

# World Roundup: Around the World Airborne Police are Climbing High

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Growing recognition of homeland security needs, the availability of funding to meet them, and new equipment to support those missions are lifting police air units from England to Indonesia.

Law enforcement agencies across the globe are recognizing the value of airborne support and acting to secure it for their operations.

In almost every region of the world, prospects are for the growth of airborne law enforcement units. They are fostered by the steadily increasing realization of the scope of threats to homeland security and the need to respond proactively to them as well as to natural disasters and common crimes.

Regional factors also are sustaining police-related air units.

Homeland security remains a major push in the United States, with federal, state and local funding now better matching the expansive requirements involved.

In Europe, new members of the Europe Union (as well as aspiring ones) are striving to meet the border protection requirements of membership and turning to rotorcraft to fulfill them.

In Latin America, agencies are deploying to counter threats from other nations and pursuing insurgencies that, in several cases, appear to be in their death throes.

Agencies throughout Asia likewise are seeking upgraded aircraft and equipment to better protect their borders from enemies and pirates and better respond to disasters.

Major cities also are confronting a range of public security issues. The New York Police Dept is setting up a new homeland-security unit. Beijing, Vancouver and London each are bolstering their abilities to ensure public safety during major events; each will host an Olympics in the next four years, with Beijing's starting next month.

Here, and in the pages that follow, we review the operations of police air units throughout the world. To begin, as the Airborne Law Enforcement Assn prepares to gather for its annual meeting in Houston, we wanted to get the views of line officers and their needs and the means of meeting them. Rotor & Wing asked dozens of airborne law enforcement professionals in North America to talk about the specialized equipment they find most useful. Each responded with insight gained from years of frontline experience patrolling the skies, pursuing criminals and providing assistance to the citizens they serve from above.

Here is their list of the high-tech (and in one case, low-tech) gear they find most valuable.



## **RADIOS**

Even if no other extras were installed, a police helicopter would be just another helicopter without a suite of radios specifically designed to allow aircrews to communicate with personnel on the ground.

The biggest radio-related frustration experienced by airborne police crews is not being able to talk to who they need to when they need to. With police, fire, ambulance and disaster assistance personnel operating on systems ranging from 30-800 MHz, analog to digital, and clear to encrypted, the problem can be daunting, even within a single government organization.

The solution to the mishmash of radio systems can be found in transceivers capable of working dozens of frequencies across several bandwidths, and being programmed easily by crewmembers on the fly (literally).

At nearly 500 sq mi (1,295 sq km), Virginia Beach is the largest city in the state of Virginia. Its police department operates a pair of aging Bell Helicopter 206Bs and will soon take delivery of a new Bell 407 with a fully programmable, multi-frequency radio suite suitable for talking to all neighboring jurisdictions. "We went with the Motorola 5000," said Officer David Cook, one of the city's pilots. "We're the only helicopter in the area, so we need to talk to others a lot."

Even with all of the program-on-the-fly technology on the market, personnel from other departments may come aboard an aircraft and need to communicate with ground units. With no way to quickly determine the frequency of the visitor's hand-held radio, aircrews need a work-around.

The Howard County, Md. Police Dept solved that problem aboard their new Bell 407 by modifying their radio suite to interface with most portable radios via a plug-in cable, allowing it to be used simultaneously with the Wulfsberg P2000 tactical FM radio.

"It's pretty handy," said Officer Perry Thorsvik of the interface system. "We get full function and can actually listen to two frequencies without having to scan."

Of those contacted, the most popular police radio systems in use were the Technisonic TDFM 6148, the Motorola 5000 and the Wulfsberg P2000.

### **MOVING MAPS**

High on the list of the most useful airborne technology are moving maps, the generic term for on-board databases that graphically show a map or aerial photo of the terrain. Unlike the Global Positioning System units commonly found in automobiles and non-police aircraft, moving maps show house numbers, property lines and property owner information, which can be important during police operations.

Once the destination has been typed in, the system provides a computer-generated aerial photograph or navigation chart of direct heading, distance-to-target, estimate time en route and a graphic depiction of where the aircraft is. "Seconds make a difference," said Philadelphia Police Lt. David Vogt of their NavTrack system. "I've lived my whole life in Philadelphia, and I don't know every street. When a job comes out, we can get there in a straight line."

The St. Louis County, Mo. Police Dept uses an AeroComputers map system, which "has been invaluable to us," said Officer Patrice Mullins, chief pilot for the department. (She also is the first sworn female police pilot in the United States.)

That map system includes sectional chart overlays, which help pilots avoid tall obstacles. "It helps us fly safe," said Mullins, "and flying safely is our number one priority."

The Avalex moving map system was mentioned by others we spoke with, and has many of the same features found in the AeroComputers and NaviTrack systems.



### **VIDEO CAMERAS**

While most thermal imaging equipment can do double-duty as a color video camera, all but one of the agencies didn't list the camera feature as the most valuable to them on a day-to-day basis. The Orange County, Fla. Sheriff's Office, however, felt differently about their camera system.

“Orange County is a hub for drug traffic,” said Capt. Randy McKendree, the officer in charge of the department’s aviation unit. “We wanted something with high-definition so we could work at higher altitudes.” The AxSys Cineflex V14MS 2 “gave us all of that.” Using it, deputies can read license plates from altitudes he would only describe as “very high. I’d rather not let everyone know our capabilities.” The county is evaluating the Cineflex system on its surveillance plane and using L-3 Wescam 12/TS-200s on its two Bell 407s and OH-58s.

### **THERMAL IMAGING**

Not to be confused with night-vision equipment, which amplifies existing light, thermal imaging gear—also known as forward-looking infrared or simply flir—uses heat signatures to produce a black and white depiction of anything within its field of view. It is particularly useful in locating people based on their body heat.

Most thermal imaging sensor housings contain a color video camera, and can be tied into the same kind of video downlink system used by news gathering helicopters to transmit live images—thermal or video—back to the ground.

“What is our favorite piece of equipment? It’s gotta be the flir and the downlink,” said Sgt. Darren Keast of Ontario Provincial Police Dept in Canada. Their FLIR Systems Model 8500 thermal imager is used with a Broadcast Microwave Systems digital downlink system aboard the two Eurocopter AS355F2s at his base. “It allows for when-it-happens visibility for commanders on the ground. It boils down to officer safety.”

Constable Tat Ng of the Calgary, Alberta Police Dept agreed that their FLIR Systems Model 7500s—while slightly outdated compared to the newer Model 8500—add to the usefulness of their two Eurocopter EC120Bs. “We probably use the flir the most in infrared mode because we fly at night mostly.”

Dan Riopel, Calgary’s senior police pilot, said the agency is in the market for a new thermal imager, and plans to visit other police aviation units to see what they’re using.

One agency we contacted uses an Israel Aerospace Industries POP-200 thermal imager, which they admit is outdated and needs to be replaced. Another agency said they use the Cineflex V14MS 2 sold by AxSys Technologies. But most of the agencies survey owned units manufactured by FLIR or L-3 Communications.

### **SEARCHLIGHTS**

All the U.S and Canadian aviation operations we reached used Spectrolab Nightsun SX-16 or SX-6. Bathing an area with a 30 million candlepower shaft of light can disperse disorderly crowds, illuminate crime scenes, and offer an extra measure of comfort and security to ground officers confronting potentially dangerous suspects.

Desoto County, Miss. operates a pair of 40-year-old, military-surplus Hughes OH-6s over its 400-sq-mi (1,035-sq-km) jurisdiction, and an additional 1,100 sq mi (2,850 sq km) in support of neighboring communities. The only specialized search gear aboard their ships are SX-6 search lights.

“The light is great,” said Trey Manning, commander of the aviation unit. “But we’re limited in our capabilities until we get a flir.”

Manning and his 12-member aviation unit won’t have to wait much longer for a flir or for relief from their aging, maintenance-intensive helicopters; the county has approved the purchase of a new Robinson Helicopter R44.

Robinson’s factory-installed police package includes a flir, Nightsun and a variety of other crime fighting equipment.

### **NIGHT VISION EQUIPMENT**

Most of the agencies did not use night-vision goggles (NVG). Urban police operations



found them unnecessary, due to the level of artificial lights around city streets. Rural departments cited their initial cost and training as their reasons for not using them.

The Charlotte-Mecklenburg, N.C., Police Dept, however, makes extensive use of NVGs, calling them the “second most valuable piece of equipment.” They “allow us to increase our mission capability in areas that were previously entered with a very high risk,” said Officer Eric Kelly, a pilot and certified A&P with Charlotte-Mecklenburg Police Dept. “Although operating with NVGs have their own dangers, they dramatically increase the safety factor for nighttime operations in poorly lit suburban areas.”

