

AT7000B

125W Antenna Tuners



The AT7000B is a 125W HF automatic antenna tuner specifically designed to interface with Datron's TW7000-series HF transceivers to tune whip and long-wire antennas. The tuner is designed for operation under the severe environmental conditions that can be encountered in mobile and shipboard usage. It is contained in a rugged case, which is water resistant. It can be mounted in any attitude, but should be located as close as possible to the radiating portion of the antenna for maximum system efficiency. The tuner comes with a set of brackets for convenient mounting to any surface in any orientation.

A 100 Channel memory is standard in the tuner in order to permit scanning, ALE, and other silent tune applications. After each channel has been initially tuned, it "remembers" the settings for that particular channel and automatically reverts to them each time that channel is selected. Channel tuning time in memory mode is less than 10 ms.

The AT7000B is designed to interface with the associated Datron radio via a RS485 serial port. This bi-directional port allows high-speed communications with the radio, enabling rapid selection of previously tuned channels from the tuner memory.

The AT7000B is designed primarily for use with end-fed, unbalanced antennas (whips and long wires).

It will effectively tune almost any antenna of this type within the specified frequency range provided a good ground system is used with the tuner.

The AT7000B is designed to be installed in a specific location and left there indefinitely. It will provide continuous, reliable operation without requiring periodic maintenance of any kind. It has no variable components, requires no adjustment during setup, and needs no re-alignment over time.

- **Completely automatic antenna tuning**
- **125W RF power handling**
- **100 channel memory for rapid tuning - ALE and silent tuning applications**
- **Tunes whips and long wire antennas**
- **Control interface to TW7000-series transmitters and transceivers**
- **Water resistant (based on MIL-STD-810)**
- **Mounting in any attitude**



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SPECIFICATIONS

General

RF power handling capability	125W, PEP or average
Frequency range	1.6 to 30 MHz
Tuning range - whips and wires with minimum specified length	10 foot whip: 2.5 - 30 MHz 16 foot whip: 2 - 30 MHz 32 foot whip: 1.6 - 30 MHz 75 to 150 foot long wires: 1.6 - 30 MHz
	NOTE: effective tuning depends on setting up a good ground system in conjunction with the antenna
RF tune power	10W (typical)
Tune time	3 - 5 seconds, first tune (typical) 10 ms, memory tune (typical)
Input impedance	50 Ohms
Power requirements	12Vdc, 1.8A , max.
Memory channels	100
Tuning accuracy	1.5:1 VSWR (typical)
Continuous duty operation (FSK)	The minimum antenna lengths stated here must be adhered to: <ul style="list-style-type: none">•75ft (2-30 MHz)•32ft (3-30 MHz)•16ft (5-30 MHz)•10ft (7-30 MHz)

Mechanical, Environmental

Size	3.0" (7.62cm) x 11.0" (27.9cm) x 14.0" (35.6) (H x W x D)
Weight	6.2 lbs, (2.8 kg)
Temperature (operating)	-30 to +60 degrees C (ambient inside case)
	NOTE: this temperature can easily be exceeded if the case is exposed to direct sunlight. For FSK operation, it is important that the tuner is installed so that the case is not exposed to direct sunlight.
Shock, vibration	Based on MIL-STD-810
Immersion	Water resistant; immersion tested to 3 feet

Controls and Indicators

Connectors	RF input, control input, RF output, grounding lug
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Note: all specifications subject to change without notice

Made in the USA