

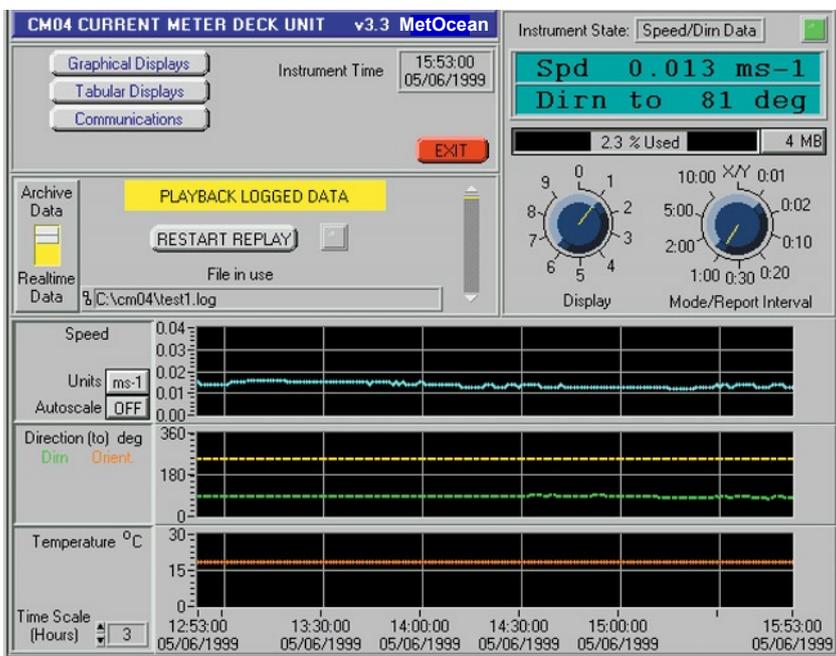


The **CM-04** consists of four piezoelectric transducers and acoustic mirror positioned to measure velocities in two axes, a flux-gate compass unit and a temperature sensor. These, combined with high stability electronics, user-friendly controls and the titanium components, provide for an accurate, stable and durable oceanographic instrument.

All data is recorded to the flash memory card. Current supported capacities range from 4 to 20 Mbytes.

The recording interval of the instrument is set by an interval selector switch. Intervals range from 0.5 seconds to 10 minutes. When a 1 minute interval is selected, and a 4 Mbyte flashcard and standard alkaline battery are used, the maximum duration of recording in continuous mode is in excess of 10 months.

The **CM-04** can be configured as a real-time instrument by interfacing via a radio telemetry link or direct cable to an IBM compatible computer running Windows 2000/NT/XP and the MetOcean display software.



The use of a moored instrument is the standard method of obtaining information about circulation of ocean waters. The **CM-04** acoustic current meter is a self-contained instrument that can be moored to record vector-averaged ocean currents and water temperature. The instrument has been specifically designed for the accurate measurement of solitons and other high frequency current phenomena. Using the latest in high speed, low power, embedded microprocessor technology and flash memory the instrument will operate for extended durations in continuous sampling mode.

## TECHNICAL SPECIFICATION

### OVERVIEW

- Motorola 68HC705 microprocessor
- Real Time Clock, battery backed. Accuracy of  $\pm 2$  seconds per day at 25°C
- 2 Line x 16 Character Liquid Crystal Display
- Averaging Interval, user selectable from 0.5 seconds to 10 minutes
- 30 samples per second sampling rate
- Continuous vector averaging

### SPEED

- Range: 0 to  $\pm 400$  cms<sup>-1</sup>
- Accuracy:  $\pm 1$  cms<sup>-1</sup> or  $\pm 4\%$
- Resolution: 1 mms<sup>-1</sup>

### DIRECTION

- Type: Flux-gate compass
- Range: 0 to 360°
- Accuracy:  $\pm 4^\circ$
- Resolution: 1°
- Tilt Limit:  $\pm 35^\circ$

### TEMPERATURE

- Range: -3°C to +37°C
- Accuracy:  $\pm 0.2^\circ\text{C}$
- Resolution:  $\pm 0.1^\circ\text{C}$

### POWER REQUIREMENTS

- 9-16VDC, 4mA at 12VDC
- 28 Amp hour Alkaline Battery Standard
- Lithium Battery Packs also available

### DEPTH RATING

- Safe Operating Depth of 650 m
- Optional 1100/2000 m and 3000 m pressure case

### MOORING LOAD

- 6,700 kg in-line tension

### COMMUNICATIONS

- Passive current loop
- 2400 baud, 8 data bits, 1 stop bit, no parity
- ASCII format

### EXTERNAL HARDWARE

- Titanium

### DATA RECORDING SYSTEM

- Flashcard memory, series II, II+ sizes 4, 10, 20 and 40 Mbytes

### DEPLOYMENT DURATION

- 10 months typical with Alkaline battery pack
- >13 months with Lithium battery pack

### WEIGHT IN AIR

- 33 kg with standard pressure case
- 50 kg with deep water pressure case

### DIMENSIONS

- 1155mm (H) x 195mm (W) x 195mm (D)