



When Brian Parkin took up flying R/C helis he took on an extra task - trying to fix a video camera to his machine. The fact that he knew of nobody else in the world who had achieved such a feat did not deter him. Now five years later he has achieved his goal - mounting a video camera onto his helicopter and actually recording aerial views in colour.

The marvellous machine was set to be the star of the show at Sandown, Britain's top model show, this year, but a last minute hitch forced a cancellation of the public debut.

Now RHI brings you the story and the pictures - exclusively

What do you call it?

I call it Videocopter, mainly because Omniocopter is a bit of a mouthful.

How is it modified?

The model is a Schluter SX81 with a Webra 61 and tuned pipe. The tail boom cover is not fitted due to the re-configuring of the radio installation. All the servos have been moved aft to allow the camera to be completely hidden within the fuselage.

Where is the camera?

A two-part foam mix was used to completely fill the fuselage, with the camera slotted into a hole in the middle of it, looking through a lens hood aperture in the front. It is angled down at 15 degrees to view from a strip of horizon downwards when in level flight.

What does it weigh?

All up weight is just over 6kg. This was achieved with weight reduction firmly in mind when re-configuring. Things like a 0.6AH battery pack, and Cyclone undercarriage struts all helped in weight reduction.

Were there prototypes?

This is the fifth variant to take to the air. The previous ones were all Kalt models, GS Barons and a Baron 60. These all had the camera mounted on the side of the canopy via an aluminium plate.

Who flies the heli?

The earlier flying was done by John Griffiths, late of Slough Radio

T H E S K Y

Control. Nowadays Dick Wallinger of Midland Helicopters does all the major flying for me, as well as being of enormous help with the project. I am only at the competent hovering stage, as I seem to spend more time developing the system than I do going out and practising! Speaking of development, if anyone is interested in financing the next stage, the whole lot as seen is up for sale - if the price is right!

What is the radio link?

The television transmitter is an amateur unit transmitting on a frequency of 1290MHZ, frequency modulated, with a power output of 200mW. I have an amateur licence to use this type of system.

The two radio systems in no way interfere with each other as they are so far removed in frequency, unless the battery packs are too close together, when direct breakthrough can occur. The transmitter and camera share the same 12 volt 0.45A/H battery, which gives around 20 minutes operation.

How's a signal received?

To ensure a constant signal on the ground, a circular polarised antenna is used to receive the signal, as the helicopter has a vertically polarised dipole on the TV transmitter, so the actual polarisation of the signal is dependent on the attitude of flight. The receiver antenna has a frequency down converter attached to it to feed a signal to the UHF FM TV receiver, which supplies a video signal to the video recorder.

The picture is monitored on the camera viewfinder, also fed with the video signal. This is an enjoyable task as you can see from the smile on my face in one of the pictures

What is the range.

The transmitting range has not been tested to the limit, but it is well over the normal pilot to model range.

What's next?

The system is continually evolving. The next logical step is to carry a camcorder, enabling perfect video to be obtained regardless of transmission quality. The transmitted video would be for monitoring only. The ultimate aim is to fly it from the screen via a head-up display, so that attention can be diverted from model to screen at will.

I am assured that flying solely from the screen is impossible due to disorientation problems.

Which camera is used?

This is a Hitachi VKC 2000E solid state sensor, domestic colour camera, fitted with a Cosmicar 12.5mm, CCTV lens, and stripped of all removeable appendages. This camera has proved to be an absolute brick - literally!

It has been shaken around for hours in the air, even longer on a RC Buggy, dropped from 50 feet onto tarmac, and is still working! It was originally on loan from Hitachi, as they showed an interest in what I was doing, and then I was offered it at half-price. But it's still a lot of money to throw around in such a high risk environment! □

Turn the page for a Picture Special on this amazing machine

The photographs on the following pages were taken by Mike Atkinson. They show Brian's Videocopter in action - flying and taking pictures of the scenes on the ground below.

Brian is seen operating the camera equipment while Dick Wallinger handles the flying.

The pictures of the aerial photos were taken during playback on screen, so have obviously suffered somewhat. But there is no mistaking the scenes picked up by the helicopter.



