

LANDING PATTERNS:

A CALL TO ACTION

by Ian Drennan



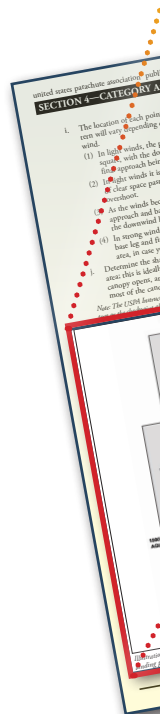
NIKLAS DANIEL

The winter boogie season is upon us, and many of us are starting to count down to when we'll take that road trip to warmer weather. We are thinking about packing lists, specialty jumps, good friends from distant places and costume parties galore, but in all this preparation, how many people are thinking about the more challenging aspects of boogies? Canopy-related incidents are on the rise in our sport, and boogies—with their unfamiliar environments and lots of canopy traffic—tend to create the kind of situation in which canopy accidents happen.

This boogie season, I present a challenge to you, the members of USPA: Let's get back to the basics. Revisit your essential canopy skills, whether you learned them last week or 20 years ago. Take responsibility for your actions under canopy, and let's work together to keep the skies safer.

The first thing you'll need to do is actually give some thought to your landings. Most jumpers, whether they are at a boogie or at their home drop zones on an average weekend, do not give much thought to their landings beyond choosing the general vicinity of where they will touch down and the rough altitudes at which they will turn. Given the amount of time most of us spend dirt diving, is it too much to ask to spend a few minutes thinking about what happens after the freefall? Determining how to land in a safe, predictable manner and how to avoid possible hazards are the things we should be thinking about on every skydive.

Landing patterns are not just for AFF students. The most skilled canopy pilots in the world fly a "student" landing pattern. The only difference between an AFF student's landing pattern and the current Canopy Piloting World Champion's landing pattern is his turning altitude and the degree of turn used to get on final. Patterns are essential not only to help you land consistently, but also to provide predictable air traffic which will, ideally, lead to fewer canopy-related incidents. It is much easier to predict what a person flying a clear, consistent pattern will do versus a person who spirals all the way to the ground, hooks it in, and jams on the brakes.



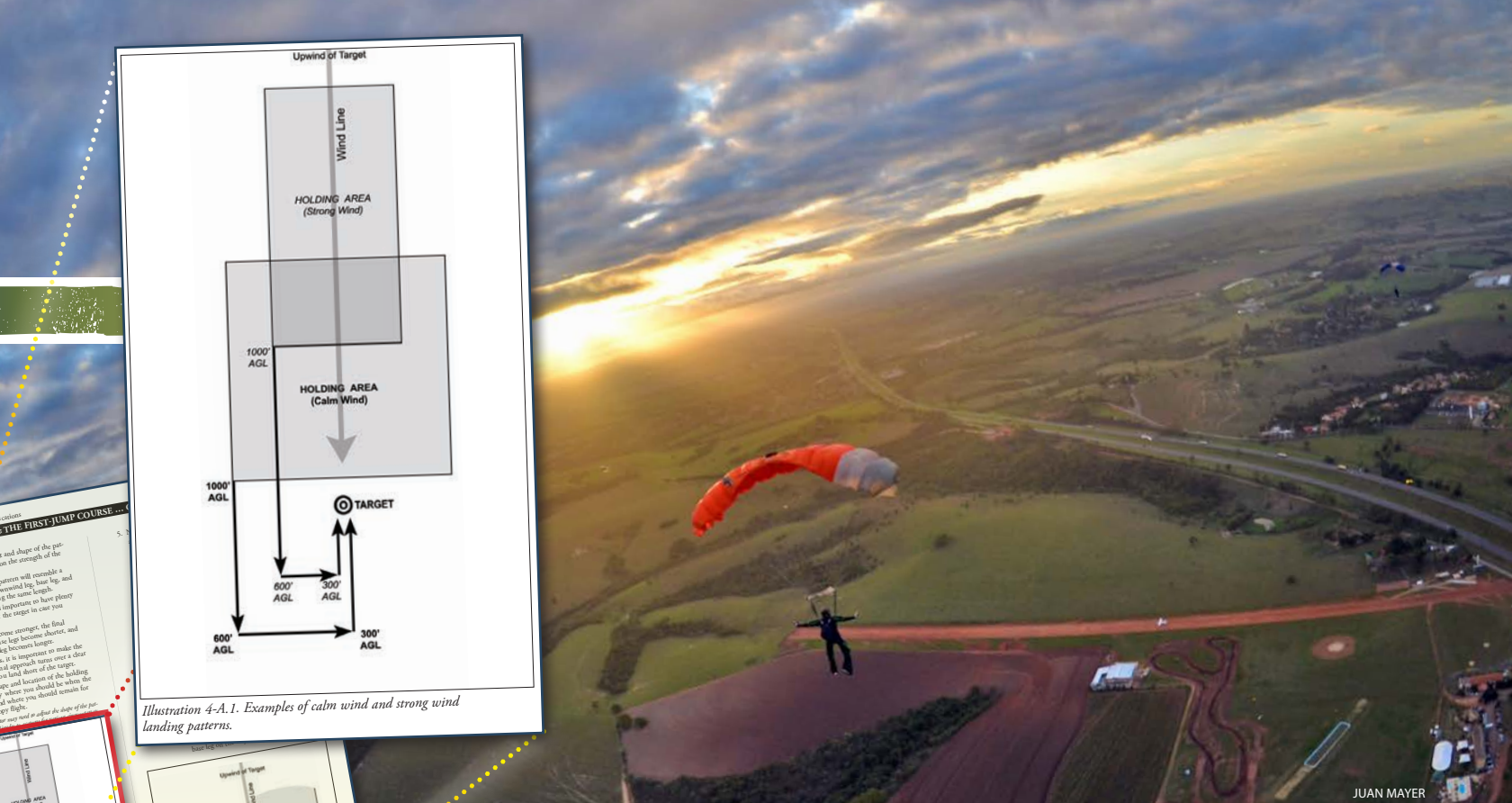
WHAT SHOULD I DO IF ...

... my altimeter reads 3,000 feet and I track, pull and see a fully inflated canopy overhead and another one flying directly at me?

Don't panic! Remember—you can control your canopy with your rear risers. Give a smooth but significant pull on your rear riser (the rule of thumb is to always turn to the right to avoid directly oncoming traffic). This is a skill that you should practice frequently on opening. It takes a negligible amount of time and will build the "muscle memory" that will help you avoid a potentially fatal situation when it really matters.

... my parachute is open and everything looks good but I spot the drop zone waaaaaay over there?

Don't automatically assume you can't make it back to the drop zone from a long spot. Assuming you are headed downwind, get into a deep-brakes configuration. (For most jumpers, this means toggles down at hip level. Articulated harnesses make a great thumb rest—just hook your thumbs in and enjoy the ride!) Focus on the drop zone in relation to the horizon. If it appears to be dropping, you should make it back. If it appears to be rising, count on an off-landing.



JUAN MAYER

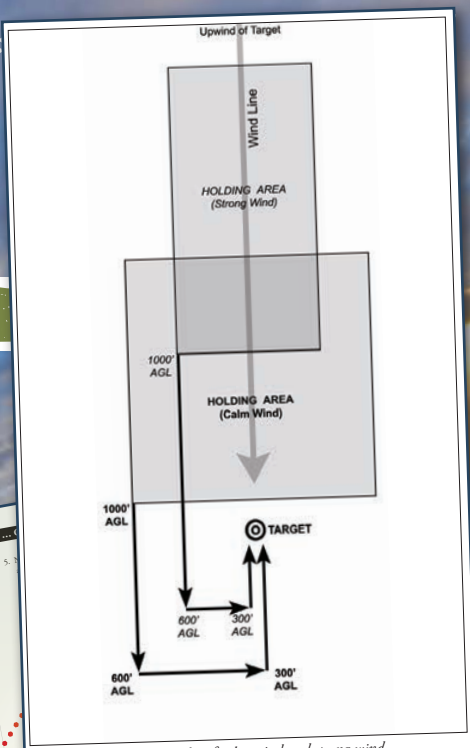


Illustration 4-A.1. Examples of calm wind and strong wind landing patterns.

... and shape of the pattern will vary on the strength of the wind. In calm wind, the base leg and final leg will be the same length. In strong wind, the base leg will be longer than the final leg. It is important to make the final approach turn onto a clear path to the target. The location of the holding area and location of the target are where you should remain for your flight.

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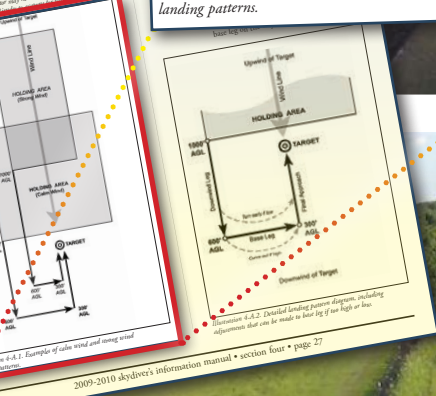
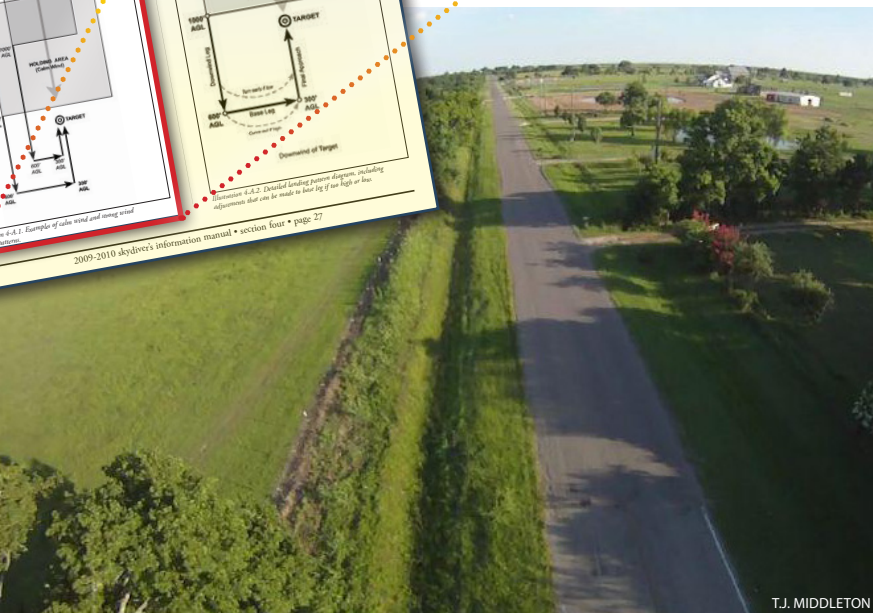


Illustration 4-A.2. Detailed landing pattern diagram, including adjustments that can be made to the DG if too high or low.

2009-2010 skydiver's information manual • section four • page 27



T.J. MIDDLETON

All jumpers who have received their USPA licenses during the past 10 years should have developed landing patterns during their A-license progressions. For a refresher with detailed information on how to build a pattern, refer to the USPA Skydiver's Information Manual (SIM) Section 4 Category A. Any jumper will benefit from revisiting and practicing these basic principles. Here are a few pointers for perfecting your pattern:

- ▶ Don't get frustrated and give up if you don't hit your landing target the first few times. While the overall process of building a landing pattern can seem tedious, once you have established comfortable altitudes for turning on to each leg of your pattern, you can easily adjust for a variety of circumstances including jumping at new drop zones and flying in various wind conditions.
- ▶ When developing your pattern, it can help to work it out backward. Rather than guessing where you should start your landing pattern, where you should turn on to base leg and where you should turn on to final, start with where you want to land and work it out backward from there.



As with any jump, you should constantly evaluate your surroundings and take note of possible areas suitable for an off-landing, just in case. If you are at an unfamiliar drop zone, be sure to speak with a local jumper before your first jump to find out any particular areas to avoid in the event that you land off the DZ.

... I've just entered my landing pattern and realize there is another jumper in close proximity, and he's all over the sky—higher, then lower, spiraling down and jerking on the brakes?

Rule number one in ensuring clear airspace for your landing is to create vertical separation. Proper timing between groups on exit as

well as staggered openings within your own group can help to achieve this separation. Another trick you can use to avoid the erratic jumper: Don't fly your canopy in full flight while in your holding area or in the first part of your landing pattern. If you are in full flight, your only option to adjust your flight speed is to brake. By flying in a half-braked configuration, you allow yourself more options not only in terms of speeding up or slowing down to avoid other jumpers but also with regard to how quickly or slowly you will approach your turning points in your landing pattern.

Remember to keep your arms up to stay in full flight on final to get the most out of your flare.

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- ▶ As you work on targeting where to turn, remember to use the “10-second rule.” After a turn, it takes roughly 10 seconds of flight time for your body to return to a neutral position under your canopy (and you should be flying in a neutral position before turning on to the various legs of your pattern).
- ▶ Once you enter your landing pattern, fly that pattern. Don’t sashay around in an attempt to lose altitude so you can be in the right spots at your turn altitudes, otherwise you won’t have an accurate representation of the pattern.



- ▶ Assuming you won’t injure yourself or others in doing so, fly the complete pattern as planned so you can determine how far off your landing target you are. Then build a new pattern, making adjustments to the old pattern in an attempt to hit your target on the next jump.
- ▶ Only make one change at a time, otherwise it will be impossible to determine which adjustment helped you achieve your goal.

It is vital for all of us to be conscientious under canopy. We have a responsibility, not only to ourselves, but to those with whom we share the air, to know how to react in sticky situations and to fly in a predictable and safe manner. While a short article in a magazine is never a substitute for a proper canopy skills course, a fundamental understanding of basic landing patterns is the first step toward making the skies safer for us all. So brush up on those essential skills, revisit your SIM, consider attending a canopy course (no matter what your current skill level is), and have a safe and enjoyable holiday season. Let’s all work together to fly in a predictable and consistent manner, making the skies safer all around.

For more information on organizing a canopy course at your drop zone, e-mail coach@flight-1.

About the Author

Ian Drennan, D-25821, has been skydiving for more than 12 years. He is a member of the PD Factory Team, has represented the U.S. in international competition and provides canopy instruction at drop zones around the country.



J.C. COLCLASURE

WHAT SHOULD I DO IF ... CONTINUED

... I’ve survived the circus jump, avoided the traffic under canopy and am on final, ready for a smooth landing, when I realize I’m heading right for a fence post?

Remember, erratic movements will only make the situation worse. Don’t fixate on the object you are hoping to avoid. Rather, focus on a clear landing space and flat turn (braked turn) your way to safety. Again, smooth and gentle inputs are key. Review SIM Section 4 Category F for detailed information on performing braked turns. Keep in mind that if you are attempting to avoid an object when you are low to the ground, be careful not to overcompensate. Turn as little as possible to avoid the object, and don’t forget to finish your flare.

Flat turns are an essential skill that every skydiver should possess, and it’s as easy to practice as performing a quick controllability check after opening. Once you’ve cleared your airspace and released your toggles, practice your flat turns while you’re checking your steering lines instead of performing full turns during your typical controllability check.

SECTION 4— CATEGORY F: PERFORMANCE

- introduction to tracking
- two clear and pulls (former AF)
- braked turns, approaches, and
- extending the glide
- power-line landing review

A. EXIT AND FREEFALL

- Initiating track
 - First locate a point on the horizon.
 - Smoothly extend both legs fully to the forward position.
 - Control in the delta and track position.
 - (1) Dip one shoulder slightly in the direction of the turn to make heading corrections (instructor technique may differ).
 - (2) Make only small corrections.
 - Slowly extend your torso by stretching your shoulders toward your ears and flatten your back.
 - Fully extend your arms to the side 90 degrees, your spine and level with your hips (instructor technique may vary).
- Refining the track
 - Once establishing a heading in a positive forward dive, fully extend both legs with your knees locked and toes pointed.
 - Stiffen your body slowly into a slight reverse arch, pushing down and forward slightly with your shoulders, while keeping your hands level with your hips.
 - Continually adjust your body position to effectively meet the relative wind.
- Tracking practice procedure
 - Experienced jumpers often allow only five to ten seconds to obtain adequate orientation.
 - Practice reverse and sideways air on heading track for ten seconds, steering direction, and repeating.
 - Practice zero turn.

B. CANOPY

- Braked turns:
 - Performed correctly, braked turns provide the quickest heading change with the least altitude lost.
 - A braked turn may be the best choice when a quick heading change is needed.
 - when suddenly encountering another jumper under canopy or someone in the landing area
 - recognizing an obstacle
 - too low to recover from a full-flight turn
- Practice braked turns.
 - From the slowest speed at which the canopy will fly, raise one toggle slightly to initiate a heading change in the opposite direction.
 - Try to change heading as quickly as possible without banking or stalling.

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