

### Spherical Near-field Chamber/Measurement System



#### DESCRIPTION

This system consists of an integrated chamber/offset arm scanner provided by The Howland Company, and motor control system and software from NSI. The system design represents a major advance for testing of wireless products. Specialized features include an offset mounted dielectric turntable to reduce truncation effects, false absorber walls with dielectric cross member to minimize reflections, orthogonally mounted linear probes to increase testing speed, and a drawbridge which facilitates test article access.

#### CAPABILITIES

The system interfaces with a wide variety of RF equipment and is capable of measuring amplitude and phase patterns from L-band to mmWave Band. The Model 700S-100 includes NSI Antenna Measurement Software. The system software runs on a Pentium based measurement workstation and provides automatic setup of scans based on measurement parameters and desired output. Measured data can be processed for far-field or holographic patterns yielding complete characterization of the antenna's performance. A single data set provides information on antenna gain, sidelobe structure, beam pointing and cross polarization. The Model 700S-100 can be supplied with a variety of options to enhance system performance.

#### FEATURES

- Full anechoic chamber
- Drawbridge access to test object
- Full 360° scanning in phi, up to 320° scanning in theta
- 800 MHz to 18GHz frequency coverage
- Wideband dual-pol probe, electronically switched during scanning
- Far-field and Near-field Measurement Capability
- Far-field, Holographic and Near-field Patterns

SPECIFICATIONS	
Construction	Dielectric overhead swing arm
Drive system	Precision Stepper Motors
Scan Area	360° Phi Up to 320° Theta
Maximum Antenna Load	4,400 lb (1,996 kg)
Maximum Antenna Diameter	30" (0.76 m)
Resolution	0.01° phi and theta
Position Repeatability	0.03°
Scan Speed (X,Y)	15 inches/sec. (0.38 m/s)
Rotational Speed (Theta and Phi)	40°/sec Phi, 10°/sec Theta
System Controller	NSI controller with parallel I/O, and GPIB Interface
Measurement Workstation	Pentium based PC with Windows operating system, keyboard, 17" LCD monitor
Stepper Motor Power Amplifier	EIA 19" rack mount. (7" high x 14" deep)
Motor Cables	Quick-connect; 40' (12 m)
Probe	0.8 - 18 GHz dual-pol log periodic antenna
RF Cables	Included
Rotary Joints	Qty. 2 - DC-18 GHz, (Phi, Theta)
Supported RF Devices	Agilent PNA, ENA, 8530A, 8753D/ E Series, 8719/20/22 Series NSI Panther (contact NSI for a complete list)
Power	100-240 VAC switchable, 47-63 Hz, 500 watts

## **DIMENSIONS**

- ◆ Width - 16 ft (4.9 m)
- ◆ Depth - 16 ft (4.9 m)
- ◆ Height - 16 ft (4.9 m)

## **ORDERING INFORMATION**

Please contact the NSI Sales department to order this product.

### **Nearfield Systems, Incorporated**

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