

# Certification hits the



*By LTC Jan C. Norris  
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The Joint Airborne Communications Center Command Post, or more commonly called "JACKPOT," recently completed C-17 certification testing at Dover Air Force Base in late August 2012.

This milestone achievement marks a significant move toward future employment of a joint 'airborne' mission command communications capability on a larger air frame. Geographic combatant commands and other federal response agencies can now include the JACKPOT in their C-17 planning scenarios for en-route and expeditionary operations when requesting support from the Joint Communications Support Element.

The JACC-CP Echo model or "JACKPOT" was first designed in 1985 to provide mission command options to senior staffs over the battlefield or en route to a predetermined destination. The system enables key leaders to make critical decisions in the air to any ground or air unit. It consists of four pallets loaded on a C17 (or three pallets on a C-130) and is a quick loading 'roll-on roll-off' transportable platform. JACKPOT is interoperable with all DOD and civilian radio IT networks. It can support GCCs, alert postured forces, and DOD/civilian first responders. The system is scalable providing work space support for up to 16 users. During initial inception of forces, JACKPOT can enable en route mission command and planning, theater C2, airfield seizure and 'reach forward' deployment of key personnel.

The JACKPOT provides SIPR/NIPR data and secure voice services through a combination of satellite and ground based radios and associated waveforms. The international maritime satellite terminal provides 256 kilobits per second of data throughput for NIPR/SIPR, VOIP/VOSIP and multi-user internet relay chat services. In addition, JACKPOT provides access to 12-14 combat radio nets using two PSC-5s, eight PRC-117Fs (Harris Multi-Band), and four PRC-119Es. Other applications available are blue force tracker, Falconview and 'wide area voice environment' technology for radio over IP and intercom voice services. The package includes four large display monitors for viewing relevant information, data feeds or a common operating picture and each work-space houses a Microsoft Windows-based computer tablet. JACKPOT is essentially DOD's equivalent to 'wifi on-board a commercial aircraft'.

This year's C-17 certification was conducted August 20-24 at Dover Air Force Base. The event was a follow-on mitigation evaluation of the termi-

nal radio configuration test conducted last year and was executed by a group of civilian technicians subcontracted under the Air Force Research Laboratory. The primary intent of the compliance evaluation was to verify electromagnetic compatibility between the JACKPOT terminal's radio equipment and the C-17 aircraft avionics systems and specifically to re-test deficiencies found during last year's certification. The JCSE J3, J5 and 4th JCS' JACKPOT team prepared six months in advance for this year's certification by conducting radio interoperability and system checks twice a week.

Mike Ivanowicz, lead certification tester from Ball Aerospace and Technologies, said "The JACKPOT uses a lot of different radios which presents many challenges given the wide range of frequencies used. The introduction of radio frequency filters has made a significant difference for success in this year's certification.

"Our main focus is de-conflicting spectrum and mitigating any risks where JACKPOT could knock out the aircraft's GPS system," said Frank Barnhart, testing official from Select Tech. A spectrum analyzer was used to record and test all frequencies. Given the JACKPOT's unique configuration with multiple radios (14 total) transmitting simultaneously via multiple hatch mounted antennas, certifying officials also implemented tow testing by moving the C17 aircraft in various positions while validating all frequencies emitting on board the aircraft. Overall, there was significant improvement noted for this year's certification given the introduction of RF filters. Final certification approval from the Air Force C17 System Program Office and associated paperwork processing is expected within 90-120 days in the late Fall/early Winter of 2012.

The positive impacts of C17 certification are unanimous among key JCSE leaders and troops; According to MAJ(P) Bill McDowell, JCSE J3, "This certification greatly expands JCSE's ability to support Combatant Commanders and JTF commanders with an Airborne C2 capability. With C-17 certification, the operational reach and time on station is greatly expanded. Since the JACC/CP (Echo model) is currently only C-130 certified, there have been significant constraints in planning for deployment of GCC or JTF commanders, especially when forced entry opera-

tions with C-17s are the preferred airframe. "Planners will no longer have to account for the employment of a C-130 in a C-17 supported mission," added McDowell.

Bradley Smith, systems engineer for the JCSE J5 said this certification brings increased capabilities to the joint warfighter. "The C-17 certification effort is a big leap forward for enabling commander's while both en-route and within a theater of operations. The C-17 allows for the initial and return en-route missions over extended distances globally with its speed and fuel capacity," Smith stated.

SGT David Woods, JACKPOT team chief in Mike Troop, 4th JCSE said, "When conducting airborne operations on the C17, both ground troops (jumpers) and battle staff can occupy the aircraft simultaneously and this saves time and money for units conducting a mission as the aircraft lift requirement goes down. We can also use both pri-

mary and back-up power sources on the C17."

"Unlike the C-130, the C-17 has all the needed antennas pre-installed and this cuts down on set-up and installation time to get airborne and conduct operations" said SGT Anthony Matute, a JACKPOT team member.

LT(P) Natasha Pennyfeather, Mike Troop commander, 4th JCS reflected on why this year's JACKPOT re-test was successful. "The frequency of training flights increased and allowed the team to conduct more realistic testing to work through malfunctions while in the air as opposed to troubleshooting in a static ground-based setting," she stated. "Access to aircraft and 'piggy backing' off airborne operations at MacDill Air Force Base has made the difference. We also re-certified with the same AFRL test team and they were familiar with our equipment and personnel," she added.

JACKPOT is currently operated and maintained by a four

man team in 4th Squadron of JCSE at MacDill AFB, Fla. The package is typically flown and tested on a monthly basis as aircraft are available. The JACKLPOT can be loaded, configured and operational in approximately three hours for a C-17 or C-130.

During Operation Iraqi Freedom in 2006, the JACKPOT was flown in support of ground convoys for voice relay/ retransmission under the direction of USCENTCOM. More recently JACKPOT and its crew participate in the Joint Operational Airborne Exercise each year with the 82nd Airborne Division and in support of the 75th Ranger Regiment for its periodic multi-lateral training exercises. Unlike the JSTARS aircraft and systems platform, which provides similar capability, JACKPOT comes 'plug and play' ready for users and is preconfigured for quick use.

If required, the equipment can be deployed on short notice (18 hours) at the request of combatant commander's or federal agencies through a standard request process to USTRANSCOM to the Joint Enabling Capabilities Command in Norfolk, Va. to JCSE. JCSE is continually working to add capabilities as they are developed or become a requirement. In fact, the JACKPOT (fox-trot model) is being certified for use now on both C-130 and C-17 aircraft and includes improved technology and equipment.

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**JACKPOT in action on board an aircraft with staff members of the Joint Enabling Capabilities Command.**