Clear-Com Delivers Portable Wireless Systems for Secure Aircraft Communications Testing

Posted on November 17, 2026



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ALAMEDA, USA – Clear-Com® is proud to announce the successful delivery of five customized test systems designed to support electromagnetic security (EMSEC) testing for military aircraft communications in the United Kingdom. The solution enables wireless, real-time validation of encrypted radio systems to ensure audio isolation between secure and non-secure communication channels.

The systems are now operational and deployed in a mobile format, housed in custom vans for use at military airfields across the country. Each portable kit leverages Clear-Com's FreeSpeak® II beltpacks and the FreeSpeak Edge Base Station, providing flexible distribution of a test signal throughout the aircraft without reliance on legacy cabling methods.

The new solution replaces a previous wired setup that introduced noise artifacts, posed safety hazards from trailing cables, and required significant setup time. By introducing a wireless workflow, the Clear-Com system reduces test prep time, improves operator mobility, and enables more effective identification of potential sideband emissions that could compromise communication security.

"This deployment reflects Clear-Com's continued commitment to supporting mission-critical operations with innovative and adaptable communications technology," said James Withey, Senior Systems Consultant at Clear-Com. "We're proud to contribute to the advancement of secure, modern testing practices within the aerospace and defense sector."

The system enables coordinated testing between van-based operators and ground staff inside the aircraft, simulating audio input to secure headset ports and analyzing any potential leakage through non-secure radio transmissions. Analysis is performed using a TEMPEST-certified receiver, allowing defense personnel to detect vulnerabilities in the aircraft's internal wiring and mitigate risks before the platform enters active service.

This solution is already in use across a wide range of aircraft platforms, including helicopters, fighter jets, and fixed-wing transport planes, and underscores Clear-Com's ability to respond to highly specialized defense requirements with custom-engineered, field-ready solutions.

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