

HOVERING

WITH JIM MORLEY

ABOUT



Above: the only evidence that this is hovering about is the flattened grass at Mike Koskela's feet. This fascinating model is described in the text.

NO, THIS COLUMN is not changing its allegiance. The fixed wing aircraft on the photo is hovering about in the true sense of the word, except that at the moment it needs a restraining hand from the pilot. Interesting that, remember the early days when we used to trim out 'copters holding onto the tailboom? Mike Koskela can do this with his model 'Harrier' with more safety than with a 'copter, if not quieter. The Rossi 81 with Byron fan unit is noisy (and a half) even with a pipe on it exiting forwards out of the pitot head!

Mike has done very well even to get the model to go up, what with all those restrictions aft of the ducted fan unit. He has achieved pitch and roll control, but has yet to introduce a forward thrust. Personally I can't see that that would be necessary except for very fast forward flight, as helicopter models can be fast enough with just a tilt to give a forward component from the lift. Anyway, to date no forward flight has been tried and attempts at hover are reminiscent of my early helicopter experiences. Of course, the model has absolutely no gyro or pendulum stability and even a lift off control problem in that, when on the ground, the back pressure effects the efficiency of the fan unit adversely and maximum power is needed. When clear of the ground by a few inches the mass flow increases and there is sufficient lift for vertical acceleration without extra power, almost exactly the opposite to a helicopter in ground effect, and far worse to contend with.

The model weighs about nine pounds, being mostly balsa construction and doesn't have any conventional elevator or aileron controls, etc. I got the impression that a rapid lift off and transition into forward flight would be easy though, if hovering was ever made possible, it would be very critical. That is, if it went even very slightly off its balance it

would not be recoverable, and because of that I think transition from forward flight to hover would be extremely difficult, but then it has got wheels so you could do a runway landing.

I look forward to being able to give you more news of this interesting 'hoverer'. Anybody else doing this? How about an ornithopter?

Smiths Industries M.F.C. and Century Systems Fly-In

This event was held at Cheltenham racecourse and is a new addition to the calendar. With lots of space and nice weather the day was undoubtedly a success with quite a good

turnout to keep the sheep off the course. Fortunately helicopters prove very effective in this respect even if the evidence of the sheep is inconveniently still on the ground.

Of course I'm biased, only having scale models, and not everybody is as inclined to damage their models in the novelty events as I am, but it would seem to make sense to have the scale events first. Skittles tables and footballs can so easily put a model out of trim (and the rest) particularly when the course is laid out so that the wind blows the football away from the goal after you've edged it forward. This seemed worse for the later competitors than those first in the list, perhaps the wind was stronger or the grass beaten smooth.

Len Mount proved to be the master of this manoeuvre as he is of several others. Incidentally I was amused to see he has developed a new training aid, that of standing behind his pupil, gripping him on the waist and willing the controls in the right direction. I couldn't see any evidence that it worked, but possibly somebody would find it nice.

Perhaps the scale event didn't have enough scale judging, nobody looked at the scale documents and what do you do for two options when eight others are listed as a must, without going to non-scale manoeuvres of course. All I could think of doing was a retract demonstration for my option, with the 'Augusta 109'.

If that seems at all critical of an enjoyable day out then I trust I will be forgiven on the basis that it is information into the pool for other people organising events.

Len Mount won novelty with his Schluter 'Superior' and 2nd in scale flight plus con-course win with his impressive Bolkow 105. Vago Nordigian with Star Ranger won scale flight and second in novelty. Pete Fullard won the award for the best turned out sports model.

Police Helicopters

A brief paragraph in the daily paper aroused my curiosity. Thames Valley police trapping speeding vehicles on the motorways



using a helicopter. How, when, is it worth it, etc.? And with visions of a new colour scheme of interest I followed it up.

The Metropolitan police apparently have three *Bell* 222 helicopters in police 'Jam Sandwich' livery and I'm told Devon and Cornwall are soon to have their own helicopters, but for the moment Thames Valley use a *Colt* AS350 'Squirrel'. Yes, I said *Colt* not *Kalt*. *Colt* cars based at Cheltenham have several 'Squirrels', they are white with a black striping, the one on loan to the police has the word 'Police' on each side and under the nose plus a County constabulary badge at the rear.

It is fitted with 'Skyshout' speakers on the rear skid supports pointing downwards and forwards. Apparently this is one of the major tasks for the unit, to clear the way for ambulances for example and it works very well. I'm not surprised, it's effective enough when coming from ground level, but from overhead I should think you might well imagine it to be the voice of somebody else who is supposedly up there!

The helicopter is fitted with VASCAR which works in exactly the same way as it would if fitted in a police car, but in fact the observers can tell by appearance if a vehicle is speeding. When told this I immediately thought that perhaps a small car is more obvious than a larger vehicle in the same way that a 'Jumbo Jet' looks slow compared to a 'Spitfire' say, at the same speed.

That isn't the case though, and it is the rhythm of the vehicle relative to the white line that shows up the guilty party. The human brain is quite clever at judging frequency of course, not unlike musical notes and tones, and with a bit of practice is very accurate. Once observed, especially on the motorway, it is a very simple matter to check the speed with a distance and time and radio ahead for a patrol car to stop the offender.

Quite often it is a case of a slight diversion when the helicopter has to go somewhere for another reason, or something to do on the way back, rather than a deliberate exercise to fill up the courts. The use of helicopter for that alone would be a bit extravagant I should think. Apparently those stopped are amazed to have the observation helicopter pointed out to them, I'm not surprised at that either, though I think I would feel rather hurt too, after having such an affection for helicopters. But then motorcycle police didn't put me off motor-cycles or police cars off fast cars either

Left: Len Mount proves adept at nosing a football through the grass.



come to think of it, even in the days when I used to exceed the speed limit, so perhaps I wouldn't.

Photograph Competition

In the early days of model helicopters there used to be all sorts of enquiries into possible uses, measuring pollution above chimneys, emission from radiomasts (think about that one!) towing lines across chasms (this is done regularly) and very persistently aerial photography.

Just recently there has been a lot of comment in this and other magazines on photographs from fixed-wing aircraft and although overseas there is a commercial camera mount for a helicopter I have never seen any results or tried it myself. I was suddenly inspired to change that, but without the time to be very scientific.

Photographs accompanying show lash-up camera mount on an ancient *Morley* 2c, the *Chinnon* 'Bellami' camera weighed the same as the ballast weight, and the best shots from the first attempt! Not exactly brilliant, but almost passable. I'd like to see what you can do.

As a gesture and just for fun, I will award £20 for the best and £5 to each two runners-up for an air to air photograph. From a Flying model helicopter of a model Helicopter flying.

Simple rules, no cheating please, no professional equipment to be used, picture to be supported by a photo of the camera set up and a few details. Entries to RCM&E editorial office by Mid November, 1984.

In other words I expect to see a picture from an ordinary model, with an ordinary camera, suspended on rubber bands or foam plastic, of an ordinary model, but from an extraordinary viewpoint. Winning entries will be published on the February 1985 RCM&E — H.A.

Dates

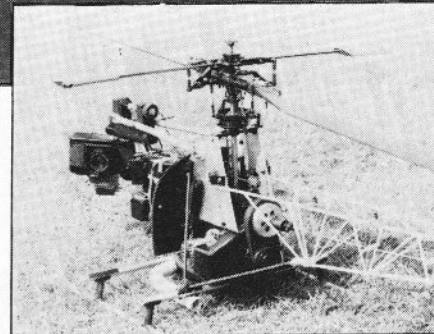
My complete inability to be in more than one place at a time has caused more trouble this year. Because of the family holiday I missed both Watford Model Centre Fly In and the BRCHA Woburn Abbey event.

I note that at Woburn they will be having a so-called Scale 1 (Gas Class) and Scale 2 (Glo class 10cc limit) and I wonder what effect this will have on future helicopter meetings? I will look forward to hearing details when I return from my Holiday.

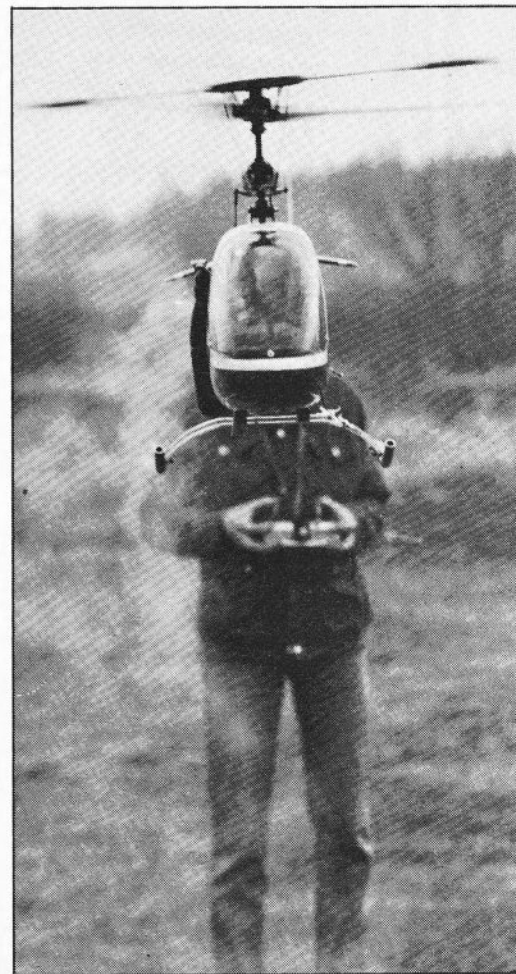
Worse than missing those, we had planned to go to the Dutch event at Ermelo, being the first specialist scale continental meeting, but we have just been told they have changed the date to September 1st and 2nd, which clashes nicely with the Morley Collective at Bristol — which can't be missed!

One date that this October issue could be in for is the Slough Radio Control fly-in on September 16th at the High Wycombe club site, Towersey, near Chinnor, Bucks.

See you there!



Above: Morley 2C as a camera mount. Followers of detail will note that half a mixer has been used on the R/H. The flybar still goes up and down for collective. Camera tripod is rubber mounted and miniature servo operates shutter. No rewind by radio as bringing a 'copter down for this is no problem.



A real rotor head or is it just an extended under-carriage? Hirobo 555 Lars Sundin, Sweden.