

MI Technologies' Range Services



Your test range requirements are unique. You may require range testing, but lack sufficient funding to build and staff a dedicated facility. You may already have a range, but your current facility cannot keep up with heavy throughput demand. You may plan to relocate your range facility and need a stand-in range. Or you may have infrequent test requirements that do not justify the expense of maintaining a dedicated on-site facility.

Whatever your individual range test challenges, MI Technologies is ready to meet your unique test and measurement requirements.

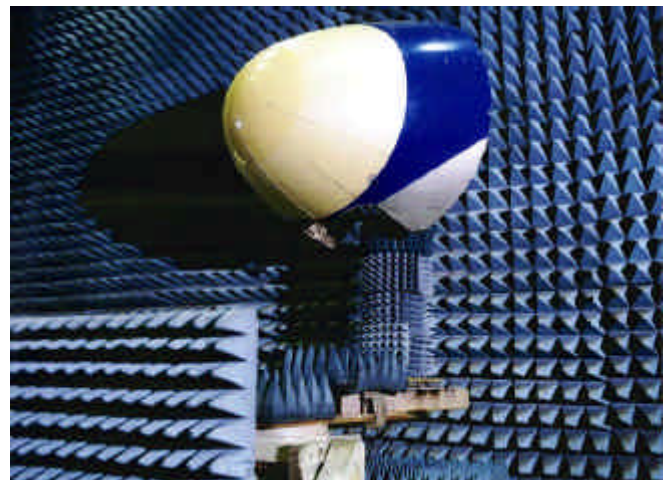
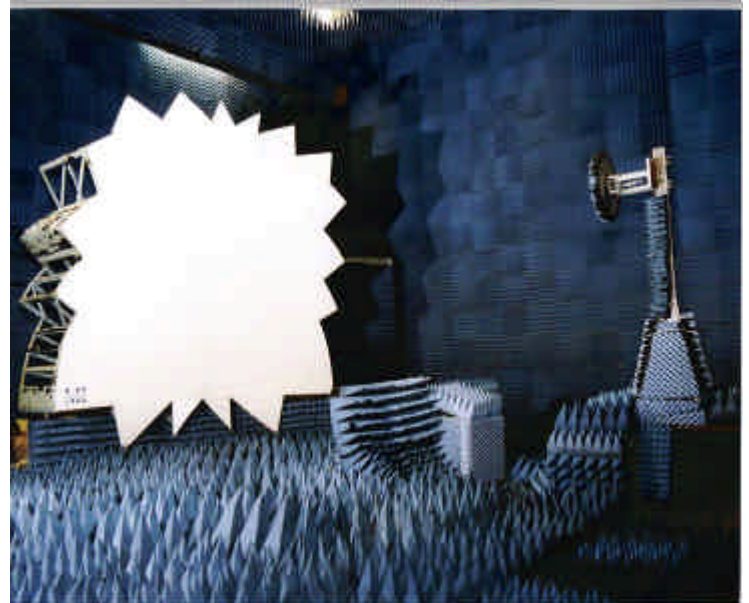
Make our range - your range!

MI Technologies offers an outsourced range testing service facility that:

- Includes all the necessary test facility, test equipment and test personnel
- Adapts to meet your unique requirements
- Performs tests at the state-of-the-art range at our Atlanta-area test facilities
- Provides quality equipment, expert staff, and flexibility
- Supports testing for any industry, including wireless, automotive, satellite and defense

Characterized and Calibrated

We calibrate our instrumentation to NIST standards, so you can be confident in the accuracy of tests performed at our facility. Before every testing program, we conduct a range probe using a phase/amplitude probe system to ensure electromagnetic quality in the frequency bands you specify.





You have total flexibility in the selection of facility configuration, equipment, required support, throughput, test objective and test item.

Facility Selection

Our facility consists of a large anechoic chamber that can be configured as a free-space far-field range, compact range, or equipped with a near-field scanner.

Equipment Selection

Equipment available to you includes:

- A fully automated system, controlled from an MI-3001 Data Acquisition and Analysis Workstation where applicable
- A manual system that can be configured to address specific needs
- A full suite of RF and microwave signal sources, receivers, mixers, multipliers, positioners, position controllers, absorber, calibration standards and cables
- A fully stocked machine shop for fixture modification or manufacturing
- Cable assemblies or control elements, with the assistance of our engineering and electronics manufacturing facility

Support Selection

We offer three levels of testing support that can be tailored to your specific needs.

Full Support Testing

MI Technologies completely performs testing and reports findings as specified by the customer.

Supported Testing

Customers perform on-site direction of the tests, while MI Technologies provides the test range and test system operator.

Limited Support Testing

Customers direct the testing and operate the test systems, and MI Technologies provides test facilities and limited support.

Throughput Selection

Our full-service range can support a single test, a limited run of test items, or a constant rate of test throughput.

Test Objective Selection

Objectives available include:

- Prototype testing
- Design verification testing
- Full product testing
- Characterization and antenna calibration
- Manufacturing quality evaluation
- Component diagnostics

Test Item Selection

Our service is ideal for any test item, including:

- Antenna Elements
- Panel Antennas
- Grid Antennas
- Phased Arrays
- Multi-beam Antennas
- Embedded Antennas
- Radomes
- Reflectors
- System characterizations

Test Facility Specifications

Anechoic chamber:

50 ft wide x 50 ft deep x 30 ft tall with adjacent control room

Frequency range:

2 to 94 GHz

Data acquisition:

Fully-automated system for all range configurations, controlled by an MI-3001 Data Acquisition and Analysis Workstation

Configuration options:

Free-space range, MI-5751 compact range, or MI-6920-3X3 planar near-field scanner with 3 ft x 3 ft scan plane and motorized probe z-axis and roll axis

Compact range configuration:

Cylindrical quiet zone (4 ft diameter and 4 ft length), with an amplitude taper of 0.5 dB or less. Total phase variation within the

quiet zone is less than 10 degrees. Test zone is expandable to 6 ft horizontally x 5 ft vertically with up to 1.0 dB amplitude taper. Conditions vary near low end of the operating frequency band.

AUT Positioning Equipment

Standard systems provide four axes of AUT control in roll over azimuth over elevation over slide. A wide variety of positioning requirements can be satisfied through use of alternate available positioning system components and fixtures.

AUT Maximum Test loads:

Up to 3000 lbs

Measurements:

The MI-3001 Acquisition and Analysis workstation can acquire most standard range parameters such as amplitude, phase, polarization and gain

measurements. System parameters such as transmitter EIRP or receiver sensitivity can be measured or computed in post processing.

Data Output:

The workstation can provide a generous set of optional formats for output data reports including ASCII test files and single and multi-curve rectangular, polar, isometrics and contour plots.

Additional Options:

- Overhead crane system
- MI-3047 Radome Analysis software
- MI-3043 Advanced Antenna Pattern Analysis software
- MI-3044 Planar Near-Field Analysis software

Lead time:

Depends on availability.

For more information, contact MI Technologies' Customer Support Service Center.