

NASA satellite ground truthing



Texas A&M University working with the Acrobat in very shallow water (3 meters depth)



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The **BEST** choice for
in-water data collection



“The Acrobat”

An actively controlled, towed vehicle

- Lower in system cost than other choices
- Totally portable between boats
- Supportive of all your instruments
- Adaptive to your programs
- Open to design change requests
- Designed to resist damage
- Easily learned by novices

Some Applications

- Ground truthing for satellite sensors
- Pollution monitoring
- Nutrient analyses while towing
- Standard chemical measurements including DO, C, T, pH, Chlorophyll
- Laser optical plankton identification & counting
- Bottom surveys using the latest acoustic and camera technologies
- Continuous water sampling while towing
- Dispersion mapping during dredging operations

Basic System includes

- Acrobat Tow Body & Wing choice
- Hand Control Module
- AC/DC Switching Power Supply
- Deck Cable
- Control Software

Additional Requirements

- Tow Cable
- Deployment, Recovery & Towing system
- Navigation & Sounding NMEA 0183 data
- Computer for remote auto control, underwater location display and recording Acrobat data

Key Specifications

Basic Dimensions (smallest wings)	800 (32)L x 400 (16)H x 760 (30)W mm (in.)
Basic Weight in Air	15 Kg./33 lb.
Towing Speed	2 to 12kts
Power Supply	30VDC via 90-250VAC, 47-440Hz
Operational Depth*	<100m
Software	MS Windows or LINUX
Communications	RS-422
Wing Spans	610 (24), 914 (36), or 1219 (48) mm (in.)
Tow Cable (length <300m; avg customer uses 150m)	Vectran, faired, 8-conductor or more, 2000 lb. B.S.

*Depth capability is a function of cable drag & weight, tow speed, wing size, and payload weight

Customization

The versatility of the Acrobat System lends itself to modifications according to customer needs.

Modifications to the basic system including the controlling software are possible.

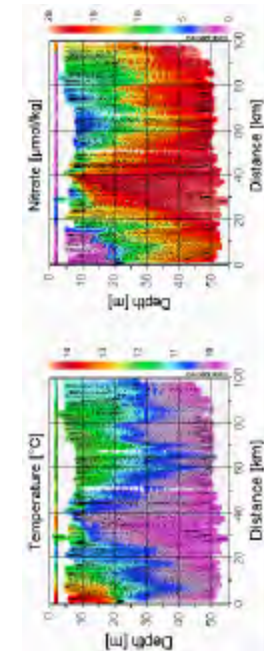
Options

Please contact Sea Sciences, Inc for assistance with your requirements



Performance

- Computer and/or manual operations
- Undulate over a desired range
 - Maintain a constant depth
 - Maintain a specific altitude above the bottom
 - Manual override of computer control



Data from MBARI Acrobat cruise showing upwelling spike approximately 40km along tow track

Reliability

“...over the course of the last 5 days and 250km of towing, the Acrobat performed flawlessly. We’ll be towing for another two weeks.” **MBARI**

“The follow up cruise went well. It flew for 25 consecutive hours! I’m going to be presenting some of the data I’ve taken with the Acrobat at a conference” **UC Berkely**