

Expert Class Manoeuvres - 2020

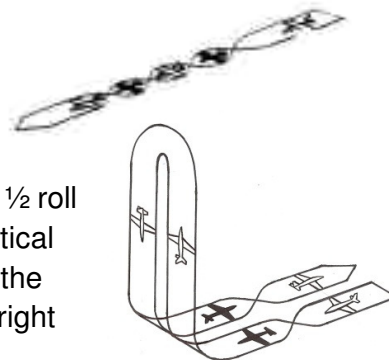
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Abbreviations

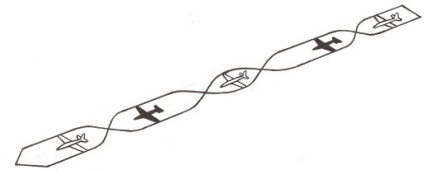
1. **S & L:** straight and level

List A

1. **Two Rolls** The model flies S & L, performs two rolls around its longitudinal axis and then flies S & L.
K8
2. **Outside Stall Turn** The model flies S & L, then performs a ½ roll 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 then performs a ½ roll back to wings level and upright on the centreline. Model exits flying S & L.
K9



3. **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.



K12

4. **Slow Roll** The model flies S & L, performs one slow roll then flies S & L. The roll shall be at a uniform rate and shall take approximately five seconds. **Note:** A significantly faster roll shall be downgraded proportionately.

K12



5. **Four Point Roll** The model flies S & L, performs a $\frac{1}{4}$ roll to a knife-edge attitude, hesitates briefly before repeating $\frac{1}{4}$ rolls and hesitations back to a wings-level attitude, then flies S & L.

K13



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

K13



7. **Ching - Ching - Chong - Chong** The model flies S & L then performs two points of a four point roll with hesitations at 90° and 180° . Then rolls in the opposite direction to perform another two points of a four point roll with a hesitation at 90° and 180° to bring the model back to the upright position then flies S & L.

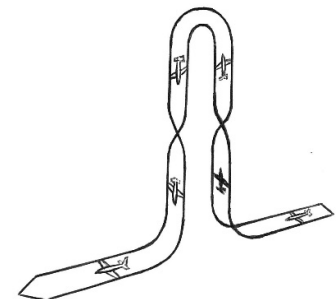
K14

8. **Two Opposite Rolls** Model flies S & L then performs one complete roll followed by a second complete roll in the opposite direction without hesitation between the two rolls. Centre of the manoeuvre is between the two rolls with the model in the upright position.

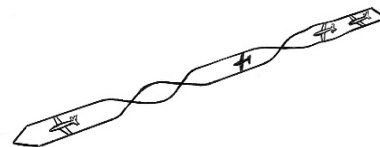
K14

9. **Thread The Needle** The model flies S & L, performs one-quarter of an inside loop to a vertical up-line on the centre line. The model then rolls through 90° so that the top side (canopy side) of the model is facing the judges. The model continues on the vertical up-line then jaws through 180° as per stall turn manoeuvre. The model travels halfway down the vertical down-line before rolling through 90° followed by a second equal length down-line before performing a one-quarter of an inside loop, then flies S & L at the same altitude and heading as the start of the manoeuvre.

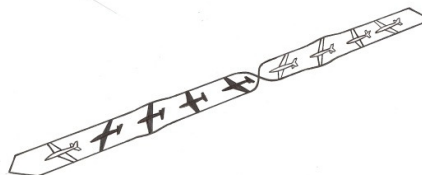
K15



- 10. Damian Roll** The model flies S & L, performs a $\frac{1}{4}$ roll to knife-edge attitude, hesitates briefly before performing a $\frac{1}{2}$ roll in the opposite direction to knife-edge attitude, hesitates briefly, then perform 1 $\frac{1}{4}$ rolls (450°) in the opposite direction to wings level attitude, then flies S & L.
K16



- 11. Eight Point Roll** The model flies S & L then performs $\frac{1}{8}$ th rolls with equal hesitations between each segment, ending with wings level attitude and flying S & L. Plane must be horizontal inverted when on the centre line.
K17

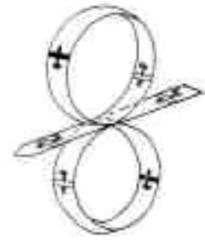


- 12. Rolling Stall Turn** The model flies S & L on the base line, at the centre it performs a $\frac{1}{2}$ roll to inverted, at the end of the base line the model is pushed to a vertical up line. Half way up, the model performs a $\frac{1}{2}$ roll, at the top of the vertical line, a stall turn is executed, half way down the vertical line, the model again performs a $\frac{1}{2}$ roll. The model is pushed to straight and inverted on the base line and when reaching the centre point, the model performs a final $\frac{1}{2}$ roll to exit the manoeuvre flying S & L.
K18

List B

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

K10

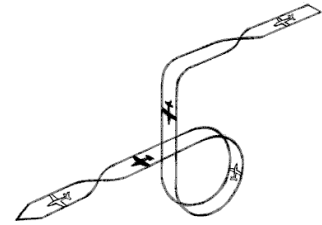


2. **Reverse Cuban Eight** The model flies S & L with the manoeuvre starting before the centreline, performs $1/8^{\text{th}}$ of a loop up the 45° line and $1/2$ roll to inverted on centreline into $3/4$ of a loop, up the 45° line and $1/2$ roll to inverted on the centreline, performs $5/8^{\text{th}}$ of a loop then flies S & L at the same altitude and heading as the start.

K10

3. **Downward Six.** Flying S & L near the top of the box, halfway along the top leg, $1/2$ 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 $3/4$ of a loop exiting inverted. After crossing the centreline, $1/2$ roll to upright and finish S & L. **Note:** The top radius must be the same radius as the $3/4$ loop.

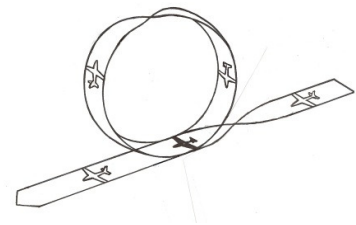
K12



4. **Rolling Loop** The model flies S & L then performs a $1/2$ roll to inverted just before the centreline and immediately pushes $1/2$ an outside loop. At the top the model performs a $1/2$ roll to inverted and pulls the second $1/2$ of the loop to exit wings level and upright. Model finishes by flying S & L.

Note: The loop should be centred on the centreline.

K12

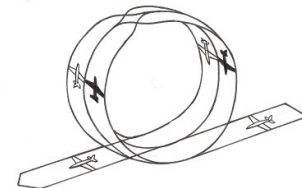


5. **Three Outside Loops** The model flies S & L, performs three consecutive outside loops (downward) and then flies S & L.

K12

6. **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.

K14



7. **Eye of the Tiger.** This manoeuvre is a triangle standing on its head. The model flies S&L, on the centre of the base line the models pulls to a 60 degree up line, at sufficient height to create a presentable size triangle, the model is pulled through 120 degrees to fly level and inverted. Once the model has flown an equal length leg, it is again pulled through 120 degrees to fly a 60 degree down leg, once the model reaches the centre point of the base line, it is pulled through 60 degrees to exit the manoeuvre flying S&L.

K14

8. Humpty Bump with Half Rolls Model flies S & L then pulls to a vertical up line. Halfway up the line a $\frac{1}{2}$ roll is performed then at the top a $\frac{1}{2}$ inside loop is flown to a vertical down line. Half way down another $\frac{1}{2}$ roll is performed followed by a pull to horizontal on the base line. All radii and half loop must be equal.

K15

9. Outside Cuban Eight The model flies S & L, rolls inverted before crossing the centerline, performs $\frac{5}{8}$ of an outside loop (to an upright 45 degree diving attitude), performs $\frac{1}{2}$ roll (the centre of the $\frac{1}{2}$ roll being at the height of the centre of the loop), performs $\frac{3}{4}$ of an outside loop (to an upright 45 degree diving attitude), performs $\frac{1}{2}$ roll (the centre of the half roll being at the height of the centre of the loop), performs one eighth of an outside loop then flies level inverted for a brief moment before performing $\frac{1}{2}$ roll to upright and flies S & L to complete the manoeuvre.

K15

10. Loop with Two Rolls at the Top Model flies S & L and on the centre line begins to perform a loop. Two consecutive rolls must be performed at the top of the loop being centred on the centre line after which the model completes the loop and exits on the base line

K16

11. Sunny Side Up The model flies S & L, starts a $\frac{1}{4}$ inside loop then performs a $\frac{1}{2}$ roll as the model approaches vertical and continues to push $\frac{1}{2}$ an outside loop until the model approaches vertical then performs a $\frac{1}{2}$ roll and pulls $\frac{1}{4}$ inside loop then flies S & L to complete the manoeuvre.

K16

12. Horizontal Eight with Centre Rolls The model flies S & L then before the centre line, pull a $\frac{1}{4}$ of an inside loop and perform a $\frac{1}{2}$ roll on the centre line, continue to push a complete outside loop and again on the centre line, perform a $\frac{1}{2}$ roll followed by $\frac{1}{4}$ of an outside loop to exit upright and with wings S & L.

K17

