

Aerobatics Manoeuvres

1. **One Roll.** The model flies S & L, rotates smoothly around its longitudinal axis and then flies S & L.

K5



2. **Split S.** The model flies S & L, performs one half roll, immediately followed by one half loop, and then flies S & L.

K5



3. **One Inside Loop.** The model flies straight and level (S & L), performs one inside loop and then flies S & L.

K5



4. **Immelman Turn.** The model flies S & L, performs one half loop, immediately followed by one half roll, and then flies S & L.

K6



5. **Stall Turn.** The model flies s & l at 90 degrees to the centre line and just past the centre line, performs one-quarter of an inside loop (to a vertical attitude, and at a position about 45 degrees from the centre line from the viewpoint of the judges), continues to fly vertically upwards for a short distance, yaws (into wind) through 180 degrees, flies vertically downwards for a short distance, performs one-quarter of an inside loop, then flies s & l at the same altitude but on the opposite heading to the start of the manoeuvre. **Note:** A score of zero should be given if the model falls more forward or backward than sideways.

K7



6. **Straight Inverted Flight** The model flies S & L, performs one half roll, flies S & L inverted for about five seconds, performs a second half roll, and then flies S & L.

K7



7. Half Cuban Eight. The model flies S & L, performs five-eighths of a loop (to an inverted 45° diving attitude), performs one half roll (the centre of the half roll being at the height of the centre of the loop), performs one eighth of a loop then flies S & L at the same altitude but opposite heading as the start.

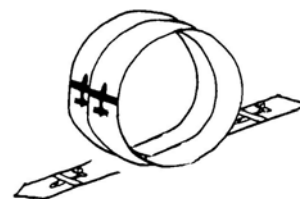
K7

8. Half Reverse Cuban Eight. The model flies S & L with the manoeuvre starting before the centreline, performs one-eighths of a loop up the 45° line and half roll to inverted on centreline into five eighths of a loop then flies S & L at the same altitude but opposite heading to the start.

K7

9. Two Inside Loops The model flies S & L, performs two consecutive inside loops and then flies S & L.

K8



10. Three Turn Spin The model flies S & L into wind, slows down until it stalls and, in a fully stalled condition, falls into a spin. At the end of three revolutions the model recovers from the spin, flies vertically downwards to regain flying speed, performs one-quarter of a loop, and then flies S & L in the same direction as the start of the manoeuvre.

K8



11. Two Rolls The model flies S & L, rotates 720° around its longitudinal axis and then flies S & L.

K8



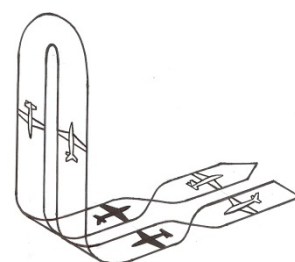
12. Double Immelman The model flies S & L and performs one half loop, immediately performs one half roll, flies S & L for about one second, performs one half outside loop, immediately performs one half roll then flies S & L at the same altitude and heading as the start of the manoeuvre.

K9

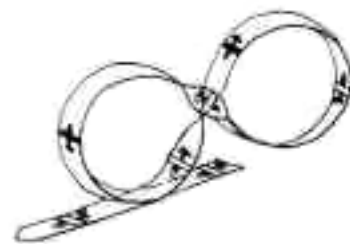


13. Outside Stall Turn The model flies S & L then rolls 180° to inverted on the centerline. The model then pushes to vertical and performs a stall turn. Push to inverted level attitude on the base line and roll 180° back to wings level and upright on the centerline. Model exits flying S+L.

K9



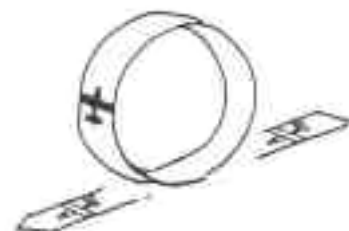
14. Cuban Eight The model flies S & L, performs five-eighths of a loop (to an inverted 45° diving attitude), performs one half roll (the centre of the half roll being at the height of the centre of the loop), performs three quarters of a loop (to an inverted 45° diving attitude, with the centre of the loop at the same altitude as the first loop), performs one half roll (the centre of the half roll being at the height of the centre of the loop), performs one eighth of a loop then flies S & L at the same altitude and heading as the start.



K10

15. Three Inside Loops The model flies S & L, performs three consecutive inside loops and then flies S & L.

K10



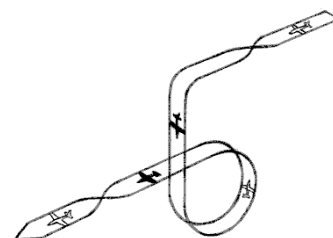
16. Vertical Eight The model flies S & L, performs one inside loop, immediately performs one outside loop, then flies S & L at the same altitude and heading as the start of the manoeuvre.

K10



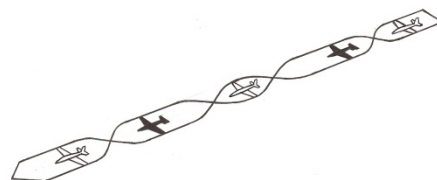
17. Downward Six. Flying with wings straight and level near the top of the box, halfway along the top leg, half roll to inverted. At the end of the leg, pull to a vertical down line on the centre line. Before reaching the bottom of the box, pull 3/4's of a loop exiting inverted. A second later, half roll to upright and finish with wings straight and level. NOTE: The top radius must be the same radius as the 3/4 loop.

K10



18. Alternating Roll The model flies S & L then rolls 180° to inverted, hesitates then rolls 360° in the opposite direction back to inverted, hesitates and then rolls 180° again in the original direction back to wings level and upright and exits flying S & L. Half way through the 360° roll must be on the centre line.

K10



19. Slow Roll The model flies S & L, performs one roll then flies S & L. The roll shall be at a uniform rate and shall take approximately five seconds.

Note: A significantly faster roll should be downgraded proportionately, e.g. a roll executed in approximately 3 seconds should be downgraded 50%, and a roll executed in 1 second scored zero.

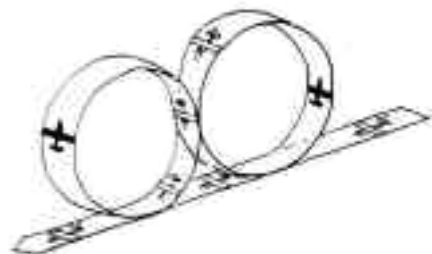


K11

20. Reverse Cuban Eight The model flies S & L with the manoeuvre starting before the centreline, performs one-eighths of a loop up the 45° line and half roll to inverted on centreline into three quarters of a loop, up the 45° line and half roll to inverted on centreline, performs five eighths of a loop then flies S & L at the same altitude and heading as the start.

K11

21. Horizontal Eight The model flies S & L, performs three-quarters of an inside loop (to a vertically downward attitude), performs one outside loop (to a vertically downward attitude), performs one quarter of an inside loop then flies S & L at the same altitude and heading as the start of the manoeuvre.



K12

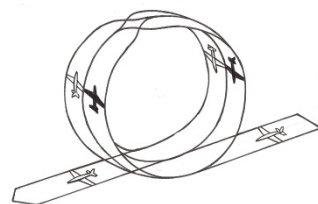
22. Three Outside Loops The model flies S & L, performs three consecutive outside loops (downward) and then flies S & L.

K12



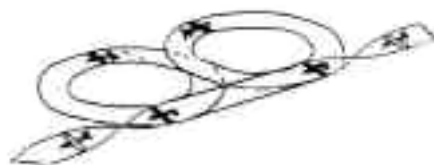
23. Twisted Loop The model flies S & L, on the centreline pull half a loop. At the top of the loop the model rolls 180° to upright then performs one full outside loop where at the top of the loop again the model rolls 180° to inverted and pulls half a loop to finish wings level and upright on the centre line. Model exits flying S & L.

K12



24. Inverted Eight The model flies S & L across wind, performs one half roll to an inverted attitude, turns (into wind) through 90°, immediately turns in the opposite direction through 360°, immediately turns in the first direction through 270°, performs one half roll, then flies S & L at the same altitude and heading as the start of the manoeuvre.

K12



25. Figure M The model flies S & L, performs one quarter of an inside loop, continues to fly vertically upwards for a short distance, yaws (into wind) through 180°, flies vertically downwards for a short distance, performs one half of an outside loop, continues to fly vertically upward for a short time, yaws (into wind) through 180°, flies vertically downward for a short distance, performs one quarter of an inside loop, then flies S & L at the same altitude and heading as the start of the manoeuvre. **Note:** A score of zero should be awarded if, in either stall turn, the model falls more forward or backward than sideways.



K12

26. Square Loop This is a variation of the basic loop. The two vertical lines and the horizontal line on top have to be of the same length. The exit line at the bottom has to be at least as long as the other three sides. The quarter loops that connect the four sides have to have the same radius at each corner.

K12

27. Three Rolls The model flies S & L, performs three consecutive rolls, and then flies S & L.

K12



28. Square Loop This is a variation of the basic loop. The two vertical lines and the horizontal line on top have to be of the same length. The exit line at the bottom has to be at least as long as the other three sides. The quarter loops that connect the four sides have to have the same radius at each corner.

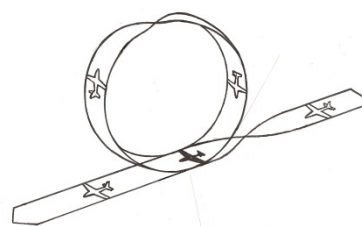
K12

29. Three Rolls The model flies S & L, performs three consecutive rolls, and then flies S & L.

K14



30. Rolling Loop The model flies S & L then rolls 180° to inverted on the centreline and immediately pushes half an outside loop. At the top the model rolls 180° to inverted and pulls the second half of the loop to exit wings level and upright. Model finishes by flying S & L.



K14

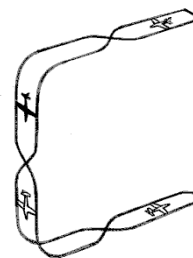
31. Four Point Roll The model flies S & L, rolls through 90° to a knife-edge attitude, hesitates briefly before repeating the quarter-rolls and hesitations back to a wings-level attitude, then flies S & L.

K14



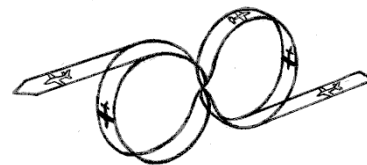
32. Half Square Loop with Half Rolls. Start by flying straight and level near the top of the box, halfway along the top leg, half roll to inverted. At the end of the leg, pull to a vertical down line on the centre line. Halfway down, perform a half roll and at the bottom of the leg, push to horizontal. Halfway along that leg, half roll to upright and exit with wings straight and level.

K14



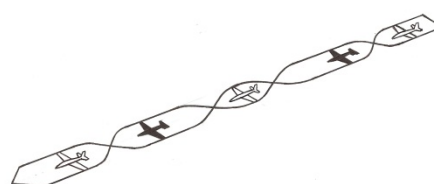
33. Horizontal Eight with Centre Rolls. Enter with wings straight and level, before the centre line, pull the first 1/4 of a loop and perform a half roll which is on the centre line. Continue by pushing a complete outside loop and again on the centre line, perform a half roll. Push 5/4's of an outside loop to exit upright and with wings straight and level.

K14



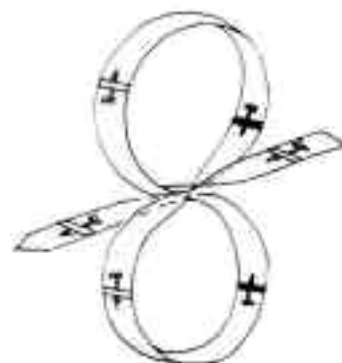
34. Alternating Roll The model flies S & L then rolls 180° to inverted, hesitates then rolls 360° in the opposite direction back to inverted, hesitates and then rolls 180° again in the original direction back to wings level and upright and exits flying S & L. Half way through the 360° roll must be on the centre line.

K14



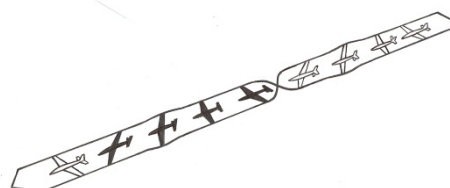
35. Rolling Eight The model flies S & L, performs one half roll, performs one outside loop (upward), performs one half roll, performs one outside loop (downward), then flies S & L. The half roll is performed simultaneously with the last portion of the first loop and the first portion of the second loop.

K15



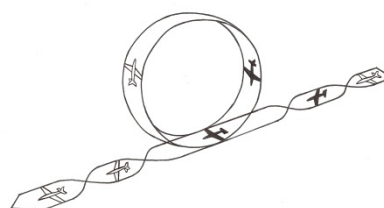
36. Eight Point Roll The model flies S & L then performs eight 45° rolls with equal hesitations between each 45° ending with wings level attitude and flying S & L. Plane must be horizontal inverted when on the centre line.

K15



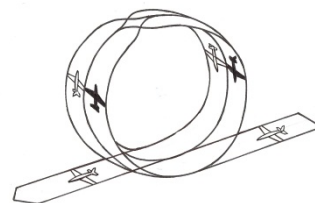
37. Four Point TOSS Roll The model flies S & L then performs two points of a four point roll, on the centre line the model performs an outside loop followed by the remaining two points of the four point roll. Model exits flying S & L.

K15



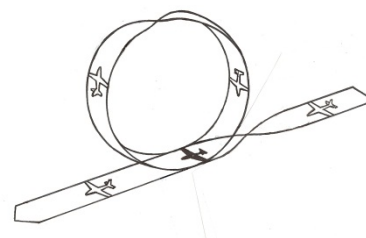
38. Twisted Loop The model flies S & L, on the centreline pull half a loop. At the top of the loop the model rolls 180° to upright then performs one full outside loop where at the top of the loop again the model rolls 180° to inverted and pulls half a loop to finish wings level and upright on the centre line. Model exits flying S & L.

K15



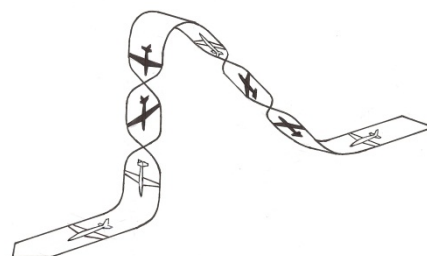
39. Rolling Loop The model flies S & L then rolls 180° to inverted on the centreline and immediately pushes half an outside loop. At the top the model rolls 180° to inverted and pulls the second half of the loop to exit wings level and upright. Model finishes by flying S & L.

K16



40. Sharks Tooth The model flies S & L then pulls to a 45° up line. Half way to the top the model performs two points of a four-point roll. At the top of the 45° line, pull a tight radius (as on a square loop) to a vertical down line which must be on the centreline. Half way down the model must perform two points of a four-point roll and then is pulled to wings level and upright on the base line. Model finishes by flying S & L.

K16



41. Four – point Rolling Circle The model flies S & L across wind, turns (into wind) through 90° and performs one quarter roll to a knife edge attitude, turns through 90° and performs one quarter roll to an inverted attitude, turns through 90° and performs one quarter roll to a knife edge attitude, turns through 90° and performs one quarter roll to an upright attitude and then flies S & L at the same altitude and heading as the start of the manoeuvre.

K18