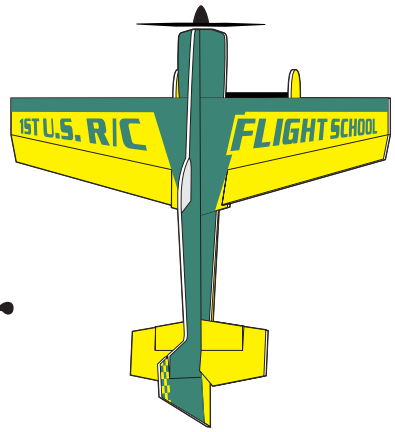
Hovering and Inverted
3D Maneuvers

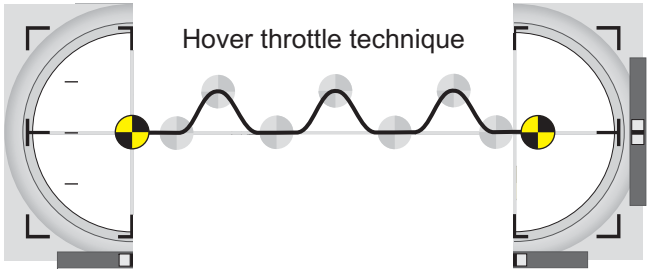
Hover
Wall
Torque Roll
Pogo
Waterfall
Inverted Harrier
Blender



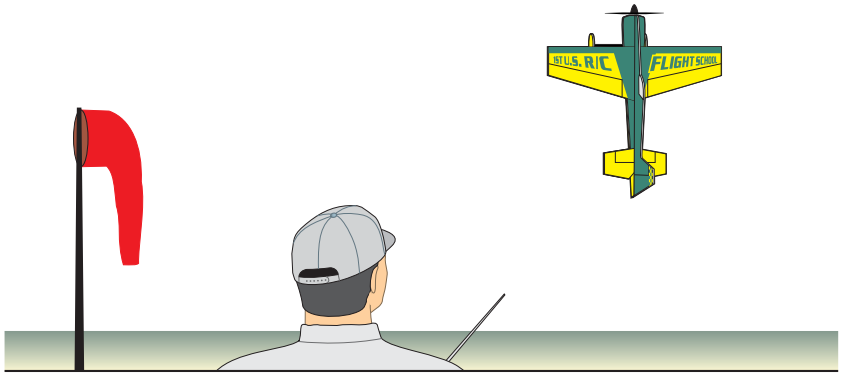
3D Hover Introduction

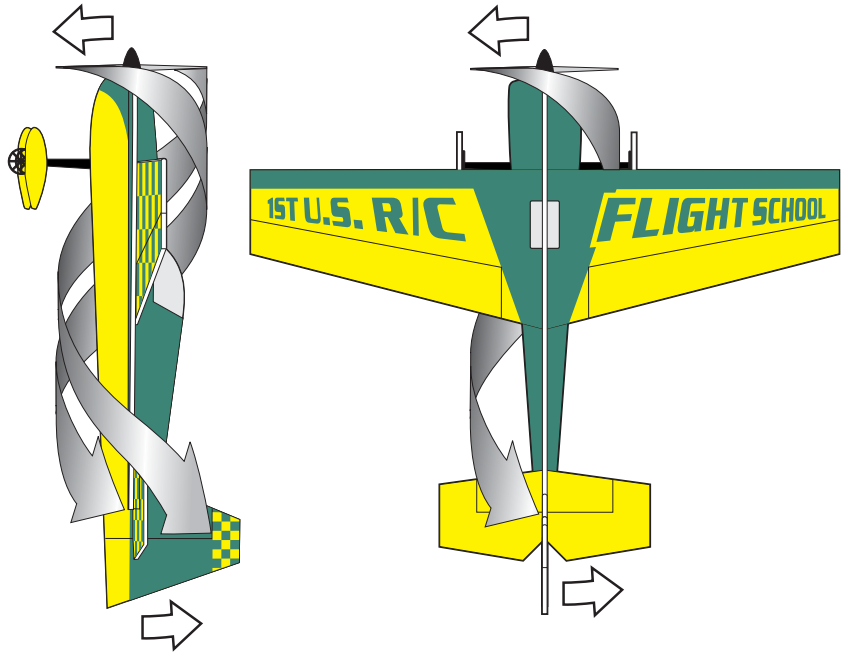
Possibly no other maneuver represents 3D flying more than hovering. A sustained hover is extremely challenging, but can be made less so by understanding the forces involved beforehand.

Control while hovering is obtained solely by the propwash over the tail surfaces and the inboard portions of the ailerons. Typically, the approx. half throttle setting required to hover provides only marginal control. But, by briefly pumping the throttle higher, you can increase the propwash over the surfaces and improve control during hover without holding the higher throttle positions long enough to cause the airplane to climb.



As stated earlier, the propwash generated by the turning propeller spirals around the fuselage and strikes the left side of the vertical tail, causing the plane to yaw to the left. A great deal of the propwash also strikes the underside of the left stab, causing the plane to pitch forward. Therefore, barring any wind, you can expect to need mostly right rudder and up elevator inputs to keep the fuselage vertical while hovering.





KPTR: Keep briefly pumping up the throttle to improve control during hover.