

Kalt 'Baron 20' kit review



The trend in helicopters these days seems to be to go bigger and better, with retracts, multi-blade heads, etc. Fortunately for those of us who are not millionaires, there now seems to be a counter trend, with a number of smaller models becoming available.

Of these, the Kalt '20 Baron' (or 'Baronette') seemed to be an ideal alternative for the 'Lark' which I have been using as a sort of shovel for the last three years. This is not meant to imply that the 'Baronette' would make a better shovel, but that by having collective pitch it might be possible for even someone like me to fly it successfully. It also has the virtue of being equipped with a very effective cooling system ie. fan and shroud, rather than the more usual heat-sink.

The Kit

Packaging is, as we have come to expect from kits of Japanese origin, of a high standard. Compartments in the box house the various sub-assemblies in numbered bags which match numbered sections in the instruction manual. Main rotor blades are supplied in finished form apart from the bolting on of metal reinforcing pieces. The cabin consists of two plastic mouldings which have to be joined using the special solvent provided and a clear canopy moulding.

A large double sided plan is included which shows a scale side view of the complete helicopter, a very useful perspective drawing of the mainframe, engine and R/C gear assembly, plus exploded views of the entire model (including the rotor head). It also has a complete parts list and a screw and bolt list.

Assembly

This section was going to be entitled 'construction' until it was realised just how little actual construction was involved. Two pieces of ply and a piece of hardwood (all pre-shaped) have to be glued together to form the servo mount, small ply reinforcements have to be added to the roots of the tail blades, two holes are drilled in the servo mount, two more in the main rotor blades and a slot

cut in the carbon fibre tail boom. After joining the two halves of the cabin as previously mentioned, the rest is pure assembly.

The engine mounting and transmission system is designed around the OS. 25 FSR, although the Enya 25 (a rare bird in this country) can also be fitted. Other motors could, no doubt, be fitted with a little modification but an initial attempt to fit my faithful HB25 from the 'Lark' soon convinced me that the OS was the only way to go. Working to the assembly order in the instructions, no problems were encountered. One thing which strikes you is that every bag you open seems to contain several ball races, there being 18 of these in all. Another noteworthy point is the way in which everything goes together exactly. There is no question of having to use bolts to pull things together or close gaps. The only problem encountered in the entire assembly was a slight binding in the clutch due to the holes for the screws holding the motor mounting block to the mainframe being fractionally too high. Elongating the holes by about 1/32in solved the problem. Full instructions are given for installing and setting up the R/C equipment, which may utilise 4 or 5 servos. In the 4 servo installation, one servo is used for both collective pitch and throttle. I chose to use 5 servos, mainly to reduce the load on the pitch servo.

Final assembly involves fuel proofing the tail rotor blades, adding coloured trim to the blade tips, covering the vertical and horizontal stabilisers and painting the canopy to taste.

Flying

The OS 25 was bench run on a 7x5 propeller for about 30 minutes before installation. This allowed the carburettor to be set up to give a reasonable idle, so that the motor was a known quantity. Some initial difficulty was experienced in starting the motor in the helicopter. It was found that the throttle needed to be opened somewhat from the idle position and the motor had to be kept turning by the starter for several seconds after it started to run. The starter belt supplied is rather on the short side and there is only just enough room to insert a Sullivan starter. If you adopt the normal procedure of relaxing the tension on the belt as soon as the motor fires, you will find that the belt will snatch with possible damage to the cabin moulding. Due to the high starting speed, a firm grip on the rotor hub is essential to avoid being clobbered by the rotor blades, but once the motor is actually running, the speed may be reduced to the point where the clutch is fully disengaged.

After a few trial hops in the course of which I decided that the tail rotor response was much too twitchy for me, the model was taken to Slough R/C Models to take advantage of their free Setting-up service. A pleasant afternoon was spent, during which Nigel Brackley pointed out several areas where my setting-up had been less than perfect, and agreed that the tail rotor control throw appeared to be rather excessive. The instructions specify a throw of 5 mm each way; it would appear that 5 mm total is the correct figure. Nigel then proceeded to fire up the OS then flew the model around the car park at the rear of the shop!

Thus encouraged, I managed several fairly long hovering flights and one flight around the field during which the 'Baronette' was very stable. Unfortunately, I made a complete mess of the landing on this last flight and thumped it very heavily. Surprisingly, there was no damage!

On the next outing, when attempting to take pictures for this review, the model was flown from very soft, slightly sloping ground. On this occasion, I made a common mistake of all inexperienced helicopter fliers and flew the model into the ground at speed backwards. There followed a great many grinding, grating and banging noises and then an ominous silence. Examination revealed that the only real damage was a stripped main gear and slightly bent main shaft, a tribute to the practical design and durability of the 'Baronette'.

It is obvious that I am still having some difficulty in controlling the tail of the 'Baronette' and I intend to fit a tail rotor gyro in the hope of speeding up my own tail rotor response without consuming too many gears and shafts in the process A report on this will follow at a later date.

Conclusions

The Kalt 'Baronette' is a compact, easy to assemble, scaled down edition of a typical R/C helicopter. Apart from being somewhat cheaper, it also has the virtue of being very rugged, and therefore forgiving, for the budding helicopter pilot.

