

The UK's first police EC 135 is now in service with a Midlands air support unit. Why are the coppers so pleased with it?

Launch customers for a new helicopter always take a risk dealing with unproven technology. The Central Counties Air Operations Unit, which provides air support for two police forces in the English Midlands - Staffordshire and West Mercia - had to wait six months after the agreed delivery date for its new EC 135T1 to arrive.

The crews are having problems getting the mission system to work the way they want and the type has yet to achieve the all-important helipad performance approval from the CAA. But it is now earning its keep and the policemen love it.

'It gives us better performance, equipment capability, noise levels - and space,' says deputy unit executive officer Sergeant Dave Gains. 'We love the space in this helicopter: if we need to we can get a full firearms team of four in the back, as well as the crew.' The extra room is not only a feature of the helicopter's open cabin design (it replaced an AS 355F1), but because the vast bulk of the operational equipment is stowed in an under-belly mission pod.

'It's also cheaper to run,' he adds, 'we have an extra hour's endurance and an increased payload, which will be even greater once we get helipad certification. Current restrictions don't hinder us much because our base, and most of our operating area, lies in fairly open country'.

Seven full-time police observers and three civil pilots (contracted from OSS, sister company of Eurocopter distributor McAlpine Helicopters) make up the service staff at Halfpenny Green, a small GA airfield near Stourbridge in the West Midlands. Although the layout of the force areas isn't ideal - often it would be quicker for a neighbouring force's helicopter to get there - it takes the EC 135 nineteen minutes to reach county borders in any direction; a four minute advantage over the old Twin Squirrel. They usually operate with a crew of three, with the pilot and the rear (RH) seat observer viewing and controlling operations from the starboard side of the aircraft.

Communications are much the same as in the older helicopter: four police radios (2VHF and 2UHF, each with over 160 channels) with provisions for secure communications enable the crew to monitor more of the bewildering (and non-standard, but change is in the air) range of equipment available to the police.

A notable improvement, however, is in operational capability; achieved primarily by the mission management system (MMS) in the rear cabin. The EuroAvionics EuroNav III moving map, displayed via 12,1 inch flat-screen monitor (from Skyquest Aviation) to the police observer, can display information as detailed as street names and individual house numbers, solving a long-standing problem of relaying airborne information to ground units - 'He's in the back garden, going to the next corner. Go forward 20 yards.'

The MMS, with a second monitor for the forward observer, is linked to a LEO 2 combined TV/TI system which provides a constant datastream of information about where the camera is pointing. It has its own pitch and roll sensors and digital compass, interfaced to the aircraft's radalt, and can combine this information with terrain mapping to calculate the precise target area.

Thus the MMS can work out exactly where on the map it is looking and display this information to the observer. The aircraft is also fitted with a Vinten military-packaged S-VHSC compact airborne video-recorder linked with an ECS video down-link system and an SX5 airborne searchlight.

The equipment is installed in a customised instrument panel and rear work station. Radio components are tucked out of the way in the rear upper avionics bay, and all LEO2 boxes, the antenna and searchlight equipment are fitted in the McAlpine Helicopter's designed pod.

The Helicopter can respond to EMS tasks if necessary, although the promised stretcher fit is not yet available. It would routinely be loaded via the rear clamshell doors (the passenger seats are moved rather than removed) and secured to the deck. The fenestron, which now removes much of the tail rotors noise instead of adding to it, is an added safety feature here.

By Andrew Healey published in Helicopter World issue Vol.18 No.1/1999