# Tide and Wave Recorders

## Measure more, deploy longer, download faster

RBR tide and wave loggers offer flexible measurement schedules, long wave burst samples, expanded memory and power for extended deployments, and faster download of large data files.

### Features

- 6Hz sampling
- 30M measurements
- Flexible tide averaging
- Fast USB download speed
- Low frequency wave detection
- Intermittent and continuous burst ability

Configurations:

| | |
|---|---|
| **RBR*virtuoso* D\|tide** | pressure recorder with tidal averaging |
| **RBR*duo* T.D\|tide** | pressure and temperature recorder with tidal averaging |
| **RBR*virtuoso* D\|wave** | pressure recorder with intermittent and continuous wave burst and tidal averaging |
| **RBR*duo* T.D\|wave** | pressure and temperature recorder with intermittent and continuous wave burst and tidal averaging |

The tide and wave recorders provide the ease and flexibility to establish the best sampling regime for your measurements. Both loggers take averages of the pressure readings over longer periods of time and at rates up to 6Hz to provide accurate tide level readings. The wave recorder bursts continuously or intermittently making it easier to measure boat wakes or other infrequent phenomena. The large number of burst samples makes low frequency waves easier to detect, while the fast sampling resolves high frequency waves. Wave data exports to Matlab®, Excel® or text files make post processing with your own algorithms simple. Ruskin performs wave analysis, to provide basic information about the wave composition (e.g. wave energy, $H_{1/3}$, $T_{1/3}T_{ave}$ and $H_{ave}$). Like all RBR products the RBR wave and tide loggers are designed to be easy to configure and easy to use.

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## Specifications

### Physical

| | |
|---|---|
| Power: | 8 or 16 3V CR123A cells |
| Communication: | True USB and RS-232/485 |
| Storage: | ~30M readings |
| Clock accuracy: | ± 60 seconds/year |
| Size: | ~260 or 395mm x Ø63.5mm |
| Weight: | 960g in air, 430g in water |
| Housing: | Plastic |

### Tide

| | |
|---|---|
| Averaging rate: | >1s, 1 to 6Hz |
| Averaging duration: | 1s to 24h |
| Sampling period: | 1s up to 24h |

### Waves

| | |
|---|---|
| Burst rate: | >1s, 1 to 6Hz |
| Samples per burst: | 512 to 32768 |

### Pressure

| | |
|---|---|
| Range: | 20/50m (dBar) |
| Accuracy: | ±0.05% full scale |
| Resolution: | <0.001% full scale |
| Time Constant: | <10ms |
| Drift: | ~0.1%/year |

### Temperature

| | |
|---|---|
| Range: | -5˚C to 35˚C |
| Accuracy: | ±0.002˚C |
| Resolution: | <0.00005˚C |
| Time Constant: | ~1s (~0.1s option available) |
| Drift: | ~0.002˚C/year |


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