, because this method is fairly stable, simple to emulate and simple to teach. (One teaching analogy is that a string attaches the wrist to the ankle. Extending the legs pulls the arms back and vice versa.) However, this method can cause problems when taking grips because the arms are no longer in front of the jumper. In addition, extending the legs to go forward can cause the flyer to float up in relation to other jumpers, because the jumper's cross-sectional area encountering the relative wind has increased.

To sink back down to stay on level, novice jumpers often compensate by squeezing their shoulder blades together and arching their chests. This motion, though sometimes effective, can compromise mobility and grip taking since the body is very stiff. Jumpers who wish to improve their formation skydiving skills can explore and build upon a more advanced technique.

To more efficiently drive forward, a jumper can extend the legs while simultaneously widening them. Widening the knees causes the pelvis to rotate in the anterior direction, therefore pitching the torso into a head-low attitude. The deflection of the air now includes the entire torso and thighs. The jumper's hands remain available for grip taking. If the jumper pitches the forearms into the relative wind, the arms can even contribute to the forward drive.

For a more aggressive forward movement (pictured), the flyer can drop the chest and slightly angle the forearms in front of the body at a downward pitch. Pitching the upper body down produces an aggressive forward drive while maintaining fall rate. Jumpers can apply this in any situation that requires an aggressive move.

Helpful Hint

As with all flight techniques, jumpers can apply this one with varying degrees of magnitude and should strive to apply only as much as necessary. To close short distances, achieving slight forward movement using parts of this technique may be enough. But if a jumper needs more power, applying a more aggressive drive using most or all of the body's available flight surfaces in a coordinated manner is appropriate.

The authors intend this article to be an educational guideline. It is not a substitute for professional instruction.