

# SEA 1612C

## Antenna Tuner

- State-of-the-art microprocessor-based
- Usable with any SSB transceiver
- Compensates for antenna changes
- Special Features: Duplex Mode, Tune Lockout, and Demand Tune
- Automatic self tuning
- No presets or adjustments
- Reduces installation costs



Designed and built by SEA, one of the industry's leaders in high technology, the SEA 1612C automatic tuner combines the sophistication of advanced microprocessor techniques with high order practicality and operational reliability. The SEA 1612C is housed in a weatherproof molded case designed to withstand the environmental conditions encountered aboard ship when mounted on the weather decks.

### WHY AN ANTENNA TUNER?

An antenna of fixed length is often used with HF/SSB equipment that covers a wide frequency range so that an antenna tuner is necessary if optimum efficiency is to be obtained. Two types of tuners are available, fixed and automatic tuned. Fixed-tuned type couplers must be pre-adjusted by a technician at each frequency to be used so that the number of channels is limited by practical considerations. An automatic coupler is a necessity with modern transceivers like the SEA 235 and 245 which have multi-channel capability. Also excellent for land mobile installations, SEA 1612C will tune a 9 foot (2.7M) whip over a frequency range of 3 to 30 MHz.

### AUTOMATIC TUNER OPERATIONS

The SEA 1612C is a versatile, fully automatic, microprocessor-based antenna tuner. The first voice impulse from the transceiver initiates a fast, microprocessor-controlled search/match procedure which determines antenna characteristics and interconnects the proper elements for optimum match and power transfer.

### SEA 1612C HAS A MIND OF ITS OWN!

The internal computer in this tuner has "learning" capability, remembers which network constants were set in for a particular frequency. This information is stored in computer memory and is recalled instantly whenever the same frequency is again selected. SEA 1612C will "relearn" and compensate automatically for minor changes in the antenna system.

Equipment will operate properly on low power inputs (15 to 20 watts), and will provide an infinite number of channels within its specified frequency range (see specifications).

**The SEA 1612C also includes these features:**

**Duplex Mode** makes use of a special control algorithm which, when energized, senses the RECEIVE mode and switches out all tuning elements.

**Tune Lockout** feature is useful when two or more transmitters are co-located, or when it is desirable to inhibit the AUTO TUNE function for any reason.

**Demand Tune** function allows the user to force the antenna tuner to retune on demand. This permits "overwriting" previously stored tuneup information when desired.

The SEA 1612C is also available with optional antenna grounding relay. Contact the factory for further information.

**Specifications:**

**Frequency Range:**  
1.6 to 30 MHz

**RF Power Handling Capability:**  
150 watts, PEP maximum

**Tuning Time: "Learn" mode**  
Less than 5 seconds (typical)

**Internal Matching Networks**  
Microprocessor controlled, "P" or "L"

**Input Impedance:**  
50 ohms

**VSWR:**  
<2:1

**Frequency Tuning Range for Land Mobile Applications Using 9 ft (2.7M) Whip**  
3 to 30 MHz

**Usable Antenna Lengths:**  
23 to 75 ft (nom) (7 to 23 M)

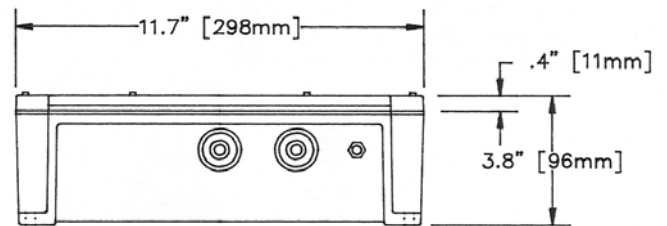
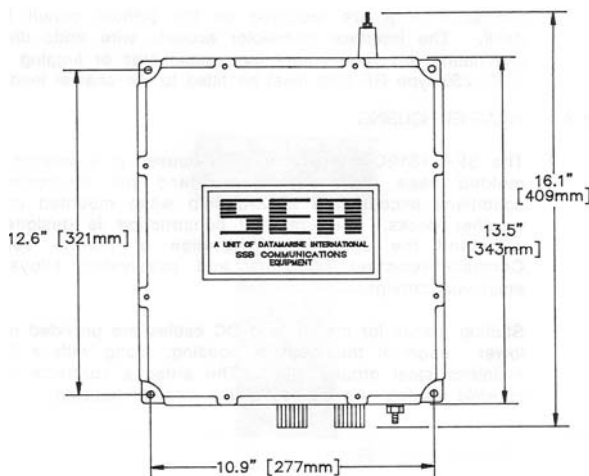
**Power Requirements:**  
13.6 VDC @ 300ma typical,  
2.0 amps maximum

**Control Cable:**  
No. 20 GA, 3 to 5 conductor, shielded cable

**Environmental Temperature Range:**  
-30°C to +60°C

**Dimensions:**  
Inches: 16 x 12 x 3.9  
MM: 381 x 304.8 x 99

**Weight:**  
10 pounds / 4.5 Kg.



American technology that talks to the world.  
7030 220<sup>th</sup> S.W., Mountlake Terrace, Washington 98043 USA  
(425) 771-2182; Fax: (425) 771-2650 www.sea-dmi.com