

**United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
RADIO STATION CONSTRUCTION PERMIT
AND LICENSE**

EXPERIMENTAL

(Nature of Service)

XC MO

(Class of Station)

WG2XUE

(Call Sign)

0078-EX-CM-2016

(File Number)

NAME iRobot Defense Holdings, Inc.

Subject to the provisions of the Communications Act of 1934, subsequent acts, and treaties, and all regulations heretofore or hereafter made by this Commission, and further subject to the conditions and requirements set forth in this license, the licensee hereof is hereby authorized to use and operate the radio transmitting facilities hereinafter described for radio communications in accordance with the program of experimentation described by the licensee in its application for license.

Operation: In accordance with Sec. 5.3(c) of the Commission's Rules

Station Locations

- (1) MOBILE: RCV Operation in and around the Pepperell Airport, within 1 km, centered around NL 42-41-42; WL 71-33-00
- (2) MOBILE: Pepperell, MA, within 1 km, centered around NL 42-41-42; WL 71-33-00
- (3) MOBILE: RCV Operation in and around iRobot Corp facility, within 1 km, centered around NL 42-35-34; WL 71-19-39
- (4) MOBILE: OCU Operation in and around iRobot Corp facility, within 1 km, centered around NL 42-35-34; WL 71-19-39
- (5) MOBILE: RCV Operation in and around GEM City Manufacturing, within 1 km, centered around NL 39-46-58; WL 84-11-27
- (6) MOBILE: OCU Operation in and around GEM City Manufacturing, within 1 km, centered around NL 39-46-58; WL 84-11-27
- (7) MOBILE: RCV Operation in and around Polaris Manufacturing, within 1 km, centered around NL 41-42-33; WL 70-46-49
- (8) MOBILE: OCU Operation in and around Polaris Manufacturing, within 1 km, centered around NL 41-42-33; WL 70-46-19
- (9) MOBILE: RCV operation at Benchmark Electronics, within 1 km, centered around NL 42-42-48; WL 71-27-32
- (10) MOBILE: OCU operation at Benchmark Electronics, within 1 km, centered around NL 42-42-48; WL 71-27-32
- (11) MOBILE: OCU operation at Plymouth Airport, within 1.5 km, centered around NL 41-54-30; WL 70-43-42
- (12) MOBILE: RCV operation at Plymouth Airport, within 1.5 km, centered around NL 41-54-30; WL 70-43-42
- (13) MOBILE: Ayer, MA, within 1 km, centered around NL 42-34-18; WL 71-36-12
- (14) MOBILE: Mansfield, MA, within 1 km, centered around NL 42-32-49; WL 71-36-38
- (15) MOBILE: Clinton, MA, within 1 km, centered around NL 42-24-18; WL 71-41-02

This authorization effective March 22, 2017 and
will expire 3:00 A.M. EST April 01, 2019

**FEDERAL
COMMUNICATIONS
COMMISSION**



Station Locations

(16) MOBILE: Devens, MA, within 1 km, centered around NL 42-32-49; WL 71-36-38

Frequency Information

MOBILE: RCV Operation in and around the Pepperell Airport, within 1 km, centered around NL 42-41-42; WL 71-33-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	20M0W7D 10M0W7D 5M00W7D	851 mW (ERP)	

MOBILE: Pepperell, MA, within 1 km, centered around NL 42-41-42; WL 71-33-00

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	20M0W7D 10M0W7D 5M00W7D	3020 mW (ERP)	

MOBILE: RCV Operation in and around iRobot Corp facility, within 1 km, centered around NL 42-35-34; WL 71-19-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	

Frequency Information

MOBILE: RCV Operation in and around iRobot Corp facility, within 1 km, centered around NL 42-35-34; WL 71-19-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4940-4990 MHz	MO	20M0W7D 5M00W7D 10M0W7D	851 mW (ERP)	

MOBILE: OCU Operation in and around iRobot Corp facility, within 1 km, centered around NL 42-35-34; WL 71-19-39

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	20M0W7D 5M00W7D 10M0W7D	3020 mW (ERP)	

MOBILE: RCV Operation in and around GEM City Manufacturing, within 1 km, centered around NL 39-46-58; WL 84-11-27

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	20M0W7D 10M0W7D 5M00W7D	851 mW (ERP)	

Frequency Information

MOBILE: OCU Operation in and around GEM City Manufacturing, within 1 km, centered around NL 39-46-58; WL 84-11-27

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	20M0W7D 10M0W7D 5M00W7D	3020 mW (ERP)	

MOBILE: RCV Operation in and around Polaris Manufacturing, within 1 km, centered around NL 41-42-33; WL 70-46-49

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	20M0W7D 10M0W7D 5M00W7D	851 mW (ERP)	

MOBILE: OCU Operation in and around Polaris Manufacturing, within 1 km, centered around NL 41-42-33; WL 70-46-19

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	20M0W7D	3020 mW (ERP)	

Frequency Information

MOBILE: OCU Operation in and around Polaris Manufacturing, within 1 km, centered around NL 41-42-33; WL 70-46-19

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4940-4990 MHz	MO	10M0W7D 5M00W7D	3020 mW (ERP)	

MOBILE: RCV operation at Benchmark Electronics, within 1 km, centered around NL 42-42-48; WL 71-27-32

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	10M0M0W 5M00M0W 20M0M0W	851 mW (ERP)	

MOBILE: OCU operation at Benchmark Electronics, within 1 km, centered around NL 42-42-48; WL 71-27-32

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	5M00M0W 10M0M0W 20M0M0W	851 mW (ERP)	

Frequency Information

MOBILE: OCU operation at Plymouth Airport, within 1.5 km, centered around NL 41-54-30; WL 70-43-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	5M00M0W 10M0M0W 20M0M0W	851 mW (ERP)	

MOBILE: RCV operation at Plymouth Airport, within 1.5 km, centered around NL 41-54-30; WL 70-43-42

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	5M00M0W 10M0M0W 20M0M0W	851 mW (ERP)	

MOBILE: Ayer, MA, within 1 km, centered around NL 42-34-18; WL 71-36-12

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	5M00W7D	3020 mW (ERP)	

Frequency Information

MOBILE: Ayer, MA, within 1 km, centered around NL 42-34-18; WL 71-36-12

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
4940-4990 MHz	MO	10M0W7D 20K0W7D	3020 mW (ERP)	

MOBILE: Mansfield, MA, within 1 km, centered around NL 42-32-49; WL 71-36-38

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	5M00W7D 10M0W7D 20M0W7D	3020 mW (ERP)	

MOBILE: Clinton, MA, within 1 km, centered around NL 42-24-18; WL 71-41-02

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	5M00W7D 10M0W7D 20M0W7D	3020 mW (ERP)	

Frequency Information

MOBILE: Devens, MA, within 1 km, centered around NL 42-32-49; WL 71-36-38

Frequency	Station Class	Emission Designator	Authorized Power	Frequency Tolerance (+/-)
1370-1390 MHz	MO	15M4G1D 16M3D1D	13.5 W (ERP)	
4940-4990 MHz	MO	5M00W7D 10M0W7D 20M0W7D	3020 mW (ERP)	

Special Conditions:

- (1) 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.
- (2) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (3) The station identification requirements of Section 5.115 of the Commission's Rules are waived.
- (4) Assignment on 1030 MHz or in one of the bands 1215-1400, 2700-2900, or 9000-9200 MHz was coordinated prior to authorization with the FAA Eastern Coordinator, New York, NY. Use of frequencies under the authority of this assignment is subject to such further coordination with the FAA Eastern Coordinator, New York, NY, as necessary to ensure compatibility with existing uses.
- (5) Operation must be prior coordinated and approved by 4940-4990 MHz public safety licensees within 50 miles of proposed location.
- (6) This authorization is issued for the express purpose of conducting experimental operations described in the related application and required by the public safety services. The use of this radio station in any other manner or for any other purpose will constitute a violation of the privileges herein authorized. Except as subsequently authorized by the Commission, this radio station shall not be operated after the expiration date of the contract designated in the related application and enumerated above.
- (7) All of the experimental devices will be retrieved by iRobot Corp. from the participants upon completion of this experiment.
- (8) The stop buzzer is Tung Ng at (781) 775-4240 and (781) 430-3150.