

OUR CHAMBERS

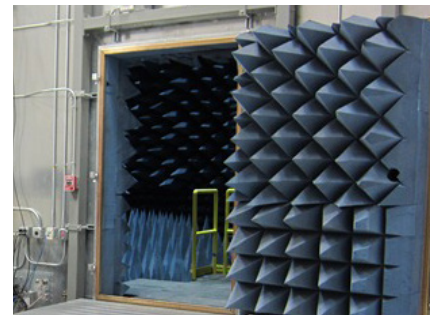
SRC takes pride in developing highly reliable radar and communications systems and has the **advanced test facilities necessary to meet our customers' highest expectations**

SRC has three anechoic chambers to provide controlled environments for accurate measurement and calibration of antenna patterns, radar performance verification, and electromagnetic interferences (EMI) emission and susceptibility characterization. These chambers include a rectangular far-field chamber, a spherical near-field scanner, and an EMI test chamber. Each is fully equipped to support characterization of advanced systems for radar, communication and electronic warfare applications.

SPHERICAL NEAR-FIELD SCANNER

This 5 meter radius spherical near-field measurement system characterizes a wide variety of antenna systems and was specifically optimized to meet the accuracy, digital control interface, power, weight, and cooling requirements of modern active phased array radar systems. The chamber accommodates test articles up to 15 feet in diameter, weighing more than 10,000 pounds and operating as high as 18 GHz.

***OUR TEST CHAMBERS
SUPPORT MEASUREMENT
AND CALIBRATION OF
ADVANCED SYSTEMS FOR
RADAR, COMMUNICATIONS
AND ELECTRONIC
WARFARE APPLICATIONS***



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The spherical measurement surface includes the complete upper hemisphere and extends to 45 degrees below the horizon. A theta over phi positioner movement allows the center of gravity of a heavy antenna under test (AUT) to remain centered over the phi axis. Theta axis motion extends below floor grade to allow low angle scanning while the AUT is conveniently located at floor level. The precise measurements of electromagnetic near fields over the spherical surface are mathematically transformed to far-field antenna patterns, allowing extremely large apertures to be characterized.

The scanner is housed within a shielded enclosure that is fully treated with pyramidal RF absorbing material providing a secure, RF-quiet environment. A dedicated air handling unit provides constant ambient airflow compatible with high-power radar transmitters. The entire chamber is isolated from host building vibrations.

Specifications

- Dimensions: 38'W x 44'L x 34'H
- Chamber Shielding Effectiveness: 100 dB
- Equipment Access Door: 10' x 16'
- Nominal Scan Surface: 5 m radius, 135° in Theta, 360° in Phi
- Frequency Range: 0.4 – 18 GHz

FAR-FIELD CHAMBER

Our far-field chamber supports testing from UHF through Ku band and is readily extendable up through millimeter waves. The chamber has a quiet zone which is optimized for performance in L and S band. In

addition to traditional far field antenna measurements, this facility supports a variety of full system-level testing including radar target test generation and communication link evaluation.

Specifications

- Dimensions: 26'W x 40'L x 32'H
- Chamber Shielding Effectiveness: 100 dB
- Equipment Access Door: 10' x 10'
- Free Space Path Length: 27'9"
- Operating Frequency: UHF to 18 GHz (mmW extensions available)
- Positioner: Azimuth over Elevation with >1000 lb capacity

EMI CHAMBER

We have an EMI chamber that supports a full range of pre-certification testing that addresses the U.S. Military Standard for electromagnetic compatibility, including radiated and conducted susceptibility and emissions testing. In addition to EMI measurements, the chamber can also be configured for small article antenna measurements with full absorber treatment and an azimuth positioner.

Specifications

- Dimensions: 20'W x 20'L x 12'H with 12'W x 16'L x 8'H anteroom
- Chamber Shielding Effectiveness: 100 dB
- Equipment Access Door: 4'W x 7'H
- MIL-STD-461 Test Capability: CE101, CE102, CE106, RE101, RE102, CS101, CS103, CS104, CS105, CS114, CS115, CS116, RS103 (1-4 GHz and 8-18 GHz only)
- Azimuth Positioner Capacity: 800 lb



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