

Application For Experimental License, Question 7 Response

This application by Northrop Grumman Systems Corporation (NGSC) is to permit an NGSC internal research and development (IRAD) effort to develop protocols for potential U.S. Department of Defense and related foreign government contracts for secure ship-to-shore data and voice communications. Active transmission over water is necessary to prove out the communications link and techniques.

Tests will be conducted from an NGSC laboratory in Annapolis, MD, to and from a boat located on the Chesapeake Bay up to 20 km away. Omni-directional antennas will provide the area coverage needed for the tests without the need to provide tracking and pointing.

The hardware will consist of a commercial Harris SeaLancet RT-1944/U transmitter coupled with a commercial RSS Tactical Omni antenna, model no. 224015-005A. The transmitter has a maximum power output of 10 watts. The antenna has a gain of 6 dBi, resulting in a maximum ERP of 24.2 watts peak. These tests will be limited to the bands 2212-2277 MHz, 2412-2427 MHz, and 2452-2467 MHz. The waveforms under investigation use BPSK, QPSK, 16 QAM and 64 QAM modulation techniques. The radio selects a frequency based on 5 MHz channelization. The emission designation is 12M0A2D.

The Stop Buzzer POC is James Pierce, 410-260-5346.