

Sportsman's Class Manoeuvres

Mandatory Manoeuvres		
	Manoeuvres	K Factor
1	ONE ROLL	5
2	SPLIT S	5
3	IMMELMAN	6
4	STALL TURN	6
5	STRAIGHT INVERTED	7
6	½ REVERSE CUBAN EIGHT	7
Optional Manoeuvres		
	Manoeuvres	K Factor
1	ONE LOOP	5
2	½ CUBAN EIGHT	7
3	TWO LOOPS	8
4	TWO ROLLS	8
5	3 TURN SPIN	8
6	OUTSIDE STALL TURN	9
7	DOUBLE IMMELMAN	9
8	CUBAN EIGHT	10
9	SLOW ROLL	11
10	REVERSE CUBAN EIGHT	11
11	INVERTED EIGHT	12
12	SQUARE LOOP	12

Mandatory Manoeuvres

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



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



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



4. **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.



5. **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.



6. **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.

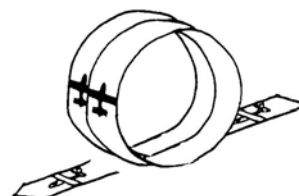
Optional Manoeuvres

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



2. **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.

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



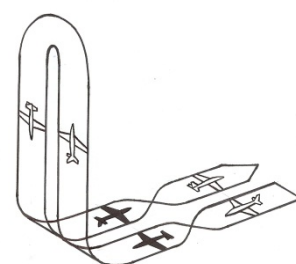
4. **Two Rolls** The model flies S & L, rotates 720° around its longitudinal axis and then flies S & L.



5. **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.



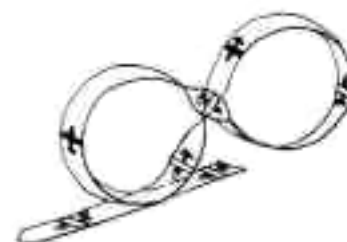
6. **Outside Stall Turn** The model flies S & L then rolls 180° to inverted on the centreline. The model then pushes to vertical and performs a stall turn. Push to inverted level attitude on the base line and roll 180° back to wings level and upright on the centreline. Model exits flying S+L.



7. **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.



8. **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.

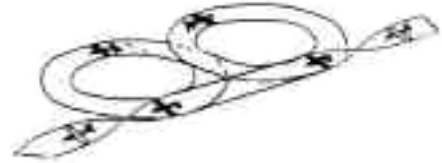


9. **Slow Roll** The model flies S & L, performs one roll then flies S & L. The roll shall be at a uniform rate and shall take approximately five seconds. **Note:** A significantly faster roll should be downgraded proportionately, e.g. a roll executed in approximately 3 seconds should be downgraded 50%, and a roll executed in 1 second scored zero.



10. 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.

11. 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.



12. 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.