

Raytheon Missile Systems
Experimental License Application
File Number: 0548-EX-PL-2013

Explanation of Experiment

Raytheon Missile Systems (Raytheon) is a US defense contractor that builds missile systems and a variety of radio systems that are necessary for the navigation, target detection, command and control, and communications required when a missile is in flight.

Raytheon has embarked on a recently launched project that intends to examine how to adapt commercial, off the shelf marine radar technology into a new product. The challenge is to work with this well-developed technology in a new way that could produce advances in missile system performance. The FCC granted Raytheon a temporary authorization WG9XJA for initial operations. Those operations have proven very productive, and Raytheon is now seeking authorization to continue this experimentation.

Synopsis

- Spectrum to be used: 154.585, 159.480, 160.725, 160.785, 454.00, and 459.00 MHz; 2450-2500 MHz, 2900-3100 MHz, 5470-5650 MHz, 9300-9500 MHz
- Locations: Tucson, Arizona, operations at the Raytheon facility indoors in Bldg 9020 Latitude: 32° 5'41.37"N, Longitude: 110°48'29.79"W, and testing will be outdoors at Point Loma, CA Latitude: 32°40'1.18"N, Longitude: 117°14'22.94"W
- Power levels: .03 watts, with an ERP of 3 watts; these are low power transmissions

Explanation of Experimentation:

Raytheon is using Raymarine marine commercial off the shelf radar systems to enhance the performance of its surface detection technologies. The planned testing uses the Raymarine technology to improve performance of radar detection at or just below the level of the radar. Initial testing has proven fruitful, and Raytheon is planning a number of advanced applications for the technology.

The testing will be during the work day, with sporadic use of the radar systems. Testing and data collection will be followed by periods of data evaluation. So, the spectrum use will be discontinuous.

Stop Buzzer:

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Conclusion:

Raytheon is expanding a productive research program to advance the surface detection radar capabilities of some of its missile systems. The planned, ongoing testing requests the use of commercial off the shelf Raymarine marine radar systems. An experimental license is needed because the radar system will not be used in a marine environment. There is no other license available for this testing, and the testing is specifically focused on development of radar technologies, so it is properly the subject of an experimental license. Because the results of early testing proved productive, Raytheon is now seeking an experimental license to continue this research program.

For additional information about this program or if there are questions on the application, please contact Tom Fagan, see above, or Anne Linton Cortez, WFS, Counsel to Raytheon, 520-360-0925, or alc@conspecinternational.com.