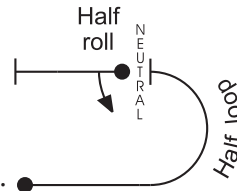


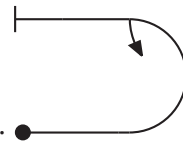
Sequencing Steps Defined

When a reference is made in this program to “sequencing” a maneuver, this specifically refers to returning the control stick to neutral between the steps that make up the entire maneuver.

For example: An Immelmann is a half inside loop followed by a half roll to upright at the top. An Immelmann, applying the practice of *sequencing* the steps, could be illustrated as two separate pieces, if not for the clutter.....

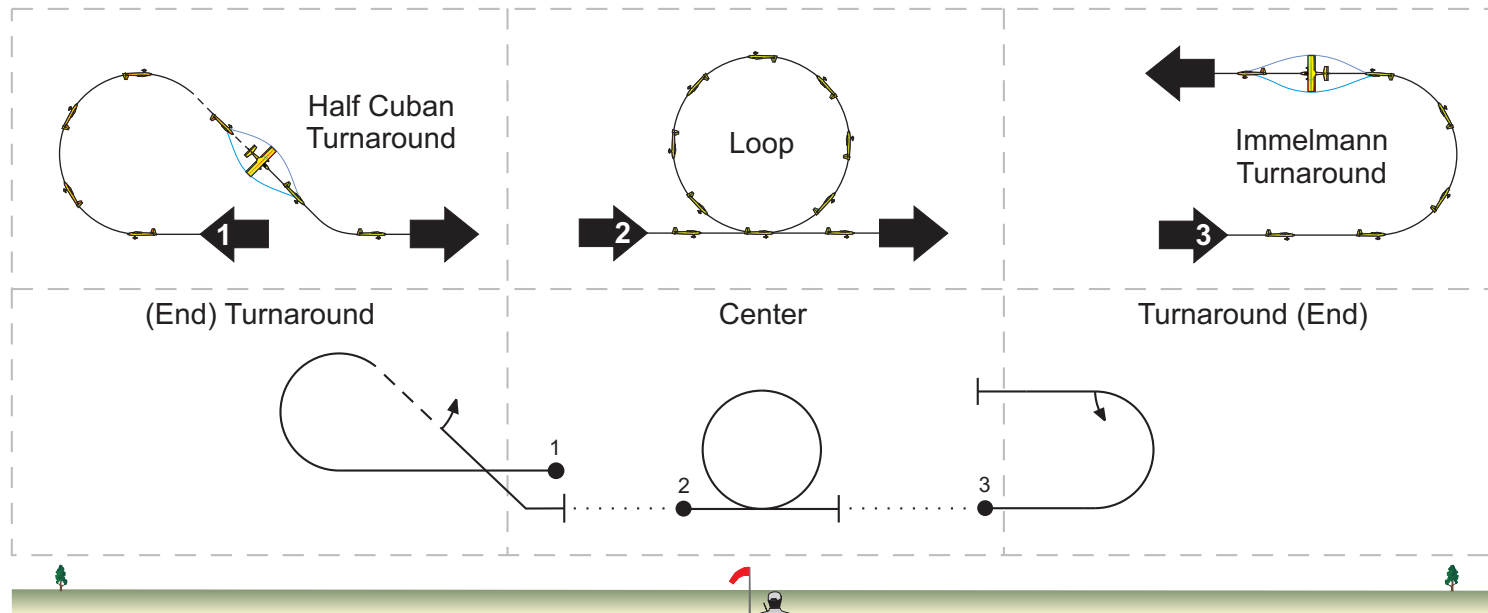


As long as it is understood that the stick is neutralized between the steps (actions), the 2-step Immelmann is illustrated as such.....



Note that Immelmanns are the only figures featured in Phase I that end up at a different altitude than started from. All other maneuvers contained in this program are intended to be completed close to the altitude they were started from.

Nearly all maneuvers fit into two categories, *center* and *turnaround* (end) maneuvers. Center maneuvers are performed out in front of the pilot, and turnaround maneuvers in sport aerobatics turn the plane around 180°.



KPTR: Sequencing a maneuver’s steps refers to neutralizing the control stick and completing one step before beginning another.

Building Maneuvers Primer

1st. We're going to cover how to properly enter a loop with wings level so all that is required is for you to hold in up elevator all the way around.

2nd. Then we will learn to do a roll by applying aileron and holding it in all the way around until upright again.

3rd. We will then combine the loop and roll and perform an Immelmann turnaround: Enter the loop, neutralizing the elevator at the top of the loop, then apply aileron to do a half roll back to upright level flight.

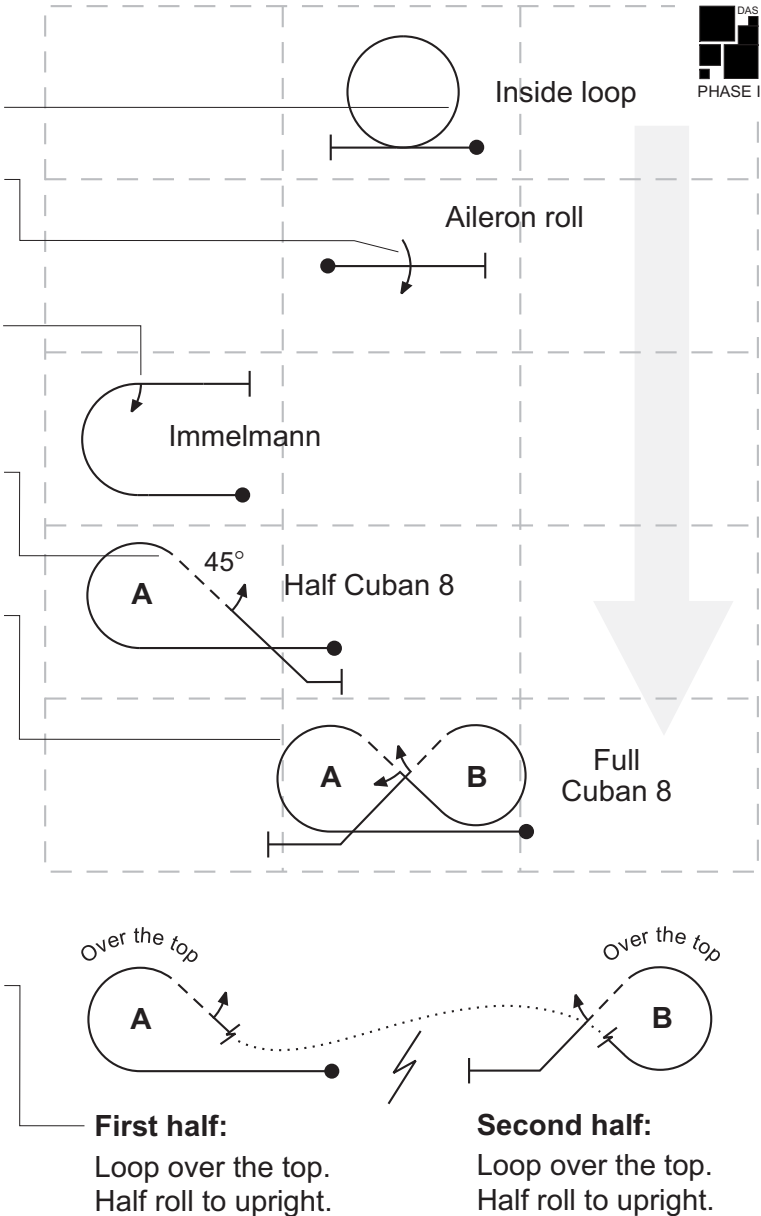
4th. We will move on to the half Cuban 8 turnaround, which is similar to the Immelmann, yet the elevator is held in a little longer *over the top* until the airplane is coming back down on a 45° downline, followed by a half roll to upright, and pulling out to level flight.

5th. When proficient at the half Cuban 8, we'll perform a full Cuban 8 by pulling out of the first half Cuban right back up into another loop, and again holding in the elevator over the top until coming back down on another 45° downline, rolling upright on the 45, and then pulling out level.

If(?) the Cuban 8 sounds elaborate, you can imagine how challenging it would be to figure out on-the-fly. The solution to understanding this, or any other maneuver, is to break it apart into its sequential steps.

The full Cuban 8 is actually treated as two separate maneuvers flown in succession, with both involving only two steps, not counting the obvious pullout at the end.

Summary: Taking time to review and understand Aresti will help you to see *what* each maneuver consists of, as a prelude to then breaking-down *how* each of the steps are performed.



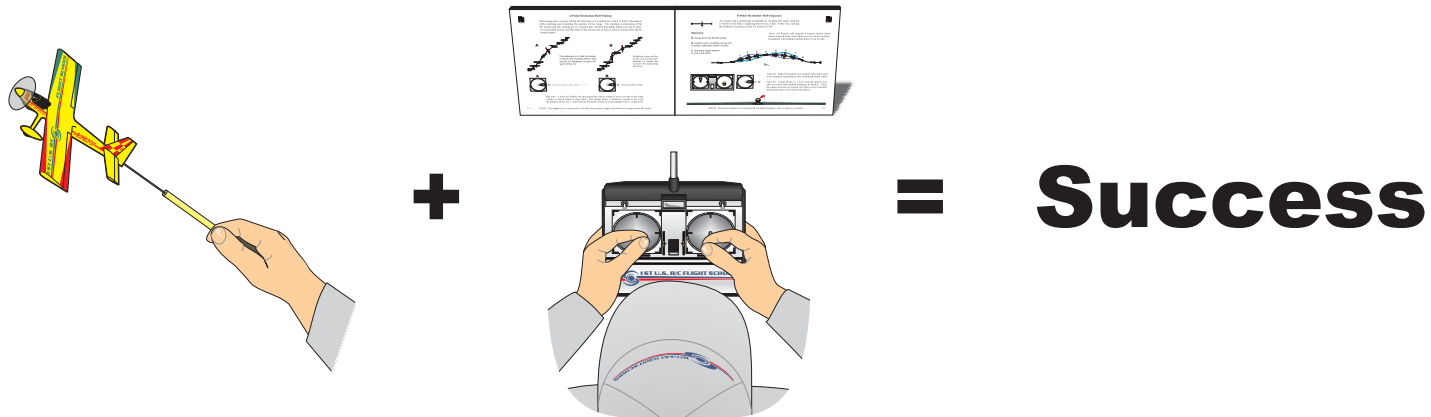
KPTR: To understand what each maneuver entails, break it apart into its primary components and follow it through step by step.

Maximizing Practice Time

The first step before practicing any new maneuver or maneuver component should be to acquire the correct understanding of the technique for flying it. This is vitally important during the initial learning phase because, without the correct understanding, practice will develop incorrect skills that will become increasingly difficult to change.

Visualization is a highly effective technique to help improve one's understanding and therefore training success. Both research and practical experience have shown that a training schedule of 25% physical practice and 75% mental preparation is more effective than 100% physical training — what is typically referred to as the “quality over quantity” approach! At first, one might get the impression that this would take the fun out of flying, when it is just the opposite: Pilots have the most fun flying when doing well and making progress. Utilizing a small hand-held model plane is a great way to maximizing the effectiveness and fun of visualization. Templates for building your own simple hand-held model can be acquired at www.rcflightsschool.com

Your confidence and success can be further enhanced by rehearsing the control inputs on your transmitter throughout your study of this manual. Then, when you do fly—secure in *what* to do—your only concern will be fine tuning when and how much to input.



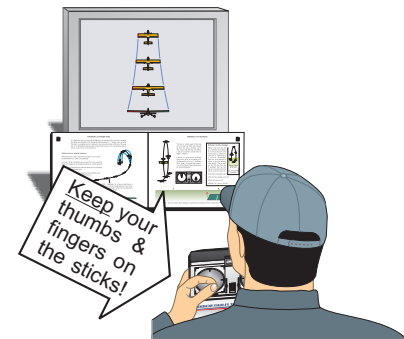
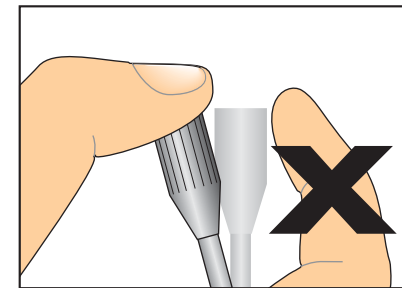
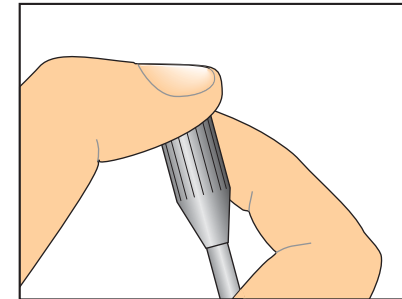
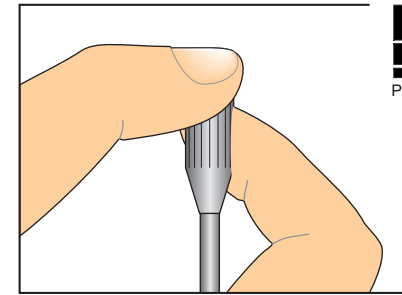
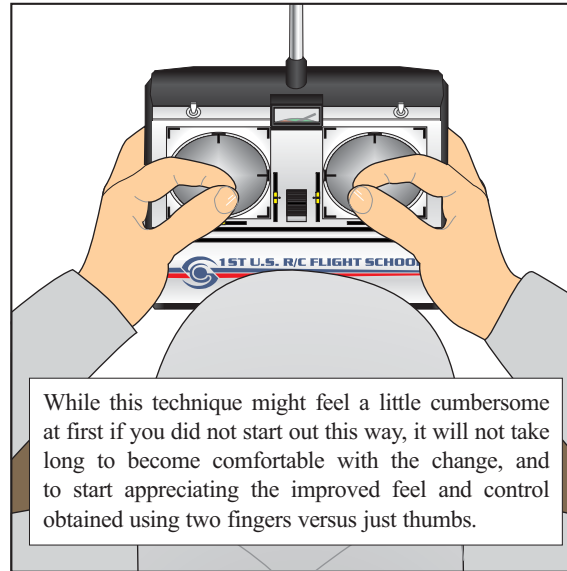
Applying Control Inputs with Precision and Control

To more precisely control the size and pace of your inputs, place your thumb-prints on top of the control sticks, and the tips of your index fingers on the side of the sticks near your thumbs for added support.

To further improve your *feel*, i.e., feedback for the control inputs made and the neutral stick position—and to reduce the chance of applying an unintentional input while inputting another—it is strongly recommended that you increase the stick tension in your transmitter as high as you can. [If the stick tension feels weak to you, you can be certain that unintentional inputs will occur regularly.]

ATTENTION: A notorious source of difficulty, and an almost impossible bad habit to break if not guarded against, is removing the index finger and using your unsupported thumb to jerk or snap the stick — thereby making it impossible to control the *types* of inputs you make with any consistency. (Hence, this is why so many flyers have to rely on programming their radios to *tame* the consequences of their inputs.) Note that this is an especially common occurrence when using a transmitter strap or tray, or becoming too casual on a simulator.

By remaining mindful to keep your thumbs and index fingers on the sticks, you will not only naturally make smoother inputs, the solid control over the types of inputs you make will foster a confident feeling of being *connected* to the plane, i.e., there will be a sense that the plane is not just responding to your inputs, but is responding in ways that more closely match your intentions!



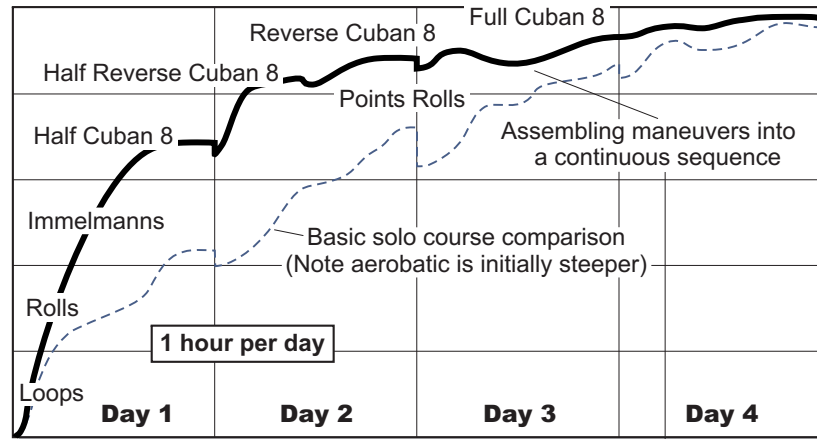
Maximizing Practice Time

Note: Up to one hour per day proves to be the most productive even-keeled amount of practice air-time to conclude each session still performing well. Exceeding the one hour time frame increases the risk of burnout that leads to practicing mistakes, a lesser ability to interpret the experiences of the day, and less carryover to the next day's practice. It has also been found that flying aerobatics for more than 4-days straight can result in experiencing so many things that no one experience is fully cemented.

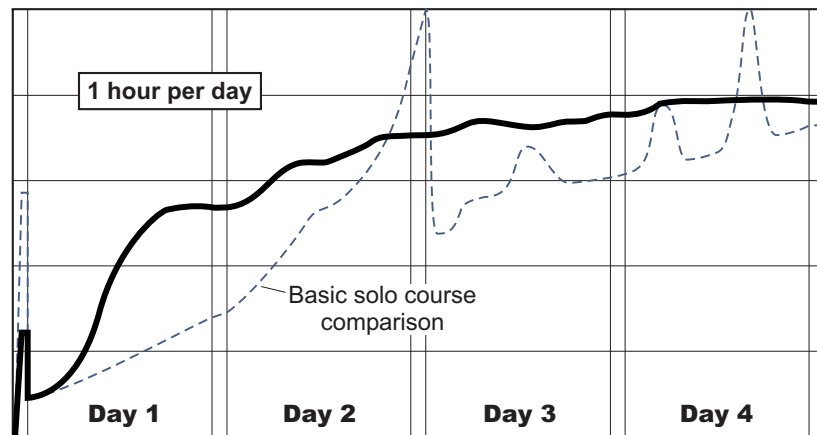
The aerobatic learning curve tends to be quite steep through the fundamental execution of the maneuvers. The area of particular note here is the dip in a pilot's *rate* of progress when several maneuvers are attempted in continuous succession.

When following up one maneuver with another, it becomes obvious how well each was performed, based on whether or not a lot of corrections are needed to align the airplane for the next maneuver. Thus, there is no greater experience than flying several maneuvers in a row to see how well you are *really* doing, to pinpoint where you need improvement, and to fly ultimately with greater purpose!

1st U.S. R/C Flight School Sport Aerobatic Achievement Curve



1st U.S. R/C Flight School Sport Aerobatic Confidence Curve



KPTR: Flying longer than one hour per day leads to walking away more focused on the day's latter mistakes than earlier successes.