RCHN PPP Level 6: Intermediate 3D (26 Maneuvers/151 Cumulative)

Maneuver ID	Title	Description	Variations
6.0	Level 5	Complete Levels 1-5.	N/A
6.1	Sideways Inside Loop	From level sideways tail-in flight from right to left (left-side loop), pull the model vertically through a smooth loop, keeping the loop as round as possible with appropriate collective inputs until the model resumes level flight where the maneuver began while maintaining the tail-in heading. Repeat from left to right (right-side loop) and in nose-in.	Tail-In/Left, Tail-In/Right, Nose-In/Left, Nose-In/Right
6.2	Sideways Outside Loop	From level sideways inverted tail-in flight from right to left (left-side loop), pull the model vertically through a smooth loop, keeping the loop as round as possible with appropriate collective inputs until the model resumes level flight where the maneuver began while maintaining the tail-in heading. Repeate from left to right (right-side loop) and in nose-in.	Tail-In/Left, Tail-In/Right, Nose-In/Left, Nose-In/Right
6.3	Sideways Tumbles	From level sideways tail-in flight from either right to left or left to right, complete at least 3 consecutive forward flips while maintaining the tail-in heading and sideways motion. Repeat backward and in nose-in.	Tail-In/Forward, Tail-In/Backward, Nose-In/Forward, Nose-In/Backward
6.4	Rainbows	With the model in an upright left side-in hover, execute large backward rainbow (at least 10 feet or 3 meters per half-flip) to a left side-in inverted hover then execute a large forward rainbow back to an upright left side-in hover. This must be done while minimizing lateral drift and executing a crisp stop at each end of the rainbow. Repeat from right side-in.	Left-Side, Right-Side
6.5	Tic Tocs (Skids In)	With the model in a nose-in hover, execute at least 5 elevator tic-tocs with the tail down while maintaining altitude and minimizing lateral drift. Repeat with tail-in tail-up elevator and left and right side-in right and left aileron. These are all skids in maneuvers.	Elevator Up, Elevator Down, Aileron Left, Aileron Right
6.6	4-Point Tic Tocs (Skids Out)	With the model in a tail-in hover, execute 1 elevator tic-toc with the tail down while maintaining altitude and minimizing lateral drift. During the second half of this elevator tic-toc, smoothly pirouette 90 degrees to the left and perform 1 left aileron tic-toc. Repeat the 90-degree pirouetting after each half-cycle until the model reaches the original tail-down elevator tic-toc orientation. The pilot must perform at least 3 consecutive 360-degree rotations. The tail of the model should appear to tic-tock at each of the four directions of a clock starting at 6 'o clock. Repeat with a right pirouette. These are all skids out maneuvers.	CW, CCW
6.7	Half-Pirouetting Flips	With the model in a tail-in hover, execute at least 3 consecutive full forward flips while simultaneously pirouetting to the left. The model must complete 1 full pirouette for every full forward flip completed. Repeat with right pirouettes. A left-pirouetting maneuver requires a clockwise cyclic stir, whereas a right-pirouetting maneuver requires a counter-clockwise stir.	Left, Right
6.8	Mobius	With the model in a tail-in hover, execute a mobius with left rudder while maintaining altitude and minimizing lateral drift. The model must complete 1 full pirouette for every full mobius completed. A mobius can be thought of as a half-pirouetting flip that has been stretched out. Alternately, it appears as a Figure 8 with one half performed inverted and a transition to upright for the second half that is executed at the center. Repeat with right pirouettes. A left-pirouetting maneuver requires a clockwise cyclic stir, whereas a right-pirouetting maneuver requires a counter-clockwise stir.	Left, Right
6.9	Forward Rolling Circles	From straight and level flight from right to left (clockwise circle), continuously roll the model to the right while executing a flying circle. Keep the circle as round and level as possible. Repeat from left to right with a left roll (counter-clockwise circle).	CW, CCW