TRIM CHART

Initial Setup – use the owner's manual   [these are suggestions if the manufacturer's suggestions are not available.]
Control Throws – Ailerons 15° - Elevator 20° - Rudder 35°   Exponential – Ailerons 30%, Elevator 30%, Rudder 40%

To Test For	Test Procedure	Observations	Adjustment
1. Control neutrals	Fly model straight and level	Adjust the transmitter trims for hands off straight and level flight	Adjust clevises to center transmitter trims
2. Control throws	Fly model and apply full deflection of each control in turn	Check the response of each control	*Aileron Hi-rate: 3 rolls in 4 seconds. *Lo-rate: 3 rolls in 6 seconds. *Elevator Hi-rate: to give smooth square corner. *Lo-rate: to give a loop of approx. 130' dia.. *Rudder Hi-rate: approx. 30-35 degrees for stall turns. *Lo-rate to maintain knife edge flight.
3. Decalage	Power off vertical dive. Release controls when model is vertical (elevator must be neutral).	A. Does the model continue straight down? B. Does the model start to pull out (nose up) ? C. Does the model start to tuck in (nose down)?	A. No adjustment B. Reduce incidence C. Increase incidence
4. Center of gravity	Method 1: Roll model into near vertically banked turn. Method 2: Roll model inverted.	A. Nose drops B. Tail drops C. Lots of down elevator required to maintain level flight D. No down elevator required to maintain level flight, or model climbs	A. Add weight to tail B. Add weight to nose C. Add weight to tail D. Add weight to nose
5. Tip Weight (course adjustment)	Fly model straight and level upright. Check that aileron trim maintains wings level. Roll model inverted, wings level. Release aileron stick	A. Model does not drop a wing B. Left wing drops C. Right wing drops	A. No adjustment required B. Add weight to right tip C. Add weight to left tip
6. Side Thrust	Fly model away from you into any wind. Pull it into a vertical climb (watch for deviations as it slows down).	A. Model continues straight up B. Model veers left C. Model veers right	A. No adjustment needed B. Add right thrust C. Reduce right thrust (move thrust line left)
7. Up/Down Thrust	Fly model on a normal path into any wind. Parallel to strip, at a distance of around 100m from you (elevator trim should be neutral as per test No.3). Pull into a vertical climb & neutralize elevator.	A. Model continues straight up B. Model pitches up (goes towards top of model) C. Model pitches down (goes towards bottom of model)	A. No adjustment needed B. Add down thrust C. Reduce down thrust
8. Tip Weight (fine adjustment)	Method 1: Fly model away from you into any wind, and pull it into a reasonably small dia. inside loop (1 loop only). Method 2: Fly model away from you into any wind, and push it down into an outside loop (1 loop only & fairly tight).	A. Model comes out with wings level B. Model comes out right wing low C. Model comes out left wing low	A. No adjustment needed B. Add weight to left tip C. Add weight to right tip

9.(a) Aileron Differential Method 1:	Fly the model towards you, before it reaches you, pull it up into a vertical climb. Neutralize controls, then half roll the model	A. No heading changes B. Heading change opposite to direction of roll commands (ie. heading veers to models & your left after right roll). C. Heading changes in direction of roll command	A. Differential OK B. Increase differential C. Reduce differential
9.(b) Aileron Differential Method 2:	Fly the model on a normal pass and do 3 or more rolls	A. Roll axis on model center line B. Roll axis off to same side as roll command (ie. right roll, roll axis off right wing tip) C. Roll axis off to opposite side of model as roll command	A. Differential OK B. Increase differential C. Reduce differential
10. Dihedral	Fly model on normal pass and roll into knife-edge flight, maintain altitude with top rudder (do this test in both left & right knife-edge flight)	A. Model has no tendency to roll out of knife-edge flight B. Model rolls in direction of applied rudder C. Model rolls in opposite direction in both tests	A. Dihedral OK B. Reduce dihedral C. Increase dihedral
11. Elevator alignment (for models with independent elevator halves)	Fly model away from you into any wind, and pull it up into an inside loop. Roll inverted and repeat the above by pushing it up into an outside loop	A. No rolling tendency when elevator applied B. Model rolls in same direction in both tests C. Model rolls in opposite direction in both tests	A. Elevators are in correct alignment B. Elevator halves misaligned. Either raise one half or lower the other half C. One elevator half has more throw than the other (model rolls to the side with the most throw). Reduce throw on one side or increase throw on the other
12. Pitching in knife-edge flight	Fly model on normal pass and roll into knife-edge flight, maintain altitude with top rudder (do this test in both left & right knife-edge flight)	A. There is no pitching up or down B. The nose pitches up (the model climbs laterally) C. Nose pitches down (model dives laterally)	A. No adjustment needed B. Alternate cures: 1. Move the CG aft 2. Increase wing incidence 3. Add down trim to ailerons C. Reverse the above