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Marine Sonic Technology, Ltd.

Sea Scan® PC AUV/ROV Components

Marine Sonic Technology, Ltd. (MSTL) manufactures the Sea Scan® PC as a portable, towed, side scan sonar system. The components that are used in these towed systems are also available as AUV/ROV components for a variety of sonar applications.

MSTL's AUV/ROV systems have been designed and built to the exacting standards of today's AUV/ROV market. The AUV/ROV system components use the same proven technology found in the towed systems but have been redesigned to make them smaller and more energy efficient. Every AUV/ROV system will consist of the Sea Scan® PC system electronics card (Installed in the PC), a Sea Scan® PC transducer electronics card/module, a pair of Sea Scan® PC transducers, and connecting cables. All four components work together and each works only with Sea Scan® PC components.

To satisfy the uniqueness of each AUV/ROV system, MSTL can tailor a system that ranges from just the basic side scan sonar components to a complete turn-key system that includes the PC, power supply, mounting brackets, connectors, cables, and pressurized containers.

This sheet contains basic information and specifications regarding the various AUV/ROV components available from MSTL.

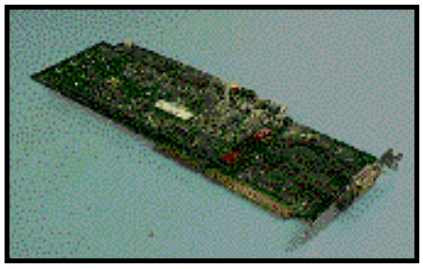
Please contact MSTL if you have any questions regarding the components listed in this sheet or if you would like to discuss a specific system installation.

BACK UP

Sea Scan PC® System Electronics card (Installed in PC) is available in two configurations: Full size, full length ISA card and as a compact PC-104 computer format for smaller installations.

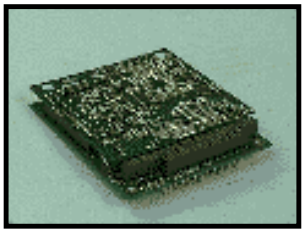
Sea Scan® PC ISA card (MSTL part # 2010-02)

- Size: 13.4 x 3.9 x 0.75" (340 x 100 x 19mm)
- Weight: 12.7oz (361 gms)
- Power consumption: 6-10 watts (function of speed and range scale)
- Power to run card, electronics and transducers are taken from the ISA bus.
- Features: All standard Sea Scan® PC features.



Sea Scan® PC PC-104 card (MSTL part # 2010-03)

- Size: 3.8 x 3.6 x 0.66" (97 x 92 x 17mm)
- Weight: 5 oz (142 gms)
- Power consumption: 4.8 watts maximum (function of speed and range scale)
- Power to run card, electronics and transducers are taken from the PC104 bus.
- Features: All standard Sea Scan® PC features plus additional range scales and improved rejection of common mode noise.



BACK UP

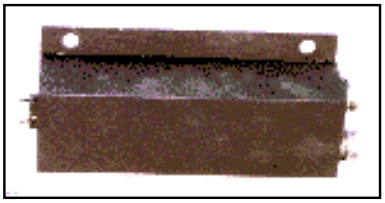
Sea Scan® PC Transducer Electronics Card/Module

These are the electronics that are normally installed inside a MSTL towfish. It contains the pulser, two channels of pre-amps and cable drivers. These cards are manufactured and tuned for a specific frequency and only function with MSTL transducers of the same frequency. Dual frequency systems require two cards plus a frequency-switching card.

Part #: 2121-(01-05)

- Available Frequencies: 150,300,600,900 and 1200 kHz
- Size: 7.4 x 2.3 x 0.9" (188 x 58 x 23mm)
- Weight: 8 oz (230 gms) (bare card)
- Note: RF and magnetic shielding may be required if installed near other electronics components or noise sources.

Transducer Electronics Modules are also available in a sealed wet version so they can be located outside of computer case. (See photos below).



Dual Frequency Module
MSTL Part#3020-13

Single Frequency Module
MSTL Part#2120-0X

BACK UP

Sea Scan® PC Transducer Modules

Transducer Modules are available in a variety of shapes, sizes and frequencies. MSTL can make custom shaped modules to suit a specific application. Standard modules (300-meter depth rating) are listed below.

Frequencies available: 150,300,600,900 and 1200 kHz
Dual frequency modules are also available (any two of the above).

600 kHz Modules (300 m depth rating) Standard

- Part # 2125-03
- Size: 17.5" long, 1.5" wide, 1.5" deep (444mm X 38mm X 38mm)
- With DGO series 110 connector.
- Weight (in air): 34.5 oz (980 gms) each

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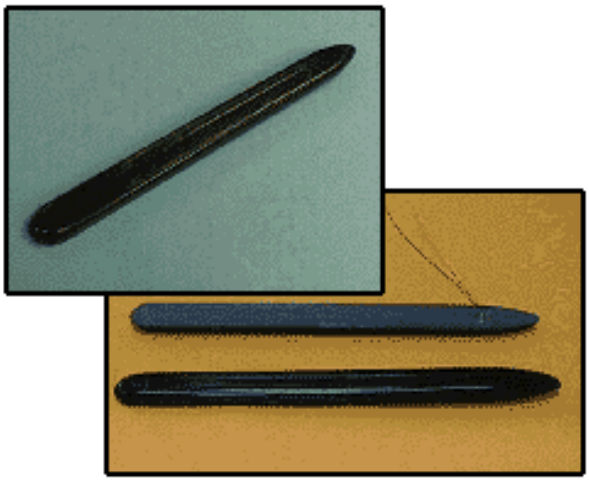
Streamlined (600 kHz Modules):

- Part # 2125-03,04,05
- Size: 17.5" long, 1.5" wide, and 0.625"deep (444mm X 38 mm X 16 mm)
- Weight (in air): 14 oz (380 gms) each



150 kHz Modules (300 m depth rating)

- Part # 2125-01
- Size: 28" long, 3" wide, and 2" deep (711mm X 76 mm X 51mm)
- Weight (in air): TBD

300 kHz Modules (300 m depth rating)

- Part # 2125-02
- Size: 28" long, 2.25" wide, and 2" deep (711 mm X 57 mm X 51 mm)
- Weight (in air): TBD

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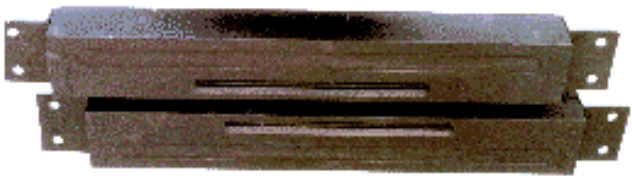
Dual Frequency (150/600 kHz) Modules (300 m depth rating)

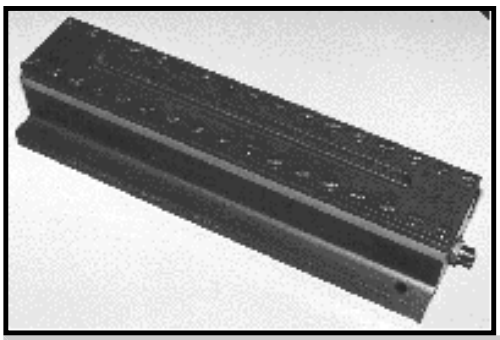
- Part # 3025-13
- Size: 28" long, 4" wide, and 3" deep (w/o bracket) (711 mm X 102 mm X 76 mm)
- Weight (in air): 16 lbs (7.3 kg) each



150/600 kHz Transducer Modules (shown with mounting bracket)

Deep Modules

MSTL also produces components with deeper depth capabilities. These components are custom orders to suit a specific application. Electronic Modules are contained in a pressure bottle. MSTL has produced 1500 m and 10,000m rated components.



Full Ocean Depth 600 kHz Module MSTL Part # 5120-03

BACK UP

Sea Scan® PC Software for ROV's and AUV's

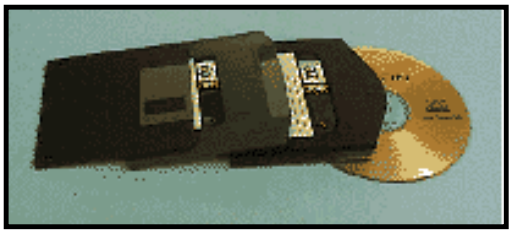
While most side scan sonar systems require a full time operator for best performance, the software provided with Sea Scan® PC systems has many features which make it ideally suited for unattended or remote operations.

These features include:

- Host Remote control: Allows control of sonar operations via a serial connection. This allows an ROV operator to operate the sonar system from

a remote computer at the other end of the tether. It also permits an AUV operator to setup the sonar from an external connection.

- Continuous/Periodic Autogain: Sea Scan® PC software contains an Autogain feature, which can be set to operate at periodic intervals or continuously as, desired. This allows the sonar to operate virtually unattended in changing environmental and bottom conditions.
- Autosave of Data Files: Sea Scan® PC software has a feature which automatically saves all acoustic and plotter information without operator action.
- Network Operations: Operating in Windows® 98, Sea Scan® PC files can be transferred and saved to network connections.



Group Processing/Review Routines: Remote Operating and Autonomous Vehicles can collect vast amounts of data, which ultimately must be reviewed for content. Sea Scan® PC Review software has several standard features which produce global files and allows an operator to scan many files quickly, while noting and saving the highlights. All Sea Scan® PC data can be stored or transferred to a variety of digital storage media.

Please note: Information, specifications and configurations, provided on this web site are subject to change without notice.

Updated September 19, 2002

Please feel free to contact Marine Sonic Technology, Ltd. if you have any questions.

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