



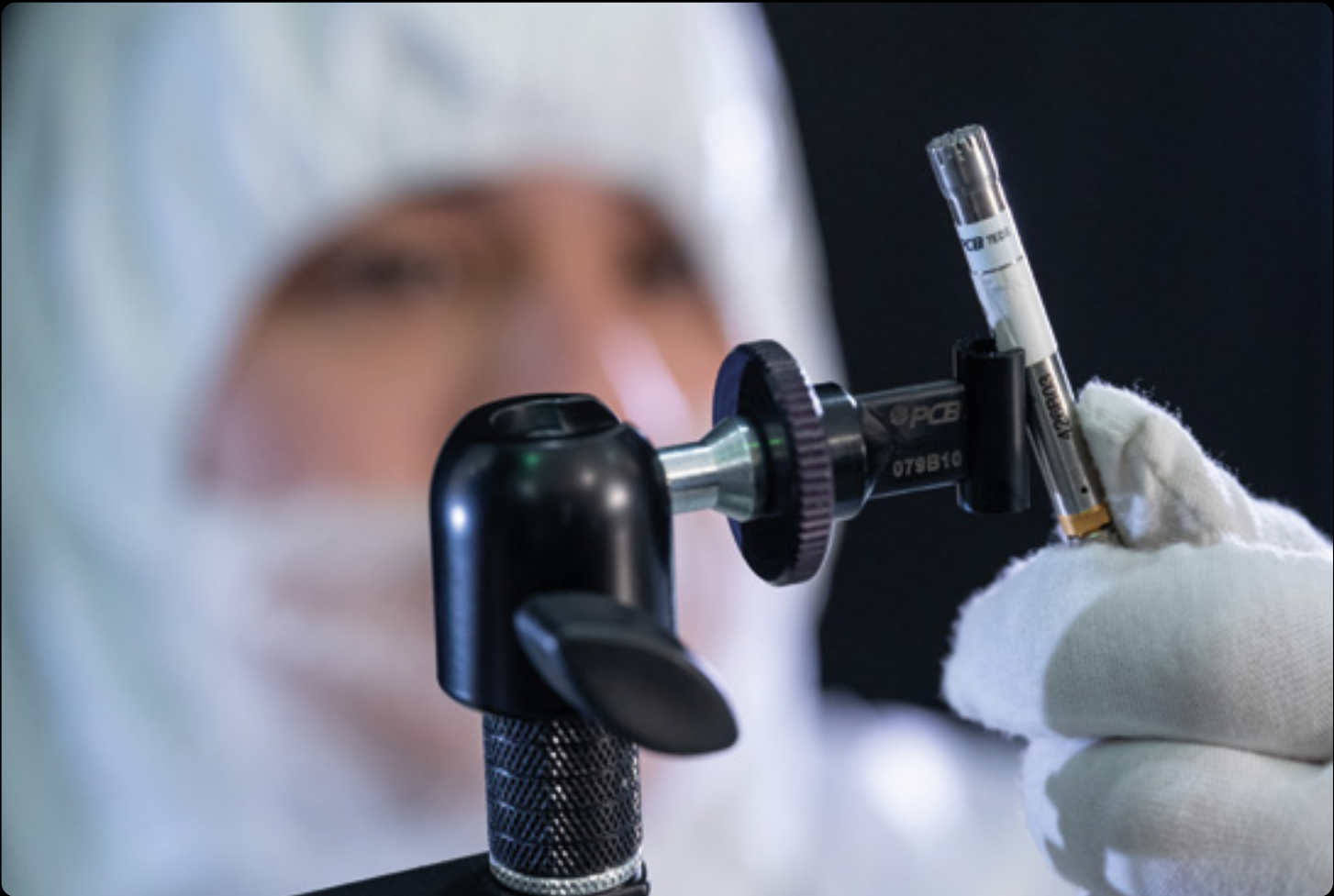


## Acoustic Testing for Launch Readiness

Launching high-tech hardware to space is among the riskiest endeavors ever attempted. Tolerances are tight and failure catastrophic.

There's a better way. Rigorous environmental testing can mitigate the risk of unknown vulnerabilities and ease the burden of launch anxiety.

# Advancing Direct Field Acoustic Testing to speed launch readiness.



## Optimizing Direct Field Acoustic and Environmental Testing

ARS provides direct field acoustic and environmental testing plus other value-add testing services to the aerospace and defense industries. We simulate the launch experience with exacting accuracy, with industry-renowned transparent data delivery and best-in-class reliability.

We understand the stress and precision required to test “can’t fail” products. That’s why we combine industry-leading exactitude with the highest standards of customized service for all aerospace and defense environmental testing needs.

Trained engineers deploy a configured Direct Field Acoustic Testing system and perform turn-key tests in conjunction with your team. Our technologies are simple, effective and powerful, enabling shorter setup times and more accurate results.

ARS is led by a diverse team with more than 80 years combined experience in high-performance audio, and several decades of experience building high-output acoustic devices for military, industrial, Direct Field Acoustic Testing applications, space and environmental testing.

We furnish services on a global basis at either your facility, at a 3rd-party multi-use facility or at our own fly-in, fly-out test facility. Having the ARS team come to your facility saves time, stress and eliminates the need to transport your hardware.

## ARS Delivers a Number of Important Advantages

### Service-focused

ARS works hand-in-hand with an extensive network of partners and experts from around the globe to design the best environmental testing program, no matter how complex the requirements or test conditions.

### Efficient

ARS quickly executes on all projects, working within strict timelines and budgets regardless of payload size or location virtually anywhere in the world.

### Safe

ARS’ environmental testing services feature multi-layer redundancy of safety systems to assure after safety for operation for both hardware and personnel.

### Transparent

ARS openly furnishes unaltered source data and analysis along with other revelatory information without filters or manipulation, ensuring you can perform your own analytics when necessary and have complete confidence in the results.

# The Service Advantage

As a leading solutions provider in environmental testing, ARS has the program management skills and experience required to oversee the entire lifecycle of aerospace environmental testing campaigns.



ARS’s highly-capable experts bring deep experience in aeronautics, manufacturing, mechanical engineering and related advanced disciplines, all combined with an unrivaled dedication to superior service to assure the job is done to each client’s precise requirements.

Our expertise spans acoustic testing (DFAN and Reverberant), shock testing, thermal testing, vibration testing and other critical tests, making ARS a one-stop, comprehensive test and program management partner.

In addition, ARS offers other value-add supplementary services.

## Value-Add Supplementary Services

### Environmental Testing Campaign Management

Our comprehensive project management keeps all aspects of your environmental testing campaign on track from initial planning to final flight approval spanning acoustics testing, shock testing, thermal testing, vibration testing and other critical tests.

### Data Acquisition Services

Our data acquisition services provide the precision necessary to equip every project with the essential information it demands, including acquisition of environmental data tailored to exact specifications.

### Quality Control and Assurance Service

Our dedicated quality control and assurance services ensure that each environmental testing project adheres to the highest industry standards, delivering results that are both dependable and exemplary.

### Space Hardware Ground Logistics Services

ARS provides logistics services that meticulously conform to the demands of handling and transporting space hardware. We safeguard safety and integrity throughout the entire process.

### Risk Evaluation Support and Consultation

ARS’ seasoned experts provide support and consultation throughout every project to assess and mitigate risks and assure project success.

Our Technology



# NEUTRON System

The pioneering NEUTRON System sets the state-of-the-art for Direct Field Acoustic Testing technological innovation. It's the core of our NEUTRON series of proprietary, purpose-built acoustic devices for DFAN applications.

## Features and Benefits:

### Full-Range Output

Provides full-range output that requires no additional sub-bass reinforcement. Features best-in-class acoustical efficiency for maximum performance and reliability.

### Highly-Scalable

The NEUTRON System is a highly scalable, capable and economical solution for a wide range of different-sized test articles.

### Included Power and Processing

All power and processing necessary to properly operate each acoustic device is supplied via the proprietary ARS CORERACK package.

### Thermal Management System

Custom-engineered, fully-integrated thermal management system ensures maximum performance and response linearity are maintained for full test duration, while significantly reducing thermal load on transducers.

### Suspension Hardware

Suspension hardware designed specifically to safely expedite the process of building columns of NEUTRON cabinets makes the system both more efficient to construct and deconstruct, and also significantly more scalable for any size of test.

# ARS CORERACK

The ARS CORERACK augments the NEUTRON System with amplification, signal processing and power distribution modules for NEUTRON Systems, and the ARSDRIVE provides real-time telemetry and control of the NEUTRON System.

## Features and Benefits:

### Mains Connection

Internal power distribution requires only a single 3-phase mains connection to energize the entire rack.

### Single-Pin Cable

A single multi-pin DRV1 cable supplies up to 64 drive lines per rack, as well as real-time network monitoring of all amplifiers and power distribution units.

### Settings and Protection Limiters

All NEUTRON DSP settings and protection limiters are stored in the amplification system to ensure safe and reliable operation with every use.

### Emergency Stop and System Protection Limiters

ARS offers manual emergency stop capability as well as several automated system protection capabilities.



# ARSDRIVE

The ARSDRIVE allows a single operator to program, control and monitor the NEUTRON System in real-time, while also enabling seamless integration with the acoustic controller.

## Features and Benefits:

### Fully Redundant

Fully redundant with backup power supply units in all devices, and battery backups for secondary PSU support.

### Autonomous

Only one ARSDRIVE is needed to control any size of NEUTRON System deployment.

### Digital Connectivity to Test Circle

Digital connectivity to test circle available via Cat6 or Fiber Optic cabling for maximum flexibility.

### High-Resolution Monitors

Dual high-resolution monitors are supported by premium swing-arms for improved ergonomics as well as easy accessibility to critical data.

### Test Controller Integration

The continuous integration of acoustic controller and audio system processor ensures that maximum drive signal fidelity is maintained, while points of failure are significantly reduced.

# Accessories

ARS has also developed essential accessories such as certified attachment devices and lifting slings that help make the deployment, connection and operation of the NEUTRON System a safe, replicable and reliable process.



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