

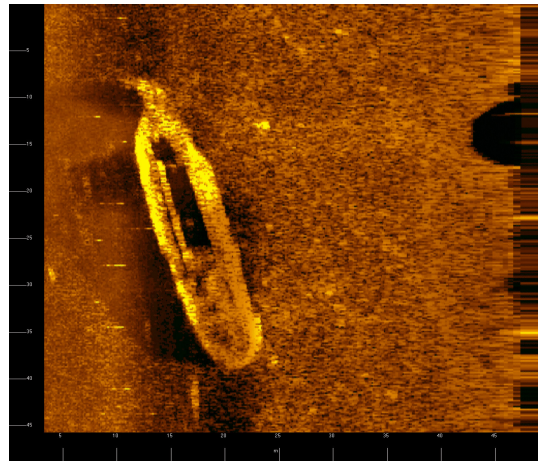
**New *ROSS* 4900 Series
Side Scan Sonar and Sub
Bottom profiler.**

ROSS

Laboratories Inc.

**Now add true dual channel side scan and Sub
Bottom profile to your hydrographic surveys.**

**Ross Laboratories, well
known for its line of
multi channel sweep systems,
has developed a low cost, series
of side scan sonar and sub
bottom profiler systems
designed for hydrographic
surveyors.**



Minesweeper in Lake Union Seattle Wa

Three versions allow users to configure a system that meets their survey requirements. Use either well known Chesapeake Technology's Sonar Wiz.map™ software for a complete system, or the Hypack™ side scan module for adding true side scan to your hydro survey capability. Also compatible with Isis™ data collection systems.

- | | |
|-------------------|---|
| Model 4901 | Complete system in splash tight case with 12 inch sunlight readable LCD display. |
| Model 4910 | Add on option for the Ross Model 960 Surveyor, adds side scan capability to the 960's complete survey system in one case design. |
| Model 4920 | Isis™ replacement sonar module. Towfish, transceiver, and control panel, designed to work with the Isis™ topside data collection system. |

***ROSS* Laboratories, Inc. • 3138 Fairview Ave E. • Seattle, WA 98102 USA
(206) 324 - 3950 • FAX (206) 329 - 0250
<http://www.rosslaboratories.com>
Email: info@rosslaboratories.com**

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Model 4901

Side Scan System 425kHz

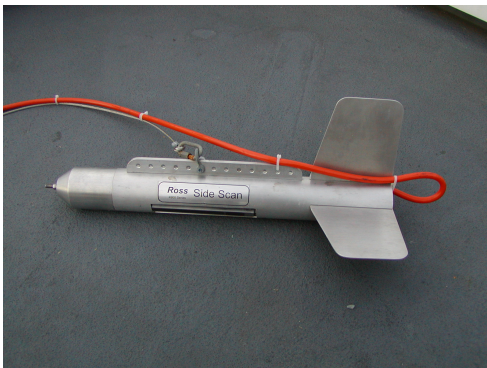
A portable two unit design with a 12 inch sun light readable display for use in small open boats.

Lightweight suitcase design with a small tow fish makes an ideal carry on system for remote fly in destinations reducing the costs of shipping and set up of conventional systems.

Two compact splashtight cases, one containing the display and user controls, the other transmitter and receiver cards for both side scan and sub bottom channels.

The 4901 display module can also be used as a portable data collector with its multiple I/O ports.

- Complete system in two portable splash tight cases.
- Direct sunlight viewable 12 inch 1000 nit display.
- Display can be used as a portable data collector with external I/O ports.



Compact lightweight tow fish allows easy one man manual deployment and retrieval.

Tow fish contains only transducer arrays. No expensive electronics package to flood or lose.

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ROSS Surveyor with **Model 4910** **Side Scan & Sub Bottom Option**

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Laboratories Inc.

Add Side Scan and Sub Bottom capability to our Model 960.

The complete Hydrographic Survey system in one package

- Integrated DGPS.
- Differential or RTK Correction .
- Integrated Ross "Smart" Sounder.
- Choice of Hydrographic Software Packages.
- Portable, Ruggedized Package.
- 12VDC or 120VAC with ext. adapter.
- USB Data download
- **Optional Side Scan and Sub Bottom module Model 4910.**



The **Model 960** is a PC based hydrographic survey system designed to fulfill the positioning, depth and surveying needs of the Survey community. **The 4910 Option adds Side Scan and or Sub Bottom capability to further enhance the 960's already convenient capabilities.**

The all in one approach allows you to arrive at the job site, plug in power, antenna, and transducers and you're ready to go to work!

Model 4920 ISIS™ Controller

A small portable control unit that interfaces the 4900 transceiver unit to an ISIS™ Data collector.

Provides switch able depth range triggering, gain controls, and pulse length control for both side scan and sub bottom transceivers.



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4900 Series Specifications

4901 Display unit:

Display:	12 inch 1000nit Color TFT internal
Controls:	Port and starboard side scan gain. (10 position switch able) Side scan pulse width .1, .25, .5ms. Sub bottom gain. (10 position switch able) Sub Bottom pulse width .2, .5, 1ms Power ON / OFF
External Ports.	2 Serial 2 type II USB 1 Ethernet 1 External SVGA Clone or virtual desk top.
Power:	12VDC @ 5 Amps
Dimensions:	17.5L x 15W x 7H closed position
Weight:	24lbs.
Operating Temp:	32°F to 122°F (0°C to 50°C)

4900 Transceiver unit: 425kHz Side Scan, 3.5 or 7kHz Sub Bottom

Connectors:	Display interconnect. Side Scan transducer Sub bottom transducers One or two depending on configuration.
Controls:	External: None Internal: Side Scan Int. TVG On /Off, Int. TVG level and curve. 3.5 or 7Khz sub bottom selection. Sub bottom envelope or detected output.
Power:	Supplied from display unit.
Dimensions:	17.5L x 15W x 7H.
Weight:	17lbs.

4920 ISIS™ Controller

Controls:	Depth Range: Switch selectable Port and starboard side scan gain. (10 position switch able) Side scan pulse width .1, .25, .5ms. Sub bottom gain. (10 position switch able) Sub Bottom pulse width .2, .5, 1ms Power ON / OFF
Dimensions:	11L x 11W x 5.5H Closed position
Weight:	7lbs.

Sub Bottom Profiler Module Specifications:

General:

The sub bottom profiler module of the 4900 series, can be used independently or together with the side scan features of the system. The 4900 series is a modular system that can be configured with either one or both functions installed. At a later date it is a simple factory upgrade consisting of installing the appropriate transceiver printed circuit boards and configuring the software to add the missing feature. Of course the additional transducer(s) will also be required.

Transceiver:

Frequency:	3.5Khz or 7.0khz single frequency, switch selectable with purchase of second transceiver PCB.
Transmit Power:	1500 watts rms.
Pulse width:	Switch selectable .2, .5, 1.0ms
Receiver:	Plug in single frequency PCB. 3.5 or 7 kHz. No TVG or AGC.
Gain control:	Rotary knob. 10 position, even steps.
Output signal:	Envelope or detected signal, switch selectable.

Transducer:

Frequency:	3.5 or 7.0 Khz.
Beam angle:	80 degree conical at -3db.
Operating depth:	2000 feet maximum.
Configuration:	System can be user configured for single or dual transducer operation. Dual transducers offer a significant increase in shallow water performance. One transducer is used for transmit, one receive, eliminating some of transducer "ringout" inherit at these frequencies.
Mounting:	On small boats in calm water, over the side pole mounting is standard. Consult the factory for optional mounting configurations for use in offshore, deepwater applications.