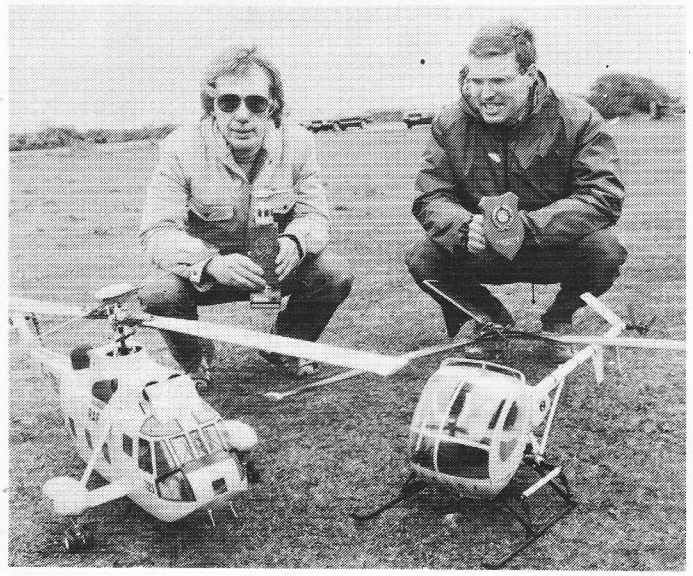
HOVERING ABOUT with Jim Morley

MORE ENTHUSIASTS would like to be able to "Hover About" than can, that's a statistic that nobody will argue with. Those of us that *can* will spend a lot of time extolling the advantages of our rotary winged flying machines, explaining how easy and worthwhile it all is and at the same time saying, by using the necessary jargon, how much there is to learn and how difficult it is. We can also talk about this and that as a means to make it all practical and immediately kill off the worthwhile bit by building up a list of expensive items that make the project completely beyond many people's financial means!



Above: line up at the Southampton MAC Helicopter fly in at Beaulieu. Before the weather closed in. Left: John Griffiths won the scale event at Beaulieu with his Kalt *'Baron' in 'Sea King' body. John Barrow finished second and is the first to win an award with the new* Morley *'Hughes 300' fitted with a custom built three blade head.*

Gary Richardson instructs Sheila Campling at the Nostell Priory Fly in. Sheila learnt to hover the helicopter in about four minutes with the aid of what appears to be a Kavan *helicopter training aid.*

I find that at exhibitions, where completely uninitiated but very interested parties see helicopters for the first time, there is immediate rejection when told that they need a four channel radio and an engine on top of the, say, £150 kit price.

Even those with some experience of R/C modelling and there are many who go straight from cars and boats to helicopters, can be discouraged if they think that they have to have a new flight box, starter, gyro and a special helicopter version of their R/C system. This approach will even discourage the established fixed wing flyer who could well find that a helicopter is now no more expensive than his next planned fixed wing model. Certainly, these days, helicopters tend to last longer and even have a resale value.

On the other hand, I know of experts who claim, although I've never believed it was the sole reason, that a helicopter is good training for multi aerobatics. I have also been told that learning to fly helicopters is a way of avoiding the expense of keen R/C car competitions.

We have reached the stage now, where, if not won by the few acknowledged experts with their sophisticated radio gear and gyros, all or most competitions are won by models with a gyro. Does this make the gyro essential? Of course not, but it doesn't stop it, or any other aid to improvement, being desirable. Model helicopters are as different, perhaps more so than your motor cars (the sit in ones, not the R/C ones) and you drive your ancient van, mini, family car or sports car according to taste and depth of pocket, probably with the same love/hate relationships — you love it, the wife hates it! No, I didn't mean that.

To get to the point, that is, whether and how to start learning to fly R/C helicopters, the obvious thing is to talk to as many people as possible and draw your own conclusions. Reading up on the subject will help to avoid starting off on the wrong foot, but even if you do, it's all part of the learning process and you can win through and enjoy it in the end.

I have always maintained that training stands are a waste of money but people want them. I could have sold the photographic tripod that my model sits on at exhibitions several times over — imagine it! I suppose anything that gives one confidence and saves breakages is a good thing, providing that it really does.

Gary Richardson, who I don't think ever needed a training stand, and certainly, as current holder of the National Championships title, doesn't need one now, demonstrated this confidence at the Rothwell A.M.S. 'Nostell Priory Fly-in' by encouraging members of the public to have a go at hovering a *Kalt* 'Baron' on a modified *Kavan* trainer. Apparently most fixed wing colleagues were hovering in two to three minutes at the most, and Miss Sheila Campling, a nursing sister from Leeds General Hospital managed to hover in three or four minutes and is now 'hooked' on the sport.

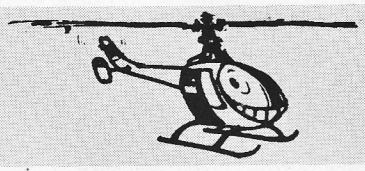
Yes, girls can do it too, I even have several lady customers, I'd like more, to state the obvious!

Beaulieu Fly-In

The first event of the season in the south was at the Beaulieu, Hampshire aerodrome, a most pleasant part of the country on May 1st. The run in through the New Forest, where spring was just becoming evident prompted a vow to return with my family and take in the Motor Museum and Lord Montague's stately home.

The Southampton M.A.C. organised their second helicopter fly-in on a day that started out very much better, but ended on nearly as wet a note as the day chosen for their first event held last year. This enabled the scale competition to take place, but put a bit of a damper on the novelty events towards the end.

The scale event, judged by a full-size pilot, was to an admirably straightforward format, being five items marked from 0-20. Two were



static (appearance and extra features), and the remaining three were for flight; take-off-circuit-landing, one nominated manoeuvre, and overall flight realism.

The result was a first for John Griffiths with this *Kalt* 'Baron' fitted with 'Sea King' body shell — pity about the two-bladed rotor — second was John Barrow with his *Morley* 'Hughes 300' and third was Pete Reay with *Hirobo* 'Jetranger.'

The novelty events, comprising limbo, skittles, slalom, pick-up, etc., were won by Mr. C. Ewer, followed by Phil Stevens and Colin Bliss. Best local entry (good idea that) was Richard Sharman, in both scale and novelty. The organisation was rewarded by a good turn out, some 70 helicopters, and some splendid flying. It was nice to see John Heaton give himself a handicap by flying a non-collective model, even if he did prove that you can't always get away with it by toppling over in the wind at touch down.

Sandown Park '83

This 'biggest in Britain' specialist R/C Show was once again organised by the Elmbridge Model Club. My reporting this year is restricted by the breakdown of the electronics in my camera on top of the usual work load. Whereas last year the Mk. 3 *Morley,* or 'Hughes 300', was on view as a prototype, it was now shown in full production form. Several people commented on how nice it was to see several models all looking the same flying around together. There was one with such a different colour scheme, that some people thought it was a different model. Another example, fitted with the O.S. 28 FSRH that will fly for half an hour on its 8oz. tank, or if you prefer, about 16 hours to the gallon.

Dave Nieman Models seem to be specialising in the very big. The latest idea is to harness a petrol engine to standard *Hirobo* mechanics and make a compact unit to fly the large scale 'Agusta 109', 'Jetranger', or 'Bell 212' fuselages that he is now manufacturing. I was also shown a leaflet describing a new Japanese kit of the *Robinson* 'R 22', with flybar-less rotor that is claimed to work without the usual flybar-less snags. I look forward to seeing that technical development.

Slough R/C had the works *Kalt* team over from Japan. These experts all gave an extremely polished performance, (with gyros of course), but also doing such clever things as slow rolls using an invert switch at the appropriate time. Their models used as much sky as a multi aerobatic job and to the same effect, plus coming back to the postage stamp flying site. John Griffiths also had scale fuselages available for the other models in the *Kalt* range.

Vago Nordigian of *Watford Model Centre* was showing off the latest *Heim* 'Star Ranger' technology, designer Heim not having rested on his laurels at all. A perspex helicopter mock-up allowed many of the clever features of the basic helicopter models to be seen, plus novel retract gear for the '222'.

Worthy of special attention, particularly by those in the category of needing new radio gear for helicopter use, is the *Fleet* 6 channel helicopter outfit. This has the extra helicopter features such as throttle hold and tailrotor/throttle mixer and, with four ball raced output servos comes at a price comparable with the less sophisticated non-helicopter outfits. Gyros with separate power pack are available for the outfit, with a special tail rotor servo (fast acting?) plus, for the adventurous as an extra, an inverted flight switch. By the next 'Hovering About'. I shall have an outfit of my own and will be able to relate some experience first hand.

More on Balancing

You don't have to go far to find something written about balancing the rotor head when you start looking into model helicopters. That's because it's very important and most people need some prompting on where to begin.

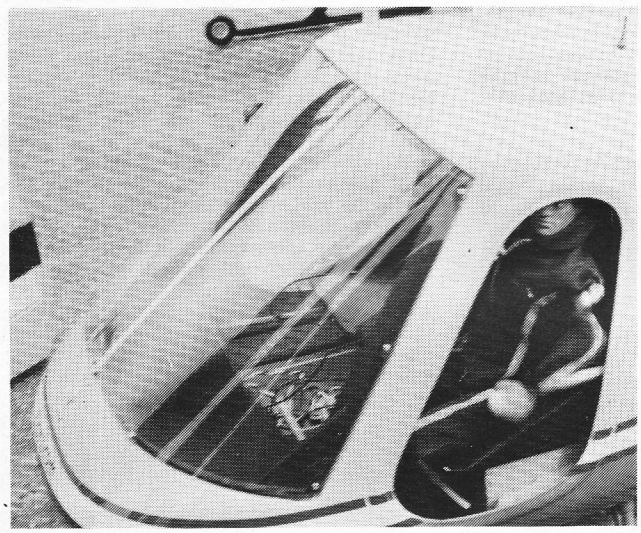
All the systems written about, except the one of adding a bit of covering and seeing if it helps and if not, moving it somewhere else, are static balancing and what is needed is dynamic balancing. Talk to any motor tyre fitting firm.

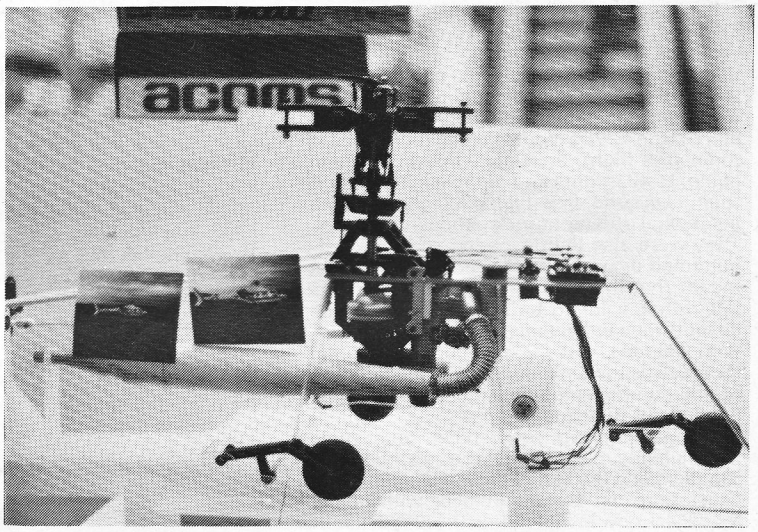
We get away with static balancing because the rotor really is a very thin rotating mass, but there are occasions when static balance doesn't give as good results as it should, and sometimes just not good enough. It is essential, for best results, to consider the rotor as a disc and balance the whole lot, not just the main blades and assume that they are going to remain diametrically opposite.

I have seen a very good article which describes how the model is flown and landed very gently, and the rotor blades 'frozen' in place with spots of cyanoacrylate before removing and rebalancing vertically on a spare mast on special pivots with a counter balance weight at the other end. That degree of static balancing could get it right, but you could still come unstuck on blade stiffness. It is possible to get a smoother hover with blades out of track if your blades are of a different stiffness. I'm afraid wood is a natural material even the best quality most carefully selected will vary from piece to piece.

If you are going to crash the model anyway, as a result of pilot error, there isn't too much point in going to a lot of trouble, but bear in mind that it is a disc if the usual methods don't work.

Below left: John Heaton connected the pilot's arm to the throttle servo on this non-collective Enstrom *model. Note the blurred action shot. Below right: demonstration unit of the new* Heim *'Star ranger' mechanics and retract gear shown on the Watford Model Centre stand by Vago Nordigan at the recent Sandown Park Model Symposium.*





Fly for Fun

With luck you could be reading this in time for the BRCHA meeting at **Woburn Abbey** on 17th July. Free entry to the grounds if you have a model (helicopter) in the car. Pete Ashford 01-575 3745.

August 7th, **Devon H/C Association**, Wybrooke House, Nr. Exeter. G. Bell, 03928-73530.

August 28th, **Gatehampton Farm**, Goring, Berks. John Glabrook. Reading 57386.

August 27th-29th, **British Nationals**, Grantham, Lincs.

September 3rd and 4th **Bretons** 'Euro-cup 83', this year the most ambitious meeting yet. FAI and Sport classes. Camping facilities available and entertainmentfor visitors, Barn Dance, Buffet, possible Bar B Q and lots of helicopters. The BRCHA are helping with the organisation this year. Near Hornchurch, Essex, Ron Rees 01-593 0748.

September 11th **Morley Collective** meeting, St. Brendons College, Broomhill Road, Brislington, Near Bristol: On A4, ½ mile west of Keynsham by-pass. Informal meeting, lots of chances to fly, lots of *Morley* Helicopters; (other makes also welcome) lots of chat and help. Toilet facilities available and not far from a pub. Motorway approach from all directions. Maurice Tait 0225 314970. Look forward to seeing you there.