



# Australia's ultimate patrol car awaits

by Brett Williams



Left to right: Sports-car seats,  
Dashboard computer screen,  
In-car video camera



**Some** cops might have thought that the ultimate Australian police patrol car was just an impractical, futuristic concept in the mind of some fantasizing technophile. If it ever was, it is not now. It actually exists, at least as a prototype.

The Melbourne-based National Safety Agency, which specializes in technology development for emergency services, has produced what it calls the Emergency Services Concept Vehicle.

This GMH-supplied Commodore features the “best of the best” technology and delivers unparalleled safety and efficiency gains. Indeed, the NSA produced virtually the same vehicle seven months ago for the Los Angeles Police Department. LAPD chief Charlie Beck labelled it the best and safest police car in the world.

Now, to get its product into the hands of front-line Aussie police, the NSA has won the full support of the Police Federation of Australia.

The car comes with a dashboard computer screen, an in-car video camera, sports-car seats, and a purpose-built back-seat prisoner cell.

Among its exterior features are three levels of LED warning lights, a dual-speaker siren system with a range of tones, and decals which motorists can see from 500 metres away. Also on the outside, mounted on the car roof, are four automatic number-plate-recognition cameras.

To develop the concept car, NSA operations director Des Bahr and business development manager Mark Greig consulted serving police officers, including front-liners, at all levels.

“They told us about people not getting out of their way in emergencies,” Mr Bahr said. “Others talked about existing pieces of technology, and said: ‘What a stupid place to put that.’ This really gave us an encyclopaedia of issues affecting the police vehicle of today.”

Other issues came to light, too, such as the lower-back injuries cops had suffered from sitting for long hours in

their patrol cars. And exacerbating those injuries were the cars’ regular seats, in which officers could not sit squarely while wearing their gun belts.

“We’ve been putting high-quality, high-performance seats into sports cars for probably 40 years, and yet police still go home with sore backs,” Mr Greig said. “Back injuries are one of the biggest problems for police.

“This seat [in the concept car] is a sports-car seat with specific police modifications to allow for the equipment belt, high lumbar support, and ventilation in the high sweat areas. All of these are specific to police operations.”

This strong focus on police-officer welfare carries through to other areas of the concept car. The in-dash touch screen, for example, creates a far safer environment by eliminating the need for the current-day pedestal-mounted screen.

“The laptop on the pedestal in the middle of the car is dangerous,” Mr Greig said. “There’s obviously an increased risk of injury to the head because it’s at that level.

“So, it’s been a major drive to take that pedestal out and put the screen in the dash. It’s safe. If a police officer is caught in an accident, he or she is no longer at risk.”

The in-car video camera, positioned next to the rear-vision mirror, can record critical evidence of street and traffic offences. But it also serves as an invaluable safety mechanism.

In cases in which a front-line officer faces a physical threat from a motorist, for example, he or she can activate the camera remotely.

This enables the real-time broadcast of the sound and images back to the Communications Centre. “That’s why when you stop and look at the in-car video, you make sure that the suspect car is in the area covered by the camera,” Mr Bahr explained.

“If not, you just move the camera slightly and point it at that car. And there’s been a camera developed now that has a following capability: it moves and follows. So, you walk off to the side, and the camera scans you.”

Of the four “top-end” ANPR cameras on the car’s roof, two are long-range and can therefore span a six-lane highway and read number plates up to 300 metres away. The other two are set up to read the plates of cars parked on the roadside.

“The four cameras work at the one time,” Mr Bahr said. “They read the plate and show you what’s in the data base – an image of that car, the person it’s registered to, and its full history – before you pull that vehicle over.

“And, depending on where you drive, the technology enables the processing of up to 18,000 [number-plate readings] a shift.”

The car features a traditional blue and white checked decal, but with a bright, eye-catching yellow stripe beneath it and an orange one above it. And clear reflective film around the letter P on the boot reacts at night with the blue, making it stand out.

Flashing LEDs, with high light output and little drain on power, operate at both ends of the car and provide 360 degrees of vision. Across the front of the car, they occupy positions at three levels – on the light bar, in the lower corners of the windscreen and below the grille.

This, of course, triples the chances of motorists seeing the car in their rear-vision mirrors as it approaches in an emergency.

Two sets of LEDs operate at the back of the vehicle as well, one from beneath the bumper and the other from inside the open boot. These lights can help reduce the risk of motorists crashing into the back of stationary patrol cars parked on roadsides.

To address the risk-filled task of transporting prisoners, the NSA has transformed the concept car’s back-seat area into what it calls a prisoner cell. One of its features is a moulded perspex barrier between the front and rear seats.

The rear seat is itself moulded, into a single piece, and therefore leaves prisoners unable to stash evidence or weapons. And to cut off prisoner access to the rear door handles, locks and window switches, special skins cover the existing doors trims.

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Among other features are:

**Integrated radio** – which provides the capacity to communicate with a communications centre via any available bandwidth (3G, MMR, SMR, satellite).

**Integrated CPU** – which provides the capacity to put multiple operational IT functions onto one computer.

**Vehicle power management unit** – which can be programmed to shut down non-critical systems automatically and therefore maintain the vehicle in a functional state.

“If we were out in the middle of Broken Hill and couldn’t start the car, it would automatically shut things down in a sequence,” Mr Bahr said. “The last thing it will leave is the radio and mobile phone so that you’ve got some means of calling for help.”

Mr Bahr insisted that police departments could put the concept car on the road for thousands of dollars less than the cost of a current-day traffic car. And no traffic car has the volume of technology available in the concept car.

Mr Bahr also insisted that the average cost (\$3,200) of decommissioning a police car would be far higher than the cost returning the concept car to standard. “We can get all of this off within an hour

with a heat gun,” he said, pointing at the decals.

“And, at the end of the day, we take the skins off of the doors in the prisoner cell and you’ve still got the original door trim inside.”

Mr Greig added that, after decommissioning a concept car, no one could ever tell it had been a police vehicle. “You take out the police seats and put the original seats back in,” he said. “When the car goes back to the retail yard, it’s going to earn more money.”

Mr Greig stressed the point that to make the concept car a standard feature in Australian law enforcement, the nation’s police departments would have to work together.

“Police as a national client are very powerful in terms of their ability to drive industry,” he said. “So we encourage Australian police forces to agree on national specifications and drive all the vehicle manufacturers to provide the solution.

“If the police forces co-operated on a standard specification, industry would respond, because there are 5,000-odd (police) sedans put on the road per year in Australia. That’s enough for industry to pay attention and start responding.

“But, currently, each of the eight police agencies is pulling in a different

direction. The police fleet managers and commissioners need to come on board, because the solutions are there and they can be delivered very quickly and very cost-effectively.”

Police Association president Mark Carroll said the only problem with the concept car was that it was not on Australian roads – with police in it. “With all its high-tech safety, efficiency and convenience features, it should be in use,” he said.

“This is a classic case of the need for police agencies to enter into collaborative purchasing, which the association has advocated for some time now.

“By acting together, they could achieve significant cost-savings and, at the same time, put their front-line officers into the best and safest patrol car available. And shouldn’t that be their goal? They are, after all, responsible for the safety of more than 50,000 police officers.”

Mr Bahr said that if the concept car did not make it into Australian law enforcement, the NSA would look to service the US market. “I see it as a challenge trying to bring the Australian police agencies together,” he said.

“But I’d like to think that the Police Federation might be able to help drive this project. We’ll just have to see where that leads over the next six months.” **PJ**

## THE POLICE ASSOCIATION OF SOUTH AUSTRALIA WELCOMES ITS NEWEST MEMBERS

Jason Balint	Luke Cundy	Andrew Jacobs	Bradley Rumsey	Alan Tasker
Samantha Bowie	Steven Day	Andrew Lawton	Amanda Ryall	Clare Tiernan
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Daniel Bronca	Miles Ferguson	James Markham	Winfield Scott	Wesley Usher
Christopher Bull	Celena Fitzjohn	Maxine Minchin	Gregory Sibbick	Ambrose Vincent
Gabriella Capponi	Samantha Formby	Claire Minge	Andrew Smith	Michael Walkden
Lisa Cardnell	Nathan Gregory	Gavin Moore	Melissa Smith	Kerrie Walker-Roberts
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