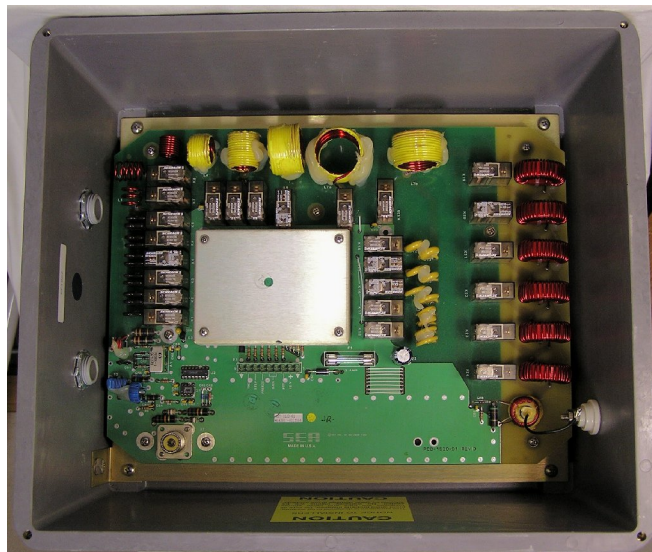


SEA 1630

Antenna Tuner

- State-of-the-art microprocessor-based
- Usable with any SSB transceiver
- Compensates for antenna changes
- Interactive operation when used with SEA330 transceiver
- SEA1631 interactive when used with SEA235 or SEA245
- 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 SEA1630 automatic tuner combines the sophistication of advanced microprocessor techniques with high order practicality and operational reliability. The SEA1630 is housed in a weatherproof molded case designed to withstand the environmental conditions encountered aboard ship when mounted on the weather decks.

The SEA1630 was designed specifically as a companion for the SEA330 radiotelephone but is also capable of independent operation (stand-alone). When used with SEA330 radiotelephone the 1630 is resident on the SEABUSS™ and is a peripheral of the radio's central CPU system. The SEA1631 incorporates a newer version of bus protocol used by the SEA235 and SEA245 radiotelephones. In this interactive mode the coupler receives information from the radio containing the operating frequency. If this frequency has been previously tuned the coupler will preset to the stored configuration automatically, before any RF power has been applied to the coupler. Information can also be sent from the radio to set the coupler to the straight thru configuration when doing voice, DSC, and Telex scan functions. Demand tune is also supported in the interactive

mode of operation. These features are not available in the "stand-alone" mode.

AUTOMATIC TUNER OPERATIONS

The SEA 1630 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 inter-connects the proper elements for optimum match and power transfer. 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 1630 will "relearn" and compensate automatically for minor changes in the antenna system.

Maximum tuning power for the SEA1630 is 75 watts PEP below 4MHz and 150 watts PEP above 4MHz. The coupler will operate properly on low power inputs (25 to 50 watts), and will provide an infinite number of channels within its specified frequency range (see specifications).

Specifications:

Frequency Range:

1.6 to 30 MHz

RF Power Handling Capability:

150 watts PEP maximum below 4MHz
300 watts PEP maximum above 4MHz

RF Tuning Power range:

75 watts PEP maximum below 4MHz
150 watts PEP maximum above 4MHz

Minimum RF Tuning Power range:

25 to 50 watts PEP

Tuning Time: "Learn" mode

Less than 5 seconds (typical)

Tuning Time: "Recall" mode

Less than 20 milliseconds (typical)

Internal Matching Networks

Microprocessor controlled, "Pi" or "L"

Input Impedance:

50 ohms

VSWR:

<2:1

Antenna:

End fed type (Marconi) of 7 to 50 m (23 to 165 ft.)
with suitable RF ground

Power Requirements:

13.6 VDC @ 300ma typical,
2.0 amps maximum

Control Cable:

CAB-1630-XXX

Environmental Temperature Range:

-30°C to +60°C

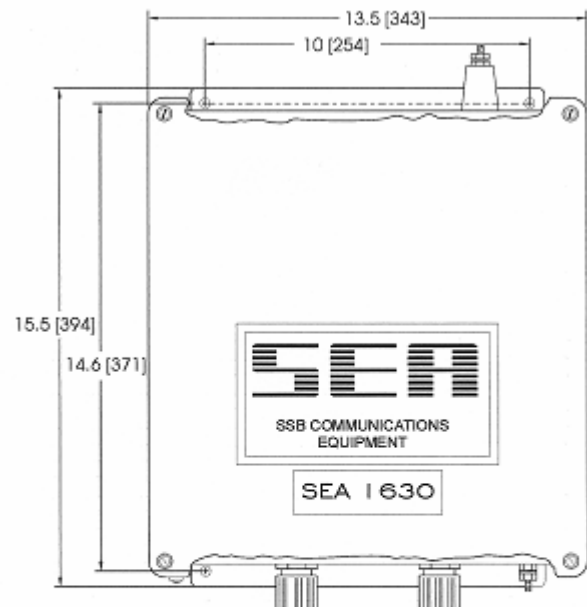
Dimensions:

Inches: 15.5 x 13.5 x 5.9

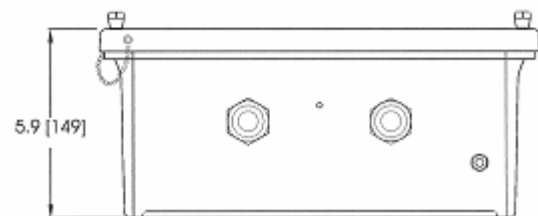
MM: 394 x 343 x 150

Weight:

10 pounds / 4.5 Kg.



Dimensions are inches and [mm]
NOT TO SCALE



American technology that talks to the world.

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