



Firstly, Seasonal Greetings to you all and here's hoping you are happily engaged at the modelling bench; secondly, on with the business.

I intend to include in future **Heli-pad** columns a series of articles on specific models plus news or problems experienced throughout the spectrum of the hobby. Whilst I accept that there are some who would welcome basic information, I feel that most readers of **Heli-pad** have already been bitten by the bug to a degree and would therefore like to be taken a little deeper into the subject. In this issue I will run over some of the trends seen during 1980 both on the model technical front and also at the various shows including the British Nationals.

I feel that most will agree when I say this year has seen the largest leap forward in variations in models and the numbers of people who can now control them. Only a few years ago one could count the reliable fliers on one hand; this year the Nationals entry must have been five times more than in previous years and I feel that a dozen of us were flying well enough to be in with a chance. It would appear that at long last modellers have realised how reliable the modern helicopter is — if carefully assembled. Also, the rules now allow one to compete on even terms with a standard model, carrying out only safe authentic manoeuvres. I think this variety of model type and flying style can only be good for our hobby.

I must say how very much I enjoyed all the events this year culminating in the 'Nats' and how nice it was to have such a large entry of enthusiasts. Congratulations must go to Len Mount, a worthy winner, for no-one has put more into his hobby than Len. Commiserations to Ken Ford for running out of time after some truly excellent manoeuvres. May it be a bigger and better event next year.

Two other events, namely **Woburn** and the **Bretons**, were resounding successes (many thanks to the organisers). I'm sure all who attended will agree **Woburn** was a delightfully informal affair with just enough discipline to make it manageable. A few simple competitions thrown in, e.g. knocking over skittles, were surprisingly difficult but a contest which anyone could have a go at without feeling overshadowed or risking serious damage. The highlight of this event was, for most of us, the amazing inverted flying of a *Jet Ranger* by a Japanese demonstration team member.

The interesting thing about this feat was the fact that the model was so standard looking, furthermore, he managed to have such a responsive model that burred through a schedule on a slow rich 2-4 stroking engine run. Obviously he had arranged for the main blades to get at least five degrees negative pitch to get the necessary lift when inverted, how he regulates the RPM of the engine I do not know. The following methods are the only ones I know of. (You have to alter things for inverted flying as in the normal way. As the pitch decreases towards 0 degrees on the main blades the throttle goes down to tickover; conversely, when you increase the collective pitch to obtain more lift the throttle opens automatically on a simple mechanical link). Firstly one can have a separate throttle on a fifth function whereby you rev the engine up on low pitch then increase the pitch to take off. I believe this is the method used by Len Mount for his spot of virtuosity (inverted flying). Whilst I have used this method for practising autorotation I find the difficulty is, when you make a descent, you have to juggle with the separate throttle to avoid over-revving. It is easy on the climb as you can soak up the power by applying more pitch for more climb. Whether Len leaves his throttle wide and pitch up with the variations in revs as he goes through 0 degrees pitch to negative to lift inverted I don't know. The other more sophisticated method, though not generally available, is to have a governor on the engine. In this system the RPM is kept constant by a device while maintaining control of the collective pitch (I suspect that our Japanese friend may have had such a device fitted). The ones I have seen use a sensor near the rotor head which is then coded through servos etc. to govern the engine.

Other models which impressed me at **Woburn** were Roy Sturman's *Breugot* contra-rotating scratch built job and his gyrocopter; both of which performed extremely well. The **Bretons** display (near Dagenham) was run on similar lines with perhaps a greater emphasis on competition — again a lot of keen flying without losing the spirit of the thing. We were blessed with superb weather, fortunately for Dave Nieman and myself, as we both arrived in full size helicopters. It was a tremendous sight as I flew towards the Thames as the whole of London was laid out on my left looking like a vast model landscape. Interesting to relate that my journey from Thruxton took just 55 minutes whilst

Christine, who brought my models by car, took 3½ hours and arrived looking a little jaded.

On the model variation scene, which I mentioned earlier, we have had a wonderful variety with *Kavan Jet Rangers*, *Heliboy*s, *Larks*, the *Hirobo* range, *Graupner 212*'s, and some *Kalts* making an appearance. I must not omit Warren Bailey's superb flying of a six year old *Morley*. I think the above includes most of those available on the British market and all can perform well enough to win at the Nationals. I will admit that I can detect a trend towards a similar layout i.e. main head with mixing levers to include a machine of direct control with the Hiller paddles linked in as well, and autorotation freewheels becoming commonplace. The exposed gear types such as the *Heliboy* and *Falcon* and the gear box types *Schluter*, *Hirobo* and *Kalt* seem to be on a par popularity wise.

An interesting point these days regarding autorotation is that machines with free running transmissions will in fact autorotate successfully just by letting the clutch drop out of engagement. I have carried out autorotations with *212*'s and *Heliboy*s not fitted with freewheels (not to the ground I will admit — but with enough control to certainly reduce the damage in the event of an engine failure). Well, that wraps things up for the month. I will start in the New Year with articles on specific models, plus modifications or technical problems with perhaps close-ups of models under construction in my workshop. Of course, if I have any feedback as to what you, the reader, would like to know, I will be happy to oblige. Feel free to drop me a line at any time through the **R.M.** office.



Above: three models from the authors 'stable', in foreground a 'big' *Hirobo Lama*, centre is its little brother which suits the smaller 40-50 size motors and in the background the very popular *Morley Bell*. Below: John waits patiently with his models for his turn to fly at the 1980 British Nationals. We are sure you will recognise him at future helicopter events — don't be 'backward in coming forward' to have a word with him or drop him a line through the R.M. office. He is only too willing to give 'unbiased' opinions and all possible assistance to both the newcomer and established enthusiast of the R/C helicopter hobby.

