

NARRATIVE STATEMENT

Pursuant to Sections 5.3 (e) through (h), 5.51 and 5.53 of the Federal Communication Commission (“FCC”) rules, 47 C.F.R. §§ 5.3 (e) through (h), 5.51, 5.53 (2018), Motorola Solutions, Inc. (“Motorola Solutions”), hereby respectfully requests an experimental license to operate on narrowband channels in the 769-776 and 799-806 MHz bands for the purpose of conducting tests in connection with the development of land mobile radio devices and systems. The authority requested would also allow it to enhance the research it has conducted under a complementary license issued under call sign WC2XYE, which has now expired. The testing will be conducted near its research and manufacturing facilities in Schaumburg and Elgin, Illinois.

The following provides additional details regarding this request.

A. Purpose of Operation and Need for Experimental License:

Motorola Solutions is a leading manufacturer of mobile radio infrastructure and is continually engaged in the design and development of new and innovative equipment and applications. The experimental authority requested herein will allow the company to test, evaluate and demonstrate the performance and functionality of prototype systems designed to support the communications needs of the public safety and homeland security community.

Specifically, Motorola Solutions proposes to conduct testing and demonstrations of prototype equipment and systems near its offices at 1303 E. Algonquin Road, Schaumburg, Illinois, and at 2450 Galvin Drive, Elgin, Illinois. Grant of an experimental license will allow Motorola Solutions to enhance the company’s efforts to design and develop solutions to meet the communications needs of potential users.

B. Locations of Proposed Operation:

Motorola Solutions proposes to conduct tests using experimental fixed base station transmitters and antennas within one (1) kilometer of its offices in Schaumburg and Elgin, Illinois. Associated mobiles and portables would operate within a 32 kilometer radius of the fixed locations. The addresses and center coordinates (in Datum: NAD83) of its offices are:

1303 E. Algonquin Road
Schaumburg, IL 60196
42° 03' 44.6" North Latitude
88° 03' 05.4" West Longitude

2450 Galvin Drive
Elgin, IL 60124
42° 05' 51.8" North Latitude
88° 20' 40.3" West Longitude

C. Justification for Five-Year Experimental License:

As noted above, Motorola Solutions is a leading manufacturer of mobile radio infrastructure and is continually engaged in the design and development of new and innovative equipment and applications. The experimental authority requested herein will allow the company to test and demonstrate the performance and functionality of prototype systems designed to support the communications needs of the public safety and homeland security community.

Motorola Solutions respectfully requests an experimental authorization so that it may enhance its current activities. Given the long-term nature and evolution of its research and development, Motorola Solutions respectfully seeks an experimental license with a term of five (5) years so that it may continue to conduct tests and demonstrations that are expected to occur on an on-going basis for at least five years and likely ten or more years.

D. Technical Specifications:

1. Frequencies Desired

Motorola Solutions requests authorization to operate on narrowband channels in the 769-776 and 799-806 MHz bands. It recognizes that these channel bands are allocated for licensed uses. Accordingly, Motorola Solutions will coordinate and cooperate with other users to ensure against interference. Moreover, Motorola Solutions has researched the FCC's licensing databases and proposes to operate on channel centers that are not currently assigned to other licensees in the area or that are spectrally separated from channel centers offset from the channel centers currently assigned to other licensees in the area. Company personnel will also monitor the operations of other users before commencing transmissions to avoid interference to such users.

In the event that Motorola Solutions receives a complaint of harmful interference resulting from the proposed operation, it will take immediate action to address the interference, including if necessary discontinuing the experimental operations. The company has designated Mr. Gregory Buchwald, whose contact information is provided below, to act as the "stop buzzer" for this purpose.

Notwithstanding the precautions it will take, Motorola Solutions does not expect harmful interference to occur. First, as noted above, company personnel will monitor the operations of other users before commencing transmissions to avoid interference to such users. Second, the proposed operations will be limited in scope; the base stations will typically transmit only periodically on any specific channel and at the minimum power level required to ensure accurate test results. Third, Motorola Solutions will not be operating simultaneously from all the transmitters it has requested in its application.

2. Effective Radiated Power

All power levels will comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiation. The mobile/portable units to be deployed are configured to operate at a mean effective radiated power ("ERP") power level of 10 Watts. The base stations will be configured to operate at a mean ERP of 100 Watts. Motorola Solutions will limit the power to the minimum necessary to evaluate the prototype equipment and systems.

3. Modulation and Emissions

The primary emission designators associated with the experimental operations are 8K10F1E, 8K80D1W, 11K0F1D, 11K0F2D and 11K0F3E. Other emission modes may be utilized, but in no event will the emissions extend beyond the frequency bands requested.

4. Antenna Information

The fixed base station transmitter antennas will be located indoors as well as outdoors near its offices in Schaumburg and Elgin Illinois, as described above. Should Motorola Solutions install antennas outdoors, the heights will not exceed 20 feet above an existing antenna structure or building. The mobile/portable antennas will be operated at heights not greater than 6 meters above ground when used outdoors or at various locations as needed for testing when used indoors. No antennas will be mounted in a fashion that will require approval under FAA and FCC rules and regulations.

5. Equipment To Be Used

Motorola Solutions expects that it will be able to conduct its tests and demonstrations with not more than twelve (12) base stations and twenty-five (25) mobile/portable units per location. Moreover, Motorola Solutions will limit the power, area of operation, and transmitting times to the minimum necessary to evaluate the equipment.

E. Restrictions on Operation/ Protection Against Interference:

Motorola Solutions is not seeking authority to perform a market study under the experimental license it has requested. Moreover, no fees will be charged to entities operating the equipment during this test. After any test is completed, Motorola Solutions will recall and recover all devices that do not comply with FCC regulations.

Motorola Solutions also recognizes that the operation of any equipment under experimental authority must not cause harmful interference to authorized facilities. Should interference occur, Motorola Solutions will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation.

In addition, Motorola Solutions will advise entities operating the equipment that permission to operate has been granted under experimental authority issued to Motorola Solutions, Inc., that such operation is strictly temporary, and that the equipment may not cause harmful interference. Entities will also be advised in accordance with Section 2.803 of the Commission's rules, 47 C.F.R. §2.803 (2018), that any unapproved devices have not been authorized as required by the rules of the FCC and are not being offered for sale or lease, or sold or leased, until authorization is obtained.

F. Public Interest Statement:

Motorola Solutions submits that issuance of an experimental license as requested is in the public interest, convenience, and necessity. Grant of an experimental license will permit Motorola Solutions to develop innovative equipment that will accommodate the communications needs of the public safety and homeland security community.

G. Contact Information:

1. Technical Point of Contact ("POC") and "Stop Buzzer/Kill Switch:"

In the unlikely event interference concerns should arise during the period of authorization for this license, please contact the person below, who will also serve as the "stop buzzer."

Gregory Buchwald, DMTS Engineer
Motorola Solutions, Inc.
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Schaumburg, IL 60196
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2. Motorola Solutions FCC Contact:

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3. Motorola Solutions FCC Legal Counsel:

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