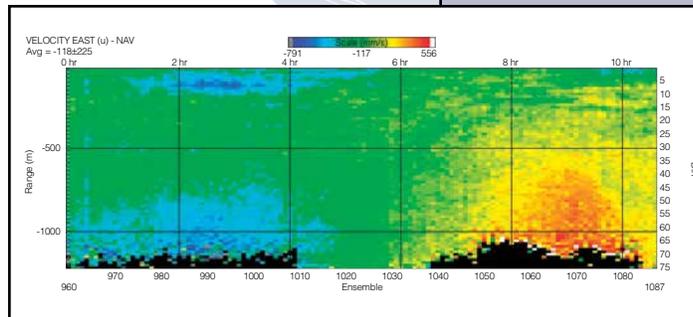
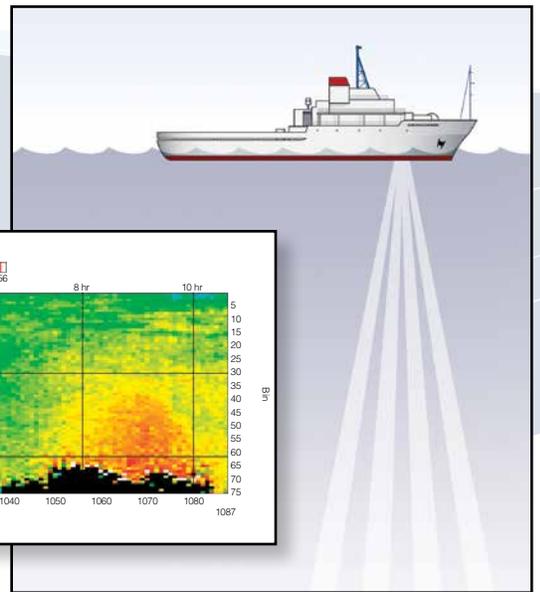
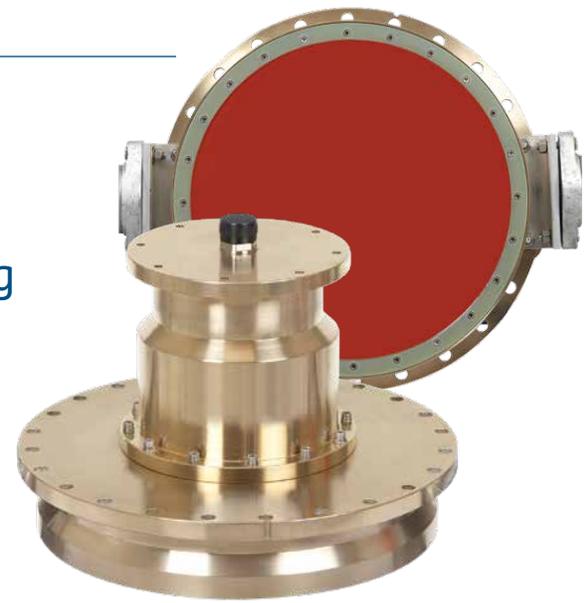


Ocean Surveyor

Vessel-Mount Long Range 3D Current Profiling

For over thirty years, Teledyne RD Instruments has been the preeminent supplier of Acoustic Doppler Current Profiling (ADCP) instrumentation for open ocean applications. Teledyne RDI's vessel-mounted OCEAN SURVEYOR family of ADCPs are the only instruments capable of collecting detailed maps of the distribution of water currents and suspended materials through the water column and along the ship's path—at depths and resolutions previously considered unattainable. In real time, the ADCP is also used to aid in situ decision-making, to adapt field operations, and to understand current regime characteristics.



Frequency	Range (m)	Cell Size (m)
38kHz	>1000	24
75kHz	>700	16
150kHz	>400	8

PRODUCT FEATURES

- **Versatile:** Broadband signal processing combines with Narrowband processing to provide the ultimate in data versatility.
- **Compact:** Patented phased array transducers significantly reduce the transducer size and weight for ease of installation.
- **Comprehensive:** The Ocean Surveyor combines current profiling, backscatter profiling, and Doppler Velocity Log capability all within a single instrument.

- **Four-beam solution:** Patented phased array 4-beam design provides increased data reliability and quality assurance.

Applications:

- Climate studies
- Mid-ocean frontal mapping
- Fisheries research
- Deep-water cable-laying projects





Ocean Surveyor

Vessel-Mount Long Range 3D Current Profiling

TECHNICAL SPECIFICATIONS

	Long Range Mode	38 kHz		75 kHz		150 kHz		
Water Profiling	Vertical resolution cell size ¹	Max Range ²	Precision ³	Max Range ²	Precision ³	Max Range ²	Precision ³	
	4					>350 m	30 cm/s	
	8			>650m	30 cm/s	>400 m	16 cm/s	
	16	>1000 m	30 cm/s	>700 m	16 cm/s			
	24	>1000 m	20 cm/s					
	High Precision Mode	38 kHz		75 kHz		150 kHz		
Water Profiling	Vertical resolution cell size ¹	Max Range ²	Precision ³	Max Range ²	Precision ³	Max Range ²	Precision ³	
	4					>225 m	15 cm/s	
	8			>425 m	15 cm/s	>250 m	8 cm/s	
	16	>900 m	15 cm/s	>450 m	7 cm/s			
	24	>950 m	10c m/s					
Profile Parameters	Velocity accuracy (typical)	±1.0% ± 0.5 cm/s		±1.0% ± 0.5 cm/s		±1.0% ± 0.5 cm/s		
	Velocity range	-5 to 9m/s		-5 to 9m/s		-5 to 9m/s		
	Number of depth cells	1-128		1-128		1-128		
	Maximum ping rate	0.4 Hz		0.7 Hz		1.5 Hz		
Bottom Track	Maximum altitude (precision <2cm/s)	1700 m		950 m		540 m		
		Range Accuracy = <±2% actual range ⁴						
Echo Intensity Profile	Vertical resolution	Depth cell size, user configurable						
	Dynamic range	80 dB						
	Precision	±1.5 dB						
Transducer and Hardware	Beam angle	30°						
	Configuration	4-beam, phased array						
	Communications	RS-232 or RS-422 hex-ASCII or binary output at 1200-115,200 baud						
System Power	AC input	90-250 VAC, 47-63 Hz						
	Power	1400 W						
Software	Use TRDI's Windows™-based software for best results: VMDAS — Vessel-Mount Data Acquisition System; WinADCP —Data Display and Export							
Options	Velocity for advanced post processing							
Environmental	Operating temperature	-5° to 45°C						
	Storage temperature	-30° to 60°C						
Standard Sensors	Temperature (mounted on transducer)	Range -5° to 45°C, Precision ±0.1°C, Resolution 0.03°						
System Components	<ul style="list-style-type: none"> • 38, 75, or 150 kHz transducer • 19" rack-mount electronic chassis • All-purpose deck box • Gyrocompass interface board • LCD gyro offset control display 							
	User to supply compass input or GPS navigation data and NMEA tilt information							
	Dimensions	38 kHz: 914.4 mm dia.; 75 kHz: 480 mm dia.; 150 kHz: 305 mm dia. <i>(line drawings available upon request)</i>						

¹ Ranges at 1 to 5 knots ship speed are typical and vary with situation.

² Single-ping standard deviation.

³ User's choice of depth cell size is not limited to the typical values specified.

⁴ Excludes errors introduced by changes in speed of sound profile, by tilting of transducer, and by slope of bottom.