



23 August 2018

REF NUMBER: IR-01-18-7876

Alex Wills
fyi-request-7033-3e319e40@requests.fyi.org.nz

Dear Alex

I refer to your Official Information Act request of 18 December 2018 in which you asked for advice on whether Police takes the accuracy of its speed testing equipment into account when issuing tickets.

You requested:

- 1. Can you clarify very specifically whether the accuracy of their speed testing equipment is taken in to account either by the officer or when the speed equipment is calibrated?*

All radars used by New Zealand Police are accurate to 0.6 km/h. The measurement error of 0.6 km/h quoted in every radar certificate of accuracy applies to the use of the radar unit to measure any unknown speed. The value of 0.6 km/h was calculated by IRLNZ (now Measurement Standards Limited of New Zealand) in accordance with the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by the International Standards Organisation. This guide is regarded internationally as best practice for the calculation of uncertainties in measurements.

All speed detection equipment operated by Police, and all the calibration test equipment used to test the accuracy of such devices, is taken into account before a certificate of accuracy is issued.

The calculated uncertainty is intended to cover use in the field and the number displayed on the radar device is always rounded down, so that an additional calculation of the speed is not required by the officer when issuing an infringement. The uncertainty of +/- 0.6 km/h is largely determined by the fact that the Stalker display only displays in steps of 1kph. The accuracy of the radar unit is actually estimated by IRL to be better than +/-0.03 kmh. This is in agreement with measurements made at the National Institute of Standards and Technology (a United States based standards laboratory). The Certificates of Accuracy issued by the Police Calibration Service report the results of accurate measurements traceable to the New Zealand standards of measurement. The measurement uncertainty quoted indicates that the speed measurement devices are fit for the purpose of road speed measurement. The underlying accuracy of the radar is significantly better than 0.6 km/h.

You have the right to complain to the Ombudsman and seek an investigation and review of my decision if you are not satisfied with the way I have responded to your request.

Yours sincerely

Superintendent Steve Greally
National Manager Road Policing