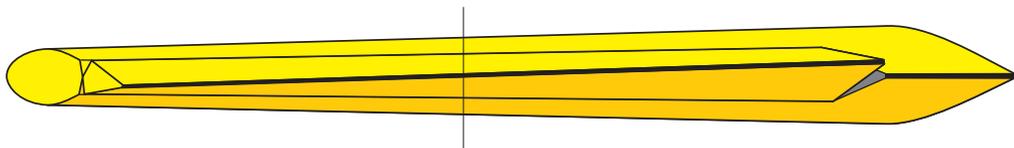


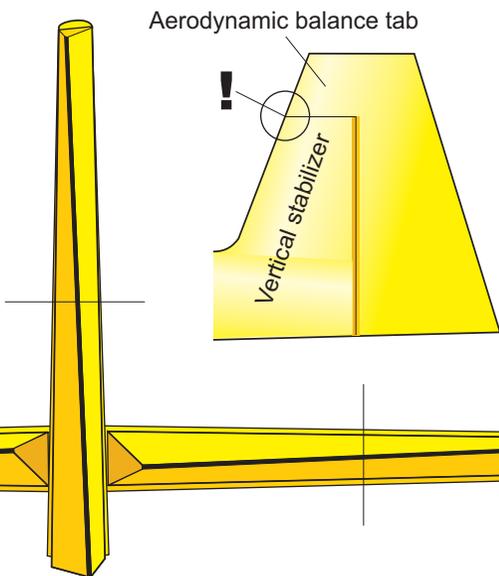
Setting True Control Surface Neutrals

Some of the obstacles that pilots encounter stem from a fixation on lining up only part of the control surface at neutral and failing to step back and look at the position of the surface overall. Note that most lightweight wood ailerons, rudders and elevators are inherently twisted for part or all of their length, and thus you should never exclusively use the inboard root or tip of the control surface to set neutral. Instead, you must look at the entire length of the control surface and identify any twists or bows, and then “average” the twist to set the true neutral position. E.g., a little down at the tip, up at the root, and neutral at the half-span, is true neutral! Furthermore, to reduce the potential for programming errors, and to simplify the fine tuning process at the flying field, as a rule, always try to mechanically set the control surface neutrals, and only use the radio to fine tune things when it becomes absolutely necessary.



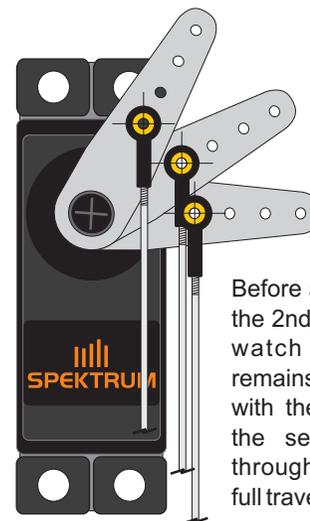
(Full length twisted aileron example) Half span = true aileron neutral

Do not exclusively use the inboard root or tip of the control surface to set neutral. Instead, identify and “average” any twists to set the true neutral control surface position. **!** Also, do not make the mistake of lining up the forward leading edges of the rudder and elevator balance tabs with the leading edges of the horizontal and vertical stabilizers. Doing so with a twisted control surface won't be truly neutral! When the twist is averaged, the balance tab will appear askew, but the surface overall will be neutral and therefore more favorable to early flying success.



(Twisted elevator halves example) Despite one elevator looking like it is up, and the other down, they are actually both neutral when the twists are averaged.

This is a good place to mention that when setting up dual servos on a single aileron, only connect one servo to the control surface. Then line up the other ball link with the hole that will be used on the other servo arm and watch that the ball link remains lined up with the servo arm throughout the full range of travel. If the 2nd servo ball link lags behind or outruns the servo arm, make the necessary adjustments to avoid damaging the servo or the control surface.



Before attaching the 2nd ball link, watch that it remains aligned with the hole in the servo arm throughout the full travel.