



ACCURATE & REPEATABLE

With over 50 years of experience in the acoustic qualification testing industry, we provide reliable and valid test results.

TEST FROM ANYWHERE

Our Direct Field Acoustic Test system is completely modular and mobile. The system is scalable for all sized components, from small satellites to large satellites.

TIME-EFFICIENT & COST-EFFECTIVE

Our DFAT® solution saves time and cost compared to conventional testing methods because we can test in-place.

REFERENCE PROJECTS

- Orion EFT-1/EM-1
- SLS/EUS
- StarOne-D1
- AsiaSat -9
- Echostar-23

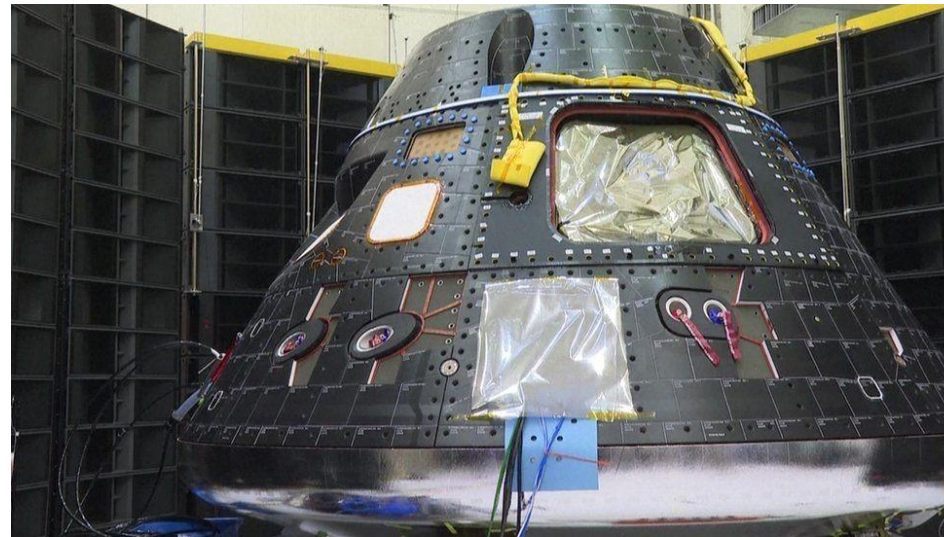
LONG-TERM CLIENTS

- Northrop Grumman Corp.
- BAE Space & Mission Systems
- L3 Harris
- MAXAR
- NASA JPL
- UTC
- Lockheed Martin

MSI DFAT® Services

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Direct Field Acoustic Testing (DFAT®)



- MSI ventured into spacecraft testing two decades ago in collaboration with Orbital Sciences, giving rise to MSI-DFAT Services, LLC. Over the past 20 years, MSI-DFAT has successfully conducted more than 200 tests for clients across the global space industry.
- The beauty of DFAT® lies in its flexibility—it isn't constrained to specialized facilities. Acoustic tests can now take place anywhere in the world, wherever the unit under test (UUT) is situated. This offers a time-efficient and cost-effective alternative to traditional testing methods.
- MSI-DFAT's testing equipment is purpose-built to replicate the intense noise and vibration conditions experienced during rocket launches. Utilizing a modular "building block" approach, MSI-DFAT systems can adapt to accommodate objects of any size. Typically, DFAT® systems feature 1,600+ speakers, 2,000,000+ Watts of amplification, multiple test microphones, and a closed-loop narrow-band data acquisition and control system.



The Trusted Partner in Spacecraft Acoustic Testing

- ✓ Narrow-band MIMO Control
- ✓ Levels Exceeding 150 dB OASPL
- ✓ Repeatability
- ✓ Shaped Sound Field
- ✓ Test is only 1 day, normal AI&T flow
- ✓ Expert personnel and tech support
- ✓ Over 200 successful tests

- The DFAT® system is meticulously designed, constructed, and operated by experienced and qualified acoustic and audio engineers to ensure precision. MSI-DFAT conducts tests on spacecraft and/or related test objects according to a set of defined and documented procedures, either provided by MSI-DFAT or tailored to the client's specific requirements. Our systems are entirely modular and mobile, enabling us to deliver to the client's designated facility.
- We complete a test typically within 4-5 days. The test object is only required for 1 day, resulting in significantly less downtime compared to other testing methods.
- MSI-DFAT's equipment is at the forefront of technology, and our crews are dedicated to delivering the highest level of service to surpass your expectations.
- MSI-DFAT Services, LLC. has been granted numerous patents for its proprietary methods and technology.

EXPERTISE & KNOW-HOW

- The inventor of Direct Field Acoustic Testing (DFAT®)
- Over 200 DFAT® tests performed

REQUIREMENTS

- Facility large enough to accommodate the test object and all acoustical test equipment
- Overhead crane
- Defined and documented test procedures
- Forklifts & manlifts

LOGISTICS & HANDLING

- Completely modular and mobile
- Set-up provides smooth coverage to target simulation levels
- From arrival to departure is typically 4 days total: 1 day of setup, 1 day of simulator testing, 1 day of downtime on the test object during test, and 1 day of tear-down



Small Satellite and Subsystem Test Setup to 3.6m tall.

Notes:

CONTACT US

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Global Service Available

www.msi-dfat.com



**Direct Field Acoustic Testing
(DFAT®)**

TEST FROM ANYWHERE

We bring the system to you

SCALABLE

Components to spacecraft

PROVEN

Meets requirements for all launch vehicles