

**FEATURES:**

- 400 MHz – 6 GHz Frequency Range
- Capable of Performing Passive Antenna Measurements
- > 80 dB Typical RF Isolation
- 80 cm Path Length
- Two-axis DUT Positioner
- User Available I/O Ports:
  - 2 SMA Connectors
  - 2 Type N Connectors
- Communication Antennas (2)
- Roll-about Casters for Mobility
- Onsite Setup and Training



*Model AMS-8041 Wireless Test System*

**THE ETS-LINDGREN AMS-8041** is a self-contained enclosure for making wireless device over-the-air performance measurements. The unit can be used for design verification, pre-certification, production sample testing, desense and regression testing. Rolling casters and the ability to pass through 0.9 x 2.1 m (3 x 7 ft.) doors, allow the unit to be readily moved between test stations.

**FEATURES**

**Antennas**

The AMS-8041 is equipped with a Model 3165-02 dual polarized, dual Vivaldi array antenna for both linear and circular measurements over the frequency range of 400 MHz to 6 GHz. The antenna is mounted on a

removable access panel at the top of the enclosure. The antenna can be interchanged with another antenna of a different frequency if needed. Two antennas are used for communication with the DUT.

**Two-Axis Positioner**

3-D antenna measurements can be made using the AMS-8041's two-axis positioner. The positioner is constructed of low-dielectric materials and is designed for handheld devices weighing up to 1 kg (2.2 lb.). The positioner is controlled by EMQuest<sup>™</sup> Software.

**RF Shielding**

The AMS-8041 is constructed with the same RF shielding and shielded door technology used in the construction of our larger, full certifi-

cation wireless test chambers. The RF shielded door uses compressible finger stock in a “knife edge” configuration. Two latch points with a single point handle provide secure sealing and one-hand operation. Typical RF isolation of both the shielding and door is greater than 80 dB.

**Anechoic Absorber**

FlexSorb<sup>™</sup>, a flexible RF absorber that bends and returns to its original form, is used in AMS-8041 to eliminate breakage from extended lab use. The absorber is performance optimized and limits reflections and moding, for more accurate, repeatable measurements. Tapered wedges line the walls, pyramidal absorber is used on the floor, and lossy foam lines the antenna.

### Connector Panel

A connector panel (bulkhead feedthrough) is included with the AMS-8041. The panel includes a power line filter, two SMA connectors and two Type N connectors for customer use. Two ST connectors are reserved for the Two-Axis Positioner, and two additional Type N connectors are reserved for the two DUT communication antennas. There is also a BNC connector for triggered acquisition functionality.

### EMQuest Data Acquisition and Analysis Software

The AMS-8041 System includes our versatile EMQ-100 Antenna Pattern Measurement Software. The software makes fully-automated pattern and frequency response measurements for active antennas. Post-processing capabilities include calculations for directivity, gain, radiation efficiency, total radiated power and total isotropic sensitivity. EMQ-100 also calculates industry specific quantities such as Near-Horizon Partial Isotropic Sensitivity required by the CTIA Test Plan for Mobile Station Over-the-Air Performance.

Advanced graphing capabilities allow data to be shown in a variety of 2-D and 3-D formats, exported to Microsoft Excel™, PDF files or saved in RTF format.

### APPLICATIONS

The AMS-8041 is designed to provide an environment for relative OTA radiation performance of wireless devices. It can be used to measure approximate EIRP, EIS or RSSI in a given direction and polarization (DUTs are positioned with the included two axis positioner). These results can be used to compare the behavior of multiple identical devices, or the same device under different conditions such as external interference or desensitization due to other platform components or radios. Additionally the AMS-8041 is capable of performing passive measurements.

### STANDARD CONFIGURATION

- Shielded Enclosure with RF Anechoic Lining, RF Shielded Door, Casters
- Two Axis DUT Positioner
- One Dual Polarized Measurement Antenna, Two Communication Antennas
- Connector Panel with Two SMA Connectors and Two Type N Connectors for I/O
- Ethernet Fiber Optic Media Converter
- RF Cabling for Measurement and Communication Antennas
- Two Days On-site Setup and General Operating Training
- EMQuest™ Software

### OPTIONS

- Additional Antennas for Added Frequency Ranges
- Range Calibration Dipole (Included with Test Package Purchase)
- Additional Feed Through Connector & Filter Options
- Instrumentation Including Workstation
- EMQuest™ Software Options:
  - Cellular
  - Wi-Fi
  - LTE-SISO
  - A-GPS 2G/3G/4G (LTE)
  - Bluetooth
  - RSE
  - TD-SCDMA

## Electrical Specifications- Antennas

TYPE	FREQUENCY	CROSS-POLARIZATION ISOLATION	IMPEDANCE (NOMINAL)	CONNECTORS
Dual Polarized Vivaldi Array (DUT Measurement)	400 MHz to 6 GHz	> 25 dB	50 Ω	SMA (2)

## RF Shielding

ISOLATION (NOMINAL)
> 80 dB

## Power Requirements- Positioner and Filter

VOLTAGE	AMPS	SOCKET
200 - 230 VAC 50/60 Hz	10 A	IEC 320

## Physical Specifications- RF Shielded Enclosure

	LENGTH	WIDTH	DEPTH	WEIGHT (NOMINAL)
Nominal Outside Dimensions	201.4 cm 79.3 in	87.4 cm 34.4 in	101.1 cm 38.9 in	261.3 kg 575.0 lbs

## Physical Specifications- RF Shielded Door

LENGTH	WIDTH
48.3 cm 19.0 in	48.3 cm 19.0 in