

Foundations of Flight: Approach with Confidence—Part Five, Pattern Adjustments



Brought to you by AXIS Flight School Instructor Niklas Daniel at Skydive Arizona in Eloy. For more skydiving educational content and professional coaching services, visit axisflightschool.com.

While altimeters and known landmarks provide useful data for navigating a landing pattern, the ultimate demonstration of skill and understanding is the ability to fly an accurate pattern using intuitive cues such as the visual angles to the target and perceived ground speed, rather than external references. To move past imprinting, you can implement some rules of thumb to reinforce core concepts. While less precise than hard numbers, here are the guiding principles that allow you to best assess your current position and determine the adjustments needed for a successful approach.

Cutting Corners and Extending Legs

While navigating the landing pattern, your relative position to the target is your most powerful tool for accuracy, not changing flight configurations. Two maneuvers, when performed correctly, are almost imperceptible to onlookers and help ensure accurate outcomes. These occur on the downwind leg at the abeam checkpoint,

and/or on the base leg prior to turning onto final:

1| Cutting a corner

When you're too low in the pattern, cutting a corner can help. Cross-checking your altimeter at the abeam point on the downwind leg may confirm you are low. From your vantage point, the perceived angle is too shallow. If your intention was to reach the abeam point at 800 feet but you arrive at 700 feet, you can anticipate being 100 feet low at your turn from base to final and ultimately at the turn to final, causing you to come up short. Instead of continuing straight ahead, slightly cut the corner and turn inward a few degrees to intercept the base leg. This adjustment helps conserve altitude and increases your chance of turning onto final at the correct altitude.

2| Extending legs

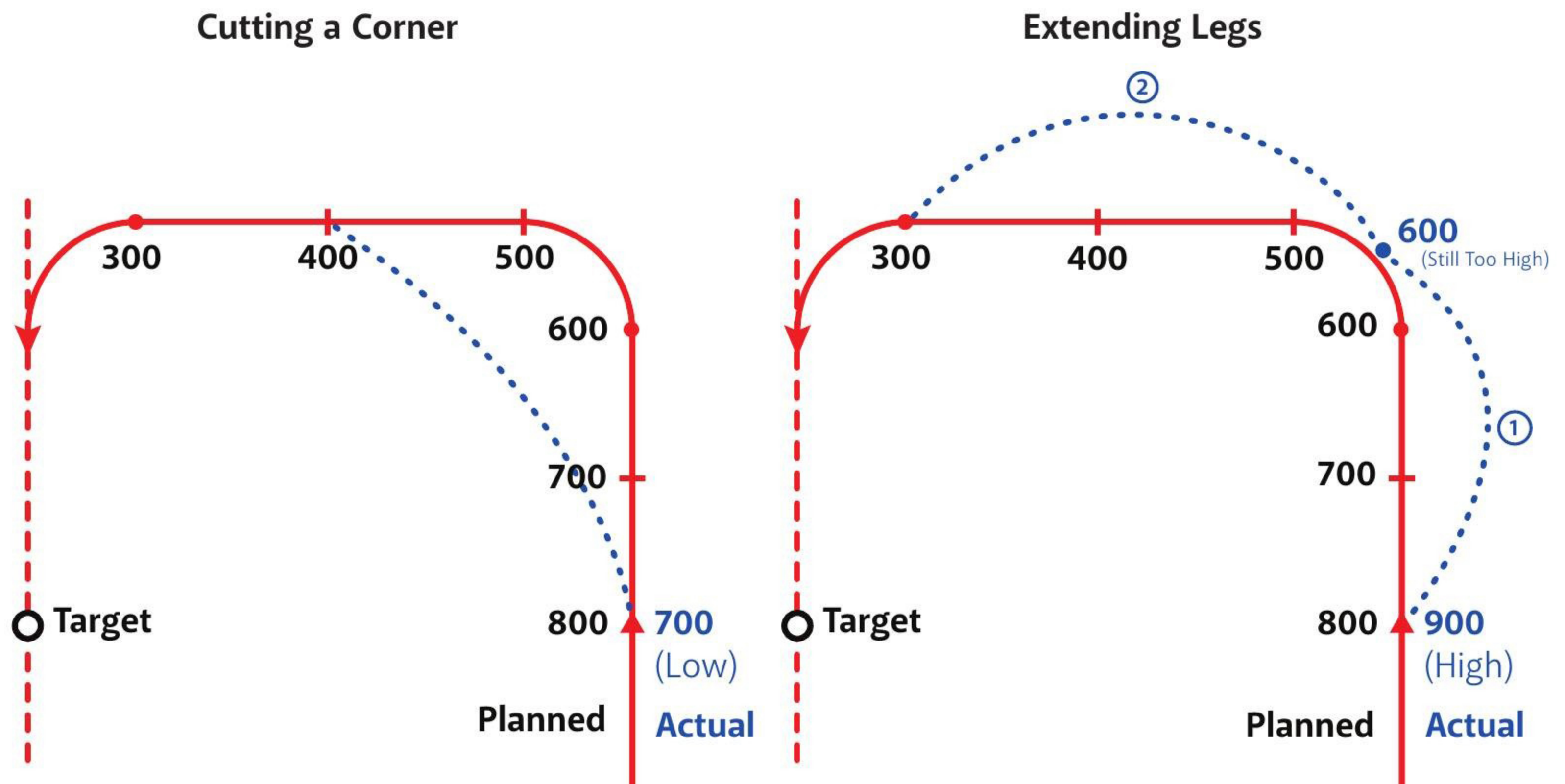
If you're too high in the pattern, extend the pattern legs. The angle to the target appears steep, often close to

your feet. A cross-check of your altimeter at the abeam point may confirm you are too high. If your intent was to reach the abeam point on the downwind leg at 800 feet but you arrive at 900 feet, then you can anticipate being 100 feet high at the turn from base to final and ultimately 100 feet high at your turn to final, causing you to overshoot. Rather than continuing straight ahead, veer outward a few degrees of your planned pattern and fly an arc towards the turn to base. This action extends the distance flown and allows you to lose altitude in an effort to reach the turn to base at the correct altitude. If you're still too high or tight after the turn to base, you can repeat the technique to elongate the base leg in an effort to reach the turn to final at the correct altitude.

Error in Intercepting the Final-Approach Course

When you find yourself too high or tight relative to the target just before turning

Good Adjustments



The first diagram illustrates cutting the corner when you are too low in the pattern, and the second diagram shows two opportunities you have to extend the pattern legs if you are too high.

to final, you might be tempted to extend the base leg past the target's centerline, as covered in part three. This puts you in a position where you must turn more than 90 degrees to intercept the final-approach line. This action can introduce several problems. Large turns—anything greater than 90 degrees—can cause an unstable approach through self-induced oscillation. While oscillations on both the roll and pitch axes decay with enough time, those that persist into the landing flare leave you working with an uneven or unpredictable airspeed. Just because your hands are all the way up, doesn't mean you are flying at trim speed. A stabilized approach that creates consistent, repeatable forces requires anticipation and smooth control inputs. When you overcompensate, oscillations can turn into sashays and s-turns (amplified side-to-side motions) that consume space in the pattern and increase the chance of a canopy collision. Avoid these pitfalls by turning to final when you have reached either your turn altitude or location, whichever comes first. Through skill development, both of these elements will occur simultaneously, improving accuracy in the process.

Pattern adjustments are required and unavoidable. The challenge is to assess, choose and execute the correct strategy

in environments and situations that are never the same. Before making these decisions, avoid errors that can make the process more difficult than necessary. Two of the biggest mistakes occur before boarding the aircraft due to complacency:

- 1| Failing to check the wind conditions and predict their impact on the ground track.
- 2| Assuming the winds are the same as a previous jump, most common on light and variable days, resulting in a down-winder or, worse, opposing the established traffic direction.

The solution is to treat every jump as a novel event, one that carries real risk and real responsibility for yourself and those around you. With that, in mind, proactively anticipate events and avoid situations that force you to rely on skill or luck to succeed.

Next month's installment will cover the final approach and touchdown in more detail.

Information about AXIS' coaching and instructional services is available at axisflightschool.com. The author intends this article to be an educational guideline. It is not a substitute for professional instruction.

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Bad Adjustments



This diagram depicts the outcome of making a last-minute, big adjustment by extending the leg past the target's centerline, which can create self induced oscillations or s-turns, resulting in an unstable approach.