

# installation **in focus**

visiting some interesting CCTV sites

## **CCTV up in the sky**



Mark Fitzsimmons and Colin de Pagter at their helicopter fitted with

Text and photos by Vlado Damjanovski © 2001

*Blue Sky Helicopters is a private helicopter flight business based at Sydney International Airport. The founder and one of the active pilots of Blue Sky Helicopters is managing director, Mark Fitzsimmons. Mark, started his flying career at the age of 21 as an aerial photographer in the United Kingdom, before emigrating to Australia in 1991.*

*Blue Sky Helicopters offers scenic flights over the most beautiful harbour in the world - Sydney harbour. In addition, Blue Sky has pioneered the concept of live (real-time edit) in-flight video! They are the only helicopter company in Australia that offers their passengers the ultimate souvenir of their flight, complete with narration by the pilot and a magnificent CD music soundtrack.*

Their custom-built CCTV video system is composed of three remote head Elmo cameras, fitted with a wide angle lens. These cameras are chosen because of their quality and size. They measure less than 1" in diameter and have a high resolution colour CCD chip.

The cameras are strategically mounted on (and in) the helicopter to capture every breathtaking moment of the flight.

A tail camera takes a view of the helicopter with the scenic view below. In order to use such a camera outside of the helicopter a special camera housing was made and approved by the aviation authorities.

A second camera is mounted on the inside looking at the pilot and the passengers.

The helicopter is a four-seater, including the pilot's seat.

The third camera is mounted inside the helicopter with a clear view of the panorama in front of the helicopter through the windshield.

This model of Elmo cameras can be synchronised with a composite video signal fed from one of the cameras, which then becomes a master sync generator. In order to do this, Mark's design uses a Video Distribution Amplifier which splits the signal with equal impedances to the other two cameras. For video signal switching the pilot uses a vertical interval frame switcher and switches any of the three cameras.

The switching is done by three micro-switches on the pilot's console. and he sees the selected camera on a 5" LCD monitor in front of him.

The video signal is fed into a VHS VCR and records from take off to landing, which usually lasts around half an hour.

The helicopter is equipped with dynamic headsets, which allow passengers to talk to the pilot during the flight, as well as listen to

In-flight music.

Also, all the voice correspondence between the Air Traffic Controller and the pilot is recorded, as well as the internal conversation between the pilot and the passengers. In addition, a CD music source is on board and the whole event is mixed with pleasant music in the background.

This makes the helicopter flight a truly memorable experience.

Mark explains that his Robinson R44 helicopter has an unobstructed cabin with no bulkhead or post between front and rear seats, affording exceptional visibility for all passengers and which enables you to capture shots to truly personalise the helicopter experience.



*The Tail-Cam is mounted on the helicopter's tail and the angle of view is such that covers the scene in front and below and includes the helicopter*



*A special housing was made and approved by the aviation authority for the Tail-Cam*

He explains that he began his career as an aerial photographer, before becoming a helicopter pilot. So he can either do the photography for the customer, or, if they prefer to do it themselves he can fly them.

Other personnel include chief pilot, Colin de Pagter and charter pilots, Grant Frazer and John Anderson. Mark's wife Lisa, is the company's flight co-ordinator, and office manager, Karen Miranda takes care of the day to day management of the business.

When I visited Blue Sky Helicopters to see if we can publish this in our magazine, I could not

help but ask if I could have a flight over Sydney and see how the system works. To my pleasant surprise a photographer was already booked for the day and I just had to wait and prepare my camera. In a few minutes off we went, up in the blue sky. Mark removed the helicopter door on my side and I had a clear view for picture taking.

Before we took off, I had to go through a short course on emergency landing and I was told to be careful with any loose objects I might have, since the strong wind from the rotator blades could suck in anything loose.

The day was wonderful, as is typical for Sydney weather, and I had a very enjoyable half an hour. I managed to make a few nice shots of Sydney harbour and decided that I will have to go up in the air soon again.

When we landed, Mark took out the video tape that was taping the whole flight and I was very happy with the results.

I highly recommend this experience to all readers, both Australian and foreign, visiting Sydney. The price is not high, especially when there is a group of two or three people.

It is very nice indeed to be able to join the work, such as preparing and publishing this magazine and enjoy special CCTV applications such as this.

Blue Sky Helicopters has a web site at [www.blueskyhelicopters.com.au](http://www.blueskyhelicopters.com.au) and more information on their services can be found there. [ ] [ ] [ ]



*Stunning views of Sydney from the Blue Sky Helicopter all recorded on their in-flight CCTV system*

*Photo below shows the Pilot-Cam and LCD monitor with the sunshield. Opposite page, the switching of the CCTV system is done from the pilot's console. Next photo shows the Front-Cam mounted on the inside looking through the clear cabin glass*





The biggest list of CCTV websites,  
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[www.cctvlab.com](http://www.cctvlab.com)