AT THIS END of the season it's a good idea to
sit back, take stock and plan ahead a bit.
Yet again there has been an obvious increase in the popularity of helicopters, both
full-size and model. A better than usual
summer in this country has enabled more
than usual use of them. We have seen a lot of
new faces at meetings, some of them doing
incredibly well in competition really
challenging the long-standing experts. Most
of the new faces belong to people who have
been interested in helicopters for some time
and have decided that the time is ripe for
them to try one of their own.
I am continuously amazed by two things.
first, how quickly some people can master
the basics and enjoy hovering about with a
modern model and secondly how long the
fascination lasts with much to learn about
helicopters.
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Unfortunately it didn't fly on the day that I
grew, and I only saw on television how slow
the main rotor speed was. Probably only
about 2 or 300 p.m. Of course, the blade tip
speed was way up, due to the huge rotor
diameter and the tips rushed by in fast
sequence because of the eight blades, but
you could assess the speed by watching the
swash plate driver. Apart from the size, one
of the most interesting features was the
make-up of the main rotor blades. They
comprised of many lengthwise sections
each about eighteen inches long and with a
row of rivets on the skin at each joint, as if
they were made by tacking each piece of one
after the other. Maybe they were, why not?
Actually the most subtle differences in
helicopters for some time is now obtrusively
taking place. This is in the dynamic
section of the blades and is due to the highly
sophisticated computer analysis of test
results possible. Until recently, the helicopter
designer had been completely unable to take
advantage of advanced aerofoil sections
giving more lift and less drag because the
environment round the section is changing so
much, from high and low speeds forward
through side ways to backwards in fact, at
rapidly changing angles of attack. So
'Supercritical' aerofoil sections have had to be left for the
exclusive use of fixed wing machines.
Now, however, sections can be designed that
remain supercritical, or approach it, rapidly from a sudden
change of angle of attack, that have less
violent pitching moment changes about the
stall and other features that are liable to
happen to a rotor blade in normal use.
Fortunately in models we don't have the
same structural difficulties that they have
with full-size rotors, so none of these dis-
coveries is likely to have any effect on us.
fly in the same air but, with much narrower
blades, it not always slower!
Coming back to earth again, at Farn-
borough, helicopter exhibits were mostly
equally examples of new turbines being played on old
instruments with the emphasis perhaps on
what helicopters could carry. Agusta spoiled
things for me by showing a A109K with fixed
undercarriage, subtle that. I'm sorry if you
do not see why! The Westland stand had on
one and a painting full size, of the EH101
with a box like in as a mock-up of the
passenger compartment. A very useful size it
was too, but more interesting was a mock-up
of the cockpit with a display of the C.R.T.
Instrumentation. Quite a revolution this,
apparently now installed and working in a
W30. The W30 was shown in many roles and the
'Lynx 3', with the W30 tail boom doesn't
look as unattractive as you might think.
Another helicopter that looked better in the
flesh, or to speak, is the Bell 400 series Twin
Ranger'. It was only there in mock-up form,
but looked good, outline drawings and artists
impressions always seemed to make it look a
bit 'over fed' to me. Didn't dare ask if the tail
rotor was going to be better aligned with the
ring fin on the real thing.
Although it is Sikorsky who seem to be the
lead in the search for greater efficiency,
both with composite structures and airfoils
for the rotor. I notice that Bell to are
deviating from the near symmetrical section
parallel chord right out to the tips that we
have got used to.
Perhaps the most obvious thing about the
helicopters on show was that half of them
had all sorts of things stuck on the outside
including a Hägglund truck which is still a thrill
after all these years (since 1962) and I so
wanted, but failed to get, a photo of the
'Skycap' with one of the natural variety in the
foreground. Actually it was a Westland that
seemed to take very little notice of all the
extra activity on its patch - except the
'Harrier'.
The other thing was the Airship
Industries demonstration of the 'Skycap'. Admittedly it

Above: JVC video monitor used in conjunction
with airborne camera for real time video.

Above: Denis Cross from Southampton flew his
fully detailed Sea King with working winch in
action. Below: excellent Wycombe Club/Slovehill
R/C Fly In at Chinnor. FAI Schedule flight in foreground,
scale gathering in centre and novelty far
distance. Plenty of room and spectators all along
behind.
Aerial photography

Perhaps my challenge to produce a photo of a model helicopter from a model helicopter wasn't difficult enough for this technological age. It seems the thing now is to send aloft a video camera and record the scene. There was even one at the Slough R/C Meeting but the set-up wouldn't behave. Pity because it has been done and I would like to have seen it.

Strictly it's illegal but if you are a licensed HAM it is only bending the rules a little bit to have the transmitted signal not quite at your fingertips.

Anyway, I don't really think I would have many entries for my competition if it was for a video. But since it is for a still black and white—or colour print if you like—I do hope for some interesting pictures. Please let me do the deciding that yours is not good enough, you may be the only entrant! But hurry, mid-November is the closing date.

High Wycombe fly-in

Getting back to models, my prediction earlier in the year about seeing more multi-bladed rotor heads in the scale comp just doesn't seem to have happened.

True, John Griffiths has this scale award at the joint High Wycombe Slough R/C fly-in with his five-bladed 'Sea King', and there was a sample of an interesting machine from solid plastic hub for Hein mechanics in both three-blade and four-blade form, which I hope to find out more about, but none of them were flown in the flying part of the day, next year perhaps.

What did happen was a really determined effort by the BRCHA to promote the F.A.I. schedule aerobatics competition with the idea of being able to present a worthy team to represent this country at European and World Championships. In the past the BRCHA seemed determined to be independent of the SMAE and due to lack of understanding and/or communication have had a few problems. Now that they are to become affiliated and have run a series of heats all over the country to find the best at the schedule aerobatics it seems that the biggest problem will be money to send the competitors to Canada for the event. Since the considerable effort expended so far on the very well run events has resulted in some extremely talented flyers, not only being found but given invaluable practice, we can only hope that a solution will be found.

The final taking place at Chinnor at the end of season fly-in, was third place Carl Eiver, second Mike Cogger, and first place also wining the Alpmax Trophy was Len Mount. No concentration for model flying.

I was amused to note that my criticism in this column last year of this event has been heeded. Perhaps I am taking credit unfairly, needing to walk through the flying to get to and from the car park was an obvious mistake but anyway, this year's event must have been one of the most successful so far, the organisation extremely lucky to have excellent weather on the day despite dismally wet and windy conditions the day after, and the High Wycombe club for efficiently marshalling. How else can you describe being met at the gate with a site plan, plenty of space to park near the model pound, secure Transmitter Control separate flight lines for each of the three events (F.A.I., novelty and scale) and qualified judges including a pilot of full-size helicopters, from Skyline Helicopters nearby.

The F.A.I. result has been released, the scale event although easy on the flying was demanding on detail. Dennis Cross's really beautiful Sea King was second to John Griffiths's similar model in spite of a novel wrapped Action Man. Len Mount was pushed into third in spite of firing rockets from his BD106. The novelty event broke up the last couple of heats was run at the same time. There were feelings that sometimes — and only sometimes — this spoilt the event for everyone except the F.A.I. flyers. It's a point worth noting, maybe it will be more interesting next year when scale is to receive the emphasis from the BRCHA, or so it has been suggested. This could mean that we see a return to more real modelling with helicopters as opposed to sport flying. For most this will be a kit with an extra amount of detail built in, but it would be nice to see a few examples of real initiative. The trouble is it takes such an awful long time. A few of the special models that I know of like Johnny Burtlams Tilt rotor and John Barrows 'Chinook', have been in the workshop for about three years. The potential is enormous, not only for interesting vintage helicopters, but for unique machines like the 'Belvedere', the futuristic LHX machine, experiment types like the Lockheed stop rotor or 'X' wing.

Or how about a Fairey 'Rotodyne' not with tippet jets but a driven rotor? I'm sure that torque effect could be taken out by having one of the side mounted forward thrust propellers with reversed pitch. Dream about it over Christmas, get out flying when the weather is kind of course.

Cheers!