

**United States of America  
FEDERAL COMMUNICATIONS COMMISSION  
EXPERIMENTAL  
SPECIAL TEMPORARY AUTHORIZATION**

EXPERIMENTAL

(Nature of Service)

WC9XNJ

(Call Sign)

XC MO

(Class of Station)

0751-EX-ST-2006

(File Number)

NAME The Boeing Company

This Special Temporary Authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This Special Temporary Authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control the Government of the United States conferred by Section 706 of the Communications Act of 1934.

Special Temporary Authority is hereby granted to operate the apparatus described below:

**Purpose Of Operation:**

Radar Testing

**Station Locations**

- (1) MOBILE: Continental US and oceans to include Hawaii and Alaska as approved per coordinated test plans.

**Frequency Information**

MOBILE: Continental US and oceans to include Hawaii and Alaska as approved per coordinated test plans.

| Frequency     | Station Class | Emission Designator | Authorized Power | Frequency Tolerance (+/-) |
|---------------|---------------|---------------------|------------------|---------------------------|
| 1030 MHz      | MO            | 3M58M1N             |                  |                           |
| 1230-1400 MHz | MO            | 3M00PXX             |                  |                           |

**Special Conditions:**

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.

This authorization effective October 19, 2007 and  
will expire 3:00 A.M. EST April 20, 2008

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



## Special Conditions:

- (2) Licensee should be aware that other stations may be licensed on these frequencies and if any interference occurs, the licensee of this authorization will be subject to immediate shut down.
- (3) Licensee shall operate in accordance to all parameters agreed upon with the FAA.
- (4) Licensee is permitted operations of the MESA primary radar over the Continental US and oceans to include Hawaii and Alaska, in the 1230 MHz to 1400 MHz band. When operating over-water only, transmissions from the MESA primary radar must be blanked on all azimuths towards the US such that no RF energy will transmit towards land, or when operating over water and/or land, operations must comply with FAA/DoD "Frequency/Distance" restrictions or "Radar Blanking" restrictions, provided by separate correspondence.
- (5) "Frequency/Distance" restrictions are based on Boeing flying at an altitude of up to 29,000 feet and maintaining an I/N ratio of 0dB at the receiver of any FAA/DoD LRR facility. This altitude restriction does not apply to test flights where "Radar Blanking" restrictions are implemented. "Radar Blanking" restrictions require Boeing to blank primary MESA radar transmissions over an azimuth that places the edge of the -3dB beamwidth at least +/- 5 degrees from the bearing of the FAA/DoD LRR facility.
- (6) MESA radar transmissions, when radiating towards the Canadian landmass, will be in accordance with separately negotiated NAV Canada and Industry Canada restrictions.
- (7) Operations of the MESA secondary radar are permitted on 1030 MHz in accordance with FCC license 0276-EX-PL-2002, and/or as authorized by Headquarters FAA Spectrum Management Office following the review of each 737 AEW&C MESA Radar Flight Test Plan linked to this license. The allowed modes of operation on 1030 MHz are Mode 1, Mode 2, Mode 3A and Mode 3C. Approval to operate on Mode 4 must be negotiated separately in accordance with the Memorandum of Agreement between the FAA Office of Spectrum Policy and Management, and the Department of Defense (DoD) Military Department Frequency Management Offices and the DoD Aircraft Identification Mode Selection Program Office.
- (8) Boeing understands this FCC license does not constitute final authorization for Boeing to conduct MESA radar flight tests. To ensure that the 737 AEW&C aircraft radar does not adversely interfere with FAA/DoD LRR facilities, and hence create a safety of flight concern, Boeing is required to submit a test plan for each flight test involving the operation of the MESA radar for review and approval, to include any necessary modifications, by Headquarters (HQ) FAA Spectrum Management Office before the flight test can be conducted. The test plan shall detail the proposed flight test profile, including flight path, altitudes, transmit frequencies, radar blanking controls to be implemented and an explanation on how the test will not cause interference to surrounding radar facilities.