

2007 IMAC Basic Narrative

Figure 1 – Roll

Just before you get to the center of the box, start an aileron roll. You will not be judged on the rate of the roll but it must be straight and without deviation in altitude. As soon as your wings get level and you complete the roll, your score for this figure is set. However, you will continue to be judged as you fly to the right end of the box so keep your wings level and don't climb or descend. Any deviation on this line will be reflected in downgrades applied to the second maneuver.

Figure 2 – Humpty Bump

As you get to the right end of the field, pull a gentle radius to a vertical upline. As you establish this line, use your rudder to keep the plane tracking straight up. Remember that in IMAC, you are judged on the TRACK of the airplane and not its attitude. So you may have to crab into the wind (with rudder) to maintain a nice vertical line. Once you have gained sufficient altitude, pull a nice gentle radius over the top to a vertical downline. You should now be looking at the bottom of the airplane. Once the airplane has flown down a short ways, complete a half roll. Draw another short line, and then execute a gentle pull back to horizontal flight and bring the throttle back up. For best score, the lengths of the two lines before and after the half roll should be equal. The airplane should now be headed back towards the center of the field parallel to the runway. As you approach the center of the box, you may notice that the plane has drifted in or out compared to where you started the sequence. You should practice holding the appropriate crab angle through these figures if there is a cross-wind or expect a downgrade if you have to correct your line later.

Figure 3 – Reverse Sharks Tooth

Fly a short ways past the center of the field, increase the throttle to full power, and execute a gentle pull to a 45 degree upline. Hold this line for a bit, and then execute a half roll to inverted. You will probably need to hold down elevator to keep this line straight. Use your rudder to keep the plane on track and keep the wings level. Once you have executed a short line while inverted, pull a gentle radius over the top of the figure to a vertical downline and reduce throttle to idle. Complete a straight downline and then execute a gentle pull to horizontal, wings level flight and increase the throttle. You should now be headed back towards the center of the field parallel to the runway from left to right.

Figure 4 – Teardrop

This figure begins with a vertical upline. It will be easiest to perform right in front of yourself. Increase the throttle to full power and pull a gentle quarter loop to a vertical upline. Execute a nice, straight upline in the center of the box using rudder to keep the plane tracking straight up. After gaining sufficient altitude, execute 5/8 of a loop across the top of the teardrop to an upright 45 degree downline. Smoothly reduce the throttle to idle as you come over the top of the

loop. Hold that 45 degree downline for a while. Finally, execute a gentle pull to horizontal flight and increase the throttle. Fly to the right end of the field.

Figure 5 – Hammerhead

Begin this figure by applying full throttle and executing a gentle pull to a vertical upline. Again, use the rudder to keep the plane tracking straight up. Once you have reached sufficient altitude, begin to decrease the power. Leave 3 or 4 clicks of power on, and just before the plane stops moving, apply full rudder. It is almost always easiest to hammer INTO the wind if there is a cross-wind. Once the plane starts to pivot, the throttle can be reduced to idle. One method of preventing the plane from wagging its tail after the pivot is to keep some rudder input after the pivot and slowly take it out as the plane goes down. At the bottom of the line, execute a gentle pull to a horizontal exit and increase the throttle. Try to make the entry and exit radius equal. You should now be flying back to the center from right to left parallel to the runway.

Figure 6 – Loop

Begin by increasing the throttle to full power, and start a gentle pull. The size of the loop is not judged, but the bigger the loop, the harder it is to make perfect. Keep the radius consistent and wind correct with rudder if necessary as you execute the first half of the loop. As you come over the top, you may need to keep a fair amount of power as this portion will be flown into the wind. You may even need to apply some down elevator across the top of the loop to keep it round. Finally, increase the power as you come back to horizontal flight. The loop should start and stop in the same place at the same altitude. Fly toward the left end of the field.

Figure 7- Half Cuban 8

Begin by increasing the throttle to full power and execute a smooth 5/8 inside loop. As you approach the inverted 45 degree line back towards yourself, decrease the power to idle and hold some down elevator to maintain a nice line. After holding the 45 degree line for a bit, execute a half roll to upright and maintain the 45 degree line. Finally, execute a gentle pull to horizontal flight and increase the throttle. You should now be flying back towards the center of the field from left to right parallel to the runway.

Figure 8. Sharks Tooth

Fly towards the right end of the field, and increase power to full throttle. Execute a gentle pull to a vertical upline. Use the rudder to maintain a nice vertical track. Execute a gentle pull over the top of the figure to an inverted 45 degree downline coming back towards yourself and decrease the power to idle. Hold down elevator to maintain a nice line and then complete a half roll to upright. Hold this line and then execute a gentle pull back to horizontal flight and increase the throttle. You should be flying from right to left parallel to the runway.

Figure 9. Immelman

This figure is used to gain altitude for the final figure – the spin. So make sure the radius is big enough for the spin that follows. Fly towards the left end of the box, increase power, and begin a nice round half loop. Immediately after reaching horizontal inverted flight, complete a half roll back to upright. Fly a straight level line just past the center box for your next maneuver.

Figure 10-One and a half turn positive spin

As you approach the center of the field at a high altitude, begin to reduce the throttle smoothly. As the plane slows, you will have to feed in up elevator to keep it from descending. This will gradually bring the nose up. Once the throttle has reached idle, keep feeding in up elevator until the nose drops in a stall. You will also have to keep the line straight with rudder – particularly if there is any crosswind and your airspeed decreases. As the nose drops, feed in rudder in the same direction as the wing that is lower. Once the spin begins, go to full rudder and full aileron in the same direction (you should already be at full up elevator). After 1.5 turns, neutralize all controls to stop the spin. If the nose is high, give down elevator to establish a vertical downline. After the downline has been established, execute a gentle pull to horizontal flight and increase the throttle. You should now be flying from right to left parallel to the runway. After you have flown a short line, wag your wings and have your caller tell the judges you are “out of the box.”