



## 250 W Automatic Antenna Tuning Unit

### Automatic Resistive Matching

#### Range

0.5 R-2 R where R equals antenna system series resistance (including ATU)

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

RF antenna current

Resistive match servo inhibited

Inductive tune servo inhibited

Resistive match status/limit

Inductive tune status/limit

Set-up mode

Local/remote

ATU temperature

Fan fail (when fan option installed)

### Remote Control (when used in conjunction with a Nautel Vector 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

### 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 (when fan option installed)

CPU ok

DC supply status

### Equipment Interface

Remote control/monitoring with RS485 serial communication (DB-9 connector with 5 connections and additionally available on terminal block).

DC Input (terminal block)

Optional 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

Frequency change kit

Sunshield to reduce thermal load

Adjustable external series resistance provides additional antenna bandwidth adjustment (this option includes the sunshield).

Extended warranty

CSA inspection (*offered with ac input only*)

Internal circulating fans

Extended frequency band -651 kHz to 1,250 kHz  
1,600 kHz to 1,800 kHz

AC input



## 250 W Automatic Antenna Tuning Unit

### Maximum Carrier Power

375 W

### Maximum Peak Envelope Power

1,000 W

### Maximum Reflected Power after Auto Resistive Match and Reactive Tune

<1.5 W at carrier frequency

### Frequency Range

Standard band: 190 kHz to 535 kHz

### Automatic Tuning Range

±5% antenna capacity variation

### Input Impedance

50 ohms nominal

### Power Requirements

24 V dc ± 5% at 1 A dc, supplied from transmitter

*Optional:* 115 V /230 V ac single-phase

± 15%, 50 Hz /60 Hz, 35 VA maximum

### Maximum Series Loss Resistance

Not greater than 1/600 x antenna reactance

### Antenna System Resistance

2 to 60 ohms

*Minimum series resistance limited to that which provides an adequate bandwidth to produce at least 70% mod depth of radiated signal when*

*using a modulation tone of 400 Hz*

### Antenna Capacitance

190 pF to 1,250 pF

*Capable of tuning larger and smaller capacitites dependent on frequency.*

*Consult factory.*

### MTBF

Greater or equal to 99,636 hours using MIL HDBK 217E calculation methods.

Field data for Nautel NDB/DGPS 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 sealed enclosure

Optional Fan Assembly which internally circulates air at approximately

220 cu.ft/min when internal ATU temperature is greater than 60°C

### Altitude

Up to 3,048 m (10,000 ft.)

### Environmental Limits

Operating:

-50°C to +55°C

0%-100% relative humidity

Storage:

-50°C to +100°C

0% to 100% relative humidity

### Climate

Any – including tropical

### Dimensions (without external resistor and/or sunshield)

Wall Mount

97.6 cm H x 95 cm W x 43.6 cm D

(38.42" H x 37.4" W x 17.16" D)

Base Mount

100.2 cm H x 95 cm W x 38.5 cm D

(39.5" H x 35.7" W x 15.16" D)

### Dimensions (with external series resistor and/or sunshield)

Wall Mount

112 cm H x 96.3 cm W x 52.5 cm D

(44.08" H x 37.92" W x 20.68" D)

Base Mount

115.8 cm H x 96.3 cm W x 50.8 cm D

(45.6" H x 37.92" W x 20" D)

### Weight (unpacked with sunshield)

32 kg (70 lbs) unpacked.

### Weight (packed with sunshield)

94 kg (204 lbs)

### Standards

IP66 rated

Tested for compliance to MIL-STD-810 F Method 509.4 (Salt Fog)

Finish meets AAMA 603.1 and CGSB-1-GP--300 specifications

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.