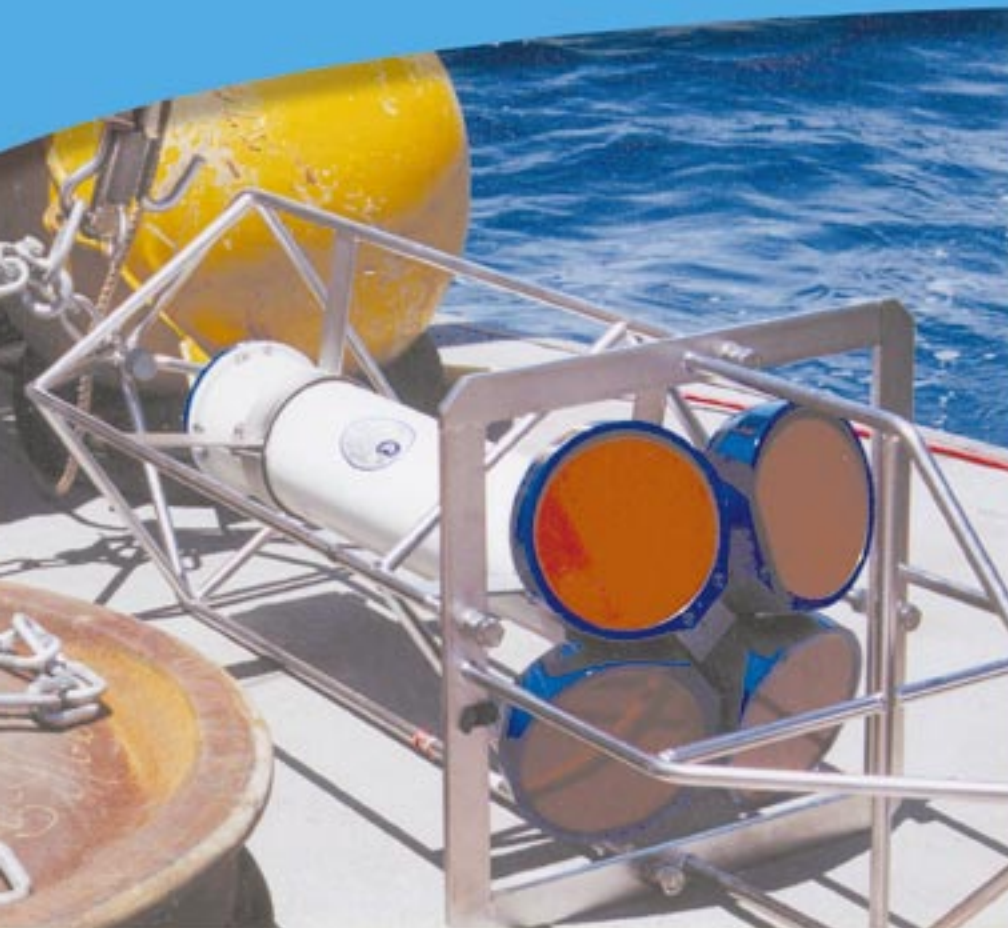


Workhorse *Long Ranger* ADCP

When you have a big job, get an instrument fit for the task.



400...500...600 meters of profiling range

Cost-effective extended capability

- Provides the longest profiling range available from a self-contained ADCP.
- Patented, BroadBand signal processing produces precise measurement, allowing frequent sampling with long battery life.

Protect your investment with Workhorse reliability

- Long Ranger inherits the Workhorse-family electronics that have been proven in thousands of RDI ADCPs.
- Set it and forget it: three, six, nine month-long successful deployments from polar waters to tropics.

Programmable modes for deployment flexibility

Mode	High Power	Low Power
Long Range	600m	430m
High Precision	500m	270m

The name says it all—

long range and long term, the Long Ranger is the best choice for gathering detailed data on seasonal and annual current structure fluctuations for scientific research and offshore oil and gas applications.

Hundreds of Long Ranger units are currently deployed on:

- environmental monitoring buoys,
- offshore oil rigs, and
- polar research moorings

The highly flexible Long Ranger unit is available in three product configurations: self-contained, direct reading, or remote-head—depending upon your application requirements.

Third Party Solutions:

Collect data at your desk - The Long Ranger is designed to operate in real time data mode. Third party products are available for acoustic and radio data transfer direct to your location.

Don't sweat the details—RDI works with an array of qualified vendors to support your mooring applications with a variety of cages, flotation and bottom mounts.



RD Instruments

Acoustic Doppler Solutions

Workhorse Long Ranger ADCP

Self-Contained 75 kHz

Typical Performance (maximum power)

Depth Cell Size ^a	Range (m), High Res. Mode	Std. Dev. (mm/s) ^b , High Res. Mode	Range (m), Long Range Mode	Std. Dev. (mm/s) ^b , Long Range Mode
4m	410	197	510	343
8m	453	71	556	123
16m	498	31	603	55
32m	543	19	650	34

Notes: a) user's choice of depth cell size is not limited to the typical values specified, b) single-ping standard deviation (Std.Dev.)

Profile Parameters

Not designed for use on moving vessels

Velocity accuracy: $\pm 1\%$ of the water velocity relative to the ADCP $\pm 5\text{mm/s}$.

Velocity resolution: 1mm/s

Velocity range: $\pm 5\text{m/s}$ (default)
 $\pm 10\text{m/s}$ (maximum)

Depth cell size: 4-32m

Number of depth cells: 1-128

Ping rate: 1 Hz (typical)

Echo Intensity Profile

Vertical resolution: depth cell size

Dynamic range: 80 dB

Precision: $\pm 1.5\text{dB}$ (relative measure)

Transducer and Hardware

Beam angle: 20°

Configuration: 4-beam, convex

Internal memory: Unit comes with 48MB memory card, standard.

Communications: Serial port selectable by switch for RS-232 or RS-422. ASCII or binary output at 1200-115,400 baud.

Power

DC input: 20-60VDC. Four internal alkaline battery packs.

Voltage: 42V DC (new) 28V DC (depleted)

Capacity (each pack): @ 0°C:
400 Watt hours

Transmit at 35V:

- 1000W (max power)
- 80W (low power, Long Range mode)
- 20W (low power, BroadBand mode)

Standard Sensors

Temperature (mounted on transducer)

- **Range:** -5° to 45°C
- **Precision:** $\pm 0.4^\circ\text{C}$
- **Resolution:** 0.01°

Tilt

- **Range:** $\pm 15^\circ$
- **Accuracy:** $\pm 0.5^\circ$
- **Precision:** $\pm 0.5^\circ$
- **Resolution:** 0.01°

Compass (fluxgate type, includes built-in field calibration feature)

- **Accuracy:** $\pm 2^\circ$
- **Precision:** $\pm 0.5^\circ$
- **Resolution:** 0.01°
- **Maximum tilt:** $\pm 15^\circ$

Pressure Sensor

- **Maximum pressure:** 1500m
- **Short-term uncertainty:** $\pm 0.1\%$
- **Maximum drift:** $\pm 0.25\%$

Environmental

Standard depth rating: 1500m.

Operating temperature: -5° to 45°C

Storage temperature: -30° to 75°C

Weight in air:

SC 86kg, DR 58kg, ExtBC 39kg

Weight in water:

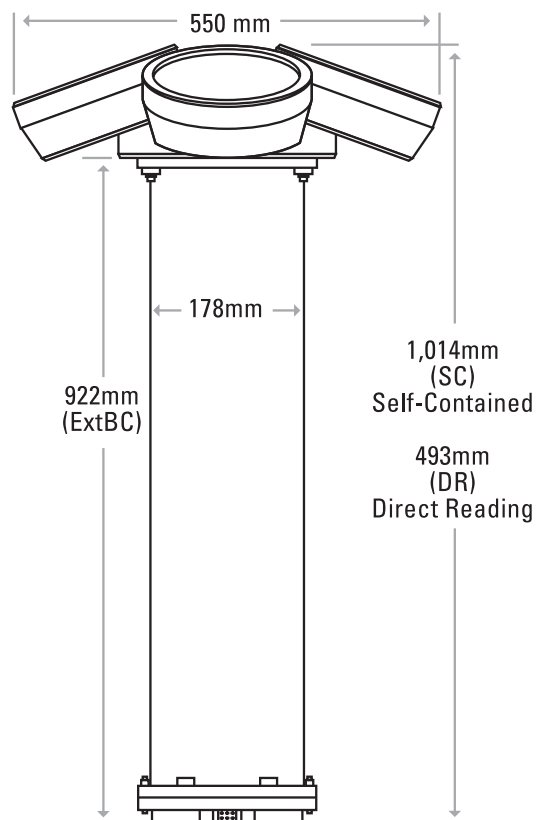
SC 55kg, DR 36kg, ExtBC 16kg

Software

Use RDI's Windows™-based software for the best results:

- WinSC — Data Acquisition
- WinADCP — Data Display and Export
- RDITools - Utilities

Dimensions



Available Options

- Memory 16-448MB PCMCIA cards (X2)
- External Battery Case (ExtBC)
- Mooring accessories: In line and bottom mount accessories available from Flotation Technologies and Mooring Systems.
- Remote head configuration
- 3000m pressure-rated configuration

For More Information

Call, e-mail or visit our web page.
Ask for our Primer about ADCPs.

Internet: www.rdinstruments.com

RD Instruments

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