

ASTRONICS
TEST SYSTEMS



Test Solutions for
Maintenance
of Critical Electronic Systems



*Building
confidence with
every mission*

BENEFITS OF A COMPREHENSIVE MAINTENANCE STRATEGY

Beyond the overarching benefit of preventing critical failures and helping save lives, test and maintenance plans provide many additional benefits to manufacturers, militaries, transit authorities, and users of their equipment. Consolidated solutions from Astronics Test Systems provide necessary synergy from the depot to the field and enable benefits including, but not limited to:

TIME	MONEY	INDEPENDENCE	EFFICIENCY	CONFIDENCE
Reduced downtime, shorter mean-time-to-repair (MTTR), saved time on training and operating multiple pieces of test equipment	Maximized return on investment in equipment, extended working life of systems no longer supported by OEM, reduced (or eliminated) cost for repairs by OEM	Gained knowledge of useful technical concepts, acquired transferable maintenance skills, improved self-sufficiency and organic capability	Eliminated "wasted maintenance" (No Fault Found (NFF) and Cannot Duplicate (CND)), reduced inventory (and increased space) from improved Turn Around Times (TAT)	Developed confidence in the functionality & reliability of equipment from the user, leading to operational readiness and on-schedule operations

COMPONENT LEVEL

SUSTAINMENT LEVEL (DEPOT)

3RD LINE

4TH LINE

Full range of test and fault identification solutions to component level

» Obsolescence and re-manufacturing solutions



» **Custom Test Solutions and Platforms** Our engineering team collaborates directly with yours to develop a custom solution specifically for your needs. Leverage our existing scalable platforms or count on our proven expertise in build-to-print and build-to-spec projects to deliver a solution to solve your toughest test challenges.

OUR SOLUTIONS & SUPPORT

From functional testing of systems in the field, to troubleshooting in the depot, to failure identification and repair at the component level, Astronics Test Systems has a solution to fit your needs.

Our solutions can address almost any electronic system. Our expertise, focus, and proven success has been in Communications Test (Military Tactical Radios & Land Mobile Radios/ Urgent Communications), Aerospace & Defense, and Mass Transit Solutions.



ORGANIZATIONAL LEVEL



INTERMEDIATE LEVEL

FIELD LEVEL (UNIT)

1ST LINE

2ND LINE

2ND LINE

3RD LINE

Pre-screening and basic fault identification.

- » Industrial & commercial (ramp testing & transponders)



(LRU)

Pass / Fail module test and component 'fault group'



CTS-6010

- » **CTS-6010** Portable communication test set for tactical and commercial radio testing, radio LRUs screener
- » **R8100** Land Mobile Radio (LMR) protocol tester supporting P25 (Project 25 Digital Trunking) Phase 1 & 2, DMR, TETRA, NXDN (Next Generation Digital Narrowband), PTC (Positive Train Control), and dPMR. Avionics ramp testing for ILS (Instrument Landing System) Localizer and Glide Slope, VOR (VHC Omni-directional Range), Marker Beacons, Non-Directional Beacons / ADF (Automated Direction Finding), SELCAL (Selective Calling System), and Morse Code Identification.



R8100



ATS-6100 WFT

- » **ATS-6100 WFT** Wire Fault Tester for troubleshooting of wire faults in air, land, and sea mission critical systems. Detect and isolate intermittent wiring faults on controlled or uncontrolled impedance wiring. Types of intermittent faults that can be isolated include Wire to Wire, Wire to Chassis, Chafed Insulation, and Cracked insulation.



Trainline PTE

- » **Trainline PTE** Verifies the integrity of the trainline signals between electric couplers in the same consist.



PinPoint α

- » **PinPoint Alpha** PCB screening of digital and analog circuits from board to component level, combining dynamic functional in-circuit (ICT) diagnostics, functional edge, boundary scan, passive and active analog testing, mixed signal tests, vectorless test, etc. with net capture and schematic generation.



PinPoint 3-PXle

- » **PinPoint 3-PXle** In addition to the features of the PinPoint Alpha, this variant provides full digital PCB edge testing for GO/NO-GO testing utilizing Astronics PXle-6943 best in class digital test instrument. The PinPoint-UDA variant steps up the combinational test capability to provide full integration into rack/stack ATE for full LRU or PCB GO/NO-GO or diagnostics testing.



ATS-3100 RTS / VRS

- » **ATS-3100 RTS / VRS** Communications Radio Test Set with diagnostics capability to identify faults at LRU level. For Tactical and Commercial Radio Testing.



ATS-5000

- » **ATS-5000** Configurable, functional tester that consolidates testing requirement to a single platform. Use for LRU and LLRU Functional Go/No-Go testing, diagnostics to ambiguity group. Support for legacy mission critical systems as well as today's newer electronics. Available variations include
 - » Low Voltage Functional Test
 - » Optical Test
 - » Communications Test
 - » RF Radar and Targeting Systems Testing



S500-HV

- » **S500-HV** Configurable high-voltage functional tester that consolidates testing requirement to a single platform. Use for LRU Functional Go/No-Go testing.

Levels of Maintenance

Levels of maintenance are defined by both the location and depth of test.

• Field/Organizational Level

- » Pre-deployment validation of system
- » Includes Over the Air (OTA) testing
- » Functional testing of system
- » Major component-level troubleshooting; cables, antenna, connectors
- » Provides insight into root cause of failure and prevents "wasted maintenance"

• Intermediate/Sustainment Level

- » Validation of performance checks
- » Troubleshooting
- » Board-level issue detection and test
- » Enables immediate repair

• Depot/Sustainment Level

- » Component-level failure identification
- » Repair at component level
- » Enables sustainment of legacy or obsolete equipment

TEST & MAINTENANCE ARE VITAL TO ENSURE OPTIMAL PERFORMANCE OF ELECTRONIC SYSTEMS

Over the years, several maintenance strategies have been developed and deployed. No matter the industry, critical electronics must be tested routinely to validate operation and prevent catastrophic failures. Corrective, Preventive, Risk-Based, Condition-Based, and now Predictive Maintenance, are all concerned with maximizing equipment uptime, ensuring optimal performance, and eliminating root cause failures. From factory to field, production test, burn-in test, acceptance test, pre-mission checks, field test, troubleshooting, failure identification, and repair should all be part of a comprehensive, multi-level maintenance strategy. This applies to the maintenance, support, and sustainment plan of every electronic system, which directly contributes to equipment performance, reliability, and lower cost of ownership.

Why should you consider all of this when creating a maintenance strategy?

Imagine that a soldier's radio in the field didn't work; or that a commuter train lost power during rush hour; or that an aircraft caught fire due to faulty wiring. These situations would be catastrophic and potentially devastating.

A comprehensive, multi-level, proactive maintenance plan, with world-class solutions to support it, can help avoid these life-threatening scenarios, and with enough predictive data, can help prevent a failure before it even happens. Furthermore, this approach ensures operational and mission readiness, maintains quality and state of good repair of your electronic systems, and as a result, helps your organization run more efficiently and effectively.

At Astronics Test Systems, we believe in putting the greatest test capability in the hands of those responsible for maintaining mission-critical systems. Our test solutions build confidence in every mission, from Aerospace & Defense to Mass Transit, to Urgent Communications, to Space, and more.

WHY ASTRONICS TEST SYSTEMS?

With more than 60 years of test and measurement expertise, our goal is to give you total ownership of your maintenance strategy with a solution tailored to your needs. We believe in a customer-managed maintenance model, and we provide tailored solutions to support it. We collaborate directly with you to solve your most complex test challenges, then deliver a flexible, upgradeable solution that will help extend the life of your legacy equipment while also addressing future technologies.

Our experience providing cutting-edge technologies to both commercial and defense programs, domestic and international, spans decades. Each engineering team is specialized in its specific

industry, knowing the pain points of our customers and users, from the inside out. We have well-established partnerships with the largest OEMs and suppliers in the industries where we do business, ensuring we have access to the technology necessary to support your equipment. Our in-house Test Program Set (TPS) and Application Program Set (APS) teams are dedicated to developing scripts to make our user experience intuitive and efficient.

We believe in going beyond testing and repairing critical electronic systems or simply optimizing their performance. We look to a future where we can provide a way to eliminate failures through predictive maintenance.

In this future, failures are obsolete.

Your Partner for Maintenance Solutions

Put our history of innovation and engineering expertise to work for you. Get started by contacting us today.

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