

# Technical Description

## The Boeing Company

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by

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### JUSTIFICATION:

The purpose of this Special Temporary Authority (STA) request is to support Research and Experimentation for Local and International First Responders (RELIEF) efforts and additionally support efforts under the FCC Notice of Inquiry (NOI) Utilizing Rapidly Deployable Aerial Communications Architecture (DACA) in Response to an Emergency.

### DATES OF OPERATION

August 10, 2012 to September 30, 2012

### OBJECTIVE & TEST DESCRIPTION

This specific operation will test and develop a narrowband voice and data range extension relay communications package for unmanned aerial vehicle (UAV) applications. The communications relay package is installed on the unmanned aerial vehicle and will communicate with various radios on the ground. The AN/PRC-148 will be used for the ground side of the link.

### TEST OVERVIEW

Manufacturer:	The Boeing Company and Thales
Model:	TCCR-ER-V4 and AN/PRC-148
Ground Transmit Band:	150 - 155 MHz
Airborne Transmit Band:	162 - 174 MHz (two frequencies only needed in this band)
Note:	(Entire frequency band is not required. Specific frequencies can be used in each band.)
Emissions:	25K0F3E & 25K0N1D (The product is a bent pipe repeater, so what goes in is automatically retransmitted out. NB FM in, NB FM out. The repeater doesn't turn off and can also transmit a raised noise floor and hence the N designator. The system is always on and transmitting the raised noise floor using the 25 KHz bandwidth.)
Transmit Output Power:	1 Watt
Effective Radiated Output:	1 Watt
Antenna Gain:	0 dBi
Antenna Type:	Quarter Wave
Station Class:	MO

**STOP BUZZER POINT OF CONTACT:**

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**LOCATIONS**

Mobile Location: Camp Roberts, CA

Latitude: 35-42-59 N

Longitude: 120-45-40 W

NAD83

Radius: 80 Kilometers

Max Flight Level: 15,000 Feet AGL

Mobile Location: Simi Valley, CA

Latitude: 34-18-40 N

Longitude: 118-48-08 W

NAD83

Radius: 1 Kilometer

Max Flight Level: 400 Feet AGL

Fixed Location: Huntington Beach, CA

Latitude: 33-45-02 N

Longitude: 118-01-59 W

NAD83