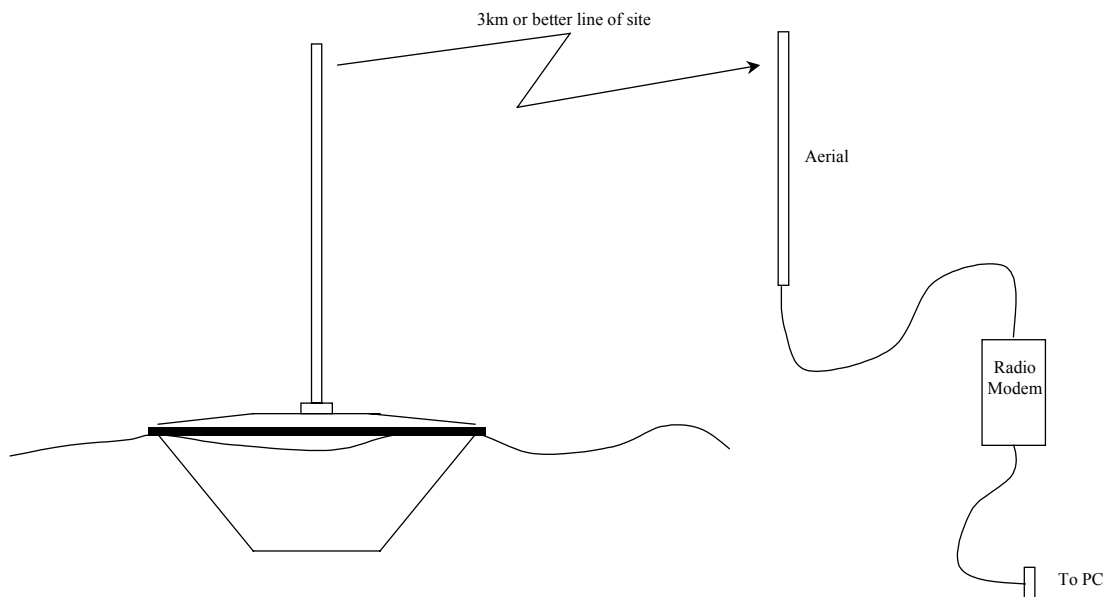


# Free Floating Wave Height Sensor With Telemetry



The Free-Floating Wave Height Sensor is a small (0.42 x 0.42 x 0.15m), highly portable (10kg) and robust free-floating wave height sensor. The unit is designed to be easily deployed and recovered by one man. It has been designed for use particularly for wash measurement and for sea state monitoring. The unit has the following functions:

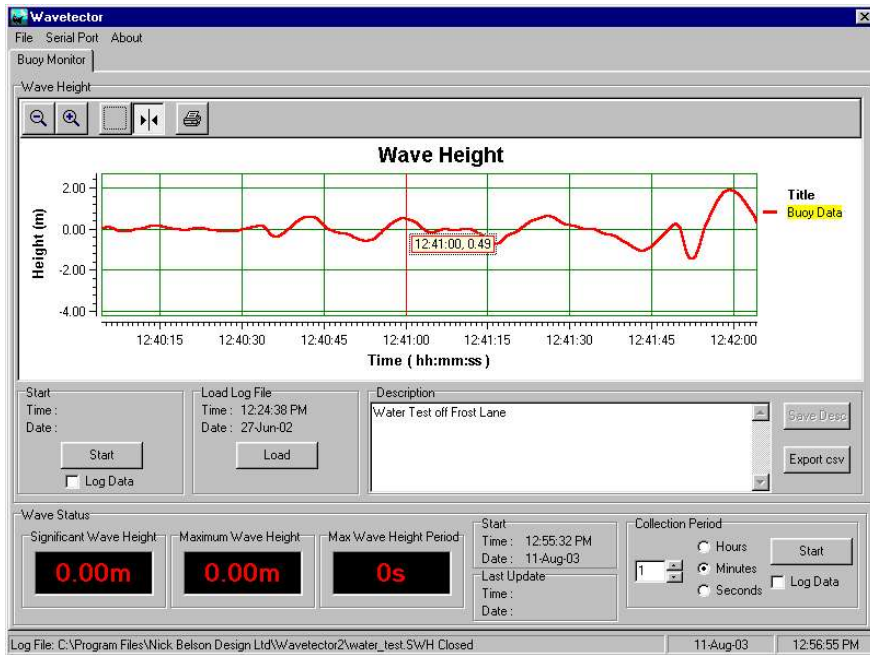
- To provide a wave profile at a 5Hz rate.
- To calculate the significant wave height (the average of the 1/3 highest waves), the average wave period, the maximum wave height and period over a time of up to 2 hours.
- Other options including wave period spectrum and GPS to report position of buoy are available.

Communication with the buoy is via radio telemetry modems which can be factory programmed to operate on a number of frequencies (see table overleaf). The standard UK version operates on a free to use frequency, with appropriate power output to permit a range of up to 3km line of site. A range of up to 19km line of site is possible on an appropriate licensed frequency.

The communications protocol employed allows for live wave height data to be stored on board the buoy for up to 29 minutes, in case of contact being lost with the buoy (ie out of range or direct line of sight obscured). The significant wave height and other statistical output can be calculated on periods of up to two hours.

At the receiving end, a radio modem and aerial are plugged into the users PC (portable or desktop) and 12V power applied. The supplied Windows user interface software gives control over the buoy and displays the statistics. Options are also given to log the captured data and to export the data into a Comma Separated Variable (.csv) format that is compatible with most spreadsheets. Live wave height data may also be reloaded from disk and viewed directly within the application, which allows the user to zoom in and out and make measurements using built-in cursors.

The accuracy of the live data is within 0.06m.



PC Windows User Interface

## Specification

<b>Physical:</b>	
Size:	420mm (round) x 150 mm (Plus aerial height)
Weight:	10kg
<b>Radio Telemetry:</b>	
Fixed Frequency Ranges:	147MHz to 174MHz VHF 400MHz to 500MHz UHF 868MHz to 920MHz UHF
Range:	3km to 19km depending on frequency and power
<b>Time Between Charges:</b>	12 Hours
<b>User Interface:</b>	PC Windows Based, RS232 Port Required
<b>Accuracy:</b>	±0.06m



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