TYRE POPPERS FOR CRIME STOPPERS?

by Dr G. McGrath, Director, National Police Research Unit

A Kenworth prime mover makes a pretty formidable weapon in the hands of a maniac.

Not so long ago, police officers in one Australian state were faced with the task of stopping a stolen, fully loaded Kenworth rig, manned by a crazed driver who was determined, it seemed, to kill both himself and any civilian or police officer who got in his way.

In the absence of draw bridges and the like there's not much that police can do in such a situation except to warn motorists ahead, as best they can, that forty tonnes of steel and cargo is roaring towards them at 130k. The scene is frighteningly reminiscent of the movie "Duel".

In this particular case, through quite extraordinary bravery, the police officers concerned managed to pull alongside and point a .38 at the driver's head. It was, as the officers well knew, a hollow threat. They dreaded the thought of a rapidly moving prime mover and trailer totally out of control.

The thief, who fortunately responded immediately to the threat, did not recognise the gesture as a last ditch effort. In the case cited, a situation fraught with danger was successfully defused. But the story could well have been different.

To a lesser degree, the problem with determined fugitives in cars is the same. However, in both situations police have been, up to now, forced to let the chase continue until it is necessary to call it off, or the chase has ended, with dire consequences, in a collision.

In theory, if not in practice, there exist a number of choices. These include:

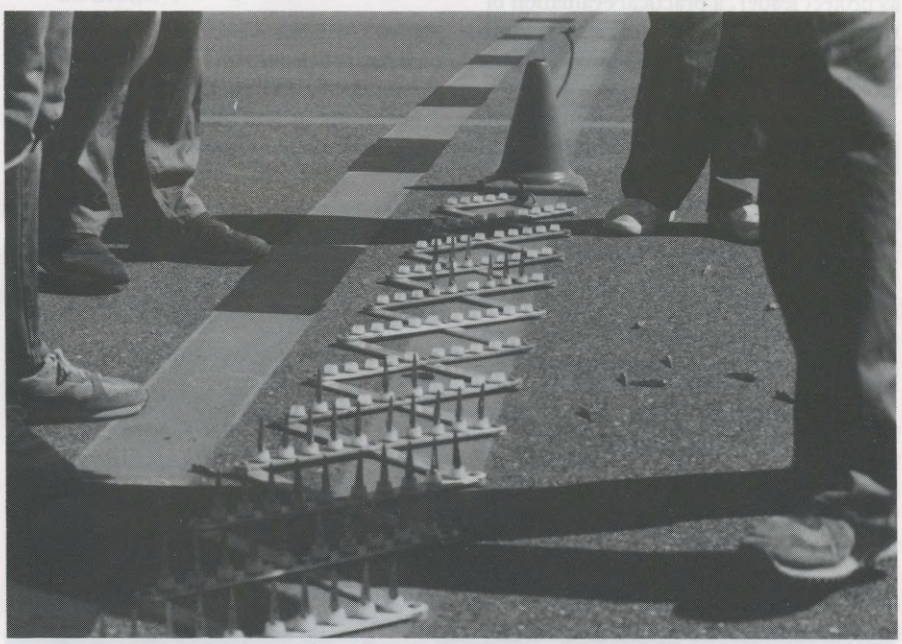
- keeping the fugitive vehicle under road or aerial observation until it stops voluntarily,
- boxing the fugitive vehicle in and bringing it to a halt,
- pressuring the fugitive driver into mistakes either on inadequacy in driving technique or on local geographic knowledge,
- physically forcing the vehicle off the road,
- the use of firearms against the vehicle or the driver, or, establishing a road block.

In 1986 the National Police Research Unit (NPRU) was asked to look into an alternative to the existing strategies all of which posed problems, especially the last four. The direction to the Unit came from the NPRU's Board of Control which is composed of the eight Australian Commissioners of Police and the Secretary of the Department of the Special Minister of State. The project called 'Anti Pursuit Devices' was one of a number approved in 1986 by the Board and submitted for final approval to the Australian Police Ministers' Council.

As with all National Police Research Projects, whether they be Post Shooting Trauma, Ammunition for Police Handguns, Drug Exhibit Security, or Warning Devices for police vehicles, the Anti Pursuit project arose out of an operational problem being experienced by all or most of the eight Australian police forces. Instead of having each force undertake research in isolation, the NPRU coordinates the resources of the eight forces, as well as its own team of scientists and consultants, in order to resolve the problem. The reliance on the eight forces to solve practical police problems is no accident.

Policing in the past has been plagued by 'back room solutions' to front line problems. What might look very nice on paper often doesn't work too well out in the streets — where the adrenalin is running high and the ungodly are not behaving according to classic criminological or scientific tenets.

Realising the importance of front line experience, the NPRU circulated all the forces' NPRU Liaison Officers, with an



Researchers inspect the 'road fangs' after a vehicle has been driven across the device.

advertisement for each of the Police Gazettes, asking for officers with extensive practical experience in high speed pursuits, for secondment from their force for a period of two months to assist with a number of pursuit-related projects. The response to the advertisements, which stressed the need for 'feet on the ground' officers, was overwhelming.

The four officers chosen to assist in the program were:

Sgt Ian Buckley
— 20 years South Australia police experience, twelve of which have been in traffic.

Sgt Geoff Caine
— 26 years Victoria Police experience, 21 of which have been in traffic.

Sgt Jack Mackaay
— 20 years with the Western Australian Police, most of it in traffic. and assisting with the project,

Sgt Norm Shepherd
— 22 years with New South Wales Police Highway Patrol.

All in all, nearly 100 years of very comprehensive experience with high speed pursuits was brought to bear on the evaluation of a number of devices designed to provide alternatives to the traditional response to fugitive vehicles.

Extensive literature searches and contact with U.K. and U.S. forces led the team to decide on the 'Lazy Tongs' as the one device which showed most promise as providing a supplement to existing practices. The four officers concerned were not however content with a mere paper examination of what might and might not work.

Under the coordination of the author as project leader, a practical evaluation of the 'Lazy Tongs', (or more affectionately, "road fangs") was then undertaken.

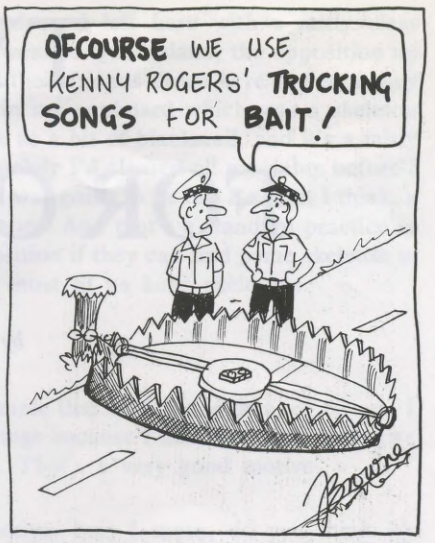
The 'road fangs' is a portable road barrier which consists of a lattice arrangement of 170 detachable, specially-designed hollow spikes which penetrate into vehicle tyres, releasing air at a rate, which it is claimed, allows the vehicle to stop safely.

A controlled tyre deflation was undertaken in situations which most closely approximated the range of pursuits which these officers knew about. With the cooperation of the RAAF, the SA Police and the State Transport Authority, a number of trials were conducted using a variety of vehicles in a variety of situations.

At the suggestion of the police officers it was decided not merely to test mechanically sound police cars, driven by professionally trained police drivers, running over the devices at legal speed, but to try to imagine the range of vehicles and conditions in which real pursuits took place. Accordingly the test procedure involved a very high speed run, a high speed run with an older vehicle (deliberately tampered with to simulate the 'big motor — lousy suspension' of many hoodlums' cars) and, finally, a high speed run with an STA bus, complete with truck tyres to see how the device would assist in "Kenworth" situations.

The four officers and the writer, under very elaborate safety conditions, submitted the device to a series of punishing tests with each driver being told to drive as if he were a determined fugitive. There was then a comprehensive evaluation of the effects on tyres and the impression of stability.

The purpose of the tests was to combine the field experience of the officers and the scientific experience of the Unit's research staff. The results of the evaluation are now being compiled and will be submitted to the Board of Control for discussion and implementation at the discretion of each of the forces.



You may well ask whether this device would be of any use to you or your mates in the sort of pursuits you experience in your own force.

In this particular project, 100 years of traffic experience has been 'moulding' the product of the Unit's research. You'll be trusting someone who's been there.

Police seem to have a built-in disregard or fear of the academic. With this in mind the NPRU strives to obtain a blending of academic and practical skills in order to achieve the best possible results.

In addition to the wealth of practical experience available to the Unit, the NPRU scientific and legal staff are looking at other considerations so as to ensure that the recommendation the Unit eventually makes will be not only practical, but as universally acceptable as possible. It has to be a winning combination!

Since its inception in 1983 the Unit has had many experienced officers assist with projects on the NPRU Secondment Program. Whether it be guns or drugs, bombs or cars, the first place the Unit looks to for help is the practising police officer. Perhaps you have a role to play in future projects.*

First Constable Keith Tomlin receives from Assistant Commissioner John Reilly a letter from the NPRU telling him he had earned an award of $50 for a suggestion for a standard system of light-wand signals.

* Further information on the NPRU's research program or other NPRU programs can be gained by contacting the AFP's National Police Research Unit Liaison Officer, Chief Superintendent Phil Baer or by writing through the Liaison Officer to the Unit. Informal inquiries regarding the Unit's diverse program may be made by telephoning the NPRU's senior research staff Principal Research Officer Const. First Class Barbara Murphy or Senior Research Officer, Mr Jim Warren. Telephone (08) 212 5311. ●