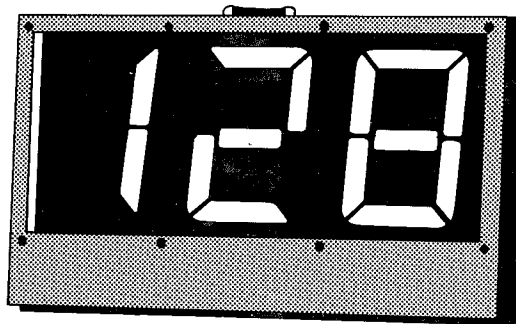
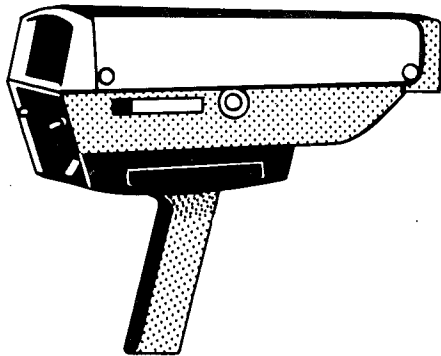


S  
656.08  
NEW  
(S 10)



# Staysafe 10

PARLIAMENT OF NEW SOUTH WALES  
JOINT STANDING COMMITTEE ON ROAD SAFETY

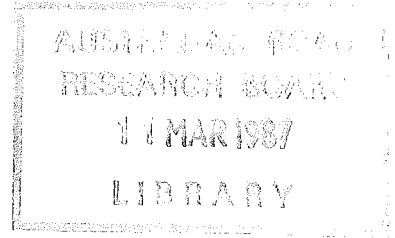


SECOND REPORT ON SPEED  
CONTROL AND ROAD SAFETY

FOR DETECTORS AND JAMMERS

SECOND REPORT ON SPEED CONTROL AND  
ROAD SAFETY

RADAR DETECTORS AND JAMMERS



Contents

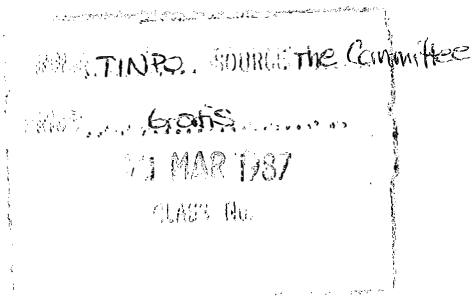
Members of the Committee	Page	i
Chairman's Foreword		iii
Acknowledgements		iv
Recommendations		v
 CHAPTER 1 - THE FUNCTION OF RADAR		 1
 CHAPTER 2 - OBJECTIONS TO RADAR		 4
Radar on good roads		4
Limitations of radar used in N.S.W.		7
No deterrent effect		9
 CHAPTER 3 - INTERFERENCE WITH RADAR BY DRIVERS		 11
Radar jammers		11
Radar detectors		13
Road crash involvement of radar detectors		15
The case for banning radar detectors		18
The case against banning radar detectors		20
 CHAPTER 4 - RADAR IN THE FUTURE		 23
No more radar detectors or jammers		23
Radar detectors on all motor bikes and vehicles		24
No police radar		25
Effective prevention of speeds too high for the conditions.		26



CHAPTER 5 - LEGISLATION TO BAN RADAR DETECTORS & JAMMERS.	28
Australia - radar jammers	28
Tasmania - radar detectors & jammers	28
Victoria - radar jammers	29
U.S.A. and Canada - detectors	29
United Kingdom - interference with radar	30

Minutes of Proceedings

List of Witnesses



MEMBERS OF THE COMMITTEE

Legislative Assembly

Mr. L.D.T. Ferguson, B.Ec., M.A., M.P.

Mr. B.J. Langton, M.P. (Chairman).

Mr. J.C. Price, M.P.

Mr. R.C.A. Wotton, M.P.

Mr. P.J. Zammit, M.P.

Legislative Council

The Hon. George Brenner, M.L.C.

The Hon. D.M. Isaksen, M.L.C. (Vice-Chairman).

The Hon. J.H. Jobling, Ph.C., M.P.S., M.L.C.

FOREWORD

Members of STAYSAFE have considered most carefully the submissions made, the evidence given and the issues involved in the use by drivers of radar detectors and jammers. The Committee has concluded that the chief reason for these uses is the perceived inappropriateness of legal maximum speed limits.

As discussed in STAYSAFE 8, speed limits are often too low when conditions are good; and they are often dangerously high when conditions are poor.

The police are seen by some drivers as the culprits, enforcing speed limits that are either too low or too high for prevailing conditions. They are, on the contrary, victims of the system of administration; victims who are expected to improve road safety through the enforcement of often inappropriate speed limits.

The particular conditions prevailing for driving in any driving situation is a road factor for which the road authorities are responsible. Determining the safe speed for that condition involves road, vehicle and driver. Communicating the safe speed to the driver is the responsibility of the body charged by Parliament with administering road traffic control and safety. That body is the Traffic Authority of New South Wales, which should now address this responsibility with vigour.

In the meantime, as a minor palliative measure, radar detectors and jammers should effectively be banned from use.

Brian Langton, M.P.  
Chairman.

ACKNOWLEDGEMENTS

The Committee wishes to record its sincere appreciation for the work done by the Staff of the Committee; our Adviser, David Herbert, Secretary, Leslie Gönye and Stenographer, Jennifer Goodwin. Once again the input by all three was of an exceptionally high standard, and facilitated the work of the Committee.

We also wish to thank the staff of Hansard and other staff of the Parliament who assisted the Committee.

The Committee expresses its gratitude to Media Design for the cover artwork and printers Luxton and Hooper for a speedy production.

RECOMMENDATIONS

No. 1 Because radar jammers are used solely to interfere with law enforcement, the Federal Government should be asked to extend the existing Commonwealth legislation banning their use, to ban their importation, manufacture by amateurs or professionals, possession and sale.

No. 2 Because the use in N.S.W. of radar detectors cannot be stopped by N.S.W. legislation alone, the Federal Government should be asked to legislate to ban their importation, manufacture by amateurs or professionals, possession, sale and use.

No. 3 Once comprehensive Commonwealth bans on radar jammers are in place, consideration should be given to the need for supporting N.S.W. legislation.

No. 4 Once comprehensive Commonwealth bans on radar detectors are in place, consideration should be given to the need for supporting N.S.W. legislation, having regard to any evidence then available that might establish a beneficial effect for road safety flowing from such N.S.W. legislation.

No. 5 N.S.W. police should continue to develop speed control measures using the following criteria:

- (a) Speed monitoring to be conspicuous
- (b) Speed monitoring to operate at known accident black spots
- (c) Speed monitoring to be used for the purpose of reducing the speed of traffic for safety reasons.
- (d) Speed monitoring to be designed so that drivers are persuaded that they are highly likely to be detected if they exceed the speed limit.

(vii)

No. 6 Where it is necessary to book drivers for illegal speed, the speed claimed by police should be supported by independent evidence from a readout by an automatic speed device which records the vehicle identification, the speed, and the circumstances of the alleged offence.

No. 7 The Traffic Authority of N.S.W. should establish ways of informing drivers what is the safe maximum speed limit for the prevailing conditions, and methods for police to use in enforcing each limit.



CHAPTER 1 - THE FUNCTION OF RADAR

CONCLUSION No. 1: Random breath testing reduces illegal (i.e. unsafe) drink-driving, because the million-a-year, highly visible roadside breath tests make the several million other drivers who see them, feel that they would be likely to be caught if they drink over the legal limit and drive. In order to reduce unsafe speeding, a similar process of frequent, highly visible speed tests must be developed, so that drivers feel that they would be likely to be caught if they break the speed limits which are set for their safety.

1. THE FUNCTION OF RADAR

1.1 One of the ways by which police try to enforce speed limits is by the use of radar which is a form of very high-frequency electro-magnetic radiation. Radar is bounced off vehicles, back to the sending unit, which calculates vehicle speed from an analysis of the return wave.

1.2 Like some other forms of electro-magnetic radiation, the use by police of radar transmitting units is controlled by the Commonwealth Radiocommunications Act of 1983, implemented in 1985. It is also subject to procedures laid down by the New South Wales Commissioner of Police.

1.3 The Commissioner, in a submission dated January 1986, said that radar was used by police primarily "to deter motorists from exceeding the speed limit and to avoid the need for police to engage in high speed manoeuvres in apprehending those who choose to disregard the traffic laws."

1.4 In STAYSAFE's first report on speed control and road safety (STAYSAFE 8, tabled on 15 October 1986), the Committee supported the use of speed monitoring devices as aids to road

safety. This support was however qualified in several important respects including:

- (a) STAYSAFE's view that the deterrent effect of speed monitoring was greatest when it received publicity, when it was conspicuous, and when their speed was displayed to drivers.
- (b) STAYSAFE's view that there are alternatives to radar which are cheaper, simpler to use, and less prone to interference by other sources of radiation.
- (c) STAYSAFE's view that speed monitoring can be justified only for the purpose of improving road safety, and
- (d) STAYSAFE's view that this is best achieved by concentrating speed monitoring at formally-established accident black spots at which illegal speed (as opposed to unwise legal speed) is a major factor in crash causation.

1.5 In that report, STAYSAFE also spelled out the need for police to develop ways of monitoring speed which were as effective in deterring drivers from breaking speed limits, as is random breath testing (RBT) in deterring drink-driving.

1.6 In order to be sure that the Police Department fully accepted the analogy with RBT, Assistant Commissioner (Traffic) Mr. W. Fleming was asked his views on this, when giving evidence on 5 November 1986. The questions and his answers were as follows:

Q.1. Would you agree that the chief reason why random breath testing for alcohol reduced drink-driving, is that the million \* or so highly visible roadside breath tests made the several million other drivers who saw the testing feel that they would be likely to be caught if they drank and drove? ---A. Yes, that was certainly so. The major matter was the high perceived risk of detection and testing.

---

\* About a million tests per year in N.S.W.

Q.2. Would you also agree that the main purpose behind those million or so breath tests was to discourage drink-driving? ---A. Certainly.

Q.3. Would you agree that the chief purpose of radar is to discourage illegal speeds? ---A. Yes.

Q.4. Rather than to detect speeding motorists? ---A. Yes. The major reason is simply that the public at large must be clear in their minds that they have a high risk of being detected if they exceed the speed limit.

1.7 Committee members were extremely pleased to be able thus to confirm that the Assistant Commissioner and STAYSAFE are in complete agreement that the purpose of radar must be to try to prevent illegal speeds, since there is little point in merely detecting such an offence after the event.

1.8 It is in that context that STAYSAFE approaches the topic of Jamming and Detecting Police Radar.

1.9 There is however another problem with radar and indeed any speed control measure; that is, the credibility of the speed limits themselves. This is dealt with later, in paragraph 2.2.10.

## CHAPTER 2 - OBJECTIONS TO RADAR

CONCLUSION No. 2: The chief reason why random breath testing reduces illegal drink-driving, is that the public are convinced that scientific research has established that every driver and motorbike rider is increasingly more likely to have a serious crash, as the blood-alcohol concentration (BAC) rises above the legal limit of 0.05 per cent. In order to reduce illegal speeding, speed control operations must be conducted in ways that will prevent speeds which scientific research has shown are unsafe for the conditions prevailing.

CONCLUSION No. 3: Random breath testing reduces illegal drink-driving, because the public knows the BAC level below which it is safe to drive. Speed control measures will reduce speeds, only when the public knows at what speed it is safe to drive in each of the wide variety of driving conditions encountered.

### 2. OBJECTIONS TO RADAR

2.1 In noting Mr. Fleming's statement that the function of radar is to increase the perceived risk of being detected while exceeding speed limits, the Committee cannot ignore evidence that not all police seem to view radar in that light. Neither can the Committee ignore the fact that members of the public have used this evidence to justify their use of radar detectors.

#### 2.2 Radar on Good Roads

2.2.1 In earlier reports the Committee has criticised the police use of radar on freeways on which high speeds are safer than on adjoining old highways. STAYSAFE 5 dealt with this issue in some detail.

2.2.2 For example, in 1985 the 126 kilometres of urban and near-urban freeway in N.S.W. had 9 fatal and 186 non-fatal

injury crashes, a rate of 1.55 casualty crashes per kilometre.

2.2.3 The urban and near-urban section of the Great Western Highway from Sydney to Penrith, 57 km in length, had 17 fatal and 630 non-fatal injury crashes, a rate of 11.35, some seven times greater than on the freeways. But if the remoter country sections of that Highway are included, its crash rate falls to 4.3. And if the entire 1,678 km of State Highways 1, 2, 3, 4 and 5 are considered, they had a rate of 1.57, seven times better than the urban and near-urban parts of the Great Western Highway.

2.2.4 Clearly, the greatest concentration of serious crashes is on roads in or near the major cities of the State, upon which speeds are much lower than on freeways.

2.2.5 For police this presents the problem that these more dangerous urban roads have heavy traffic flows which make radar impossible to use for establishing court cases against drivers, except in the late night and early morning hours when traffic is light and travel safer. According to public submissions to the Committee, this results in much of the use of radar by police being on safe roads in light traffic.

2.2.6 Mr. J. Tingle said in evidence that going down a steep hill called Bellambi Hill you come from a 110 km/h zone on the F6 Freeway into a 100 then an 80 km/h zone. The radar trap, he said, is always in the same place, 300 yards from the bottom of the hill going south in a little side road that leads to a DMR excavation. The tendency, he said, is for your car to increase in speed going downhill; but police radar units are set up on long straight stretches, on open hills, downhill, and many people get caught for exceeding the speed limit by 20 or so kilometres per hour.

2.2.7 Mr. Tingle cited a different case of the small bypass road in which he lives which he said is a small, narrow, hilly,

twisting road, with children, a park and bicycles; but people speed at 100 km/h in peak hours with impunity. Mr. Tingle asked why then should a motorist doing say 90 km/h instead of the 80 km/h limit on Bellambi Hill, be booked, when there is not even a radar unit in his street?

2.2.8 Mr. E. Mulligan said in evidence that police hide everywhere; out at Hay the police hide behind the only tree for hundreds of miles. They trap you going downhill, he said; "they get you in the early morning when there is no traffic density, when statistics show you they are times and areas where the deaths or whatever are not occurring".

2.2.9 Mr. N. Ledingham said in evidence that public regard for the law and its enforcement tends to be undone when someone is apprehended in the early hours of the morning for doing something, admittedly illegal, that probably 90 per cent of the road users do at 2 o'clock in the afternoon as part of the normal traffic flow.

2.2.10 This raises again the question of the credibility of the speed limits themselves, a subject which was discussed at length in STAYSAFE 8. The Committee concluded there, about speed limits:

- (1) There is little evidence from official police reports of illegal speed being a frequent factor in fatal crashes on 100 km/h roads.
- (2) Speeds on rural roads do not appear to have been reduced since the introduction of a 100 km/h legal speed limit.
- (3) Fatal crashes on rural roads have not been reduced in frequency since the 100 km/h legal speed limit was introduced.
- (4) The value of advisory speed and other warning signs, in helping drivers judge safe speeds in poor driving conditions, is questionable.

## 2.3    Limitations of Radar used in New South Wales

2.3.1    According to the Department's submission dated January 1986, N.S.W. police mostly use the Kustom KR11 but KR10 and Digidar 11 models are also in use. The Digidar can only be used from a stationary position, whereas the others can operate from stationary or moving vehicles.

2.3.2    A SPEED-SAFE advertisement \* says that the KR11 is generally used in the mobile mode in N.S.W. "The KR11 has a hand button which allows the officer to 'zap' your vehicle as it comes in view, giving virtually no time to slow. However in order to operate as a mobile unit, it must constantly fire a ground pulse in order to assess its own speed. This ground pulse is emitted 5 to 7 times a minute and can be picked up by a sensitive detector up to three kilometres away. Some police are aware of this and have their ground pulse detuned outside the K band spectrum of older detectors, but this is no problem for a good detector".

2.3.3    SPEED-SAFE \* say that the effective range of a KR11 in the mobile mode is only 400 metres. It appears then that an approaching driver with an instrument to detect the ground wave, should be able to slow down to a legal speed before reaching the 400 metre range, by slamming on the brakes. This is more likely to be practicable if police have their instruments on to monitor a vehicle in front - the second driver then has more time to slow down, after detecting radar used for the first one. (In the mobile, "instant-on" mode, the ground wave is transmitted only while the policeman is activating the KR11, according to one report, whilst another maintains that the ground pulse is always present - allowing easy detection).

2.3.4    An article \* in Street and Custom Magazine (undated) says that N.S.W. police have 260 KR11 units (plus 100 Digidars being slowly phased out). It goes on to say that the KR11 can only be

---

\*    Articles in Sgt. R.K. Smith's folder, see para. 3.3.9.

used in the mobile mode when the two vehicles are approaching each other, but police can still book you from the rear, by using their KR11 ground wave as a speedometer. (Or the ordinary speedometer can be used whilst pacing the target vehicle in front, one might add).

2.3.5 The article\* concludes that using the best radar detectors:

"In most situations, about 30 to 35 kph seems to be the critical speed above the posted speed limit. If a driver was travelling faster - say, over 115 kph in an 80 kph zone, or more than 145 kph on a 110 kph freeway - then it would be difficult to say he would not be nabbed if he was first up, even if his detector warned him of the radar".

2.3.6 The KR11 is more feared in the stationary mode. Australian Trucking Action\* (vol. 1, no.2, June 1983) says: "A target vehicle has from 2 to 3.7 seconds to slow down on being zapped. In practical terms that is not enough time to slow 38 tonnes from say 105 kph to 85 kph. While most police are giving trucks 100 kph these days, if they know you have beaten the radar unit to somewhere below 100 from somewhere way above it, they will get very old fashioned about 85 kph".

2.3.7 As a speed measuring device, radar is not easy to use. For example, Sgt. N.A. Shepherd, who is in charge of the training of radar operators, said in evidence on 5 November 1986 that "the target must be separated from all other traffic by at least 100 metres".

2.3.8 A signal from a more distant larger vehicle may over-ride the signal from a visible but slower car or motorbike, so the monitored vehicle must be visually observed by the radar operator for several seconds concurrently with taking radar readings.

2.3.9 Radar units with facilities to switch from high to low range have been known to indicate the wrong range, so the U.K. Home Office# advises against their usage.

---

\* Sgt. Smith's folder

# Scientific Research & Development Branch 1983,  
pubn. no. 29/84



2.3.10 Recall facilities on radar were criticised by a judge so the Home Office<sup>#</sup> advises against their usage. The same judge recommended that the sites used for radar should first be checked for radio interference. Erroneous readings may be caused by nearby radio transmitters, including police, other mobile radio including CB, and fixed amateur sending stations.

2.3.11 Police counter these criticisms by saying that radar is operated only by trained police. Witnesses have stressed the need for high integrity in these police, because there is in N.S.W. no independent record of the vehicle tested, nor of its speed. Mr. Ledingham, for example, referred in his submission to the Video Print Device. In evidence he said that it was a little video camera that sits on top of the radar unit; every time the radar unit is activated, it takes a shot down the road at which the radar is aimed, and overlays the time, date and speed. This, he said, avoids any argument between police and motorist. Mr. Ledingham said that without such a device, an "unscrupulous police officer will clock a car travelling at, for instance, 120 km/h, will leave that speed registering, and all his victims will be said to have travelled at that speed."

## 2.4 No Deterrent Effect

2.4.1 Unlike RBT, radar, by its very nature, is a secret weapon. As a "ray", it has, in the minds of some people, all the hallmarks of the methods used by secret police in other societies. It is reminiscent of "laser beams" so popular in juvenile science fiction. In short it is an electronic "bug".

2.4.2 Being a secret weapon, radar of itself lacks the characteristics of RBT which produce a reduction in drink-driving. The characteristics that are required of a speed control device in order to reduce speed were listed in paragraph 1.4. They are:

- (a) Public and conspicuous, with speed conveyed to driver.

---

# Scientific Research & Development Branch 1983, pubn. no.29/84

- (b) Cheap, simple to use, not prone to interference,
- (c) Used only to improve road safety, and
- (d) Concentrated where and when most serious crashes result from illegal speed.

CHAPTER 3 - INTERFERENCE WITH RADAR BY DRIVERS

CONCLUSION No. 4: It is necessary, for the maintenance of a law-abiding society, to develop ways of banning the manufacture, sale, possession, installation and use of both radar jammers and radar detectors.

CONCLUSION No. 5: The question of the use of radar jammers by truck convoys, alleged by police to occur, will be a further matter to be investigated by the Committee as part of its study of Heavy Vehicle Safety.

3. INTERFERENCE WITH RADAR BY DRIVERS

3.1.1 The Committee did not, in STAYSAFE 8, deal specifically with the problem of deliberate interference with radar by drivers, by equipment carried in vehicles for the purpose of frustrating police measurements of speed. In a submission dated January 1986, the Commissioner of Police referred to two types of interference namely:

- (a) The fitting to vehicles of radar detection devices, "the primary aim" .. being .. "to exceed the speed limits with immunity," (Para. 4.4 of his submission) and
- (b) The fitting to vehicles of radar jammers. These can for example be set to a speed below the speed limit, say 75 km/h in an 80 km/h zone. Police radar would then display 75 km/h, however high the actual speed of the vehicle happened to be (Para. 5.2).

3.1.2 These two devices will now be discussed separately.

3.2 Radar Jammers

3.2.1 In his submission the Police Commissioner said inter alia:

"A new type of device commonly termed a radar jammer has

recently been introduced into the heavy vehicle industry. It is capable of transmitting a fixed reading to a radar instrument. Heavy vehicle drivers have been known to set the jammer at say 75 km/h and travel at speeds much higher than the 80 km/h maximum limit. Any radar detection of the heavy vehicle would display the set speed of 75 km/h.

"Inquiries from the Department of Communications indicate these jammers are illegal if it can be proved that they are possessed for the purpose of transmitting. The Communications Act amended in August, 1985, provides for a maximum fine of \$10,000 or five years gaol or both for the use of this device. Extreme difficulty is, of course, experienced in detecting the use or possession of the jammers as they are, as would be expected, usually well concealed.

"Search of vehicles for suspected offences under the Communications Act can only be undertaken by officers authorised by the Department of Communications. New South Wales Police do not have authority to search vehicles for these devices.

"The cost of the jamming device is believed to be in the vicinity of \$1100.00. When the benefits are compared with the cost it is obvious they are worth the investment. Heavy vehicle drivers have been known to travel in convoy with the leading vehicle in possession of a "Jammer" to negate radar detection."

3.2.2 In evidence on 28 August 1986, Inspector B.J. O'Brien said that the offence under the Federal Radiocommunications Act was using a radio transmitter to interfere with a police radio transmission. Possession of a radio jammer is not an offence. He said that recently he had nominated 25 highly qualified police electronics people as inspectors under the Radiocommunications Act.

3.2.3 Assistant Police Commissioner Fleming said that he doubted the ability of Tasmanian State legislation on radar jammers to

override Commonwealth legislation.

3.2.4 Sgt. Smith's folder includes the complete construction plans for making a radar jammer, supplied by Philips Instrument Design Co. Inc., Portland, Oregon, U.S.A. in 1983-84.

3.2.5 No one has submitted to the Committee that radar jammers should be made legal. Their use to jam radar is already illegal under Commonwealth law. The Committee would like also to see the ownership and purchase made illegal, because that would assist the objective of the law against use. These legal matters are dealt with in a separate chapter.

### 3.3 Radar Detectors

3.3.1 In his submission, the Commissioner gave no details about radar detectors. He merely stated that various types were available including some that were sophisticated and expensive.

3.3.2 He mentioned that his Department had evaluated Slant Doppler Radar (described in Section 4.3 of STAYSAFE 8), and "is endeavouring to add this device to the resources now available."

3.3.3 He did not comment on any value Slant Doppler might or might not have in countering detection.

3.3.4 In evidence on 13 August, 1986, Sgt. R.K. Smith said that a radar detector is "an early warning device that receives the signal transmitted by the radar instrument and emits a warning tone audible to the driver. From that point on, generally, the driver adjusts his speed to be within the limit".

3.3.5 Sgt. Smith added: "From inquiries and a study I conducted shortly before Christmas 1985 at the Marulan lorry checking station I found that 91 per cent of vehicles passing through that station were fitted with a visible radar detector". He

said that such devices are quite legal in New South Wales. When asked whether detectors should be illegal, Chief Inspector P.C. Andrews intervened to say that he believed they should be illegal. "They are illegal in Tasmania. I believe that the use of them should be illegal in New South Wales".

3.3.6 Sgt. Smith also submitted what he described as "the traffic histories of fifty persons who have been reported for Exceed Speed Limit offences in the Goulburn area, in recent months. At the time these persons were reported, it was noted that the vehicles they were driving were fitted with radar detection devices".

3.3.7 Sgt. Smith stated that among the sample of 50 drivers, 40 "had previously had their licences cancelled on one or more occasions by the Commissioner for Motor Transport, because of their record as drivers of motor vehicles. In addition, 16 drivers...had previously served one or more periods of disqualification for a serious driving offence.."

3.3.8 When asked whether they should be illegal in both cars and trucks, Chief Inspector Andrews replied: "Yes. Although we hear of many reasons why people have such instruments in their vehicles, experience has shown they are installed for the purpose of detecting radar instruments so that the driver can adjust his speed to comply with regulations. I have had personal experience where a person's speed is checked and the person complains to you about the fact that he spent \$400 or \$500 on a radar detection instrument but is still being reported because his speed is being checked from behind."

3.3.9 Whilst giving evidence on 28 August 1986, Sgt. R.K. Smith presented a folder of documents which was "basically...a summary of the availability, use and effectiveness of the various radar detectors and radar jammers that are currently able to be purchased for use in this State."

3.3.10 Also on 28 August 1986, Inspector B.J. O'Brien stated that in addition to Tasmania, Victoria and South Australia were legislating against radar detectors, as well as jammers.

3.3.11 He added that radar detectors are very effective in giving early warning to drivers about radar use by police. He thought that the lead trucks in convoys often carried both detectors and jammers.

#### 3.4 Road Crash Involvement of Radar Detectors

3.4.1 If, as police claim, the use of radar detectors increases the likelihood of dangerous speeding, then they should often be found in vehicles involved in high speed crashes.

3.4.2 An examination of all Police P242 reports on fatal crashes for a period of four months during 1985, suggested that a police instruction had been issued requiring police to search for and report upon the presence of radar detectors in vehicles involved in fatal crashes. Mr. Fleming was asked to document this enquiry and its outcome. In reply, Executive Chief Superintendent K.J. Chapman wrote on behalf of Mr. Fleming:

"Although extensive inquiries have been made dating back a number of years, I have been unable to establish with any accuracy the source or the instruction which lead to the inclusion on the P.242 Form of information relating to the fitting or non-fitting of radar detectors. However, it appears likely that verbal instructions to this effect may have been given at a Traffic Supervisors meeting. Notwithstanding, there is no indication as to the purpose this information was put or the results of any survey which may have been conducted at the time."

3.4.3 The following are the crash details for the eight crashes for which there was any specific mention of detectors. In a few others the word "unknown" appeared in Code 27 used for the

specific reports. This may however refer to something other than detectors. Code 27 showed:

- (a) RADAR DETECTOR FITTED. A pedestrian ran across a road in a 60 km/h zone and was hit and killed by a semi-trailer travelling at about 50 km/h whose 27 year old driver was reported for negligent driving, a minor charge.
- (b) RADAR FITTED BUT NOT OPERATIONAL. A Victoria-registered 4-wheel drive travelled in light rain on a dirt surface in a 100 km/h zone at a speed described by police as "normal". The vehicle slid, hit an embankment and rolled over. Police said this was "accidental" and proposed no charges although a passenger was killed.
- (c) NIL RADAR DETECTOR. A car failed to take a 75 km/h curve and hit a semi-trailer head-on. Speed of truck claimed to be 30 km/h; car's speed unknown in a 100 km/h zone. Car driver killed.
- (d) RADAR DEVICE NOT FITTED. A car veered on to the wrong side of the road and hit a truck head-on. Vehicle speeds said to be unknown in a 100 km/h zone. Car driver killed.
- (e) NIL RADAR DETECTOR. A semi-trailer travelling round a bend veered on to the wrong side of the road and overturned, killing the driver. Police stated speed unknown in a 100 km/h zone.
- (f) RADAR DETECTOR NOT FITTED. A car was driven at an unknown speed in foggy conditions on a straight road posted 100 km/h when it ran off the road and rolled over. Driver killed.



(g) NIL RADAR DETECTOR. The driver of a car lost control on a sharp bend having a 45 km/h advisory speed, and the car slid into the path of a semi-trailer claimed to have been travelling at 60 km/h. Car speed unknown. Car passenger killed.

(h) NIL RADAR DEVICE. A car collided with a pedestrian who died. Car speed described by police as "normal" in a 60 km/h zone.

3.4.4 It is not known how many vehicles were searched before finding the two detectors reported here (one of which was said to be not operational). So no conclusion will be drawn from the tiny number. The circumstances of the crashes are however interesting as being fairly typical of fatal crashes. That is, there is either no information on vehicle speed, or the speed is seen by police as "normal", whatever that means.

3.4.5 Clearly however, the survey has not produced evidence against radar detectors (nor for them, it should be added).

3.4.6 Some supporters of radar detectors have argued that, as rally or racing drivers, they are very highly skilled, and also are fully aware of the necessity to provide a good example by their manner of driving on ordinary roads. The Committee is pleased to hear about this intention to provide a good example. However, the point must be made once more, as made previously in STAYSAFE reports, that research both in Australia and overseas has shown that drivers who are trained to use their skills in driving to get out of troublesome pre-crash situations, seem to have more crashes than the general population of drivers. This appears to be because the "skilled" drivers overestimate their ability to handle hazardous situations.

3.4.7 On the other hand, those who want to ban detectors so that drivers breaking the speed limits can more readily (in the opinion of the banners) be detected and charged, are ignoring

the research evidence from Australia and overseas, that no connection has been established between people having high frequencies of traffic offences, and people having high frequencies of crashes. Very few people are in both groups.

### 3.5 The Case for Banning Radar Detectors

3.5.1 Although few people writing to the Committee wanted to ban detectors, Mr. A.H. Ginger in evidence said that he thought there was a silent majority of the population who wanted a ban because they considered that detectors operated against road safety and hampered the work of police.

3.5.2 In a technical appraisal of both detectors and jammers, Mr. R.B. Frenkel wrote that these devices were both designed, not merely to help their possessor break a law, but to commit a serious offence in doing so. Speed limits, he wrote, should be obeyed everywhere. Detectors and jammers enable their possessors to exceed the speed limit, while masquerading when necessary as law-abiding drivers. He added that a ban would not, as claimed, prevent people exploring the electro-magnetic spectrum, because radar operated in two narrow bands, of no interest to explorers.

3.5.3 In evidence Mr. Frenkel said that if detectors were banned, a body search would not be necessary for locating them, because "there is always a small amount of leakage of microwave radiation from the local oscillator and it would be a fairly simple matter for police to pick up this oscillation from a distance...They would probably need to use a small parabolic high gain antenna." He admitted however that such an antenna would not react to a radar detector that had been switched off by the driver before pocketing it.

3.5.4 The Committee noted that the newer forms of radar detector, unlike the majority of those at present in use, would be difficult

for police to find simply by a visual inspection of a vehicle. Police probably would need the power to conduct body searches, which many people would find repugnant. This is a strong argument for banning their manufacture and sale, if it is intended to ban the possession and use of radar detectors.

3.5.5 Police see the banning of radar detectors and jammers "as a major step in Police enforcement of speed limits...which is vital if the objective of reducing crashes is to be achieved". (Submission dated 30 October 1986).

3.5.6 As well as recommending the immediate enforcement of the law against the use of jammers, the NRMA (submission dated 31 October 1986) reminded the Committee that a submission dated September 1984 dealt with detectors; there they "recommended the banning of the use of radar detection devices from a specified date and that the manufacture, importation and sale of such devices be prohibited. The submission therefore implies some period of grace before taking action. The impact of immediate action on the livelihood of people should be assessed, and weighed against the disadvantage to road safety through use of the devices in deciding when to take action." The NRMA can, one supposes, be said to represent the views of the majority of law-abiding drivers.

3.5.7 In a joint submission dated November 1986, the Department of Motor Transport and the Executive of the Traffic Authority wrote that they recommended:

that "(i) The Motor Traffic Regulations be amended for it to be an offence to drive or to permit to be driven on a public street vehicles carrying or fitted with radar detectors and/or jammers.

(ii) Legislation be introduced in N.S.W. to prohibit the sale of radar detectors and radar jammers; and,

(iii) The Federal Government be asked to introduce legislation to prohibit the use and sale of radar detectors and jammers."

3.5.8 In that same submission however it was stated that:

"(1) General deterrence theory is defined as "the process of influencing a potential offender, through his fear of detection and consequences, to avoid offending...in contrast to specific deterrence, general deterrence is based on a threat that has not been directly experienced" (Cameron & Sanderson, 1982, p.6).

"(2) The general deterrence approach is based on road users' perceived risk of detection, not the objective or actual risk of detection. However, it is important to stress that the effectiveness of the general deterrence approach is dependent on a strategic deployment of police radar equipment which aims to maximise the perceived police presence. For, if the motorists realise that the actual risk of detection is nowhere as high as they originally perceived, then there will be a decline in the perceived risk of detection.

"(3) Relating the general deterrence approach to the Speed Reduction Campaign, it becomes clear that the effectiveness or success of the campaign is dependent upon the perceived risk of detection. However, if motorists utilise radar detectors widely, they are likely to reduce speed only in locations where their detectors indicate police are operating speed radar checks.

"(4) To a certain extent therefore, radar detectors do play a useful part in slowing down speeding drivers but only in locations where police radar checks are deployed...."

### 3.6 The Case Against Banning Radar Detectors

3.6.1 A submission dated 3 November 1986 was presented "on behalf of the radar detector industry of N.S.W." The conclusions of this submission stated that the purpose of the industry in making it was "to enhance road safety and reduce accidents"... But any road safety measures "need to be based on careful research and the promise that they will achieve measurable results. There is no point in imposing further burdens on the people of N.S.W. merely in the pursuit of road safety gestures, not matched by

actual results. The radar detector industry argues very strongly that even if detectors are successfully banned, black markets and interstate mail order suppressed and constitutional challenges weathered, at the end of the day the whole exercise will still have been futile. There will be no reduction in road accidents because radar detectors themselves are not intrinsically the cause of accidents. There is no point in attempting to ban radar detectors."

3.6.2 In his submission on behalf of Creative Electronics Pty. Ltd., Mr. P.J. Mulligan wrote that there is no written research data to connect radar detectors or their use with fatal road crashes. He said that the important thing for motorists was to drive at speeds that were suitable for the conditions. His research showed that "a majority of radar detector users drive at speeds according to the prevailing conditions....With more than 100,000 radar detectors estimated to be used in N.S.W., they represent only a fraction of the 3,500,000 drivers in N.S.W. Radar detectors must be seen as contributing to safer driving and therefore are of a benefit to road safety."

3.6.3 Mr. M.A. Harvey, in a submission for Super Snooper Australia, wrote that if radar detectors were banned, "it will mean:-

"(a) The closing down of yet another Australian Small Business (as it is still very small it is probably of little consequence to anyone).

"(b) The jobs of our receptionist, typist/book keeper, salesman, technician and the two Directors lost. So another 6 people join the ranks of the unemployed.

"(c) Our company will be forced into liquidation.

"(d) We will lose more money than we can possibly afford and will take us years to repay. We will ensure none of our creditors suffer.

"(e) The dreams of two young Industrious Australians who wanted to make it on their own are shattered."

3.6.4 Mr. P. Korbel of Spectrum Research, acting for Creative Electronics Pty. Ltd., presented a report on owners of radar detectors. It showed 52 per cent of owners as being under 35 years of age, 59 per cent as single, or married without children, and 72 per cent in sales/clerical, blue collar, or unemployed groups. He concluded, amongst other things, that "The main benefits of owning a radar detector are:

- (a) Maintaining a licence, particularly for work purposes amongst Group A (Under 25, single, blue collar).
- (b) Safety/peace of mind, particularly amongst Group B (Over 25, more likely to have children in the car).
- (c) Savings financially through not being fined, in both Groups.

3.6.5 Another point made by the industry was that the use of radar detectors is at present perfectly legal, because detectors are only receivers and do not in any way interfere with the transmission of police radar signals or any other radiation. In this respect, of course, radar detectors are quite different from radar jammers, whose sole purpose is to interfere with police radar, which is why they are illegal to use.

CHAPTER 4 - RADAR IN THE FUTURE

4.1 This chapter serves to examine some possible scenarios in which radar might operate in the future. These scenarios include:

- (a) A situation in which a radar detector is fitted to every motor bike and vehicle.
- (b) A situation in which police cease completely to use radar for speed control.
- (c) A situation in which police establish the highly visible presence of a large armoury selected from existing and future speed control devices, and achieve a highly effective deterrence against speeds that are unsafe for the conditions, akin to the methods used to reduce unsafe drink-driving through random breath testing.
- (d) A situation in which radar detectors and jammers disappear completely from use in N.S.W.

4.2 No More Radar Detectors or Jammers.

4.2.1 This scenario is considered first because it is the situation desired by police, and which they have argued would reduce the number of serious crashes.

4.2.2 It may be impossible to achieve this position, but it will nonetheless be looked at seriously.

4.2.3 Clearly, if there were no detectors or jammers, the drivers who now have them would be more likely to be caught speeding in areas in which radar was operating. Even for the so-called "highly skilled" drivers who are more likely to have crashes than ordinary drivers, there is no evidence that they

would have more crashes without radar detectors. This is especially likely because there is also no evidence that police radar has had any effect in reducing speeds generally (that is, except in the few times and places at which it is seen operating), nor that the introduction of radar has reduced crashes.

4.2.4 The most likely effect of a disappearance of radar detectors and jammers would be a greater respect for the speed laws, among law-abiding drivers and the police themselves.

4.2.5 A possible side-effect would be that police would become self-satisfied, and take no further steps to concentrate their efforts on preventing unsafe speeds for the conditions, rather than booking drivers after the event for breaking arbitrary speed limits.

4.2.6 A further matter, one which the Committee will consider further in its deliberations on heavy vehicle safety, is the allegation by police that the lead trucks in convoys carry radar jammers and detectors as well as CB radios, mainly for the purpose of grossly exceeding legal and safe speed limits. The Committee reserves its position on this matter because it needs more evidence before making any recommendations on it.

4.2.7 On the whole it would appear that a situation of no radar detectors and jammers would be desirable one, but it should not necessarily be depended upon to reduce the road toll.

### 4.3 Radar Detectors on All Motor Bikes and Vehicles.

4.3.1 It has been argued that all drivers should be given radar detectors so that they can tell from the presence of radar, when they are travelling under conditions in which they should slow down.

4.3.2 This has superficial appeal, but it overlooks the facts:

(a) That radar cannot tell drivers what is a safe speed - only



that its presence may indicate that some drivers are driving too fast, and

(b) That radar would have to be very widespread, to achieve this situation, unmanned radar being the logical approach - but this is even less likely to be able to differentiate good from poor driving conditions.

4.3.3 This situation then is one that probably has no practical benefit.

#### 4.4 No Police Radar.

4.4.1 The quickest way to make radar detectors useless would be for police to cease using radar. In view of the doubts about the value of radar, as presently used by the N.S.W. police, in reducing the amount of speeding under unsafe conditions, this option needs to be given serious consideration, not only by the Committee, but by the police force itself.

4.4.2 Before actually embarking upon a withdrawal of radar, after carrying out an evaluation of it, police would probably first change their radar operating procedures, so as to make more difficult the detection by drivers of police radar. These include:

(a) Ceasing to use radar in the mobile mode, which is said by the detector experts to provide the ground wave that measures the speed of the police car which in turn is required for calculation of the speed of the car being monitored by police. This ground wave is said to be capable of detection by modern detectors up to 3 kilometres away. Mobile radar, in any case, appears to have little deterrent effect and is suitable mainly for booking drivers after they have broken the speed limit. Stationary radar is seen by all passing drivers, like RBT.

(b) Using radar only in the 3 second bursts needed to establish to the satisfaction of a Court that an offence has been committed. This procedure would give drivers with detectors too little time to slow down to legal speeds, even by extremely dangerous violent

application of the brakes. By themselves however, these bursts do not seem to have any deterrent effect.

(c) Giving to all police who operate radar, the training needed to raise their levels of expertise so that they may operate radar in ways difficult to circumvent by radar detectors.

(d) A decision by police completely to cease using radar would result probably only from a conclusion from their evaluation of radar, that other methods would have greater effect in ensuring that drivers did not drive faster than the prevailing conditions permit. More probably, the evaluation would indicate that radar should be used in better ways, and mixed with other methods.

#### 4.5 Effective Prevention of Speeds Too High for the Conditions

4.5.1 To be effective in reaching its goal of better road safety, speed control by police would be confined to times and places at which speed too high for the conditions is established by scientific research to be a major factor in causing serious road crashes.

4.5.2 A major problem for police is that they have been given a brief to keep speeds within posted limits, which is by no means the same thing.

4.5.3 The Traffic Authority Act, 1976, in section 17, inter alia, charges the Traffic Authority with establishing general standards and general principles in connection with the design, construction and operation of traffic facilities, for purposes connected with road safety; with co-ordinating the activities of public authorities related to road safety; and with promoting traffic safety.

4.5.4 The Motor Traffic Act, 1909, as amended, in Section 4A(3) gives to the Traffic Authority the power to fix the speed limit on any length of street.

4.5.5 Taken together, these two Acts charge the Traffic Authority with the responsibility of fixing speed limits that are safe for the conditions prevailing.

4.5.6 It is clear however that present speed limits often have no practical relationship to maximum safe speeds.

4.5.7 It follows that the enforcement by police of present speed limits often has no practical relationship to safe speeds.

4.5.8 It is therefore essential that the Traffic Authority should take the initiative, in collaboration with the Department of Main Roads and the Police Department, in

- (i) Determining ways of indicating to drivers what is the safe maximum speed, upon each length of street, for the various conditions likely to arise, and
- (ii) Determining methods whereby these safe speeds can be achieved in practice.

CHAPTER 5 - LEGISLATION TO BAN RADAR DETECTORS & JAMMERS

5.1 AUSTRALIA - Radar Jammers

5.1.1 The Commonwealth Radiocommunications Act No. 130, 1983 prescribes as an offence -

The use, without reasonable excuse, of a transmitter in a manner likely to interfere substantially with radiocommunications carried on by or on behalf of a prescribed organisation including the police force of a State.

5.1.2 The penalty is a fine not exceeding \$10,000 or imprisonment for a period not exceeding 5 years, or both.

5.1.3 Inspectors under the Act are appointed by the Minister (and may include, in the future, some N.S.W. police).

5.1.4 An inspector who believes on reasonable grounds that an offence is being committed may stop, enter and search any vehicle in which the offence is believed to be committed.

5.2 TASMANIA - Radar Detectors & Jammers.

5.2.1 Traffic (General and Local) Amendment Regulations (No. 5) 1980 prescribes as an offence to -

Drive or cause or permit to be driven, a motor vehicle on a public street equipped with, or in which is carried, a device capable of being used for the purpose of detecting, or interfering with, electromagnetic radiations from a radar speed analyser on a frequency not less than 10.50 or more than 10.55 gigahertz.

### 5.3 VICTORIA - Radar Jammers

5.3.1 A Road Safety Bill 1986 proposes to make it an offence to -

Sell or use a device the sole or principal purpose of which is to prevent the effective use of a prescribed speed measuring device.

5.3.2 The purpose of the original Bill was to make jamming but not detecting illegal. It has been proposed to amend the Bill to include detectors.

5.3.3 All devices forfeited must be destroyed or otherwise disposed of as the Chief Commissioner of Police directs.

### 5.4 U.S.A. and CANADA - Detectors

5.4.1 According to Mr. J.H. Mooney of the Insurance Institute for Highway Safety, detectors are legal to own - but not to operate - in Virginia and Connecticut. In Washington D.C. they are illegal to own or operate.

5.4.2 In Canada he thinks they are legal in British Columbia, Saskatchewan, New Brunswick and Nova Scotia. They are illegal to use in Quebec and Manitoba, and illegal to sell and use in Ontario, Alberta, Newfoundland and Prince Edward Island.

5.4.3 The Ontario legislation dates from 1977 and refers to "radar warning devices".

5.4.4 In his submission, Mr. P.J. Mulligan stated that the Alberta legislation on detectors had been reversed "on the basis that detectors increase the awareness of police patrols and anything that increases the awareness of road safety is good for the community".

5.5    UNITED KINGDOM - Interference with Radar

5.5.1    A request to the British Home Office for documentation on radar interference, was met by the supply of a large technical report dated 1983, and entitled "Measurements on police hand held radar speedmeters".

5.5.2    The report does not deal with radar detection nor with jamming. It does however include in great detail studies of errors produced in radar measurements by a variety of sources of interference.

5.5.3    The report concludes with several pages of recommendations covering the design, approval and use of radar by police, aimed at minimising errors and accidental interference.

5.5.4    A paper, called "A review of speed limits", prepared by the Parliamentary Advisory Council for Transport Safety, was also supplied. It says that U.K. police see speed limits as unenforceable by present techniques.

PARLIAMENT OF NEW SOUTH WALES

PROCEEDINGS OF THE JOINT STANDING COMMITTEE UPON ROAD SAFETY

Wednesday, 5 November, 1986

At 10.30 a.m., Parliament House, Sydney

MEMBERS PRESENT

Legislative Council

The Hon. George Brenner  
The Hon. D.M. Isaksen  
The Hon. J.H. Jobling

Legislative Assembly

Mr. Ferguson  
Mr. Langton  
Mr. Price  
Mr. Wotton  
Mr. Zammit.

Mr. Herbert, the Committee's Adviser, was also in attendance.

The press and public were admitted.

By direction of the Chairman, the Clerk read the Committee's Terms of Reference and Legislative Assembly Standing Order No. 362, relating to the examination of witnesses.

Mr. Peter Comans, Barrister-at-Law, Mr. Christopher William Hegarty, Company Director of Super Snooper Australia, Mr. Paul Julian Korbel, Managing Director of Spectrum Research, Mr. Patrick Joseph Mulligan, Managing Director of Creative Electronics Pty. Ltd., and, Mr. Brad James Robinson, General Manager of Cincinnati Microwave Australia Inc., affirmed and examined.

Evidence concluded, the witnesses withdrew.

Mr. Michael John Butler, Commissioner for Motor Transport (on oath from 26 June, 1984), Mr. Harry Leonard Camkin, Director of the Traffic Authority (on affirmation from 26 June, 1984), and Mr. Edward Bruce Blackhall, Assistant Commissioner for Motor Transport, sworn and examined.

Evidence concluded, the witnesses withdrew.

Assistant Commissioner William Fleming (on oath from 27 June, 1984), Executive Chief Superintendent Kenneth John Chapman (on oath from 9 August, 1985), Inspector Barry John O'Brien (on oath from 28 August, 1986), Sergeant Norman Alfred Shepherd (on oath from 9 August, 1986) and Sergeant Raymond Keith Smith (on oath from 13 August, 1986), of the New South Wales Police, examined.

Evidence concluded, the witnesses withdrew.

Mr. Bruce Owen Searles (on oath from 29 January, 1985) Chief Traffic Engineer of the National Roads and Motorists' Association, examined.

Evidence concluded, the witness withdrew.

The Committee adjourned at 4.49 p.m., until Thursday, 6 November, 1986, at 9.30 a.m.

---

Thursday, 6 November, 1986

At 9.30 a.m., Parliament House, Sydney

MEMBERS PRESENT

Legislative Council

The Hon. George Brenner  
The Hon. D.M. Isaksen

Legislative Assembly

Mr. Langton  
Mr. Price  
Mr. Wotton  
Mr. Zammit.

Mr. Herbert, the Committee's Adviser, was also in attendance.

Apologies were received from Messrs. Ferguson and Jobling.

The press and public were admitted.

By direction of the Chairman, the Clerk read the Committee's Terms of Reference and Legislative Assembly Standing Order No. 362, relating to the examination of witnesses.

Mr. John Saxon Tingle, journalist, sworn and examined.

Evidence concluded, the witness withdrew.

Mr. Robert Baruch Frenkel, experimental scientist, sworn and examined.

Evidence concluded, the witness withdrew.

Mr. Arthur Henry Ginger, electrical contractor, sworn and examined.

Evidence concluded, the witness withdrew.

Mr. Edward Andrew Mulligan, Managing Director of Opposite Lock Accessories, sworn and examined.

Evidence concluded, the witness withdrew.



The Minutes of the meetings held on 28 August, 1986, 23 October, 1986, and 5 November, 1986, as circulated were confirmed.

The Committee deliberated and discussed a programme of future Committee activities.

RESOLVED, on the motion of Mr. Price, seconded by Mr. Wotton:

1. That, in accordance with the Committee resolution of 18 June, 1986, the Chairman approach the Premier for approval for the Committee Adviser to work extra days through the Committee's current period of activity.

2. That the Chairman approach the Premier seeking an appropriate increase in the Adviser's fees.

RESOLVED, on the motion of Mr. Wotton, seconded by Mr. Zammit:

That, the Chairman investigate and prepare a submission to the Parliamentary Remuneration Tribunal seeking parity on allowances payable to Members of the Public Accounts Committee.

Mr. Nicholas Damien Ledingham, solicitor, sworn and examined.

Evidence concluded, the witness withdrew.

The Committee adjourned at 4.37 p.m., until Thursday, 13 November, 1986 at 9.30 a.m.

---

Thursday, 13 November, 1986

At 9.30 a.m., Parliament House, Sydney

MEMBERS PRESENT

Legislative Council

The Hon. George Brenner  
The Hon. D.M. Isaksen

Legislative Assembly

Mr. Ferguson  
Mr. Langton  
Mr. Price  
Mr. Wotton  
Mr. Zammit.

Mr. Herbert, the Committee's Adviser, was also in attendance.

An apology was received from Mr. Jobling.

The Minutes of the meeting held on 6 November, 1986, as circulated were confirmed.

A copy of the revised draft Discussion Paper (STAYSAFE 9 - entitled "Speed and Overtaking with Safety on 100 km/h Roads"), having been transmitted to each member of the Committee, was accepted by the Committee as having been read.

The Committee proceeded to consider the revised draft Discussion Paper.

Foreword note read and amended.

Foreword note, as amended, agreed to.

The Committee deliberated.

The Committee adjourned at 10.07 a.m., until Thursday, 20 November, 1986 at 9.30 a.m.

---

Thursday, 20 November, 1986

At 9.30 a.m., Parliament House, Sydney

MEMBERS PRESENT

Legislative Council

The Hon. George Brenner  
The Hon. D.M. Isaksen  
The Hon. J.H. Jobling

Legislative Assembly

Mr. Langton  
Mr. Price  
Mr. Wotton  
Mr. Zammit.

Mr. Herbert, the Committee's Adviser, was also in attendance.

An apology was received from Mr. Ferguson.

The Minutes of the meeting held on 13 November, 1986, as circulated were confirmed.

Consideration of the revised draft Discussion Paper (STAYSAFE 9) was resumed.

Discussion Paper read and agreed to.

The title was then read again and amended.

New title, STAYSAFE 9 - "Safe Speed and Overtaking on 100km/h Roads", read and agreed to.

RESOLVED, on the motion of Mr. Wotton, seconded by Mrs. Isaksen:

That the revised draft Discussion Paper, as amended and agreed to, be the Discussion Paper of the Committee.

A copy of the draft Report (STAYSAFE 10 - relating to "Traffic Law Enforcement Measures" and entitled "Jamming and Detecting Police Radar"), having been transmitted to each member of the Committee, was accepted by the Committee as having been read and amended pro forma.

The Committee deliberated.

RESOLVED, on the motion of Mr. Price, seconded by Mr. Wotton:

That the Chairman, the Clerk, the Adviser and any other Committee members be authorised to attend briefings with officers of the Federal Office of Road Safety.

The Committee adjourned at 10.27 a.m., until Friday, 21 November, 1986 at 12 noon.

---

Friday, 21 November, 1986

At 12.15 p.m., Parliament House, Sydney

MEMBERS PRESENT

Legislative Council

The Hon. George Brenner  
The Hon. D.M. Isaksen

Legislative Assembly

Mr. Ferguson  
Mr. Langton  
Mr. Price

Mr. Herbert, the Committee's Adviser, was also in attendance.

Apologies were received from Messrs. Jobling, Wotton and Zammit.

Consideration of the revised draft Report (STAYS SAFE 10) was resumed.

Pages i to vi read and agreed to.

Conclusion 1 read and agreed to.

Paragraphs 1.2 to 1.9 read and agreed to.

Conclusions 2 and 3 read and agreed to.

Paragraphs 2.1, 2.2.1 to 2.2.10, 2.3.1 to 2.3.11 and  
2.4.1 and 2.4.2 read and agreed to.

Conclusions 4 and 5 read and agreed to.

Paragraphs 3.1.1 and 3.1.2, 3.2.1 to 3.2.5 and 3.3.1 to 3.3.5  
read and agreed to.

Proposed new paragraphs 3.3.6 and 3.3.7 inserted.

Paragraphs 3.3.6 and 3.3.7 read and agreed to.

Whereupon paragraphs previously 3.3.6 to 3.3.9 consequently  
amended to new paragraphs 3.3.8 to 3.3.11.

Paragraphs 3.3.8 to 3.3.11 read and agreed to.

Paragraph 3.4.1 read and agreed to.

Paragraph 3.4.2 read and amended.

Paragraph, as amended, agreed to.

Proposed new paragraph 3.4.3 inserted.

Paragraph 3.4.3 read and agreed to.

Whereupon paragraphs previously 3.4.3 to 3.4.6 consequently  
amended to new paragraphs 3.4.4 to 3.4.7.

Paragraphs 3.4.4 to 3.4.7 and 3.5.1 to 3.5.5 read and agreed to.

Paragraph 3.5.6 read and amended.

Paragraph, as amended, agreed to.

Paragraphs 3.5.7 and 3.5.8 and 3.6.1 to 3.6.5 read and agreed to.

Paragraphs 4.1, 4.2.1 to 4.2.7, 4.3.1 to 4.3.3 and 4.4.1 read and agreed to.

Paragraph 4.4.2 read and amended.

Paragraph, as amended, agreed to.

Paragraphs 4.5.1 to 4.5.8 read and agreed to.

Paragraphs 5.1.1 to 5.1.4, 5.2.1, 5.3.1 to 5.3.3, 5.4.1 to 5.4.4 and 5.5.1 to 5.5.4 read and agreed to.

The title was then read again and amended.

New title, STAYSAFE 10 - "Second Report on Speed Control and Road Safety : radar detectors and jammers", read and agreed to.

RESOLVED, on the motion of Mr. Price, seconded by Mrs. Isaksen:

That the revised draft Report, as amended and agreed to, be the Report of the Committee.

The Minutes of the meeting held on 20 November, 1986, as circulated were confirmed.

The Committee adjourned at 12.48 p.m., sine die.

---

LIST OF WITNESSES

Mr. Edward Blackhall, Assistant Commissioner for Motor Transport.  
Mr. Michael Butler, Commissioner for Motor Transport.  
Mr. Harry Camkin, Director of the Traffic Authority.  
Executive Chief Superintendent Kenneth Chapman, Police.  
Mr. Peter Comans, Barrister-at-Law.  
Assistant Commissioner William Fleming, Police.  
Mr. Robert Frenkel, Experimental Scientist.  
Mr. Arthur Ginger, Electrical Contractor.  
Mr. Christopher Hegarty, Company Director of Super Snooper Australia.  
Mr. Paul Korbelt, Managing Director of Spectrum Research.  
Mr. Nicholas Ledingham, Solicitor.  
Mr. Edward Mulligan, Managing Director of Opposite Lock Accessories.  
Mr. Patrick Mulligan, Managing Director of Creative Electronics.  
Inspector Barry O'Brien, Police.  
Mr. Brad Robinson, General Manager of Cincinnati Microwave.  
Mr. Bruce Searles, Chief Traffic Engineer of the N.R.M.A.  
Sergeant Norman Shepherd, Police.  
Sergeant Raymond Smith, Police.  
Mr. John Tingle, Journalist.