

# Horsham & District Radio Control Model Club

## Learning to fly a radio controlled model aircraft

### Part three - Installing the Radio Gear

The installation of the radio equipment should be thought about prior to building your model. In most cases you have to make provision for it during the building phase. The physical size of the airframe will dictate the type of equipment that will be required, however in most cases, trainer models will accommodate the 'standard' sizes of servo's, etc. I will assume you have fitted the mounting plates, hardwood bearers in the correct position. You may have to offer up the servos during building, but it's best to leave the installation till the airframe is complete, and is almost ready to cover. Most plans and kits will show the 'best' position for the equipment, and it's advisable to follow these instructions wherever possible.

Prior to covering, install the servos in their correct position, and make up the pushrods and/or snakes to connect to the flying surfaces. One or both ends should have an adjustable links on it. This is necessary to make the small adjustments later. With the servo in the neutral position adjust the pushrods, so that the flying surface is also in neutral. The switch should be positioned in a convenient position, ideally away from the engine exhaust and tank filling pipes, thus avoiding any unnecessary oil, or dirt getting on it. The receiver should be wrapped in foam and packed (usually within the fuselage), so that it doesn't rattle around, but not so tight that it's difficult to get at. The aerial should exit the fuselage at a convenient point and attached to the fin, with either a rubber band or small piece of tubing. This will allow it to pull out should the model crash, but also keep it out of the propeller. Never double the aerial back on itself, but leave the end free, providing it doesn't foul any flying surfaces.

The battery can then be positioned last (after the engine and silencer), so that it can be moved backwards or forwards. This allows you to adjust the centre of gravity of the model, without adding any unnecessary weight. The centre of gravity should be exactly as indicated on the plan. Should it not be possible to get it in the correct position by moving the battery, then a small amount of weight should be added. (A CofG slightly forward is usually O.K., but never try to fly a model with the CofG behind the point indicated on the plan).

Assuming you are nowhere near a flying site (very important), try out your radio. Always switch on the transmitter first, before switching on the receiver. Check all flying surfaces move freely (i.e.: - there is no binding, or servo stalling). Check the senses of the movement (get advice if you are unsure at this stage), and that the flying surfaces move the correct amount, as indicated on the plan or in the instructions. If necessary cut away any wood to allow free movement where the pushrods exit the model.

Remove the radio equipment, prior to completing the model, and re-install it as above once it's covered or painted. Always recheck the CofG when the model is finished.