1 INTRODUCTION

This document covers the operation of the Model 740 Portable Water Level Recorder, when used with Valeport Ltd TideLog PC software for Windows™.

1.1 DESCRIPTION

The Model740 is a small cost effective Water Level Recorder, specifically designed for applications where the user requires an accurate record of water height or level, rather than the realtime displays available from the larger Model 710 Tide Gauge system.

Comprising a corrosion resistant, titanium housed, vented pressure transducer, connected via a 20m vented (standard) cable to an above the water surface, battery powered logger, the Model 740 is simple to install, and requires minimal maintenance.

The logger is powered by 4 "D" type cells, which, together with the 128kbyte memory allows operation for 2 years at a 20 minutes cycle with 15 second bursts.

The burst length, cycle time, delay start date/time and site information is set using the PC software package supplied. This program also allows the calibration to be set up, battery voltage to be checked, the time and date to be set, and the recorded data to be extracted in a spreadsheet compatible format.

After switching on, a flashing LED signals that the instrument is working.

The addition of the radio option allows the calibration to be set up, battery voltage to be checked, the time and date to be set and the recorded data to be extracted from sites remote from the actual 740 unit. The power switching function in the 740 radio unit allows both the radio and/or 740 to be powered either internally or externally. Real time data is also a feature.

1.1.1 SPECIFICATION

Transducer

Type:	Druck PDCR 1830 (titanium shelled, vented strain gauge) with mounting bracket.
Range:	Standard 10 dBars (approx. 10 metres water depth). Other ranges available.
Accuracy:	± 0.1% Full Scale
Calibration:	Held within the logging unit.
Dimensions:	18mm diameter x 80mm excluding mounting plate

Logging unit

Housing:	Black anodized aluminum. Waterproof to IP67 (0.5m for 30 secs) with connectors mated, but transducer connector includes vent to atmosphere. The electronics are sealed from vent.
Internal power:	4 "D" cells within housing. 1.5V Alkaline cells provide power for over 2 years at 20 minute sampling with burst length of 15 secs, in logging only mode. The unit will also accept 3.6V lithium 'D' cells for extended life or radio option.
External power:	6-15volts. (except when used with radio transmitter module 12V DC max.)
Memory:	128kbytes solid state, allowing over 65,000 data points. Equivalent to over 900 days at 20 minute sampling. New data file created every time the unit is switched on.
Sampling:	Raw data sampled at 4 Hz and data logged as average over burst. Burst length selectable between 1 and 60 seconds in 1 second steps. Time between burst cycles (Burst cycle time) selectable between 5 and 1440 minutes [1 day] in 5 minute steps.
Resolution:	Data logged to 1mm resolution. Raw data acquired at 14 bit resolution
Comms:	RS232 via 3m cable to PC.
Dimensions:	Housing 47 x 110 x 235mm
Weight:	1.7Kgf (approx.) including batteries