

## NSI-700S-20

*Spherical Near-field Measurement System - 10" (0.25 m) max AUT Dimension*



### DESCRIPTION

Model 700S-20 is an ideal system for measuring medium and low gain antennas up to 10 inches (0.25 m) and up to 10 pounds (4.5 kg). The 700S-20 uses a dual-axis, phi-over-theta, high accuracy positioning system with an adjustable stand, for probe support. The system is constructed of modular aluminum and components. Thus, the location of the probe, theta, and phi stages can be adjusted to accommodate various antenna sizes, mounting mechanisms, and frequencies. Additionally, the system is easy to assemble and can be quickly dismantled for relocation or storage.

### CAPABILITIES

The system interfaces with a wide variety of RF equipment and is capable of measuring amplitude and phase patterns from X-band to mmWave frequencies. The Model 700S-20 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, side lobe structure, beam pointing and cross polarization.

### FEATURES

- Low Cost & Portable
- Full 360° x 360° coverage
- X-band to mmWave Measurement
- Far-field, Holographic and Near-field Patterns
- Far-field Measurement Options Available
- Optional encoder and slip-ring assembly for Theta stage

SPECIFICATIONS	
Construction	Theta, phi, and pol rotation stages with "L" bracket (aluminum)
Drive system	Precision Stepper Motors
Scan Area	Full spherical; Phi/Theta - 360°
Maximum Antenna Load	10 lb (4.5 kg) at 9" CG off set
Maximum Antenna Diameter:	10 in (0.25 m)
Resolution	0.015° phi and pol, and 0.01° theta
Position Repeatability	0.03°
Rotational Speed (Theta and Phi)	30°/sec
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 (1" flat)
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 - 24 " (0.6 m)
- ◆ Depth - 60" (1.5 m)
- ◆ Height - 36" (0.91 m)
- ◆ Weight - 100 lbs (45 kg) approx

## ORDERING INFORMATION

Please contact the NSI Sales department to order this product.

### Nearfield Systems, Incorporated

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