



Bird Technologies®

# Antenna Tester

## AT-500, AT-800 Series

The Bird's® AT-Series Antenna Testers provide a cost-effective, fast, graphical way of determining the quality of mobile and base station antennas.

- ▶ Rugged, easy-to-use, hand-held design with extended battery life makes it ideal for use in the field.
- ▶ Tests the system in VSWR, Return Loss, Match Efficiency, or Reflection Coefficient (Rho)
- ▶ Single frequency readings and frequency sweeps allow for everything from pinpoint tests to system optimization and tuning.
- ▶ Can save up to 12 traces for comparison and tracking over time.
- ▶ RS232 Interface allows communication.

### PROBLEMS ▶ SOLUTIONS

Harsh environment

- ▶ Military grade instrument

Extended field use

- ▶ Long battery life

Antenna failure

- ▶ Multiple measures to identify failure mode

### APPLICATIONS

Ideal for use when a rugged field instrument is required to validate, test and troubleshoot antenna systems.

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### FREQUENCY CHARACTERISTICS

<b>Frequency Range</b>	AT-500 5-520 MHz
	AT-800 806-960 MHz
<b>Frequency Resolution</b>	AT-500 20 kHz
	AT-800 30 kHz
<b>Frequency Accuracy</b>	AT-500 $\pm 50$ kHz
	AT-800 $\pm 100$ kHz
<b>Number of points</b>	100

### MEASUREMENTS

<b>Rho</b>	0.000 to 1.000
<b>Match Efficiency</b>	0 to 100%
<b>Return Loss</b>	-32 to 0 dB
<b>VSWR</b>	1.00 to 100.00
<b>Measurement Accuracy</b>	Rho $\pm 0.04$

### TEST PORT

<b>Connector</b>	AT-500 N(F) (TNC, UHF, BNC male or female adapters available)
	AT-800 TNC(F) (N, UHF, BNC male or female adapters available)
<b>VSWR</b>	1.25 max
<b>Directivity</b>	32 dB typical

### MEASUREMENT SPEED

<b>Single Frequency Point</b>	5 readings per second typical
<b>Frequency Sweep</b>	1 sweep per second typical

### FIELD STRENGTH

<b>Range</b>	0 to 100%, relative
<b>Sensitivity</b>	AT-500 Fullscale deflection and 0.22 V/m @ 400 MHz using supplied antenna.
	AT-800 3M @ 12.6 ERP

### PC INTERFACE

RS-232 protocol via DB-9 port

### POWER REQUIREMENTS

**Power Supply** Rechargeable NiCAD battery system. Unit may be re-charged while operating using a wall adapter (included)

### GENERAL REQUIREMENTS

<b>Dimensions</b>	8" x 4-5/8" x 1-3/4" (204 x 118 x 42 mm)
<b>Weight</b>	2.0 lbs (0.9 kg)
<b>Temperature, Operating</b>	0 to 50°C (32 to 122 °F)
<b>Temperature, Storage</b>	-40 to +71 °C (-40 to +160 °F)
<b>Humidity</b>	95% $\pm$ 5% max (noncondensing)
<b>Compliance</b>	Unit complies with MIL-T-28800 Class 5 except for temperature and humidity. Unit is CE-compliant and RoHS compliant

### ACCESSORIES

<b>4240-402</b>	Interseries Adapter, N (M)
<b>4240-403</b>	Interseries Adapter, N (F)
<b>4240-404</b>	Interseries Adapter, BNC (M)
<b>4240-405</b>	Interseries Adapter, BNC (F)
<b>4240-406</b>	Interseries Adapter, TNC (M)
<b>4240-407</b>	Interseries Adapter, TNC (F)
<b>4240-408</b>	Interseries Adapter, UHF (M)
<b>4240-409</b>	Interseries Adapter, UHF (F)
<b>4240-410</b>	Interseries Adapter, SMA (M)
<b>4240-411</b>	Interseries Adapter, SMA (F)
<b>5000-030</b>	Soft Carrying Case for Model 5000-EX Digital Power Meter and Antenna Tester (AT) Series
<b>5000-035</b>	Hard Carrying Case for Model 5000-EX Digital Power Meter and Antenna Tester (AT) Series
<b>7000A545</b>	Verification Kit for Model AT-500 Antenna Tester
<b>7000A845</b>	Verification Kit for Model AT-800 Antenna Tester
<b>7000B840</b>	PC software used to upload trace data for analysis, printing or storage



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