

Attractive packaging for the new Snelflight Jump Jet



Everything you need is all safely stowed in the foam container



No assembly is required so this model is ready for action. Note the module in the centre of the lift motors and lightweight structure

where 'high speed' impacts occur. If we call unplanned landings crashes then my Jump Jet has made quite a few, and as a result has suffered some superficial damage. However, new body sets are available from Snelflight. None of the crashes was actually due to piloting errors (honestly!) but due to range issues that I will come to later.

The electronics used in the Jump Jet are obviously quite complex as three gyros control the four motors and constantly send them positioning information. This is quite noticeable in flight as individual motors speed up or slow down. This built-in control allows the Jump Jet to hover in a quite stable position, although like all helicopters, the model will soon

'drift' unless actively controlled. This is where the pilot becomes necessary!

Flying the Jump Jet is very exhilarating as it feels different from a co-axial helicopter and one can imagine you are piloting a Harrier! Before continuing with the performance report I will just mention the range situation. The Jump Jet used IR control and is designed for 'small space', 'room size' flying situations where the walls and ceilings can reflect the IR beam. It is not designed for flying in a large hall or gym where, as I found, the beam can 'get lost' over a distance of far less than the quoted range of 25 ft. I have had lots of email correspondence with Phil about this but basically the Jump Jet performs perfectly in the flying

conditions for which it was designed. There is a possibility of a RF version being developed. Remember there are other factors that also influence an IR system such as fluorescent lighting, direct sunlight and the operation of other IR devices like TV controllers.

With the flight battery fully charged the Jump Jet is put on a level surface and switched on. This allows the gyros to self-calibrate and set their zero movement references. When the handset is switched on the PCBA is activated and a red LED indicates that the Jump Jet is ready for take-off. The instruction book gives ample information on how to control the Jump Jet and I personally think it falls somewhere between a co-axial and a FP/CP helicopter. Certainly I think having some FP/CP experience is helpful as if over-controlled the Jump Jet quickly builds up speed and you could easily get into the dreaded 'wallowing' state. Once out of ground effect the flight performance is lively and as with all helicopters and 3-D aircraft the throttle gets plenty of use. It is very absorbing to fly but I found it needed maximum concentration plus a bit and very 'busy fingers'. All helicopter flying is about anticipation and flying the Jump Jet is just the same. Nose-in flying needs very sensitive use of the controls, as does flying circuits in small space. Flying in our school hall caused

more range problems than I had anticipated and I regularly ran out of range, when this happens the motors cut and the Jump Jet descends rapidly! On another occasion I flew the Jump Jet more successfully in the same hall during the day when there were no lights on. The main point is that it flies perfectly in the conditions for which it was designed.

Phil emphasised the importance of keeping the AUW as low as possible and told me of several ways to reduce the weight. I had hoped to fit an U/C to mine and decided to do this after carrying out some slimming. All that is required to knock off 5 g is to remove the propeller guards, at your own risk of course! Having done this and test flown the Jump Jet again I made a lightweight U/C using some small wheels from a Kyosho Minima Cessna. The Jump Jet with an U/C actually weighs less than it did with the prop guards and it just seems better setting it down on its wheels after a flight.

Without the rings I found that the yaw trim was slightly out and the model turned slowly clockwise. On Phil's advice I replaced two of the rings and the trim was corrected. Apparently delicate changes to the motor angles are required in the setting up process and the rings do help to direct the prop thrust. If you remove them this may affect the trim, in theory one could attempt to re-trim the motor angles but I decided against that course of action! Spare parts are available and I have obtained a set of 'body





Mode 1 and 2 versions of the hand controller are available



The Jump Jet hovers easily but is quite 'slippery'!



I fitted a light U/C but of course this did affect the C of G



I tried the Jump Jet without the rings



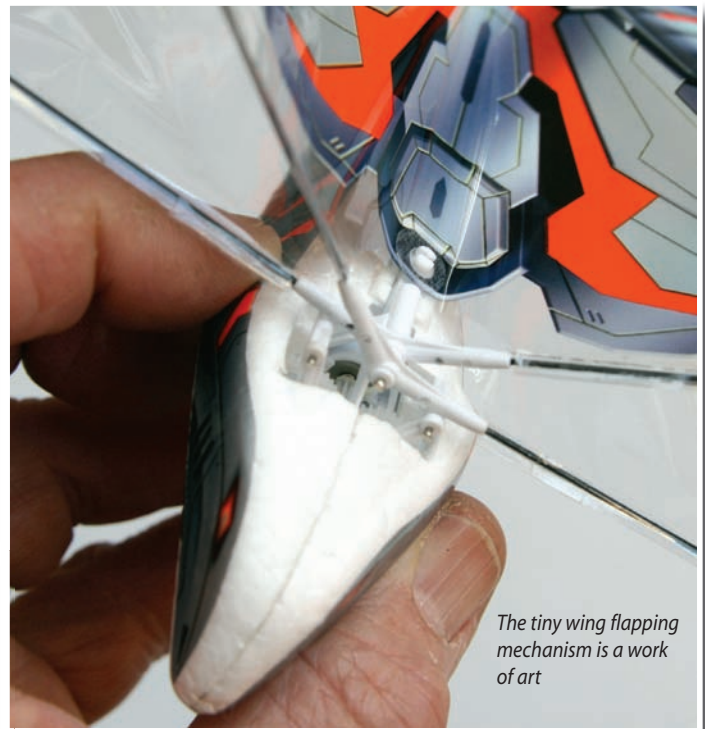
After trials I replaced two of the rings as their absence was affecting the yaw trim



The i-Bird perches on its combined Tx/charger unit



This bird can fly in the smallest space of any model I have flown



The tiny wing flapping mechanism is a work of art



The rudder is quite large and gives excellent control

parts' from Phil. I've used these to produce a 'camo' set to turn my Jump Jet into an military version, pictures later.

A one-car garage gives just enough room to fly circuits, without the car there of course! Flying nose-in, particularly in a restricted space is not easy and certainly sharpens up the reactions!

I have had great fun with the Jump Jet and have found it really fascinating to fly. Even with plenty of helicopter experience behind me it has been a new and quite exhilarating challenge. Now how about a larger version on 2.4 GHz? That would really be something and might even make me abandon all my helicopters, just imaging flying it around the garden!

Well-done Phil and the Snelflight team for bringing out a new and very imaginative flying machine.

i-Bird Magic

The Interactive Toy Concepts Vamp ornithopter was the first model of this type I have ever flown and I was really surprised by its superb performance. The throttle is very smooth and the Vamp turned easily in either direction. It did not take long to find out that it can ROG easily off from a smooth surface! However, I was in for an even bigger surprise when I met up with the i-Bird from Silverlit.

This ornithopter is described as 'graceful and efficient' and the performance is quite astonishing. The 'bird' is very small at just 12 g and a 280 mm (11") wingspan and there are several differences between it and the Vamp. The bird has four wings rather than two and the gear and crank system is a work of art. It uses a fin with a quite

large rudder rather than the wing warping used on the Vamp. The Tx for this model is the IR Palm-Z type with sliding controls and it now has a socket to enable an IR Booster to be fitted. The range is quoted as 5 m (15 ft) but with the booster this increases to 15 m (50 ft). Fitting the booster is easy and simply requires the original battery cover to be unscrewed and replaced by the booster. A lead from the booster plugs into a socket on the Tx. The booster increases the IR emitters from 3 to 7.

The I-Bird flies at a high alpha angle like a humming bird and

because of this it can fly extremely slowly. It responds immediately and smoothly to the rudder control and can be flown in circles of around 1 m diameter. The effectiveness of the rudder enables very tight circuits and figure eights to be flown without losing height. The trim controls are effective and if required the elevators can be cut free and used for trimming. Small, self-adhesive trimming discs are provided and these can be stuck on the wings to correct turning tendencies. Self-adhesive rectangles are included for repairing tears to the wings and a spare rudder is also provided.



