

## Buchan Aeromodellers - Help Sheet for Budding Model Helicopter Flyers

This sheet is intended to let you know what you are likely to need to start off in radio controlled model flying. Before buying anything, visit your local model flying field and speak to the helicopter flyers there. They have already been through this and this can prevent expensive mistakes. Unlike model aircraft, you don't get to try before you buy - this is price controlled! Once you have your own heli, get an experienced flyer to check it over and test it out so that you can start the learning process with a machine that is ready to fly.

Having decided to invest in a model helicopter, you will need:

1. Model helicopter. Common sizes are 0.30, 0.50, 0.60 and 0.90 (The numbers refer to the size of the engine in cubic inches and hence the size of the helicopter, 1.00 cu in = 16 cc). Cost ~ £200 - £1000 or more! 50 sized helicopters are a good compromise between cost and stability. The bigger the helicopter, the more stable it is, the more it costs and the more it costs to repair! Model helis can be bought pre-built or as a kit which is screwed together.
2. Heli Radio. Latest radios are on 2.4 GHz and consist of transmitter, receiver, 5 servos, batteries and a charger. Helis can also be flown on 35 MHz sets. Cost ~ £135 minimum
3. Gyro. This connects between the receiver and the tail rotor servo to keep the tail rotor under control. Cost £40 - £200. Some come with a dedicated servo.
4. Engine. The most suitable engine is a 2 stroke glow engine of appropriate size for the heli. Heli engines do not include a silencer. Engine cost £80 - £300. Silencer cost £30 - £100.
5. Glow plugs for the engine. Cost ~ £3 each.
6. Glow clip for powering the glow plug. Cost ~ £4
7. Starter + starter shaft. This is like an aircraft starter but has a 9" shaft with a hex ball which fits into the starter's rubber cup. This engages with a hexagonal cup on the front of the engine for starting. Starter cost ~ £20 upwards. Shaft cost £10 - £40.
8. Ground battery. This is a 12 V battery, minimum 6.5 Ah gel battery to an old car battery. It will power the power panel.
9. Power panel. This splits the power from the ground battery to provide about 2 V for the glow plug, 12 V for the starter and a separate 12 V for the fuel pump. It usually has a control to adjust the current for the glow plug and a 2 way switch to make the pump fill or empty the tank. Cost ~ £15 - £40.
10. Fuel pump. This is a small electric pump for pumping the fuel from the fuel container to the fuel tank in the model. Some power panels have pre-fitted pumps. Cost ~ £5 - £10.
11. Fuel. Glow fuel is methanol with oil and power additives (nitro) dissolved in it. Cost ~ £15 - £20 per gallon. Usually has 10% nitro for helis.
12. Flight box. This is any type of suitable box to carry all the above! Have a look at what other flyers use.
13. Training rig. This is a wide undercarriage designed to stop the heli from tipping over when you are learning. Cost ~ £15.
14. If you have a PC, a simulator is a definite help in learning to hover - every time you break your heli, it gives you a new one to try again. This doesn't happen in real life! Your credit card will become your helis best friend. Simulators come with an interface lead to connect to your transmitter. Cost ~ £100.

Having got this lot, remember, do not try to fly it on your own - when it tips over, it can thrash itself to bits very quickly and expensively! Remember that you can often buy second hand from someone who has given up or is moving on to more advanced models.