

Glenrothes Aeromodelling Club

Sailplane Trimming Chart

To test for..	Test Procedure	Observations	Adjustments
1. Model control neutrals	Fly the model straight and level.	Adjust the transmitter trims for hands off straight & level flight. No camber control	Change electronic subtrims and/or adjust clevises to centre transmitter trims.
2. Control Throws. Note: be sure all aileron & flap horn pairs have matching angles	Fly the model & apply full deflection of each control in turn. Camber control in neutral (setup 6 & 9)	Check the models response to each control input. Set flaps for as much down flap as possible in glide path control (90° is good) <5° reflex needed.	Aileron & elevator rates set for desired authority. Rudder set for max throw. Set flap motions in steps 4, 5, & 6
3. Decelate & C of G (Note this is an iterative procedure, depends on desired handling characteristics Back CG = Less stability But better performance.	Trim for level glide. Enter 45° dive (across wind if any) and release controls. Caution beware of airspeed & flutter	A Does the model continue its dive without pulling out or diving? B Does the model start to pull out (nose up)? C Does the model start to tuck (dive more nose down)?	A No adjustment B Reduce incidence (add down elevator) and/or reduce nose weight. C Increase incidence (add up elevator or add nose weight).
4. Glide path control settings. Pitch trim Note be sure all aileron & flap horns pairs have matching angles.	Fly the model and slowly apply full deflection of glide path control (airbrake stick). Observe any pitch changes	A Nose drops. Up elevator required for level flight. B No pitch change. C Tail drops, down elevator required to maintain level flight	A Several options: 1 more up elevator mix 2 reduce aileron reflex 3 Increase flap motion B No adjustment C Reverse of A
5. Glide path control settings Elevator delays	Rapidly apply full glide path, observe initial pitching responses	A Nose drops B No pitch change C Nose rises	A Increase elevator delay % B No adjustment C Reverse of A
6. Glide path control settings Roll response	Fly the model and apply full glide path control. Observe any roll response.	A Model rolls to right when glide path control (airbrake stick) activated. B No roll motion C Model rolls to left	A Mix in less right & move left aileron reflex with airbrake motion. B No adjustment C Reverse of A
7. Differential/coupled Rudder setting	Fly the model and apply alternating left & right aileron commands. Observe path of fuselage line.	A Model yaws to right with left aileron and vice versa B Fuselage traces straight line C Model yaws left to right aileron and vice versa	A Increase differential and/or amount of rudder coupling B No adjustment C Reverse of A
8. Camber (full wing aileron & flap droop or reflex) setting	Put the model in a straight glide passing in front of you. Apply camber control.	A Model slows down and stalls or sinks rapidly B Model slows slightly C Model speed unchanged	A Reduce amount of droop &/or add elevator compensation. B No change needed C Reverse of A
9. Launch setting (Part 1)	Switch to launch mode. Launch the model & observe climb angles and required control inputs.	A Shallow climb angle lots of up elevator required. B Model climbs steeply with little control needed. C Too steep climb, weaves back & forth, down elevator required	A move towhook rearwards small amount, increase up elevator preset a little or add camber. B No adjustment C Reverse of A
10. Launch settings (Part 2)	Switch to launch mode. Launch the model & observe climb angles and required control inputs.	A Model banks left on tow. B Model climbs straight ahead with no roll input needed. C Model banks right on tow. D Model tip stalls to one side	A Reduce left aileron & flap droop or increase right aileron/flap droop B No adjustment C Reverse of A above D Check droop same on both sides. Increase aileron or decrease flap droop.
11. Speed settings	Switch to speed mode (entire TE reflexed slightly, <1/16 inch/1 mm)	A Nose drops B No pitch change C Tail drops	A Increase up elevator preset B No adjustment C Reverse of A
12. Elevator to Camber Coupling Sense	Fly model at high speed, bank & pull up	A Model keeps speed and comes about rapidly B Model slows down	A Increase down flap or leave alone B Reduce amount of down flap.