

NIWA UV Risk Indicator

(for schools, pools, beaches, public places, and shop windows)



UV Index Display at Goldrush
(powered from the 4WD's cigar lighter jack)

A UV Index display meter, which shows the current level of sunburning UV radiation, has been developed by the National Institute of Water and Atmospheric Research (NIWA) in consultation with the Cancer Society of New Zealand. The first prototype was installed in November 2003 at the Molyneux Aquatic Centre in Alexandra Central Otago. The unit on display here was deployed at the Goldrush multiport event in March 2003 (pictured at left). Units like this are available for purchase from NIWA in limited quantities.

A detector senses the amount of sun-burning UV radiation present and the information is displayed in terms of the UV Index, which is the internationally-agreed scale for reporting UV to the public, on a large board rather like the fire danger signs we see around the country. The main difference is that the pointer moves automatically in response to the changing UV, for example as clouds move overhead. As well as displaying the actual UV Index, additional information about appropriate behavioural responses is also provided, which should be displayed nearby (pictured below). These prototypes operated successfully over the past summer.

- Dimensions:
width: 900 mm, height: 600 mm, depth: 10mm
- Calibration:
Initial calibration provided by NIWA
- User-adjustable calibration:
Using NIWA Clear Sky UV predictions on the internet
- Weather Resistance:
This version of the UVI display is suitable for indoor operation, and for outdoor operation only in locations that are protected from extreme weather and vandals. The sensor is fully weatherproof.
- Power: 12 Volt (mains plug pack supplied)
- Advertising space for sponsor's logos
- Chart of behavioural messages included
- Three-year service contract available (\$500)
- Cost: \$2990 + GST

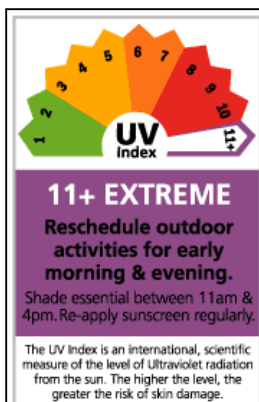


UV Index Display under test at Lauder

Installation costs are the responsibility of the purchaser. The purchaser may choose to enclose the display unit a secure vandal-proof enclosure. The

sensor must be located within 20 m of the display, in an area that is unobstructed by shadows and has a good view of the sky. To maintain measurement accuracy, the sensor must be accurately levelled, and easily accessible for weekly cleaning with a damp cloth.

The technology developed by NIWA is also used in a fully weatherproof and vandal resistant version UV display, similar to the version that was installed at Thorndon Pool in Wellington in Dec 2003. Information about these stronger weatherproof units is available from Tasmanstudios (<http://www.tasmanstudios.co.nz/>).



Visual brightness or air temperatures are not good indicators of UVI. In the New Zealand summer, the peak UVI is about 13. Its value depends on the sun angle and the ozone amount. On a clear winter's day the peak UVI is about 1 in the South, and 2 to 3 in the North of the country. At night the UVI is always zero.