ARC Scout

Embedded
Side Scan Sonar

Marine Sonic Technology

Sea Scan® ARC Scout MkII

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

The ARC Scout MkII 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 MkII 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 MkII 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 150kHz to 1800kHz are available. Whereas the 600kHz / 1200kHz option provides the ideal compromise between high range and high resolution, the 900kHz / 1800kHz 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, 150kHz or 300kHz low frequency transducers paired with 900kHz 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. The Scout MkII 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 150kHz to 1800kHz
- 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 TKMS ATLAS North America

Sea Scan® ARC Scout MkII

Compact & Lightweight | Low Power | Great Customer Service

Electronics Mechanical Specifications

Dimensions	12.8cm (L) x 5.9cm (W) x 2.5cm (H) 5.02in (L) x 2.32in (W) x 0.97in (H)
Dimensions Optional Fan	12.8cm (L) x 5.9cm (W) x 3.45cm (H) 5.02in (L) x 2.32in (W) x 1.36in (H)
Weight	195 g / 6.9g in air (per unit)

Note: Transducer Mechanical Specifications are determined by the customized design

Typical Power Consumption

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

Interface Specifications

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

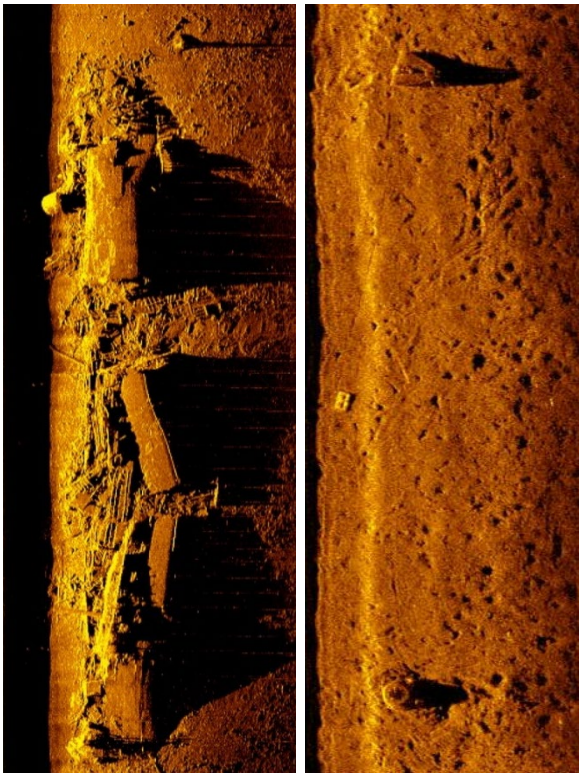
Acoustic Specifications

Across Track Resolution	0.5cm (600kHz – 1800kHz) 1.5cm (300kHz) 2cm (150kHz)
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	35kHz – 150kHz
Transmit Pulse Length	256µs
Data Collection Speed	1kts – 5.5kts typical
Depth Rating	600m – 10,000m 1970ft – 32800ft

Frequency Specifications

Frequency	Max Range (per side)	Along Track Resolution
150kHz	500m / 1640ft	30.4cm
300kHz	250m / 820ft	30.4cm
600kHz	140m / 460ft	15.2cm
900kHz	80m / 262ft	10.2cm
1200kHz	45m / 148ft	7.6cm
1800kHz	25m / 82ft	5.1cm

Like all Marine Sonic Technology products, the Scout MkII comes with the user-friendly and self-explanatory Sea Scan Survey acquisition and review software. Also included, is a Software Development Kit (SDK) which allows vehicle 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 WWII era British Steam Tanker was taken with the ARC Scout MkII using 600kHz transducers at 80m Range.

The image on the right shows a Manta (bottom) and a Rockan (top) Mine and was recorded with at 1800kHz. 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

TKMS ATLAS North America LLC
120 Newsome Drive, Suite H
P.O. Box 1309
Yorktown, VA 23692 I United States

Phone: +1.757.463.0670
sales@us-tkmsgroup.com
www.marinesonic.com

MARINE SONIC TECHNOLOGY
A brand of TKMS ATLAS North America