

# Jonathan Hail

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## SUMMARY

Systems Test Engineer with five years supporting RF, microwave, electronic, and **Electronic Warfare** systems through integration, developmental test, verification, validation, and field evaluation. Converts system requirements into verification methods, detailed test plans, procedures, instrumentation configurations, data products, and defensible reports. Configures spectrum analyzers, signal generators, network analyzers, RF accessories, and **data acquisition systems** for repeatable laboratory and field measurements. Analyzes RF performance, signal behavior, propagation, anomalies, technical risks, and requirements compliance. Partners with government engineers, program managers, **integrated product teams**, and multidisciplinary specialists during test planning, execution, demonstrations, and integration events. Holds U.S. Citizenship and an active **Interim Secret clearance**, with eligibility for Top Secret/SCI access. Contributes clear technical judgment, disciplined troubleshooting, and reliable documentation during mission focused test work.

## EXPERIENCE

### Systems Test Engineer, Electronic Warfare Systems

May 2024 - Present

Summit Defense Technologies

Colorado Springs, CO

- Leads developmental testing, integration, verification, and field evaluation for RF and Electronic Warfare subsystems. Owns requirement traceability, test configuration, instrumentation readiness, data analysis, technical reporting, and coordination with government engineers and integrated product teams.
- Converted allocated RF requirements into **verification** methods, test configurations, data products, and acceptance evidence.
  - Configured **spectrum analyzers**, **signal generators**, network analyzers, and acquisition equipment for repeatable laboratory measurements.
  - Executed field integration tests with government engineers, preserving **configuration control** and objective requirements traceability.
  - Analyzed RF performance data, identified anomalies and technical risks, then documented focused follow up actions.
  - Authored **test plans**, procedures, **technical assessments**, and reports connecting measurements with compliance conclusions.
  - Coordinated range demonstrations, equipment readiness, data collection, troubleshooting, and post test documentation during travel events.

### RF Test Engineer, Microwave Systems

July 2022 - April 2024

High Plains Systems Group

Denver, CO

- Supported bench and subsystem verification for microwave assemblies and **Electronic Warfare integration activities**. Built requirement based procedures, operated calibrated RF instrumentation, investigated anomalies, maintained records, and prepared evidence for multidisciplinary program reviews.
- Characterized microwave assemblies with calibrated instrumentation, documenting gain, frequency response, and interface performance.
  - Derived requirement based test steps from engineering specifications and interface documentation for repeatable **verification**.
  - Investigated anomalous **RF** results through controlled injection, fixture checks, configuration review, and repeated measurements.
  - Collected spectrum and signal data during EW **integration**, giving hardware and software engineers clear observations.
  - Prepared test summaries with setup details, measured results, deviations, technical risks, and retest conditions.
  - Coordinated shared laboratory instrumentation and schedules, preserving complete records across concurrent engineering efforts.

### Junior RF Systems Engineer, Electronic Systems

June 2021 - June 2022

Mesa Applied Electronics

Albuquerque, NM

- Supported RF and **microwave engineering** for electronic systems through laboratory characterization, integration checks, data processing, and customer demonstration preparation. Applied electromagnetic theory, **signal analysis**, controlled measurement practices, and careful technical documentation under senior engineering guidance.
- Applied **electromagnetic theory** during RF characterization and integration checks for electronic system assemblies.
  - Operated **spectrum analyzers**, signal generators, and **network analyzers** under controlled laboratory procedures.
  - Built measurement configurations from diagrams, checking cables, attenuators, adapters, interfaces, and equipment settings.
  - Processed captured data in **MATLAB** and Python, clarifying frequency domain behavior for design discussions.
  - Documented unexpected system behavior with reproducible conditions, traces, and configuration details for senior engineers.
  - Prepared equipment inventories, procedures, and data collection materials for customer demonstrations and off site testing.

## PROJECTS

### Electronic Warfare Field Verification Program 📅 2025

Supported a field verification effort linking RF instrumentation, system requirements, test procedures, data collection, anomaly review, and government stakeholder reporting during formal demonstrations.

### Microwave Subsystem Characterization 📅 2023

Built a repeatable laboratory approach for microwave assembly characterization, combining calibrated measurements, signal analysis, configuration records, and technical findings for engineering review.

LEADERSHIP & AWARDS

- Recognized by engineering leadership for dependable RF test preparation and clear technical reporting.
- Selected as a trusted contributor during multidisciplinary integration events and customer demonstrations.
- Received positive stakeholder feedback for careful anomaly documentation and practical troubleshooting support.

EDUCATION

**Bachelor's Degree in Electrical Engineering**  
University of New Mexico   GPA: 3.5  
*Coursework: RF engineering, microwave engineering, electromagnetic theory, signal analysis, systems engineering*

2021  
Albuquerque, NM

CERTIFICATIONS

- Interim Secret Security Clearance, Active 📅 2024
- Top Secret and SCI Clearance, Eligible to Obtain and Maintain 📅 2024

TECHNICAL SKILLS

- **RF Test Equipment:** Spectrum Analyzers, Signal Generators, Network Analyzers
- **Data Acquisition:** Data Acquisition Systems, Measurement Logging, Test Data Capture
- **RF Engineering:** RF Systems, Microwave Engineering, RF Propagation
- **Electronic Warfare:** Electronic Warfare Systems, Signal Analysis, Spectrum Operations
- **Verification Methods:** Requirements Verification, Verification and Validation, Compliance Assessment
- **Test Documentation:** Test Plans, Test Procedures, Test Reports
- **Systems Integration:** Subsystem Integration, Interface Verification, Field Integration
- **Data Analysis:** MATLAB, Python, Frequency Domain Analysis
- **Instrumentation Practice:** RF Accessories, Calibration, Configuration Control
- **Engineering Methods:** Electromagnetic Theory, Technical Risk Analysis, Anomaly Troubleshooting
- **Stakeholder Coordination:** Government Engineers, Program Managers, Integrated Product Teams
- **Field Operations:** Test Ranges, Field Demonstrations, Travel Support

SKILLS

- |                               |                         |                             |                            |
|-------------------------------|-------------------------|-----------------------------|----------------------------|
| • Systems Test Engineering    | • Microwave Engineering | • Test Procedures           | • Technical Risk Analysis  |
| • Electronic Warfare          | • RF Propagation        | • Requirements Verification | • Troubleshooting          |
| • Verification and Validation | • Signal Analysis       | • Systems Integration       | • Government Communication |
| • RF Engineering              | • Test Planning         | • Field Testing             |                            |

PROFESSIONAL AFFILIATIONS

- Association of Old Crows, Electronic Warfare professional community participant.
- Institute of Electrical and Electronics Engineers, electrical engineering professional community participant.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

**Work Status** : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST