



ORDERS ASSOCIATES RESEARCH SYSTEMS LLC
 OCEANOGRAPHIC EQUIPMENT LEASING
 MOORING DESIGN AND CONSTRUCTION

EQUIPMENT LIST

Monday, December 07, 2009

EQUIPMENT	#	DESCRIPTION	SETUP	MONTH	DAY
Current Meters					
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	3	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	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 Monitor 1200 kHz ADCP with Bottom Tracking, Water Modes 1, 5, 8, and 11.	1	Acoustic Doppler Current Profiler (multi bin). Water modes 1(standard), 5 (very slow/shallow), 8 (fast/shallow), 11 (slow/shallow), Bottom tracking, temperature, and tilt. 512 meg memory standard. 25 meter data/power cable. Can be used moored, bottom mounted, or vessel mounted. Fully autonomous deployment when used with external double battery pack below. Bottom mounts, tension mooring frames, and double external battery pack available.	\$225	\$3300	\$110
Double External Battery Pack for RDI Workhorse Sentinel ADCP	3	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)	\$150	\$5
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	4	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 S4 (1000m)	3	Solid state vector averaging current meters. Speed, direction, and tilt. 128K memory.	\$120	\$1500	\$50
InterOcean S4 (1000m)	2	Solid state vector averaging current meters. Speed, direction, 1000 meter pressure (6 cm resolution), conductivity, temperature, and tilt. 64K memory.	\$120	\$1950*	\$65
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)	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 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)	1	Solid state vector averaging current meter. Speed, direction, 1000 meter pressure (6 cm resolution), conductivity, and fast response temperature. 256K memory.	\$120	\$2250*	\$75
InterOcean S4 (1000m)	1	Solid state vector averaging current meter. Speed, direction, conductivity, and fast response temperature. 256K memory.	\$120	\$1950*	\$65
InterOcean S110A	4	S4 computer interface. Requires 12v DC or 110v AC	\$30**	\$100*	\$3
S4ADW Mounting Frame	1	Aluminum bottom mount frame for S4ADW	N/A	N/A	\$10

USGC Stream Gauge Kit	1	AquaCalc flow computer, 2 each Price AA and Pygmy current meters, hand winch with 75' conducting cable, 30 lbs bronze fish weight. Components may be leased individually.	\$60	\$1500	\$50
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)	3	45 psia Paros Digiquartz or Quartzonix pressure sensor, temperature, 1 to 8 Meg memory. Includes tide and wave processing software.	\$120	\$1200*	\$40
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 600 kHz ADCP (50m) with Bottom Tracking	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)	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
Sound Profilers		DESCRIPTION	SETUP	MONTH	DAY
Applied Microsystems SVPlus (500m)	1	Direct time of flight sound velocity, temperature, and pressure profiler. Sampling rate up to 10 Hz, 500 meter pressure sensor. 4 meg memory. Protective load cage.	\$120	\$1500*	\$50
CTD Profilers		DESCRIPTION	SETUP	MONTH	DAY

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 DO/OBS/pH/SCUFA sensors.	\$120	\$2400*	\$80
Sea-Bird SBE-19 (600m) (click here for photo)	2	Pumped conductivity, temperature, 600 meter pressure stainless steel protective cage. Internal or external recording. Can accommodate DO/OBS/pH sensors or DO/OBS/SCUFA (see below)	\$120	\$1500*	\$50
Sea-Bird SBE-43 DO Sensor	2	Pumped SBE DO sensor. Records directly to Sea-Bird SBE19 (above).	\$30	\$600	\$20
Sea-Bird SBE-23 DO Sensor	2	Pumped YSI DO sensor. Records directly to Sea-Bird SBE19 (above).	\$30	\$300*	\$10
Sea-Bird SBE-18 pH/SBE-27 pH ORP Sensor	2	Range 0 to 14 pH, accuracy 0.1 pH, 1 second response time. Records directly to Sea-Bird SBE19 (above).	\$30	\$300*	\$10
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	6	Self contained underwater Fluorometer for Rhodamine WT with turbidity channel. Can be used with Sea-Bird SBE19 (above)	\$60	\$750	\$25
D&A Instruments OBS3/OBS3Plus	2	Turbidity sensor Records directly to Sea-Bird SBE19 (above).	\$30	\$300	\$10
SeaBird SBE26 (20m, moored only)	3	45 psia Paros Digiquartz or Quartzonix pressure, temperature, conductivity, with tide and wave processing software, 1 to 8 Meg memory.	\$120	\$1500*	\$50
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	6	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
D&A Instruments OBS3/OBS3Plus	2	Turbidity sensor can be used with SBE19 CTD (or user application)	\$60	\$300*	\$10
Transponders and Releases		DESCRIPTION	SETUP	MONTH	DAY
ORE (EdgeTech) 8242XS (6000m)	5	Acoustic Release/Transponder, 6000m depth rating, 5500 kg release rating.	\$180	\$900*	\$30
ORE (EdgeTech) 8242XS	2	Allows two 8242XS Release/Transponders to be	\$30	\$150*	\$5

Tandem Mounting Kit (click here for photo)		mounted in tandem such that triggering either will release the load. Maintains full working load rating of the 8242XS.			
ORE (EdgeTech) CART (1000m)	6	Acoustic Release/Transponder, 1000m depth rating, 500 kg release rating.	\$180	\$750*	\$25
ORE (EdgeTech) CART Tandem Mounting Kit	2	Allows two CART Release/Transponders to be mounted in tandem such that triggering either will release the load. Maintains full working load rating of the CART.	\$30	\$150	\$5
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
Water 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
10 Liter Niskin Bottle (click here for photo)	10	10 liter OceanTest Equipment Niskin bottle rigged for either line or carousel use. 6 units use standard internal bungee, 6 units are rigged with external closure mechanisms for clean sampling.	\$15	\$150*	\$5
Brass Messenger	5	For use with the above bottles	NA	\$30*	\$1
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	\$3
Small meter wheel (click here for photo)	1	Snatch block meter wheel for ¼" or 3/8" cable. 999 meter counter.	\$30	N/A	\$3
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
5KW Generator	1	110/220VAC, 8hp Honda engine. 4 110VAC outlets, 1 220VAC outlet	\$30	NA	\$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)	4	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.