

# ATU-HP-TT

FEATURES PRELIMINARY ISSUE 1.3  
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## 3000 W High Power NAVTEX Automatic Antenna Tuning Unit

### Remote Monitoring (when used in conjunction with a Nautel Vector Navtex series transmitter)

RF Antenna Current

Resistive match servo inhibited

Inductive tune servo inhibited

Resistive match status/ limit

Inductive tune status/ limit

Local/remote

ATU temperature

Fan fail

### Remote Control (when used in conjunction with a Nautel Vector Navtex series transmitter)

Resistive match servo inhibit

Inductive tune servo inhibit

Increase/decrease resistive match

Increase/decrease inductive tune

### Metering

Forward power

Reflected power

Antenna current

### Servo Inhibit

Automatic resistive match and reactive tuning servos inhibited when Vector Navtex transmitter RF output is not enabled

### Local Control

Resistive match servo inhibit

Inductive tune servo inhibit

Increase/decrease resistive match

Increase/decrease inductive tune

Set-up mode

Transmitter On/Off

### Local Monitoring

Resistive match servo inhibited

Inductive tune servo inhibited

Resistive match status/limit

Inductive tune status/limit

Set-up mode

Transmitter Off

Local/Remote

Fan fail

CPU ok

DC supply status

### Equipment Interface

Remote control/monitoring with RS485 serial communication to the Nautel Vector Navtex Series transmitter (DB-9 connector with 5 connections used and additionally available on terminal block).

AC Input - (Terminal Block)

RF Input - (N Connector)

Antenna feeder connection  
(Mechanical Bolt)

Antenna system ground  
(Mechanical Bolt)

### Shipping

Export packed in wooden crate

All assemblies to remain in ATU for shipment

ISTA Procedure 1B compliant

### Options

Sunshield to reduce thermal load

Extended warranty

Adjustable external series resistance of 0.8 to 5.6 ohms in seven fixed increments provides additional antenna bandwidth adjustment (this option includes the sunshield).

CSA inspection



## 3000 W High Power NAV-TEX Automatic Antenna Tuning Unit

**Maximum Carrier Power**  
3,000 W

**Maximum Reflected Power after Auto Resistive Match and Reactive Tune**  
<3 W at carrier frequency

**Frequency Range**  
Dual Channel 490 kHz + 518 kHz

**Automatic Tuning Range**  
±5% antenna capacity variation

**Input Impedance**  
50 ohms nominal

**Channel Change Time**  
Not exceeding 3 seconds (includes Vector Navtex transmitter tuning time)

**Power Requirements**  
115 V/230 V ac single phase ± 15%, 50 Hz/  
60 Hz, 35 VA maximum

**Automatic Resistive Matching Range**  
0.5 R-2 R where R equals antenna system series resistance (including ATU).

**Maximum Series Loss Resistance**  
Not greater than 1/1000 x antenna reactance

**Antenna System Resistance**  
2 to 39 ohms.

**Antenna Capacitance**  
350-3400 pF

**MTBF**  
Greater than or equal to 56,405 hours using MIL HDBK 217E calculation methods.

Field data for Nautel LF/MF systems indicate MTBF in excess of 3,000,000 hours

**MTTR**  
Less than or equal to 30 minutes at PWB/module level

**Cooling and Heat Flushing**  
Cooled by radiation from the enclosure. Internally circulated air at approximately 220 cu. ft./min when internal ATU temperature is greater than 60°C.

**Altitude**  
Up to 3048 m (10,000 ft.)

**Environmental Limits**  
Operating:  
-50°C to +55°C  
0% to 100% Relative Humidity  
Storage:  
-50°C to +100°C  
0% to 100% relative Humidity

**Climate**  
Any – including tropical

**Dimensions (without external series resistor and/or sunshield)**  
Wall Mount  
97.64 cm H x 123.83 cm W x 67.8 cm D  
(38.44 H x 48.75 W x 26.69 D in.)

**Base Mount**  
103.35 cm H x 123.83 cm W x 62.4 cm D  
(40.69 H x 48.75 W x 24.56 D in.)

**Dimensions (with external series resistor and/or sunshield)**  
Wall Mount  
112.78 cm H x 139.9 cm W x 83 cm D  
(44.44 H x 53.5 W x 32.69 D in.)

**Base Mount**  
118.6 cm H x 135.9 cm W x 81.9 cm D  
(46.69 H x 53.5 W x 32.25 D in.)

**Weight (without external series resistor and/or sunshield)**  
50.3 kg (111 lbs) unpacked  
93 kg (205 lbs) packed

**Weight (with external series resistor and/or sunshield)**  
65.4 kg (144 lbs) unpacked  
138 kg (304 lbs) packed

Notes: Specifications established at rated power unless otherwise noted. All measurements at standard antenna load; AC input at nominal voltage.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.