

NASA satellite ground truthing



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



40 Massachusetts Ave  
Arlington, MA 02474  
USA

Tel: 888.781.7812  
Fax: 781.643.3850  
Cell: 401.529.2282  
[sales@seasciences.com](mailto:sales@seasciences.com)  
[www.seasciences.com](http://www.seasciences.com)

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

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

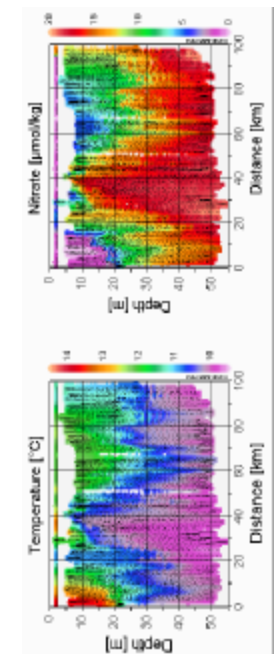
## Options

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**