

# What Type of Controller Do I Need?

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To operate the Hoverfly, you will need a control handset (transmitter). The Hoverfly TXI package (H301CF) includes our mini-controller called the FlightPad, which has been specially designed for the Hoverfly. However the Hoverfly II package (H201CF) does not include a controller; you have to provide your own. The controller needs at least four channels with servo reverse switches, plus a trainer (buddy box) socket. There are a lot on the market which have these facilities, and the Hoverfly can be configured to work with just about any of them. However, when choosing, you might want to bear in mind the following:

On the whole, the simple four-channel controllers are a lot easier to use with the Hoverfly than the fancy multi-channel computer types, especially if you are a beginner. This is because computer radios have literally dozens of set-ups and controls, many of which have to be set correctly in order to work the Hoverfly. It is true that in general, the various facilities have to be switched off, but actually doing this involves working through a long sequence of 'menu' type button selections whilst trying to follow the instruction manual. You simply don't need this sort of hassle and uncertainty when you are new to the hobby, and don't know what any of the jargon means.

The simple controllers are also the least expensive. Rock bottom on price is the Futaba Skysport 4, which usually comes as part of a set along with a receiver, servos, battery packs and so on. You don't need most of the other stuff (although you do need the radio's battery pack and charger), so it's well worth asking nicely to see if the dealer will split the set. Quite a few will, and some will have a spare radio or two left over from sets previously split up for the other bits. It's worth ringing around.

We recommend the Skysport 4 because it has only the features required by the Hoverfly and no more. The Hoverfly comes factory preset for Futaba radios, so there will be very little left for you to set up. If you do buy a Skysport 4, it will work much better if you take the trouble to open it up and remove the mechanical limiter fitted to the throttle joystick mechanism. This plastic widget prevents the throttle stick from moving as far forwards (or backwards) as the other stick, greatly reducing Hoverfly climbout performance. If you compare how far the two sticks move, the difference will be obvious. No one seems to know what this limiter is for (many other radios have it too), but it can be easily removed as follows:

- 1) Open the battery compartment and remove the battery pack, disconnecting its lead from the radio.
- 2) Release the four screws on the rear of the radio, and remove the back cover (this is safe, and fully sanctioned by Futaba, who describe the procedure in their instruction booklet). Take care not to touch the electronics with your screwdriver.
- 3) Unscrew and remove the throttle stick friction spring. This spring is a strip of metal, located far right as you look at the inside of the radio from the rear.
- 4) Having removed the spring, you can now get to the screws which attach the plastic throttle limiter widget to the stick mechanism. Remove the screws and the plastic widget itself, then replace the friction spring if you want the throttle to have a 'notched' feel. Most helicopter pilots don't, by the way, because the notches make it harder to hover.
- 5) If you want to, you can adjust the stick self-centre spring tensions at this time. This is done by turning the small screws found next to the centring springs in the corners of the stick mechanisms. The Futaba instruction manual has a diagram.
- 6) Replace the back cover, making sure that the training socket and battery lead locate properly.
- 7) Replace the battery pack and close the compartment.

Please note that the Skysport 6YG is not well suited to the Hoverfly, even though it doesn't have the above mechanical throttle limiter. This is because it has been designed electronically to give reduced throttle signal range, *just as if* it did have a mechanical limiter fitted. An electronic modification is therefore needed to increase the throttle range. I can supply details to anyone wishing to try this (a single resistor value needs to be changed); however I doubt that Futaba would sanction it! The Skysport 6 is attractive because it has adjustable rates on the other controls, but I would recommend avoiding it because of the above problem. The Hitec Focus 4 is an inexpensive and superb radio that also has adjustable rates, and works brilliantly with the Hoverfly.

The downside to buying a cheap radio is that you can't use it to fly an outdoor model helicopter later on. For this you need at least five channels, plus a bunch of other features that you only get on 'heli' radios. However, using an expensive radio to learn on seems a waste to me, since you end up with worn-out joysticks by the time you can fly. I think it's worth buying a cheap one first, and then getting a fancy heli radio when you are sure you like the hobby.