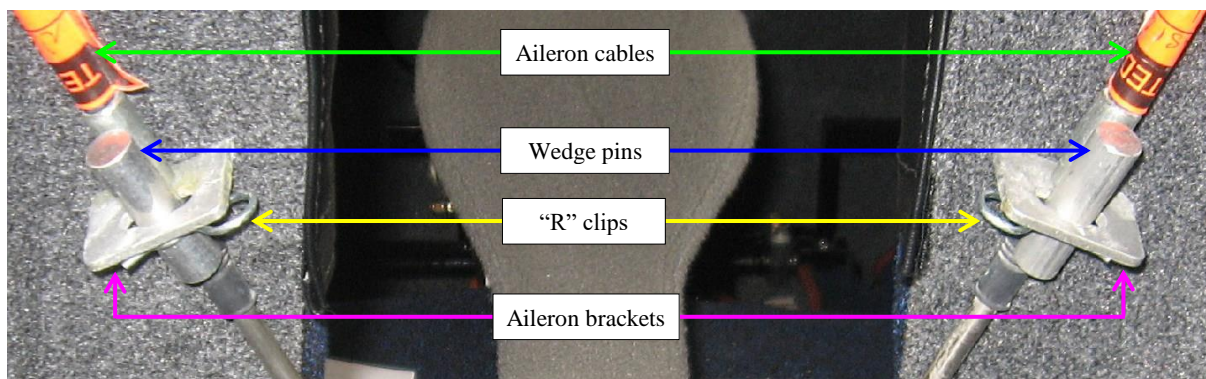


Post-Paint>Wings>Connect ailerons

Objectives of this task:

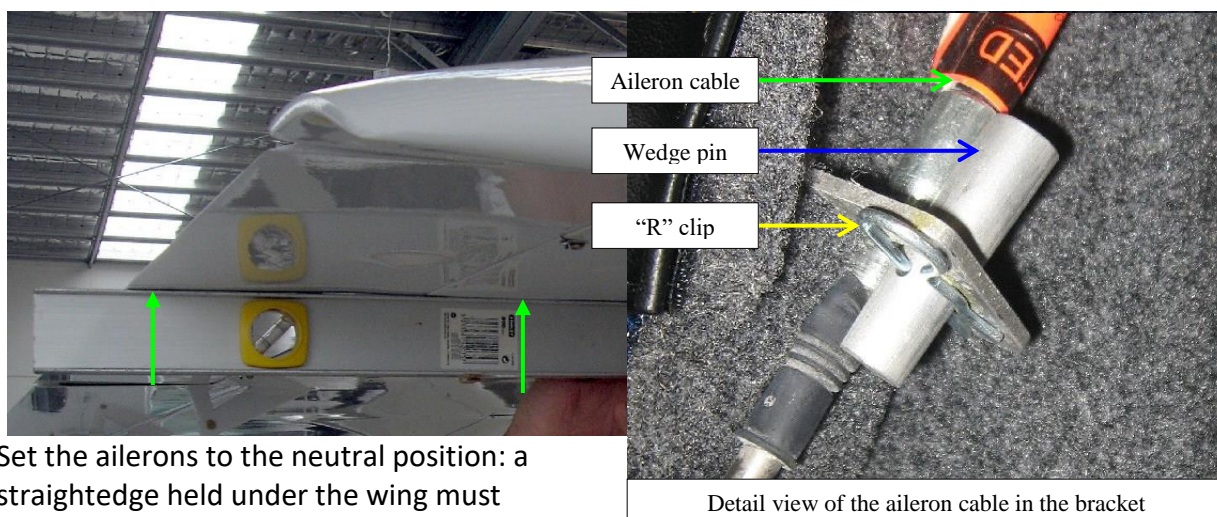
To connect the aileron cables and set the aileron deflections. One person can do this task but it is much easier with 2 people: one to position the ailerons and one to make the adjustments.



Fit the outer cables

Feed each aileron cable through the same side bracket in the seat back: the left-hand cable through the left-hand bracket and the right-hand cable through the right-hand bracket. Fit the groove in the outer cable into the shaped hole and push the cable forward so that the cable seats into the bracket, then fit the retaining wedge pin in behind the cable, push the wedge pin firmly down and secure it in the bracket with the retaining spring clip as shown at right.

Set the ailerons to the neutral position



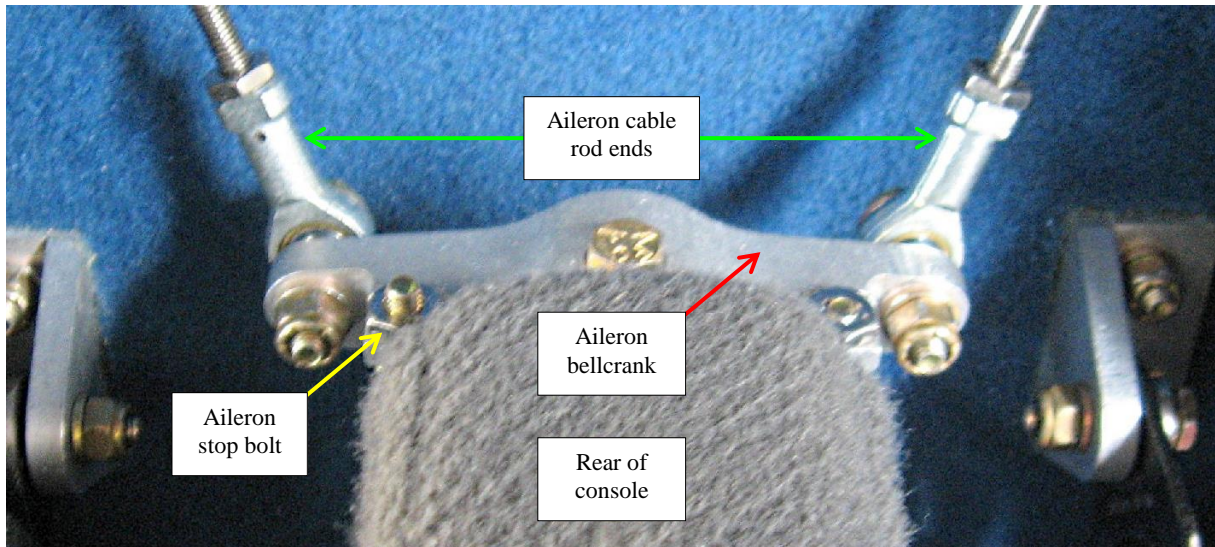
Set the ailerons to the neutral position: a straightedge held under the wing must touch the front and back of the wing and the back of the aileron as shown arrowed in the photo above. Keep the straightedge handy – this setting will need rechecking several times.

Set the aileron cable lengths

Loosen off the lock nuts on the rod ends at both ends of each aileron cable.

Set the control stick so that it is centred laterally/from side to side.

Check that both ailerons are still set to the neutral position and then carefully adjust the rod ends on each aileron cable by hand so that an AN3 bolt can be fitted through the rod end and the aileron bellcrank on each side.



It may be necessary to adjust the cable length at both ends of the cable, and ideally the rod ends should be adjusted to be close to equal with the same amount of thread showing at each end of the cable. Work on one side at a time and check that the aileron is still neutral and the stick is still centred, then move to the other side.

Take your time with this step: it is easy to bump the control stick slightly while testing cable lengths and it may be necessary to repeat the process several times until both ailerons are set to neutral and the cable lengths are both correct.

Ensure that the inboard end of the aileron cables are connected to the **same side** of the aileron bellcrank at the rear of the control column: the left wing cable **must** connect to the left side of the bellcrank and the right wing cable **must** connect to the right side of the bellcrank. When both aileron cable lengths have been set with the ailerons in the neutral position and the stick centered, fit the rod ends to the aileron bellcrank with an AN3 bolt. Fit an AN960-515 (1/4") flat washer, then the rod end followed by an AN960-416 (3/16") flat washer, then the bellcrank, another AN960-416 (3/16") flat washer and a Nyloc nut.

Tighten the Nyloc nuts to safety and mark each nut with a dab of *TorqueSeal*.

Tighten the rod end locknuts at each end of each aileron cable firmly and mark each locknut with a dab of *TorqueSeal*.

Set the aileron deflections

Once the aileron cables have been adjusted to length with the ailerons in the neutral position and the stick centred, the full travel deflections can be set.



In the kit there is an aileron deflection template. Place this template on top of the wing and set the aileron to the full UP travel deflection as shown in the photo above (note the 3 arrowed points where the template touches) and then adjust the stop bolt on the aileron bellcrank so that the bolt just touches the eccentric stop at full deflection.

The eccentric stop that you fitted in the [Post-Paint>Fuselage>Interior>Fit console controls](#) task can be rotated if required to give an equal length to the stop bolts.

Repeat the process for the other aileron and tighten the stop bolt locknuts.

Final check

Recheck each step:

Check that the outer cables are firmly fixed into the brackets by the wedge pins and that the wedge pins are held by the "R" clips;

Centre the control stick and check that both ailerons are in the neutral position. Make minor adjustments as required;

Check that the aileron stops are set correctly for full deflection: when the control stick is at full left deflection the left aileron should touch the aileron deflection template at all 3 points and when the control stick is at full right deflection the right aileron should touch the aileron deflection template at all 3 points. Make minor adjustments as required;

When all of the settings are correct check all 4 rod end lock nuts (2 on each cable) and the 2 aileron stop lock nuts for tightness and mark each one with a dab of *Torque Seal*.

This completes the [Post-Paint>Wings>Connect ailerons](#) task.