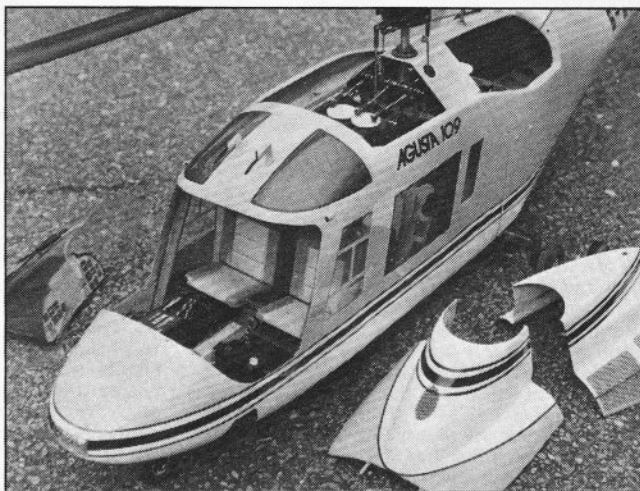
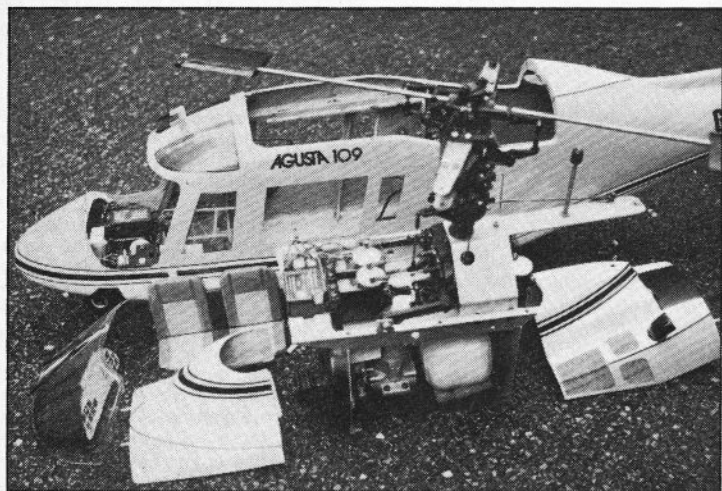


HOVERING

WITH JIM MORLEY

ABOUT



Above left and right: new Morley 'Agnota' 109 kit includes nice detail on the fuselage and little extra bits and pieces to doll up the model properly. Fuselage sections remove to allow easy removal of mechanics and R/C unit as one.

THE EARLY PART of the season has brought some truly marvellous days for flying, though it's strange that on the particular weekends of public displays there have regularly been the next best thing to gales blowing, this certainly applied to shows at Winchester, Salisbury and Sandown Park.

The Winchester model show was held at the huge Montgomery of Alamein School south west of Winchester. Exhibits included a good variety of models from round about as well as trade stands. As previously said there was a very strong wind to curtail the flying more than somewhat. I also think the cold kept the crowds away, which is a pity because there was a lot of effort put into a show that has a lot of promise, particularly if the organisers can arrange for a more compact layout.

Helicopter of merit were Denis Cross's 'Sea King' with Kalt 'Baron 50' mechanics and Irvine 60 motor and an interesting experimental model by Geoff Elliot of the Gosport Model Shop. This latter was a Kaman 'Huskey' using doubled-up 'Lark' mechanics and an Irvine 40. We weren't privileged to see it fly but I gather it has been flown by Stuart Mitchell. The lateral and fore/aft cyclic controls are operated on both rotors together and yaw control is by differential fore/aft. How much yaw control can be obtained from the two inter-meshing rotors like that is debatable. Collective pitch is not possible with the 'Lark' rotor heads but I understand the model is now no more, I hope they're going to have another try. The duo were also showing a Karman 'Seasprite' for Kalt 'Jet Ranger' mechanics, this model still in the construction phase. Body shape and interesting forward swinging retracts were in evidence.

At Salisbury our R/C helicopter models would have been more in line with other exhibits if they had been steam powered and with seats dangling on chairs from the rotor tips. No disrespect is of course intended but it was mostly a steam show and there were a great many models of fairground equipment. A big show for all that but with only restricted 'Hovering About' in the car park of the civic

hall. It's not surprising that it's not supported by the aircraft fraternity very much.

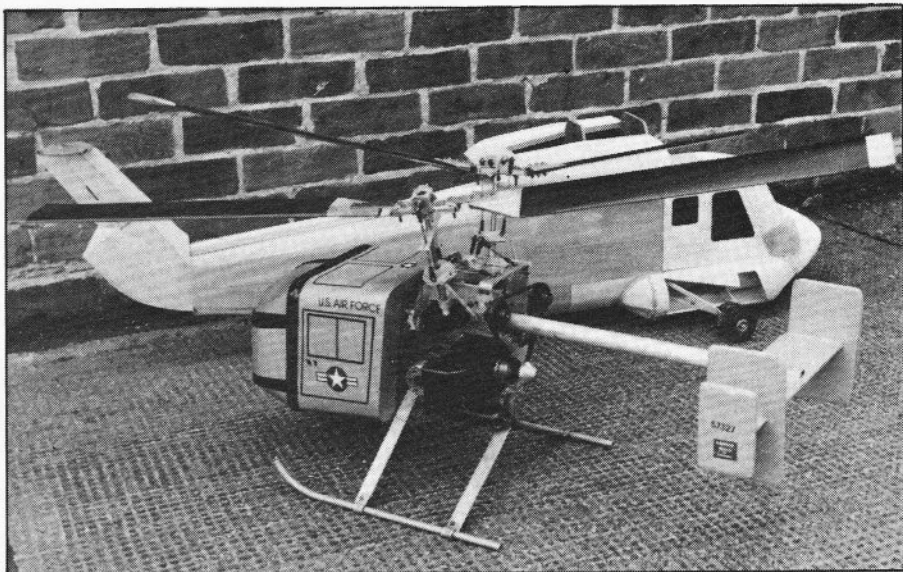
Sandown Park organised by the Elmbridge Model Club was its usual tremendous self. Elmbridge will have to keep working though to maintain their claim of being the biggest show of its type in the world. The Cranfield venue for the Barnstormers organised event is to my mind much better than Sywell. There was a good crowd and the flying site is much more suitable and of course there are all the full-size aircraft.

However, back to Sandown. Here as always the helicopters have something of an advantage over the fixed wing aircraft when it comes to the flying display, the restrictions and obstructions causing the usual difficulties plus the aforementioned high winds. I had to take the frequency penant off the end of my transmitter aerial in order to hold it still. It's bad enough trying to fly a 'copter in those conditions without the transmitter jumping about. I could also have done with some flying goggles to stop my





Above: Trevor Butcher's beautiful 'Lynx' has full cockpit details and transport bay. Above right: interesting Kaman 'Husky' with interesting twin rotor system built by Geoff Elliot from doubled up 'Lark' mechanics. Geoff has started to scratchbuild a 'Sea Sprite'.



eyes streaming, but my more able assistants held the fort well. We had four *Hughes 300s* and two *'Augustas'* flying at one time the latter being called the model of the show by David Bishop of *DB Sound* because of its superb appearance and retractable U/C.

There wasn't much that anybody could do to compete with Hanno Prettners fixed wing display from the flying point of view, but Vago Nordigian of Watford Models did very well with the *'Star Ranger'* flying with a new gyro

Morley Helicopters' Augusta 109

Even wearing my 'Hovering About' hat it is fair to say something about this new model just launched on the British market. The first kits to be available were at the Sandown Park show, the box labels actually being glued on at the stand, the packaging schedule was that tight! Why does nothing ever arrive on time? The three models on the stand were the ones photographed to make the box label.

The kit at £249.50 comprises the polyester glass fibre fuselage in three parts, body tail portion and engine cowl, the Morley Mk 3 mechanics virtually as in the *'Hughes 300'* so that spares are interchangeable. A chassis to contain these and to mount the radio forms an integral helicopter unit, and of course holds the retractable undercarriage parts. There are die-cut plywood parts and vacuum-formed windows and accessories, all control rods and ends plus a fuel tank to make a really complete kit.

It has been found that most, if not all of the problems encountered by purchasers of the *'Hughes 300'* could have been avoided if they had been able to follow the instructions properly so the *'Augusta'*, and also the latest *'Hughes'* kits are supplied with a folder of instruction sheets instead of a plan and small instruction book. This means that the words and pictures describing particular operations are in one place so that information is not so easy to miss and hopefully there won't be any more joints without glue or gearboxes without oil. But then the *'Augusta'* is definitely not a beginner's kit.

One of the prime attractions of the *'Augusta 109'* is the variety of possible scale colour schemes for the beautifully streamlined bodyshell. The kit body has a surprising wealth of detail panel lines and is very light with a good percentage of glass to resin. The vacuum formings include recessed windows, seat, instrument cowl, exhaust outlets, tail plane shapes, etc.

The Mk 3 mechanics in the unit chassis go into the body from the top and are covered by the engine cowlings. This means only a small square hole in the bottom of the model for the starter belt and air inlet for the engine. Actually air can also go in through the nose leg hole which is without doors and out through the multitude of mesh filled holes on the engine cowl. Also of course through the swash plate hole, the exhaust ducts and the main U/C leg positions, the bottom door of these being omitted for simplicity and the upper door being left longer than scale to compensate.

The retract servo is fitted just behind the noseleg with a long push rod going under the chassis unit. The legs are operated on a

scissor principle with over-centre down lock. In fact the operating mechanism almost has a down lock on the down lock!

The tail rotor servo is fitted alongside the retract servo, its better to have it fixed to the airframe rather than on the chassis to ease removal of this, though on some prototypes where nose ballast could be afforded it was moved aft of the U/C gear to take it nearer the tail. On my own model the gyro is mounted under the pilot's seat. To enable access to all this, the windscreens are removable as a unit held in by the windscreens wipers supplied in the kit. Who is going to be the first to make them working? I am quite happy to have the nose landing lights come on when the U/C comes down, very easy but you have to be conscious of battery life since the lights work from the gyro battery.

The undercarriage legs are formed from glass filled nylon mouldings, the main legs operating the doors with a cam on the hinges as they move. This feature supplements the scale detail in the cockpit and elsewhere very successfully. It is possible to make a successful wheels-up landing on short grass without touching the tail. On the other hand, special care has to be taken at take-off with this tricycle set-up to avoid the model tipping forward to one side or the other. The procedure is back stick on power application followed by forward at the instant of lift-off. The penetration of the model in a strong wind compared with the unstreamlined *'Hughes 300'* has to be experienced to be believed.

Coming out at 9lb. weight including extra gyro battery and fuel, the model does need a good 40 rather than a modest one, or smaller as in the *'Hughes 300'* with the Mk 3 mechanics. The rotor head is fitted with 21in. blades bringing the diameter up to 48in.

I am proud that on first time out on the competition circuit my own model and that of Andy Hopkins came third and second respectively to Trevor Butcher's magnificent *'Lynx'* at the Beaulieu fly-in by the Southampton Model Helicopter Club.

A *'Hughes 300'* by Mike Young came second to Ken Binks' *'Hirobo'* in the novelty event of knocking skittles down and landing on tables, etc. With my *'Hughes 300'* I made a good job of the skittles then tried to knock the table down as well.

Unlike the previous years SMHC fly-in, the rain held off until the end of the event so it was a most enjoyable occasion in a delightful area of the New Forest.

Dates to Note

SMAE British Nationals at RAF Barkston on August 25th, 26th and 27th. Helicopters on 72, 74, 76 and 80. Practice on 25th, two

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Left: Slough Radio Control made their usual professional job of displaying *Kalt* helicopters at Sandown. John Griffiths also brought over the Japanese *Chopper Champ* Yoshiaki Nagatsuka.

set up (see subsequent item), his stand was also showing a new 'almost unbreakable universal helicopter undercart'.

The works *Kalt* flyer, on the Slough Radio Control stand was also very impressive. His model was flown at high speed along the racecourse railing and then pulled up in a smooth right angle. Now if someone had told me that it had *'Cheyenne'* style, a pusher tail rotor, I might have believed it — it just went up and up pointing vertically. Phew — all that inertia!

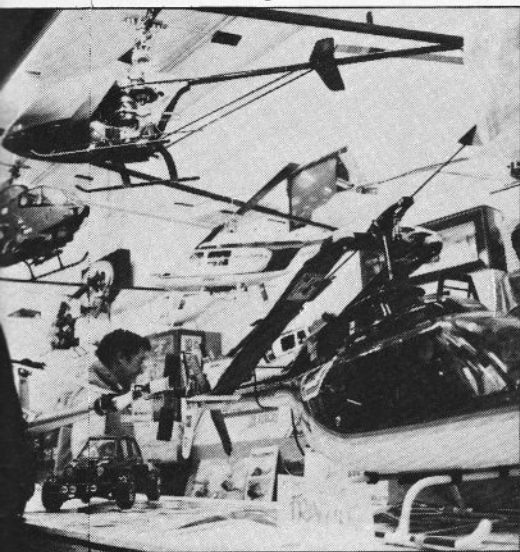
A reporter from the local paper asked me how many manufacturers of helicopters there were in the UK. "Well," said I (this was at the beginning of the show when I was still alert), "if you mean designer manufacturers of any number there's only me and *Westlands*."

Sorry if that appears frivolous, but its true!

Left: how a *'Sea King'* should be detailed *Kalt* mechanics is this model by Dennis Cross. Dennis won the static contest at SMAC Fly-In at Beaulieu.

AUGUST 1984

Right: Colin Bliss of 'Model Land' now importing the GMP range of helicopters with the 'Competitor' at Sandown. Left: Dave Nieman's stand to look at but 'don't touch.' Dave Nieman's staff impressed with a fine flying display at Sandown with the Hirobo range.



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round aerobatic schedule on 26th and one round on 27th to finish at 1 p.m. SMAE membership necessary and competition licence. Closing date 31/7/84.

I think anyone interested in competing must be by now in touch with the BRCHA, who are well into their series of events to encourage the FAI schedule as listed in the last 'Hovering About'.

A less formal event will again be held on the first Sunday in September (the 2nd Sept.). This is the Morley Collective Meeting at St. Brendon College on the A4 into Bristol.



Guess which make of helicopter is predominant though others welcome to this day of light entertainment.

More on Gyros

A little while ago a gyro either worked well or not so well, or you didn't have one. Now there are additional choices to sort out, like switched gain, variable gain, external battery, adjustable on the model or on the transmitter, also the obvious one of price which can vary from £25 or so for the *Century Systems* kit to the £105 of *Futaba's* version.

We now have yet another variety with a cunning feature. That is, the gain varies with movement of the tail rotor control stick. It is arranged of course so that you have maximum gain at central position and therefore most gyro effect when are hovering which then trails off to no gyro at full left and right.

This newest system is the *Kraft* gyro that Vago Hordigian of *Watford Model Centre* was

showing at Sandown Park. It is supplied with *Kraft* plugs but all that is necessary is for you to purchase an extension lead for your radio and cut and insert the black box. The tail rotor servo lead is then plugged onto your modified extension lead, no extra batteries, switches control channels or whatever and so, like the simpler systems, it may be used with a four channel outfit.

Vago had one on his 'Star Ranger' that he flew so impressively at Sandown Park. I believe all the exhibition flyers used gyro except the *Morley* team who still like to show that you can manage without all the electronic gadgetry, although one of the 'Augusta 109s' had a *Century Systems* gyro on board.

I have no doubt, though, that a gyro is the best training aid you can have initially, and at £79.95 the *Kraft* one is a strong contender for best buy. It could be that the reduced gain with stick movement makes it more of an 'expert's' gyro, we shall see.