

## ***Pre-Paint>Fuselage>Fit control cables and lines***

### **Objectives of this task:**

The rudder, elevator, elevator trim cables, static line and VHF antenna cable, along with any electrical wiring, will be routed from the empennage to the cockpit for later connection.

The **trim** cable will be routed from the front edge of the pilot's seat and into the longitudinal rib out the bottom of the empennage, the **elevator** cable will be routed from the console through the longitudinal rib and out the rear of the empennage, and the **rudder** cable will be routed down through the fin stub and into the longitudinal rib and out of the lower console.

Cable connections will be performed in the appropriate tasks later in this manual.

### ***Identify the cables***

Each control cable is fitted with a white identification tag permanently attached and a bright orange identification tag just beside it. In every case these tags identify not only the cable but also the inboard or control end of the cable and you should plan to have the tagged ends end up inside the cabin when each cable is finally fitted.

### ***Identify the exit holes in the console***

All electrical cabling and the fuel line exit the console at the top front of the lower console, just before the rudder pedals. This slot was enlarged in the *Prepare fuselage* task.

The **trim** cable exits the console at the right front of the pilot's seat against the console.

The **elevator** cable exits the console from the right hand side of the centre armrest.

The **rudder** cable exits the console midway between the front of the pilot's seat and the firewall just above the floor. This slot was cut in the *Prepare fuselage* task.

### ***Run the electrical cabling and static tube***

The rudder cable will be used to push all of the electrical cabling through from the rear of the fuselage and through the holes in the ribs then into the lower longitudinal rib to the wiring hole in the lower forward top of the console.



Use cloth tape to bundle all electrical cabling (2 fuel pump wires, VHF antenna cable, strobe light wires (if fitted)) and static tube to the end of the elevator cable as shown above right. You may want to include a drawstring for any wiring that you decide to add later.

Feed the bundle in from the rear and through the holes in the ribs beside the lower longitudinal rib and into the slot in the lower longitudinal rib under the lateral beam behind the seats and into the lower forward part of the console.



When the bundle is visible in the cable hole at the lower front of the console pull it through until the cloth tape can be removed, then withdraw the rudder cable slightly while holding the electrical cables and the static tube from moving back – tape them to the side of the console if necessary.

Pull the electrical cables and the static tube up until they are level with the top of the windscreen – this will give enough length for later connection.

Use a wire hook to pull the static tube down through the rearmost slot underneath the empennage as shown at right.

The static tube from the static probe in the vertical fin will be routed down and through the same slot and a joiner will connect the 2 tubes – both tubes can be seen in the photo at right, tied together to prevent them slipping back into the empennage.

The VHF antenna cable and the strobe wiring can be left trailing out the rear of the fuselage at this point – they will later be routed up into the vertical fin. The 2 fuel pump wires can be coiled up behind the seats for later fitting into the header tank enclosure, and any wingtip strobe wiring can be coiled in the same position for later connection.

Use a wire hook to pull the static tube down through the rearmost slot underneath the empennage as shown at right.

The static tube from the static probe in the vertical fin will be routed down and through the same slot and a joiner will connect the 2 tubes – both tubes can be seen in the photo at right, tied together to prevent them slipping back into the empennage.



The VHF antenna cable and any tail strobe wiring can be left trailing out the rear of the fuselage at this point – they will later be routed up and into the vertical fin. The 2 fuel pump wires can be pulled up through the hole in the lower longitudinal rib behind the rear bulkhead along with any wingtip strobe wiring for later connection.

### ***Fit the trim cable***

Feed the trim cable (untagged end first) in through the hole in the front edge of the pilot's seat and feed it back into the longitudinal rib (you may need to use a wire hook through the access hole behind the front seats to lift the cable over the main gear hump) until it can be seen through the front slot under the empennage, then hook it out of that slot (the rear of the trim cable can be seen in the photo above right) and pull it through until it is level with the trim horn.



### ***Fit the elevator cable***

Feed the elevator cable (untagged end first) into the slot on the right-hand side of the armrest and back through the longitudinal rib.

You may need to use a wire hook through the access hole behind the front seats to lift the cable over the main gear hump.

Feed the cable back and out the "T" shaped hole at the lower rear of the empennage.

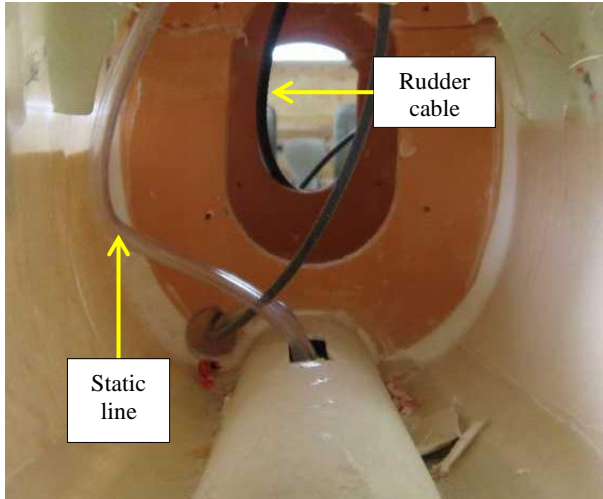


Clamp the elevator cable into place using the supplied clamp bracket, taking care to fit the pressed locating section of the clamp in the groove around the outer cable. The clamp consists of a saddle and a backing plate, and the whole clamp must be fitted onto a tapered profile plate with the thin end of the wedge facing the rear of the aircraft and secured to the fuselage by 2 x AN3-6A bolts and Nyloc nuts. Tighten firmly.

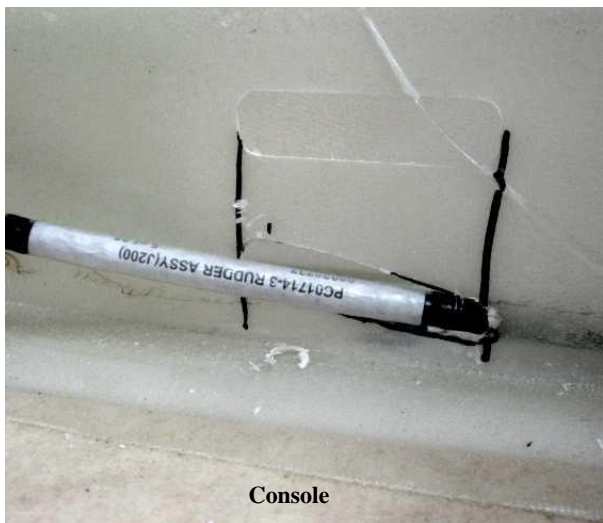


### ***Fit the rudder cable***

The rudder cable was partly fitted with the electrical cabling, so all that is left to do is to feed the rear of the cable up and out of the slot on the right hand side of the fin stub, as shown at right: the photo has been taken from the rear of the empennage looking forward.



The front of the rudder cable can be seen inside the console near the rudder slot on the left-hand side of the lower console, so use a hook to pull it through the slot and pull it about 150mm through and into the cabin footwell.



This completes the *Pre-Paint>Fuselage>Fit control cables and lines* task.