



*Automatic test equipment for*  
**MRO**



[www.mktest.com](http://www.mktest.com)

# WHY CHOOSE MK TEST SYSTEMS

**Since 1991, our automatic test equipment has enabled MRO operators to efficiently test electrical wiring and measure lightning protection, HIRF protection and ground circuits.**

We enable some of the biggest names in the aerospace sector to efficiently and accurately perform high voltage testing.

MRO facilities can be assured that our equipment meets OEM requirements - we're listed in Boeing and COMAC aircraft maintenance manuals (AMM) and offer equivalency for Airbus.

Our tools and equipment combine powerful features with easy-to-use software and interfaces - designed to make testing simpler and faster.

This brochure provides an overview of the main test applications for the MRO sector.

For help and advice, visit [mktest.com](http://mktest.com) or contact our team on [sales@mktest.com](mailto:sales@mktest.com).



# SOME OF OUR MRO CUSTOMERS



## TESTIMONIALS

*“ExLRT provides faster testing, is easier to use and can be [operated] by 1 person.”*

ExLRT user, Lufthansa Technik

*“Kudos to you and the team!”*

ExLRT user, AAR Aircraft Services

*“[ExLRT] is greatly exceeding our expectations...the speed at which we can move through test points is greatly increased. The ergonomics are a big plus as well.”*

ExLRT user, The Boeing Company

# APPLICATIONS & RECOMMENDED PRODUCTS



## Bond, Loop & Joint Testing

Automatic resistance testing to ensure low resistance current paths. Products: ExLRT, BLRT, BLTU4.

## Engine Testing

Automatic test solutions for electrical wire harness and components; electrical bond circuits, earth straps and shielded cables. Products: Automeg, Portable Automeg.

## LRU Repair & Rebuild

Electrical QC testing of Line Replaceable Units such as Engine fuel monitoring units and hydro-mechanical fuel controls. A single system replaced 5 manual tools for one repair shop, reducing test time for a single LRU by 85%. Products: Automeg.

# MORE RESOURCES AVAILABLE ON MKTEST.COM

Visit our website to access dozens of resources, including product brochures, case studies, application notes, FAQs, 'How to' articles and videos, and more.

**APPLICATION NOTE**

**APPLICATION**  
HISCO Component Repair Group is an FAA-approved repair station based in Ft. Lauderdale, FL. They hold various FAA Parts Manufacturing Approvals (PMA) for the repair and rebuild of a wide range of devices called Line Replaceable Units (LRUs) aircraft operators.

**PREVIOUS TEST METHOD**  
Traditionally, HISCO technicians use a variety of manual instruments like multimeters, ohm meters, etc. to test electrical components.

LRU maintenance manuals specify various electrical QC tests such as resistance, capacitance, bond strength, continuity, dielectric strength (DMPS), etc.

**INDUSTRY SPOTLIGHT: LOOP RESISTANCE TESTING FOR AIR CARGO CONVERTERS**

Carry out loop resistance testing during the inspection process quickly, safely and reliably using the ExLRT from MK Test Systems.

**REDUCE THE LOAD OF LOOP TESTING**  
Continuing the increased size of the aviation industry, the world needs to be paradigm shift in dimensions of passenger planes to flight air traffic - meaning the quality and speed of turnaround of our business is more important than ever.

We know carrying out the testing on aircraft while on the ground is a necessary but tedious process. The ExLRT helps to reduce testing time and therefore cost, and our operators want a simpler and safer tool to get the job done.

The ExLRT is a modern tool designed for business like yours. It's been developed in consultation with The Boeing Company and is used in the airline. It's a major upgrade on the legacy LRT tool, and RCR can be achieved in 3 months.

**INDUSTRY:** Air cargo, freight, logistics, etc.

**REQUIREMENTS:** Test of the electrical components, resistance, continuity, etc.

**SOLUTION:** ExLRT, portable, rugged, automatic electrical harness test system.

**BENEFITS:** Reduces testing time, reduces cost, improves safety, etc.

Testing time from 30 min reduction.

**AUTOMEG**  
*Automatic, high voltage test system for wire & cable harnesses and electrical interconnect assemblies*

**PORTABLE AUTOMEG**  
*Portable, rugged automatic electrical harness test system*

**ExLRT**  
*Intrinsically safe loop & joint resistance tester*  
Part Number XLR-9703-01  
Approved by Boeing and the FAA as an alternative to the LRT

**BLTU4**  
*Automatic Bond & Loop Resistance Test Unit*  
1KHs | Equivalency to TS11194 loop tester approved by Airbus  
Suitable for non-explosive environments

**MK TEST SYSTEMS**  
www.mktest.com

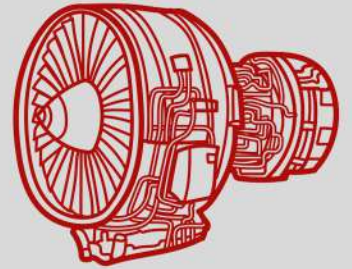
# AUTOMEG

We offer an extensive range of electrical harness test systems with our Automeg product, which has the modular flexibility to suit your exact requirements.

Our sales team can help you configure the perfect spec for your needs, but as an overview all models offer the following features:

- Continuity resistance measurement, low voltage isolation test (short circuit), and high voltage DC insulation resistance testing as standard.
- Optional high voltage AC HiPot testing, capacitance measurement LCR modules
- Optional function test stimulus switching modules and power supplies to enable actuation and function test.
- Integration with a range of third party sources, scopes and measurement modules.
- MKAT, our test management software which combines ease of use with powerful test program creation and management capabilities.

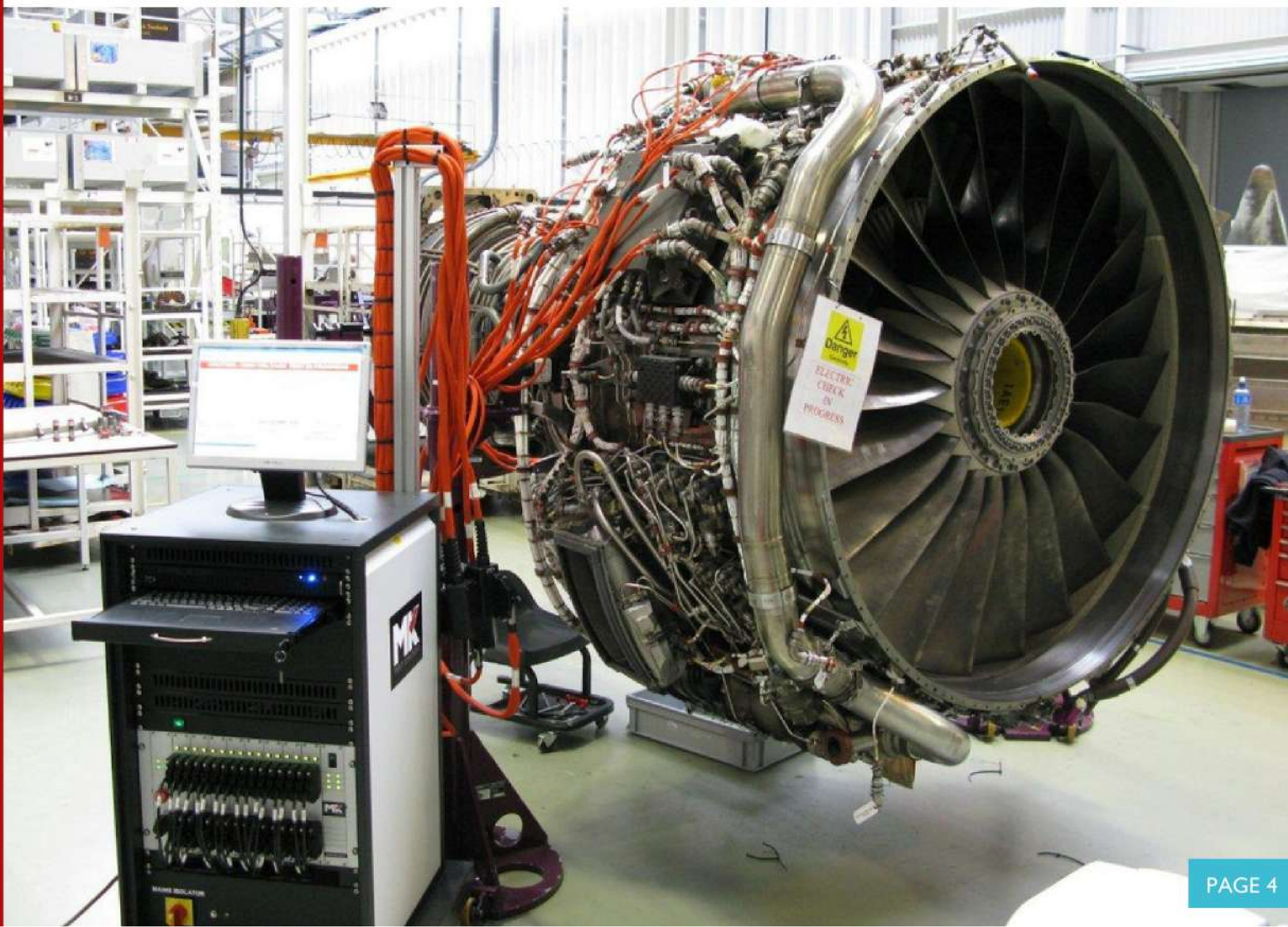
All systems can be configured to suit your operation and application, from static rack cabinets to heavy duty mobile cabinets suitable for MRO environments. We also offer distributed and fully portable systems.



*Engine testing*



*LRU  
(Line replaceable unit)  
repairs*



# BOND & LOOP RESISTANCE TESTING

The electrical bonding on an aircraft protects the aircraft and passengers by limiting the effects of lightning strikes, stray currents, HIRF and EMC.

The integrity of bonding circuits is critical to ensure they perform reliably to ensure normal and safe operation of the aircraft control and communication systems.

Our range of portable bond, loop and joint testing tools all have built-in operator guidance. They provide automatic testing of ground bonding points on aircraft, and record the test data for full traceability.

They perform simple, rapid and automatic test and measurement of:

- Bond resistance between structural elements
- Loop resistance and integrity of cable shields
- Loop resistance and integrity of bonding straps
- Joint resistance diagnostics

The whole range is lightweight and operator-friendly. We have models approved for use by Airbus, Boeing and COMAC as well as for Bombardier through equivalency.

**AIRBUS**

**BOEING**

**COMAC**

**BOMBARDIER**



*Specified in AMMs  
(aircraft  
maintenance  
manuals)*



*Lightweight and  
easy to handle*



*Intrinsically safe  
(ExLRT)*



*Don't use a bond meter to carry out loop and joint resistance tests!*

A bond meter is not accurate enough for loop and joint tests. Why? The bond meter cannot detect open circuits in complex parallel networks, so using one inappropriately can result in bad joints passing inspection.

# COMPARISON GUIDE



	<b>LRT (THE YELLOW ONE)</b> 906-10246-3, 906-10247-3, 906-10276-3	<b>BLRT / BLTU4 (THE ORANGE ONES)</b>	<b>EXLRT (THE RED ONE)</b> XLR-9703-01
<b>MANUFACTURER</b>	BAE Systems	MK Test Systems	MK Test Systems
<b>INTRINSIC SAFETY CLASSIFICATION</b>	Class 1 Division 2 (Flammable gases not likely to exist)	N/A	Class I, Division 1 (Flammable gases exist all the time)
<b>OPERATORS</b>	2	1	1
<b>TEST MODES</b>	Manual	Manual & automatic	Manual & automatic
<b>PROGRAMMABLE</b>	No	Yes	No
<b>USER INSTRUCTIONS</b>	No	Full graphics in auto mode	Text instructions in auto mode
<b>RESULTS</b>	None	Auto save to tool & network	Auto save to tool & network
<b>CALIBRATION</b>	Turn-around time 2 months	Turn-around time 1 week	Turn-around time 1 week
<b>WEIGHT</b>	17kg / 37.5lbs	7kg / 15.5lbs	3kg / 6.6lbs
<b>BOND / LOOP / JOINT</b>	No / Yes / Yes	BLRT/BLTU4 - Yes / Yes / Yes	No / Yes / Yes
<b>OEM APPROVAL</b>	Boeing	Airbus, Boeing, COMAC (BLTU4 also suitable for Bombardier)	Airbus (via equivalency) & Boeing



Detailed guides are available on our website, which explore the benefits of MK's range of test tools versus the commonly-used LRT.

Visit [mktest.com/blog](http://mktest.com/blog) to learn more.

# ABOUT US

We've been designing and manufacturing automatic electrical test equipment for 30 years. In that time, we've provided systems to customers around the world, in the following industries:

- Aerospace
- Automotive
- Defence (US DoD CAGE code 8EGR1)
- Industrial, Power & Control
- Subsea
- Trains

Our range of products enable rapid, automatic testing of engines, wiring harnesses, slip rings and other vital components.

We can work with you wherever testing is undertaken, at any stage of the product lifecycle. This may be at component manufacture stage - providing quality assurance to subcontractors - or at the final assembly stage, ensuring complete confidence in the final product. Beyond this, we also provide testing solutions for MRO and servicing.

# TALK TO US

Our UK head office is supported by satellite locations in the US and Hong Kong. With our large global network of reps and distributors, you can be assured of local support, sales and training.

For your local contact details, please visit our website, [www.mktest.com](http://www.mktest.com).



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