



ORDERS ASSOCIATES RESEARCH SYSTEMS LLC

OCEANOGRAPHIC EQUIPMENT LEASING
 MOORING DESIGN AND CONSTRUCTION

EQUIPMENT LIST

Thursday, September 26, 2019

EQUIPMENT	#	DESCRIPTION	SETUP	MONTH	DAY
NEW! Nortek Aquadopp Single Point Doppler Current Meters	8	Single bin Doppler volume sampler current meter. 2 - 300 meter units, 4 - 2000 meter units, and 2 6000 meter units. All units have full range pressure sensors, temperature, and 9 MB internal memory. Comes with mooring clamps and software.	\$120	\$1800 \$2400 \$3000	\$60 \$80 \$100
NEW! Hawkeye H22PX Handheld Fathometer	1	Battery operated (4AA) hand held fathometer. Range from 2.5 to 199 feet (.7 to 60.1 meters), temperature, waterproof to 200 feet for diver operation	\$15	\$150	\$5
Current Meters					
TRDI StreamPro ADCP with float	2	Acoustic Doppler Current Profiler (multi bin) with float, for measuring currents in streams, irrigation canals, drainage ditches, and estuaries. Automatically ranges from 0.1 to 6 meters. Bluetooth connection.	\$225	\$3000	\$100
TRDI ChannelMaster 600 kHz Horizontal ADCP	2	Horizontal Acoustic Doppler Current Profiler (multi bin). 10-meter pressure sensor, vertical stage transducer. Measures currents horizontally across irrigation canals, streams, and rivers. 4 MB backup memory. 25 meter data/power cable. Up to 90 meter range. Must be fixed mounted. Requires 12 VDC external power.	\$225	\$3300	\$110
WaterLog H-500XL SDI-12 Data Logger	1	For use with ChannelMaster HADCP or any SDI-12/Analog/Digital output sensor. 256 MB memory expandable with Compact Flash. Remote access via radio, cellular, or landline modem. Requires 12 VDC external power.	\$60	\$300	\$10

RDI RiverRay 600 kHz ADCP with Trimaran float and integrated GPS	1	Acoustic Doppler Current Profiler (multi bin) with float ant GPS for measuring currents in rivers, streams, and estuaries. Automatically ranges from 0.4 to 100 meter. 5 meter data/power cable. Must be fixed mounted or towed. 5 meter data/power cable or Bluetooth connection.	\$225	\$3600	\$120
RDI Workhorse 300 kHz Horizontal ADCP (HADCP, 300m)	1	Horizontal Acoustic Doppler Current Profiler (multi bin). 20-meter pressure sensor. Measures currents horizontally across bays and rivers. 1 gig memory standard. 5 meter data/power cable. Must be fixed mounted. 25 meter data/power cable (for logging to PC) and double external battery pack (for autonomous deployment) available (see below).	\$225	\$3300	\$110
RDI Workhorse Sentinel 300 kHz ADCP (150m) with Bottom Tracking and Waves Firmware	2	Self-contained Acoustic Doppler Current Profiler (multi bin). Bottom tracking, 200-meter pressure sensor, temperature, and tilt. Measures currents (directional wave spectra firmware/software available at an additional charge). 512 meg memory standard. 5 meter data/power cable. Can be used moored, bottom mounted, or vessel mounted. Bottom mounts, tension mooring frames, and double external battery pack available.	\$300 (Includes 1 28 D-cell battery pack)	\$3300	\$110
RDI Workhorse Sentinel 600 kHz ADCP (50m) with Bottom Tracking and Waves Firmware (1 with Water Modes 5, 8, and 11).	3	Self-contained Acoustic Doppler Current Profiler (multi bin). Bottom tracking, 50-meter pressure sensor, temperature, and tilt. Measures currents and directional wave spectra (firmware/software included). 512 meg memory standard. 5 meter data/power cable. Can be used moored, bottom mounted, or vessel mounted. Bottom mounts, tension mooring frames, and double external battery pack available.	\$300 (Includes 1 28 D-cell battery pack)	\$2850*	\$95
RDI Workhorse Sentinel 1200 kHz ADCP (20m) with Bottom Tracking and Waves Firmware	2	Self-contained Acoustic Doppler Current Profiler (multi bin). Bottom tracking, 20-meter pressure sensor, temperature, and tilt. Measures currents and directional wave spectra (firmware/software included). 512 meg memory standard. 5 meter data/power cable. Can be used moored, bottom mounted, or vessel mounted. Bottom mounts, tension mooring frames, and double external battery pack available.	\$300 (Includes 1 28 D-cell battery pack)	\$2550*	\$85

RDI Workhorse Sentinel 1200 kHz ADCP with Bottom Tracking, Water Modes 1, 5, 8, 11, and 12.	1	Acoustic Doppler Current Profiler (multi bin). Water modes 1(standard), 5 (very slow/shallow), 8 (fast/shallow), 11 (slow/shallow), 12 (high rate pinging) Bottom tracking, temperature, and tilt. 512 meg memory standard.). 512 meg memory standard. 5 meter data/power cable. Can be used moored, bottom mounted, or vessel mounted. Bottom mounts, tension mooring frames, and double external battery pack available.	\$300	\$3600	\$120
Double External Battery Pack for RDI Workhorse Sentinel ADCP	2	External housing holds 2 28-cell alkaline battery packs (included) in addition to the pack in the ADCP. "Y" adapter cable included.	\$300 (Includes 2 28 D-cell battery packs)	\$300	\$10
SUBS A2 ADCP Mount (click here for photo)	4	Streamlined buoy system for all RDI Sentinel Workhorse ADCP. Uses 2 14" Viny floats (included)	\$30	\$300*	\$10
TRDI Sentinel bottom mount frame	5	Aluminum bottom mount frame for TRDI Sentinel. Does not include weights.	\$30	\$300*	\$10
RDI Workhorse Sentinel ADCP Data/Power cable	3	25 meter data/power cable for RDI Sentinel Workhorse ADCP. Cables may be hooked together for 50 meter overall length.	\$30**	\$150*	\$5
InterOcean S4ADW (70m)	1	Solid state vector averaging current meter. Speed, direction, 70 meter pressure (4 mm resolution), temperature, conductivity, OBS and tilt. 20 meg memory. Adaptive directional wave measurement.	\$120 (\$400*** with lithium batteries)	\$2850*	\$95
InterOcean S4ADW (70m)	3	Solid state vector averaging current meter. Speed, direction, 70 meter pressure (4 mm resolution), temperature, conductivity, and tilt. 20 meg memory. Adaptive directional wave measurement.	\$120 (\$400*** with lithium batteries)	\$2550	\$85
InterOcean S4 (70m)	1	Solid state vector averaging current meter. Speed, direction, 70 meter pressure (4 mm resolution), temperature, conductivity. 128K memory.	\$120	\$2250	\$75
InterOcean S4 (1000m)	6	Solid state vector averaging current meters. Various configurations including	\$120	\$1500-\$1950	\$50-\$65

		speed, direction, 1000 meter pressure (6 cm resolution), conductivity, temperature, and tilt. 64K to 128K memory.			
InterOcean S110A	4	S4 computer interface. Requires 12v DC or 110v AC	\$30**	\$150*	\$5
S4ADW Mounting Frame	1	Aluminum bottom mount frame for S4ADW	N/A	N/A	\$10
Wave/Tide Gauges		DESCRIPTION	SETUP	MONTH	DAY
SeaBird SBE26PLUS (20 meter)	2	45 psia Paros Digiquartz pressure sensor, temperature, 32 Meg memory, 12 D-Cell housing. Includes tide and wave processing software.	\$120	\$1800*	\$60
SeaBird SBE26 (20 meter)	1	45 psia Quartzonix pressure sensor, temperature, 8 Meg memory. Includes tide and wave processing software.	\$120	\$1800*	\$60
20 meter data/power cable	4	Allows real time monitoring or data recovery without retrieving SBE26	\$30	\$150	\$5
SeaBird SBE4 conductivity sensor.	2	Adds non-pumped conductivity to SBE26 above. Logs directly to SBE26/SBE26Plus. Mount and cable included.	\$30	\$300*	\$10
RDI Workhorse Sentinel 300 kHz ADCP (100m) with Bottom Tracking and Waves Firmware	2	Self-contained Acoustic Doppler Current Profiler (multi bin). Bottom tracking, 100-meter pressure sensor, temperature, and tilt. Measures currents and directional wave spectra (firmware/software included). 512 meg memory standard. 5 meter data/power cable. Can be used moored, bottom mounted, or vessel mounted. Bottom mounts, tension mooring frames, and double external battery pack available.	\$300 (includes 1 28 D-cell battery pack)	\$3300*	\$110
RDI Workhorse Sentinel 600 kHz ADCP (50m) with Bottom Tracking and Waves Firmware	3	Self-contained Acoustic Doppler Current Profiler (multi bin). Bottom tracking, 50-meter pressure sensor, temperature, and tilt. Measures currents and directional wave spectra (firmware/software included). 512 meg memory standard. 5 meter data/power cable. Can be used moored, bottom mounted, or vessel mounted. Bottom mounts, tension mooring frames, and double external battery pack available.	\$300 (includes 1 28 D-cell battery pack)	\$2850*	\$95

RDI Workhorse Sentinel 1200 kHz ADCP (20m) with Bottom Tracking and Waves Firmware	2	Self-contained Acoustic Doppler Current Profiler (multi bin). Bottom tracking, 20-meter pressure sensor, temperature, and tilt. Measures currents and directional wave spectra (firmware/software included). 512 meg memory standard. 5 meter data/power cable. Can be used moored, bottom mounted, or vessel mounted. Bottom mounts, tension mooring frames, and double external battery pack available.	\$300 (Includes 1 28 D-cell battery pack)	\$2550*	\$85
InterOcean S4ADW (70m)	1	Solid state vector averaging current meter. Speed, direction, 70 meter pressure (4 mm resolution), temperature, conductivity, and tilt. 20 meg memory. Adaptive directional wave measurement.	\$120 (\$400*** with lithium batteries)	\$2550*	\$85
InterOcean S4ADW (70m)	3	Solid state vector averaging current meter. Speed, direction, 70 meter pressure (4 mm resolution), temperature, conductivity, OBS and tilt. 20 meg memory. Adaptive directional wave measurement.	\$120 (\$400*** with lithium batteries)	\$2850*	\$95
CTD Profilers and external sensors		DESCRIPTION	SETUP	MONTH	DAY
Sea-Bird SBE-19PlusV2 (3500m)	3	Pumped conductivity, temperature, 3500 meter pressure (5cm resolution), stainless steel protective cage. Internal or external recording. 64 meg memory. Can accommodate up to 6 external sensors (DO/OBS/pH/PAR/ORP/SCUFA)	\$120	\$2400	\$80
Sea-Bird SBE-19PlusV2 (600m)	1	Pumped conductivity, temperature, 600 meter pressure (5cm resolution), stainless steel protective cage. Internal or external recording. 64 meg memory. Can accommodate up to 6 external sensors (DO/OBS/pH/PAR/ORP/SCUFA)	\$120	\$2400	\$80
Sea-Bird SBE-19Plus (3500m)	2	Pumped conductivity, temperature, 3500 meter pressure (5cm resolution), stainless steel protective cage. Internal or external recording. 8 meg memory. Can accommodate up to 4 external sensors (DO/OBS/pH/PAR/ORP/SCUFA)	\$120	\$2400*	\$80
Sea-Bird SBE-43 DO Sensor	4	Pumped SBE DO sensor. Records directly to Sea-Bird SBE19 (above).	\$30	\$600	\$20
Sea-Bird SBE-18 pH/SBE-27 pH ORP Sensor	3	Range 0 to 14 pH, accuracy 0.1 pH, 1 second response time. Records directly to Sea-Bird SBE19 (above).	\$30	\$600*	\$20

Sea-Bird SBE-39 Temperature/Pressure Probe	1	600 meter pressure sensors (1.2 cm resolution), fast (0.5 second) temperature response, uses standard 9v alkaline or lithium battery, 150,00 records, only 2" x 14".	\$60	\$600*	\$20
Turner SCUFA Fluorometer for Chlorophyll A	1	Self contained underwater Fluorometer for Chlorophyll A with turbidity channel. Can be used with Sea-Bird SBE19 (above)	\$60	\$750*	\$25
Turner SCUFA Fluorometer for Rhodamine WT	5	Self contained underwater Fluorometer for Rhodamine WT with turbidity channel. Can be used with Sea-Bird SBE19 (above)	\$60	\$750	\$25
Biospherical PAR Sensor	1	Boispherical QSP2300L PAR sensor, 2000 meter. Records directly to Sea-Bird SBE19 (above).	\$60	\$600	\$20
Campbell Scientific OBS3+	8	Turbidity sensor Records directly to Sea-Bird SBE19 (above).	\$30	\$600	\$20
SeaBird SBE26/26Plus (20m, moored only)	3	45 psia Paros Digiquartz or Quartzonix pressure, temperature, conductivity, with tide and wave processing software, 1 to 32 Meg memory.	\$120	\$1800*	\$60
Fluorometers & Turbidity Sensors		DESCRIPTION	SETUP	MONTH	DAY
Turner SCUFA Fluorometer for Chlorophyll A	1	Self contained underwater Fluorometer for Chlorophyll A with turbidity channel. High capacity rechargeable Lithium Ion battery. Internally or externally recording. Can be used with Sea-Bird SBE19 (above)	\$60	\$750*	\$25
Turner SCUFA Fluorometer for Rhodamine WT	5	Self contained underwater Fluorometer for Rhodamine WT with turbidity channel. High capacity rechargeable Lithium Ion battery. Internally or externally recording. Can be used with Sea-Bird SBE19 (above)	\$60	\$750*	\$25
Turner SCUFA Fluorometer Lithium Ion Battery	8	High capacity rechargeable Lithium Ion battery for use with Turner SCUFA Fluorometer for fully autonomous operation.	\$30	\$300*	\$10
Turner 50 meter data/power cable	3	Allows real time monitoring or data recovery without retrieving SCUFA. Requires 12 volt DC power	\$30	\$150*	\$5
Campbell Scientific OBS3+	8	Turbidity sensor can be used with SBE19 CTD (or user application)	\$30	\$600*	\$20

Campbell Scientific OBS3A	1	Stand alone turbidity sensor with 100 meter pressure and temperature. Requires 3 D-Cell alkaline batteries.	\$60	\$750	\$25
Transponders and Releases		DESCRIPTION	SETUP	MONTH	DAY
ORE (EdgeTech) 8011M ORE/Edgetech/Benthos Mors/Oceano command unit	2	Sends all commands and ranges on most manufacturer's releases and transponders. Internal rechargeable battery or 110/220VAC	\$60	\$2400	\$80
ORE (EdgeTech) 8242XS (6000m)	9	Acoustic Release/Transponder, 6000m depth rating, 5500 kg release rating.	\$240	\$900*	\$30
ORE (EdgeTech) 8242XS Tandem Mounting Kit (click here for photo)	4	Allows two 8242XS Release/Transponders to be mounted in tandem such that triggering either will release the load. Maintains full working load rating of the 8242XS.	\$180	\$150*	\$5
ORE (EdgeTech) PORT (3500m)	3	Acoustic Release/Transponder, 3500m depth rating, 350 kg release rating.	\$240	\$900*	\$30
ORE (EdgeTech) PORT Tandem Mounting Kit	1	Allows two PORT Release/Transponders to be mounted in tandem such that triggering either will release the load. Maintains full working load rating of the PORT.	\$180	\$150	\$5
ORE (EdgeTech) 8011M	2	Command/Ranging Deck Unit. Battery or AC Powered. Sends all ORE/EdgeTech commands and Benthos commands	\$60	\$2400	\$80
ORE (EdgeTech) 8011AT	1	Command/Ranging Deck Unit. 115/230 VAC	\$60	NA	\$60
ORE (EdgeTech) 8011XS	1	Command/Ranging Deck Unit. Battery Powered	\$60	NA	\$35
ORE (EdgeTech) AMD200R	1	Command/Ranging Deck Unit. Battery Powered	\$60	NA	\$35
FloTec Float Collar (1000m)	5	For 8242XS. +60 lbs. net buoyancy, 1000m depth.	\$30	NA	\$5
Benthos ALP365 Pinger	8	Water activated pinger. Adjustable frequency from 25 to 40 kHz. Output settings of 162, 168, or 174 dB. Ping rate settings 2Hz, 1Hz, or 0.5Hz. Operates on 2 9v alkaline or lithium batteries. Uses APL-275A Pinger Locator (below)	\$30	\$150	\$5
Benthos DPL275A Pinger Locator	1	Diver operated directional hydrophone pinger locator. Works with all Benthos/Datasonics/RJE and	\$30	NA	\$25

		any pinger operating from 5 to 80 kHz. Rechargeable NMH battery. Includes charger and earphone.			
Water and Sediment Samplers		DESCRIPTION	SETUP	MONTH	DAY
6.2 Liter WildCo Alpha Horizontal Water Sampler (click here for photo)	1	Clear acrylic 6.2 liter horizontal water sampler. Sampler, 100' line, and messenger, all in a handy carrying case.	\$15	NA	\$5
2.2 Liter WildCo Alpha Horizontal Water Sampler (click here for photo)	2	Clear acrylic 2.2 liter horizontal water sampler. Sampler, 100' line, and messenger, all in a handy carrying case.	\$15	NA	\$5
10 Liter Niskin Bottle (click here for photo)	6	10 liter OceanTest Equipment Niskin bottle rigged for either line use. 5 units use standard internal bungee, 5 units are rigged with external closure mechanisms for clean sampling.	\$15	\$150*	\$5
Brass Messenger	3	For use with the above bottles	NA	\$30*	\$1
Petite Ponar Sediment Grab	1	6" x 6" (0.025 square meter) 2.4 liter stainless steel sediment grab	\$30	\$600*	\$20
Ponar Sediment Grab	1	9" x 9" (0.05 square meter) 8.2 liter stainless steel sediment grab.	\$30	\$600*	\$20
Meter Wheels		DESCRIPTION	SETUP	MONTH	DAY
Kahl Scientific	2	Snatch block meter wheel for ¼" cable, rated for 10,000 lbs., 99,999 meter reversible counter.	\$30	N/A	\$5
Small meter wheel (click here for photo)	1	Snatch block meter wheel for ¼" or ⅜" cable. 999 meter counter.	\$30	N/A	\$5
Portable Winches and Generators		DESCRIPTION	SETUP	MONTH	DAY
Deck Winch (click here for photo)	1	Complete stand alone system. 2000lb capacity, 5hp Honda powerpack, 1100' ¼" galvanized cable (2000' capacity), adapters for ship hydraulics.	\$60	N/A	\$50
Honda EU2000i Generator	2	Lightweight, quiet, portable 2000 watt generator. 2 20 amp 110VAC outlets, one 12 volt DC outlet. Units can be used with combiner below for 30 amp 110VAC 3800 watt output	\$30	N/A	\$25
Honda EU2000i Combiner kit	1	Allows 2 Honda EU2000i generators to be run in parallel for 30 amp 110VAC 3800 watt output	\$30	N/A	\$5

5KW Generator	1	110/220VAC, 8hp Honda engine. 4 110VAC outlets, 1 220VAC outlet	\$30	N/A	\$50
Mooring kits		DESCRIPTION	SETUP	MONTH	DAY
Complete kit for building ¼" steel cable moorings	2	Nicopress tool for ¼" sleeves, cable cutter, quick release, 2 Klein cable grips.	N/A	N/A	\$25
McMillan SeaCatch TR7 quick release	1	Toggle release for anchors, frames, etc. up to 7000 lbs. Vertical or horizontal pull to release. Safety pin secures release in locked position to avoid accidental release.	\$30	N/A	\$5
Floatation/Frames		DESCRIPTION	SETUP	MONTH	DAY
InterOcean Aluminum Buoy	1	110 cm Aluminum Sub-Surface buoy. 500 lbs buoyancy, 3000 foot working depth.	\$30	\$300	\$10
McLane G6600 deepwater glass floats (click here for photo)	4	3 10" glass spheres in a single plastic hard hat. 66 lbs buoyancy, 7000 meter depth rating. May be stacked for greater buoyancy.	\$30	\$150*	\$5
SUBS A2 ADCP Mount (click here for photo)	4	Streamlined buoy system for RDI Sentinel Workhorse ADCP. Uses 2 14" Viny floats (included)	\$30	\$300*	\$10
ADCP bottom/low current mount (click here for photo)	3	Aluminum base plate for use in low current environments. Can be weighted and placed directly on the bottom, or used with 4 11" trawl floats for tension mooring (see photo)	\$30	\$300	\$10
S4ADW/RDI Sentinel bottom mount frame	4	Aluminum bottom mount frame for S4ADW/RDI Sentinel. Does not include weights.	\$30	\$300*	\$10
Center hole floats (300m)	26	14" Viny floats, +48 Lbs., 300 meter working depth	N/A	N/A	\$2
Center hole floats (500m)	42	11" trawl floats, +17 Lbs., 500 meter working depth	N/A	N/A	\$1

*Monthly rate is nominal. Clients will be billed at daily rate.

**No setup fee if leased with instrument.

***Estimated setup cost. Actual cost will vary depending on price and availability of lithium cells.