



Radar Speed Detection Instructional Sheet

INTRODUCTION

The use of speed measuring device/guns in motorsport is not a revenue making excises but to be used for safety both for the public, competitors and officials. The operator should be clearly visible at all times, ideally wearing a high visibility vest, in order to act as a deterrent rather than to 'catch' someone.

This training programme is to be used in conjunction with the Australian Standard AS2898.2-2003 Part 2: Radar Speed Detection and the manufacturer's recommendations, copies of which should be with the speed detection unit at all times

BEFORE OPERATING

- Make sure the device has an up to date test certificate
- Check that the batteries are fully charged and/or that you have spares
- Test the device with tuning fork and/or an internal test (if part of device's functions) or against a vehicle's speedometer of known accuracy
- Check that the Operator knows how to use the device and has been trained
- Ensure that you have a quantity of reporting forms and warning signs if required

OPERATIONS (Taken from AS2898.2-2003)

Site Selection General

When selecting a site for the use of a radar gun the factors listed below should be taken into account

1. Electromagnetic interference (EMI)

The operator shall ensure that the effects of EMI are minimised by careful site selection these include items such as high tension power lines, electric motors, bug zappers, TV and mobile phone towers

2. Reflection from stationary objects

The operator shall ensure that the radar beam is not being reflected away from the direction in which it is being aimed by stationary objects as this may lead to incorrect target in identification

Note: Typical stationary reflective objects are advertising hoardings, traffic signs, parked vehicles, metallic fences, sheds and phone boxes

3. Detection area

The operator shall take into account the full detection area and the fact that the speed of any moving object within the detection area could be being measured at any given time

Note: The detection area varies with different makes of radar device

4. Traffic density

The operator shall take into account the traffic density at the site at the time of measurement to ensure that targets can be clearly identified

5. Extraneous moving objects

The operator shall take into account the fact that moving objects which are not on the roadway/track being monitored can be within the detection area

Note: Such objects can be on adjacent service roads or highways, on the other side of divided roads, on properties bordering the roadway, or there may be trains on adjacent railways

6. Alignment

The operator shall ensure the beam of the radar device is related to the flow of traffic as follows

- (A) For slant radar devices, as near as possible to being parallel to the plane of the roadway and at the angle specified by the manufacturer, within the manufacturer's specified tolerances

Note: The operator should be aware of the fact that if a slant radar antenna is not aligned in accordance with the manufacturer's specifications, the speed measured by the radar device will be greater or less than the true speed of the target accounting to whether the angle to the flow of traffic is smaller or larger than specified

- (B) For direct radar devices, as close as possible to being directly in line with the direction of travel of the target

Note: The operator should be aware of the fact that if a direct radar antenna is not aligned with the direction of travel of the target the speed measured by the device can be less than the true speed of the target. This is referred to as this "cosine angle effect" because the measured speed is equal to the true speed multiplied by the cosine of the angle between the antenna and the direction of travel of the target and hence cannot be higher than the true speed

CARE OF EQUIPMENT

Radar speed measuring devices are precision instruments and as such should be handled with extreme care. Please DO NOT DROP OR KNOCK them and always store in the travelling case supplied when not in use.