

## NSI-700S-90

**Spherical Near-field Measurement System - 60" ( 1.5 m) max AUT Dimension**



### DESCRIPTION

Model 700S-90 is an ideal system for measuring medium and low gain antennas up to 60 inches (1.5 m) in diameter. It is well suited to perform cellular and PCS band base-station antenna testing. The 700S-90 uses a dual-axis theta-over-phi high accuracy stepper motor based positioning system with an adjustable extension arm for the probe. The system can support AUT loads of up to 300 lbs (136 kg). The location of the probe is adjustable to accommodate different configurations. The NSI-700S-90 uses an overhead dielectrically swing-arm for probe motion in the theta axis, and a dielectric AUT support stage for motion in the phi axis. The overall system is specifically designed to eliminate the adverse effects from interactions between the AUT and the surrounding environment. It is the ideal solution for providing complete 3D characterization of the antenna or wireless device.

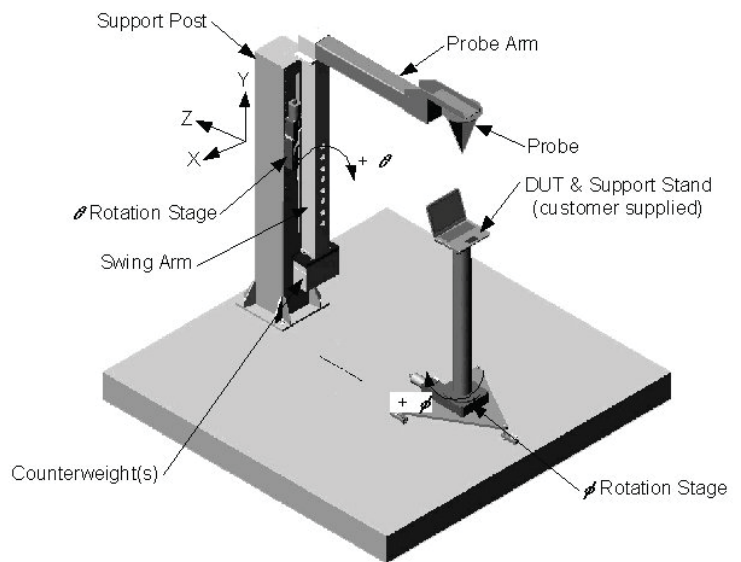
### CAPABILITIES

The system interfaces with a wide variety of RF equipment and is capable of measuring amplitude and phase patterns from 0.5 GHz to 40 GHz. The Model 700S-90 includes NSI Antenna Measurement Software. The system software runs on a Windows 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, side lobe structure, beam pointing and cross polarization. The Model 700S-90 can be supplied with a variety of options to enhance system performance.

### FEATURES

- Scan Area 360° Phi and 330° in Theta
- L-band to mmWave Measurements
- Complete 3D characterization
- Dielectrics & optimized design to reduce reflections
- Optional wideband, dual-port probe 800 MHz to 6 GHz or 500 MHz to 18 GHz
- CTIA OTA Performance Testing
- Far-field, Holographic and Near-field Patterns
- Far-field Measurement Options Available

SPECIFICATIONS	
Construction	Theta, phi, and pol rotation stages with Dielectric overhead swing arm, steel support tower, aluminum vertical arm
Drive system	Precision Stepper Motors
Scan Area	360° Phi and 330° in Theta °
Maximum Antenna Load	300 lbs (136 kg)
Maximum Antenna Diameter	60 in (1.5 m)
Resolution	0.01° phi and theta
Position Repeatability	0.03°
Rotational Speed (Theta and Phi)	40°/sec Phi, 10°/sec Theta
System Controller	NSI controller with serial and parallel I/O interfaces
Measurement Workstation	Measurement workstation computer with large LCD monitor
Stepper Motor Power Amplifier	EIA 19" rack mount. (7" high x 14" deep)
Motor Cables	Quick-connect; 40' (12 m)
Scanner Absorber	Absorber Kit (5" pyramidal cone)
Probe	WR90 Open-ended Waveguide Probe SMA (f) transition & Pyramidal absorber (3")
RF Cables	20 GHz RF Cables
Rotary Joints	Qty. 3 - DC-26.5 GHz, (Phi, Theta, Pol)
Supported RF Devices	NSI Panther Receiver Subsystem or selection of Agilent, Rohde & Schwarz and Anritsu VNA's (contact NSI for a complete list)
Power	100-240 VAC switchable, 47-63 Hz, 500 watts



## DIMENSIONS

- ◆ Width - 146" (3.7 m)
- ◆ Depth - 146" (3.7 m)
- ◆ Height - 161" (4.1 m)
- ◆ Weight - 1,200 lbs (544 kg)

## ORDERING INFORMATION

Please contact the NSI Sales department to order this product.

### Nearfield Systems, Incorporated

19730 Magellan Drive, Torrance, CA 90502, USA, Tel: 310.525.7000, Fax: 310.525.7100  
 Email: [sales@nearfield.com](mailto:sales@nearfield.com). Visit our website: [www.nearfield.com](http://www.nearfield.com)