National Aeronautics and
Space Administration

# Electromagnetic Interference/Electromagnetic Compatibility

The Electromagnetic Interference/Electromagnetic Compatibility (EMI/EMC) Control Test and Measurement Facility supports engineering development and provides EMI/EMC evaluation and certification testing of crew, flight, and ground support equipment, including but not limited to communication, instrumentation, biomedical, guidance and navigation, computation, and robotics. The Computational Electromagnetics Laboratory is used for full-wave, frequency domain electromagnetic simulations.

## Services Provided

- Developmental, engineering support, performance and precertification evaluation, and certification testing
- Conducted and radiated emissions and susceptibility testing (e.g., Mil-STD-461, all revisions; DO-160, sections 16 through 21)
- Lightning indirect effects and electrostatic discharge assessment (e.g., DO-160, sections 22 and 25)
- Cable transfer impedance and equipment shielding effectiveness assessment
- EMC design consultation
- General three-dimensional (3D) frequency domain electromagnetic analysis

## EMI/EMC Testing

| Capabilities | |
|---|---|
| Shielded room enclosures | Meet military standard MIL STD 285 |
| Synthesized signal generators | Capable of covering a frequency range of10 Hz to 26 GHz |
| Radio frequency power amplifiers | Provide up to 500W of output power in the frequency range of 10 kHz to 18 GHz |
| Lightning transient generator and support probes | Provide test waveforms 1, 3A, 3B, 4 and 5A for lightning indirect effects testing up to level 3 |
| Electrostatic discharge test equipment | Provides standard ESD test waveforms up to 30kV peak pulse voltage |
| Complete line of general purpose ancillary test equipment | Power supplies, oscilloscopes, powermeters, voltmeters |
| Hi-fidelity EMC modeling software | General purpose 3D electromagnetic modeling |

*Robonaut 2 Undergoing EMI Testing*

We have developed customer-friendly agreements to streamline business relationships and are eager to share our unique facilities and expertise with new customers. We invite your inquiries regarding application or adaptation of our capabilities to satisfy your special requirements. Briefings on general or specific subjects of mutual interest can be arranged at JSC or at your business site.

**Facility Testing Information**
http://jsceng.nasa.gov

**Point of Contact**
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