

NARRATIVE STATEMENT

By this application, Motorola, Inc., respectfully requests an experimental radio license to test, evaluate and demonstrate a prototype radio communications system designed to support the internal communications requirements, including public safety-related communications, of an electric power generation and transmission cooperative in the Commonwealth of Kentucky. The cooperative shares a common goal with public safety entities to maintain critical infrastructure needed by the residents, businesses, and visitors to its operating area. The cooperative and its members also act as first responders during utility-related disasters or crises. In the wake of widespread power outages caused by recent natural disasters, the cooperative appreciates now more than ever the need for reliable and ubiquitous communications capabilities to respond effectively to such emergencies.

Specifically, Motorola proposes to test a small percentage of the units to be supported by the system (*i.e.*, 15 units per site out of the approximately 2000 total units expected to be supported, or less than 1%) so that it may demonstrate the functionality and capability of the system, determine user acceptability, and obtain needed feedback to improve and enhance the design of the system. The experimental activities will be conducted on a non-interference basis using a limited number of non-Federal Government channels in the 150 MHz band that have already been pre-coordinated for such operation. Nor will the test involve operations on channels listed in Section 90.20 or other sections of Part allocated to the Public Safety pool. Motorola understands that the FCC may specify these as well as other conditions on its authorization.

Motorola does not seek authority to conduct market studies or provide communications services under the requested experimental authority. It also does not propose to market, sell, or lease prototype equipment to end users in conjunction with this test. The participants in the test will be advised that (1) the test is being conducted under an experimental authority issued to Motorola, (2) Motorola is the party responsible for the operations, (3) all operations must be conducted on a non-interference basis, and (4) after the test is completed, Motorola will retrieve and recover all devices that do not comply with FCC regulations. In addition, no fees will be charged to entities using the equipment during this test. Motorola understands that the FCC may specify these as well as other conditions on its authorization.

Grant of this application would serve to replace Motorola's existing special temporary authority ("STA") for this experimentation granted under File No. 0282-EX-ST-2010 and issued under call sign WE9XKP. Moreover, as provided under Section 5.61(b) of the Commission's rules, 47 C.F.R. § 5.61(b)(2009), this application is also intended to serve as a renewal or extension of Motorola's authority to operate as permitted under its STA pending action on this application. The company underestimated the time it would take to obtain agency action on the applications for regular licenses that would have replaced the authority granted under the STA. The following information is provided in support of this request:

Proposed Operations / Locations and Frequencies:

As noted above, Motorola requests authority to test, evaluate and demonstrate a prototype radio communications system designed to support the internal communications requirements of a power generation and transmission cooperative engaged in, among other

things, public safety activities. To obtain valid data and to present an accurate demonstration of real-world operations, Motorola must deploy a sufficient number of units during its test to simulate actual usage. Motorola expects that it will be able to complete its demonstration with a small percentage of the units to be supported by the final system. Specifically, it proposes to test the system with a maximum of 15 mobile units or portables per transmitter site that will be designed to support up to 2000 total units. Thus, it will operate on less than 1% of the number of units that are planned for the system. It will also limit the power, area of operation, and transmitting times to the minimum necessary to evaluate the system.

The proposed locations of the base stations are identified in the attached table. Mobile operations will occur within 80 kilometers of these locations. Operation under this experimental STA will be conducted on a non-interference basis on a limited number of 12.5 kHz channel pairs in the 151.4725 – 154.5675 MHz band and the 157.1875 – 162.9625 MHz band. Specifically, Motorola seeks to deploy approximately three, but not more than five, channel pairs per site that have been recommended by the FCC's frequency coordinators or that are currently under review by the FCC for licensing to the cooperative (*i.e.*, on selected channels unassigned to other licensees near each location).

Notably, Motorola does not propose to operate on any channel allocated either on an exclusive basis or on a shared basis with the Federal Government, including without limitation channels allocated for Federal Government use in the 161.9625 – 161.9875 MHz and 162.0125 – 162.0375 MHz bands. Nor will the test involve operations on channels listed in Section 90.20 or other sections of Part allocated to the Public Safety pool. Motorola will operate only on non-Federal Government channels.

Technical Specifications:

On Non-Federal Government, Non-Public Safety Frequencies Only:

151.4725 – 154.5675 MHz;
157.1875 – 162.9625 MHz

Base Station Power:

100 W Peak Effective Radiated Power (ERP)

100 W Transmitter Output Power (TPO) (all power levels will comply with the limits set forth in the FCC's rules, including those relating to human exposure to radiation)

Mobile Power:

45 W Peak ERP; 45 W TPO

Bandwidth:

12.5 kHz per channel

Modulation:

Frequency Modulation

Emission Designators:

11K2F1D; 11K2F3E

Station Antenna:

Omnidirectional up to 9 dBi Gain

Mobile Antenna:

Omnidirectional up to 3 dBi Gain

Antenna Information:

The antennas used for these tests will be installed and operated in accordance with all FAA and FCC rules and regulations.

Restrictions on Operation / Interference Protection:

Motorola recognizes that experimental operations must not cause harmful interference to authorized facilities. As stated above, operation under this experimental STA will occur only on a limited number of 12.5 kHz channel pairs on non-Federal Government channels allocated under the FCC's rules and that have pre-coordinated or applied for such use. Motorola will also coordinate with existing licensees, as necessary, but has selected and pre-coordinated channels that are not assigned in the test area or that are sufficiently distant so as not to pose interference concerns. Should interference occur, however, Motorola will take immediate steps to resolve the interference, including if necessary arranging for the discontinuance of operation.

In addition, Motorola will advise entities participating in the test that permission to operate has been granted under experimental authority issued to Motorola, that such operation is strictly temporary, and that the operation may not cause harmful interference. To that end, Motorola proposes to label prototype equipment or associated written information as follows:

FCC STATEMENT

Permission to operate this device has been granted under experimental authority issued by the Federal Communications Commission to Motorola, Inc., is strictly temporary and may be cancelled at any time. Operation is subject to the condition that it not cause harmful interference. This device is not, and may not be, offered for sale or sold until the approval of the FCC has been obtained. Thus, the user does not hold a property right in the device and may be required to return the device.

Motorola also requests a waiver of the station identification requirements set forth in Section 5.115 of the Commission's rules, 47 C.F.R. § 5.115 (2009).

Public Interest Statement:

Motorola submits that issuance of expedited special temporary authority as requested is in the public interest, convenience, and necessity. Grant of such authority will permit Motorola to design and develop an innovative system that will accommodate the public safety communications needs of an electric power generation and transmission cooperative.

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EXPERIMENTAL TEST LOCATIONS

City/ Site Name	Address	Latitude; Longitude (NAD83)
Olive Hill, KY (Ault)	6.9 mi S of Olive Hill near the Intersection of KY 504 and Dewey Garris Road	38°12'16.9N 83°10'06.0W
Lawrenceburg, KY (Anderson)	1200 Versailles Road	38°02'31.0N 84°52'38.4W
Brooks, KY	N of Brooks Hill Road 600 ft W of Holsclaw Hill Road 1.5 mi W of Brooks	38°03'46.0N 85°44'15.0W
Campton, KY	Wilgus Tolson Road	37°44'34.1N 83°32'43.4W
Burnside, KY (Cooper)	5000 ft NE of EKPC Cooper Power Station 2 mi NE of Burnside	37°00'30.0N 84°34'40.0W
Williamstown (Folsom)	Off Warsaw Road 7 mi W of Dry Ridge	38°42'0.0N 84°43'11.0W
Glasgow (Fox Hollow)	Fox Hollow Switchyard	36°58'16.2N 85°53'29.9W
Freedom (Russell)	EKP Sewellton Substation at Junction of US Hwy 12 KY Hwy 55	36°55'25.0N 85°06'22.0W
Lancaster (Garrard)	Hwy 52 Richmond Rd	37°37'04.4N 84°33'47.8W
Bardstown (Garrison Lane)	Garrison Lane & KY 1858 5 mi ENE of Bardstown	37°49'55.2N 85°22'53.5W
Flemingsburg, KY (Goddard)	Off Pea Ridge Rd 2.3 mi NE of Goddard 8.2 mi SE of Flemingsburg	38°22'59.2N 83°35'21.1W
Greensburg (Green)	Off KY Rd 487 3/4 mi W of	37°15'16.2N 85°31'09.9W

City/ Site Name	Address	Latitude; Longitude (NAD83)
Howe Valley	.75 mi S of Int of Rt 86 & Howe Valley Road	37°40'35.2N 86°05'10.9W
Joe Knob (Dione)	Top of Joe Knob, 1.35 mi S of Rt 119	36°55'39.3N 83°05'35.6W
Gray, KY (Johnson Hollow)	2205 Johnson Hollow Rd	36°56'41.2N 83°58'10.3W
Lawhorn Hill, KY (Liberty Junction)	Near KY Rd 1649 0.2 mi SE of Lawhorn Hill	37°17'54.9N 84°51'11.5W
Whitley City, KY (Wiborg)	263 Buelah Hunts Rd	36°48'29.6N 84°28'59.1W
New Castle, KY	N of Int of KY 1861 Jackson Rd 2.4 mi SW	38°24'54.0N 85°12'39.0W
Renaker, KY (Harrison)	On KY Hwy 36 1 mi SE	38°26'45.3N 84°24'31.8W
Walton, KY (Stanley Parker)	EKPC Switchyard 3 mi NE of Walton	38°53'44.2N 84°34'46.7W
Stanton, KY	On KY Hwy 213 2.3 mi SSE	37°48'34.3N 83°50'33.7W
Maysville, KY (Taylor Knob)	Near County Rd 576 & S Ripley Rd 6 mi WNW of Maysville	38°41'05.5N 83°50'24.3W
Tyner, KY	S of KY Hwy 30 .5 mi SW of Tyner	37°20'23.3N 83°54'20.7W
West Liberty, KY	Old Rte 172 2.4 mi NE of West Liberty	37°56'31.3N 83°13'13.6W
Kehoe, KY (Zion Ridge)	0.2 mi S of Loyd Ridge Rd 0.35 mi west of KY Hwy 784 6.5 mi NW of Kehoe, KY	38°31'52.0N 83°08'24.0W
Burgin, KY (Dix Dam)	600 ft N of Hwy KY 342 0.7 mi WNW of Dix Dam	37°47'30.0N 84°42'56.0W