

AT7000B **125W Antenna Tuner**



- **Completely Automatic Antenna Tuning**
- **125W RF Power Handling**
- **100 Channel Memory for Rapid Tuning - ALE and Silent Tuning Applications**
- **Meets MIL-STD-810 for Environmental Performance**
- **Tunes Whips and Long Wire Antennas**
- **Control Interface to TW7000-series Transceivers**
- **Completely Waterproof (Immersible)**
- **Mounting in any Attitude**

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 completely immersible. 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 msec.

The AT7000B is designed to interface with the associated Datron radio (or a computer) via a RS485 serial port. This bi-directional port allows 9600 baud communications with either the radio or the computer, enabling rapid selection of previously tuned channels from the tuner memory. The tuner can also be used with other HF/SSB transceivers provided a suitable interface is provided. The factory should be consulted for individual applications.

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 antenna. Broadband, resonant antennas like LPAs may be used with the tuner if desired. Narrowband, resonant antennas, such as dipoles should only be used if the antenna VSWR is less than 3:1 at the operating frequency.

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.

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
Tune time	3 to 5 secs, first tune (typical) 10 msecs, 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)	Adhere to the minimum antenna lengths stated here: <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	MIL-STD-810 (with shock mount)
Immersion	Waterproof; immersion to 3 feet
Controls and Indicators	
Connectors	RF input, control input, RF output, grounding lug

Note: all specifications subject to change without notice



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