



Diamond Engineering  
Automated Measurement Systems



DAMS Antenna Measurement Systems Guide

## Complete Systems Starting at \$9,500

### LOW COST

Using an outside Antenna lab for your measurements can become very costly over time. By using our system you can design and measure your antennas and devices quickly and efficiently using your own GPIB enabled instruments. We currently support a wide range of VNA's, Signal Generators, Power Meters, Voltmeters, and Spectrum Analyzers

### ADVANCED SOFTWARE

Our measurement systems utilize advanced software that measures the AUT over a multiple number of frequencies and displays measured data in multiple formats including a complete 3D spherical view\* of the AUT and Isotropic or Dipole overlay at any measured frequency.

### EASE OF USE

If you have a compatible GPIB instrument, PC, and reference antenna our system will include everything else you need to make successful measurements. We provide All customers immediate assistance with making measurements quickly and efficiently.

### INSTRUMENT COMPATIBILITY

Our software supports many common instruments from HP/Agilent, Anritsu, Advantest, and Rhode & Schwarz. If your instrument is not listed on our site but has a GPIB Port, contact us for more details.

Visit [www.Diamondeng.net](http://www.Diamondeng.net) for a complete list of supported instruments

## DAMS x100 Heavy Duty Measurement Systems Up to 150 lb. Payload Capacity



#### Positioner Features-

- .25 deg. Horiz. Resolution (DAMS 5100)
- .10 deg. Horiz. Resolution (DAMS 6100/7100)
- +/- 360 Degree Rotation
- +/- 90 deg. Vertical Range @ .10 deg. /step
- DC -6 GHz. Measurement range (DAMS 5100)
- DC-18 GHz Measurement range (DAMS 6100)
- DC-40 GHz Measurement range (DAMS 7100)
- Low Noise Rotary SMA joint.
- Aluminum construction with Steel gears and precision bearings for long life and reliability
- Quick and efficient technical support
- Includes All Accessories
- 24" Aluminum thrust plate for larger antennas
- Ultra Heavy-Duty tripod for maximum stability

## DAMS x000 Standard Measurement Systems Up to 20 lb. Payload Capacity



#### Positioner Features-

- Up to .125 deg. Horiz. Res.(Dams 5000)
- Up to .0625 deg. Horiz. Res.(Dams 6000/7000)
- 360 deg. Continuous Horizontal Range
- +/- 45 deg Vertical Range @ .10 deg. /step
- DC -6 GHz. Measurement range (DAMS 5000)
- DC-18 GHz Measurement range (DAMS 6000)
- DC-40 GHz Measurement range (DAMS 7000)
- Low Noise Rotary SMA joint
- 85% acrylic/deirin construction for high strength and minimal reflections
- Quick and efficient technical support
- Up to 3 years parts and labor warranty

#### Optional Accessories \*

- Acrylic or Aluminum\*\* Thrust Plate for heavy loads.
- Laser Tool for long range alignment
- Digital Level for precise setup
- +/-90 Deg. Pivot for spherical measurements
- Advanced Processing Module

\*- Included with DAMS 6x00/7x00 systems

\*\*- Additional costs may apply



# Supports Most GPIB Enabled Instruments

## Powerful Software

Antenna Measurement Studio is powerful antenna measurement software that can completely characterize any antenna using a wide variety of processing and display features.

### Standard Software Features-

- Path loss calculator
- Simple 3D Plots
- Easy USB connectivity
- One Touch Antenna profiling
- Reference Antenna import feature
- Data Export Function
- Measure over frequency
- Calibration Features
- Fully configurable positioner settings
- Extensive plotting features
- Dataset Manipulation

### Advanced Processing Module Features

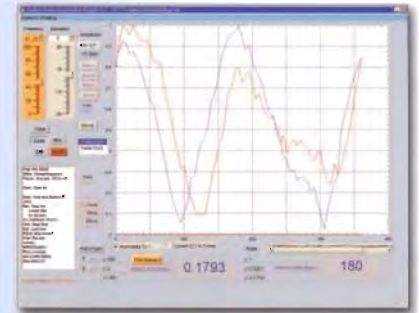
- Advanced Spherical 3D plots
- Exclusive dataset calculator

### Supported Instrument Configurations

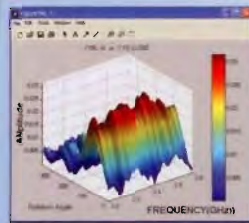
- Single VNA
- Receive\* only for self generating sources
- Separate Source and Receive\* Instruments
- \*Supported Receivers: Spectrum Analyzer, Power Meter, or Voltmeter w/ Detector Diode



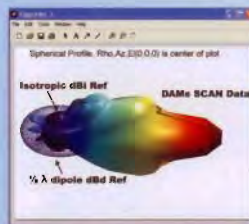
Dual Trace Polar Radiation Plot



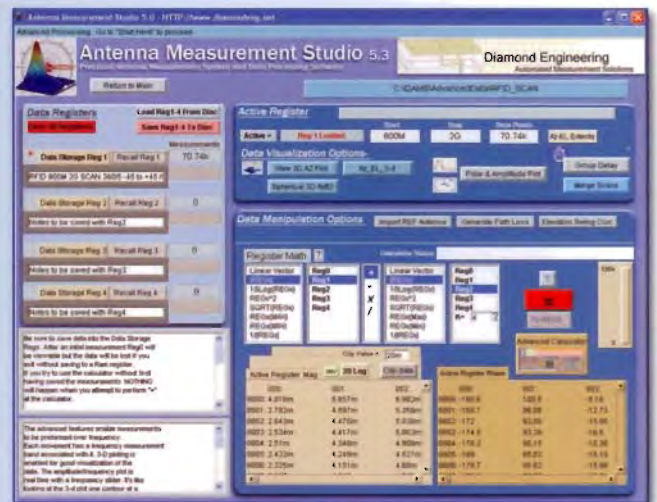
Dual Trace Amplitude Plot



3D Amplitude plot



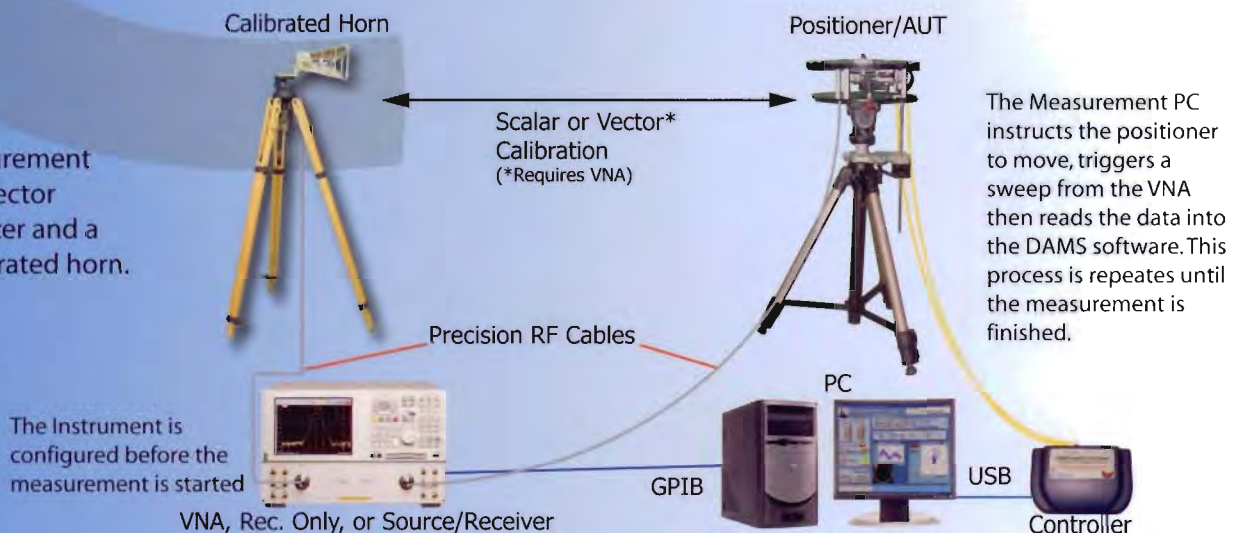
Spherical Plot



Data Processing and Plotting Page

## Typical Measurement Layout

A typical measurement setup using a Vector Network Analyzer and a stationary calibrated horn.



Visit us on the web: [Http://www.diamondeng.net](http://www.diamondeng.net)

## System Pricing

### Heavy Duty x100 Series - Up to 150 Lb. payload capacity



Model	Frequency	Price
5100	DC-6 GHz	\$21,000 USD
6100	DC-18 GHz	\$27,000 USD
7100	DC-40 GHz	\$34,000 USD

Download fully functional demo software from [www.diamondeng.net](http://www.diamondeng.net)

### Standard x000 Series - Up to 20 Lb. payload capacity



Model	Frequency	Price
5000	DC-6 GHz	\$9,500 USD
6000	DC-18 GHz	\$14,000 USD
7000	DC-40 GHz	\$21,000 USD

- Advanced Processing Module (inc. with 6x00/7x00) \$2,500 USD
- Pre-Configured Desktop or Laptop PC w/ GPIB \$1,900 USD

- Educational Discounts Available -

Used worldwide by top Companies and Universities



Lockheed Martin  
Motorola  
L3 Communications  
Apple Computer  
Motion Computing  
Ball Aerospace  
Broadcom  
Madison University- Wis.

TDK - Ireland  
King Saud University  
Govt. of Israel  
Manchester University  
ATC Egypt  
Samsung/LG  
University of Natal  
Elektrobit A.G.

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