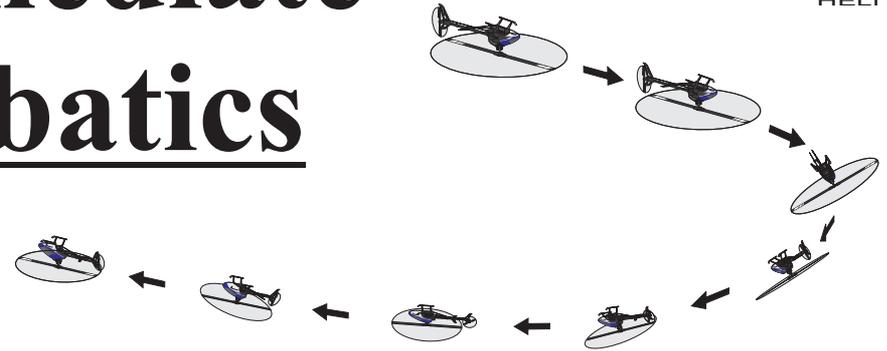
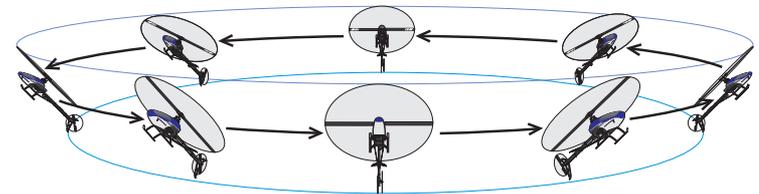
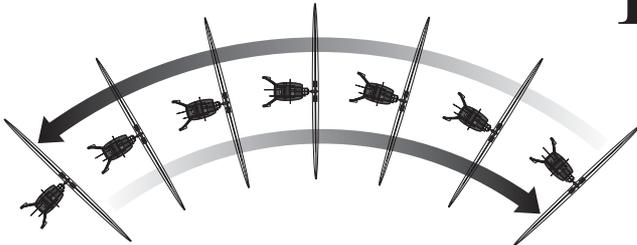


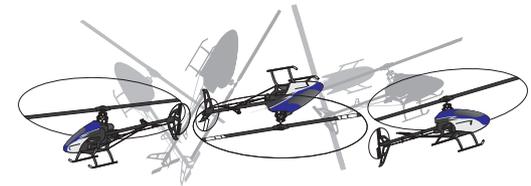
Intermediate Aerobatics



Inverted Hover & Turns Tic-Tocs



Funnels Rolling Flips Piro Flips



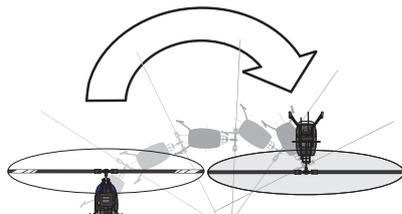
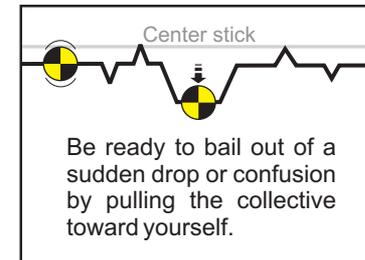


Inverted Stationary Hover: Collective/Altitude Control

Learning to maintain an inverted tail-in hover is where a simulator is worth its weight in gold! For example, all but one of the controls are reversed, and a sim will allow you to develop some competence with them individually before putting them all together. If you practiced the basic aerobatic maneuvers up to this point, you're already familiar with pulling negative collective to prevent a loss of altitude when the heli is inverted. So, use a sideflip to roll inverted, aiming to stop as close as possible to level, then pull the collective slightly past center to start hovering. The sole objective at this point is to correct altitude changes by briefly bumping more or less negative collective, i.e., when the heli sinks, pull more negative collective, and when it climbs, reduce the negative collective. Note that there won't be any need for positive collective while hovering inverted, rather, unwanted climbs are corrected by reducing the negative collective closer to center stick (zero thrust) and letting the weight of the heli bring it lower.

As a rule, the consequence of correcting an altitude deviation late is that a larger adjustment is then needed, thus increasing the potential for over-controlling. Therefore, keep your fingers nimble or moving in order to be ready to respond to the needs of the moment. I.e., Don't get lulled into thinking that you've found the "sweet spot" and can take a timeout from making throttle adjustments, because before you finish the thought, the heli will have started climbing or descending.

Learning to manage the collective while inverted takes a lot of practice. However, your ability to respond to sudden drops, especially in pressure situations, can be greatly improved by identifying a *safe word* or two that will help you remember to "pull" negative collective when the heli is dropping toward the ground. For example, the author teaches "belly bail" to help pilots remember to pull the collective toward themselves when it sinks close to the ground. What words you come up with aren't as important as just having something, rather than nothing, to quickly fall back on when things become hectic.



Flip to inverted and aim to neutralize the aileron at the instant the rotor disk is level while introducing negative collective.

