ARC Scout

Embedded
Side Scan Sonar

Marine Sonic Technology

Sea Scan® ARC Scout Mk II

150 kHz to 1800 kHz Options | Transducers Tailored To Your Vehicle



The ARC Scout Mk II is the newest generation of Marine Sonic's embedded side scan sonars specially designed for Autonomous Underwater Vehicles (AUVs) and Remotely Operated Vehicles (ROVs). The Adaptive CHIRP Technology provides the highest imaging quality possible from a side scan sonar and, in conjunction with an improved signal-to-noise ratio, supports ranges up to 60 % greater than non-Adaptive CHIRP systems. The Scout Mk II has been designed to increase Area Coverage Rate (ACR) and reduce the overall survey time. With the introduction of selectable Range and Range Delay settings per frequency, the operator gains the ability to acquire high resolution images to the maximum extent of the chosen frequency without sacrificing the range extents of the low frequency channels.

The modular design of the Scout Mk II provides both single frequency and dual frequency options with ultra-low power consumption and reduces the mechanical footprint needed for system integration. To best suit different user applications, frequency options from 150 kHz to 1800 kHz are available. Whereas the 600 / 1200 kHz option provides the ideal compromise between high range and high resolution, the 900 kHz / 1800 kHz option is optimized for applications that require ultra-high resolution imagery for detecting very small targets in the first survey pass. For the detection of larger objects, 150 or 300 kHz low frequency transducers paired with 900 kHz provide the highest ACR. The system electronics will easily integrate into all small AUV platforms currently on the market and is also available in a watertight pressure case configuration for ROVs. The Scout Mk II comes with ruggedized transducers custom-designed and built to fit your vehicle to reduce your time and effort to integrate the sonar payload. This gets your vehicle in the water faster. The transducers are available for depth ratings from 600 m up to full-ocean depth.

Applications

- Mine Countermeasures (MCM)
- Intelligence, Surveillance, and Reconnaissance (ISR)
- Small Object Detection
- Hydrographic / Geophysical Survey
- Civil Infrastructure Inspection
- Terrain Mapping & Obstruction Surveys
- Offshore Infrastructure Inspection
- Cable and Pipeline Surveys
- Archaeological & Biological Surveys

Key Features

- Dual Simultaneous Frequency Operation
- Adaptive CHIRP Processing
- Compact, Lightweight, and Low Power Consumption
- Frequency Options from 150 kHz to 1800 kHz
- Customized Transducers Tailored To Your Vehicle
- Depth Ratings from 600 m to Full-Ocean Depth
- Variable & Modular Design
- Excellent Cost-to-Performance Value
- Low Integration Costs

MARINE SONIC TECHNOLOGY
A BRAND OF ATLAS NORTH AMERICA

Sea Scan® ARC Scout Mk II

Compact & Lightweight | Low Power | Great Customer Service

Mechanical Specifications

Dimensions	Length 12.8 cm / 5.02 in x Width 5.9 cm / 2.32 in x Height 2.5 cm / 0.97 in
Weight	195 g / 0.421 lbs in air (per unit)

Power Consumption

Input Voltage (12 – 30 V DC)	Single Frequency	Dual Frequency
12 V DC	4.0 W	6.5 W
24 V DC	6.5 W	11.5 W

Interface Specifications

Control	10/100 Ethernet, Isolated RS-232 Serial, TTL Sync-In, TTL Sync-Out
Data Storage	External via Ethernet (For Internal Storage Options see ARC Scout)
File Format	SDS, XTF (with Conversion)
AUX Data Input	Latitude, Longitude, SOG, COG, Heading, Depth, Altitude, Roll, Pitch, SOS in NMEA - 0183

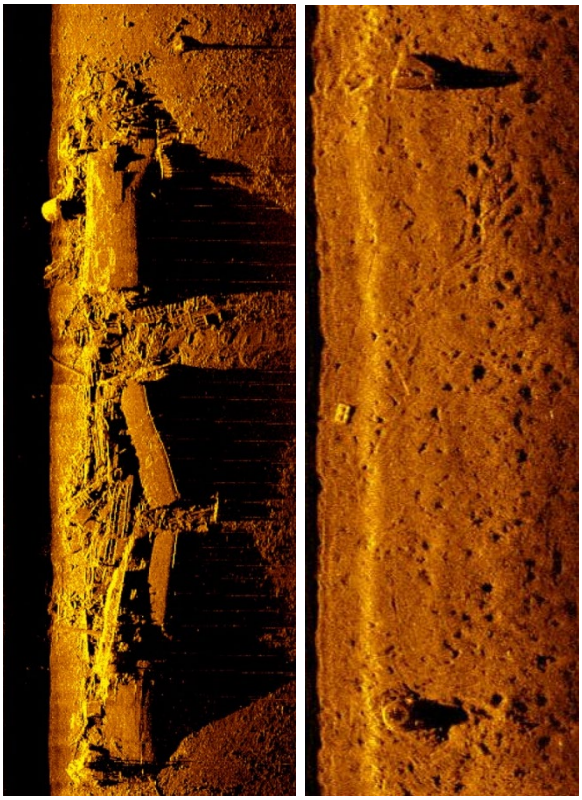
Acoustic Specifications

Across Track Resolution	0.4 cm to 1.5 cm
Horizontal Beam Angle	300 – 1800kHz 0.34° (two-way) 150kHz 0.68° (two-way)
Vertical Beam Angle	24° (two-way)
Transmit Pulse Technology	Marine Sonic Technology Adaptive™ CHIRP
Transmit Pulse Bandwidth	50 to 200 kHz
Transmit Pulse Length	< 0.5 ms
Data Collection Speed	5.3 Knots Max. (4.7 Knots @ 100 m Range)
Depth Rating	600 m to 10,000 m 1970 ft to 32800 ft

Frequency Specifications

Frequency	Max Range (per side)	Along Track Resolution
150 kHz	500 m / 1640 ft	30.4 cm
300 kHz	250 m / 820 ft	30.4 cm
600 kHz	140 m / 460 ft	15.2 cm
900 kHz	80 m / 262 ft	10.0 cm
1200 kHz	45 m / 148 ft	7.5 cm
1800 kHz	25 m / 82 ft	5.0 cm

Like all Marine Sonic Technology products, the Scout Mk II comes with the user-friendly and self-explanatory Sea Scan Survey acquisition and review software. Alternately, we offer a Software Development Kit (SDK) which allows UUV manufacturers and third party software developers the ability to control the sonar directly, as well as display data.



The left image of the SS Shirvan a WW II era British Steam Tanker was taken with the ARC Scout Mk II using 600 kHz transducers at 80 m Range.

The image on the right shows a Manta (bottom) and a Rockan (top) Mine and was recorded with at 1800 kHz. The cinder block in the center of the image provides a relative perspective for the small size of both mines.

We Pride ourselves on our Customer Support.

- Free 24hr Tech Support
- Free Software Upgrades
- 3-year limited warranty

ATLAS NORTH AMERICA LLC
120 Newsome Drive, Suite H
P.O. Box 1309
Yorktown, VA 23629 | United States

Phone: +1.757.463.0670
Telefax: +1.757.463.0673
info@na-atlas.com
www.marinesonic.com

Follow us online:
www.linkedin.com/company/marine-sonic-technology/
www.facebook.com/marinesonic

MARINE SONIC TECHNOLOGY
A BRAND OF ATLAS NORTH AMERICA

ATLAS NORTH AMERICA
A company of the ATLAS ELEKTRONIK Group