

REQUEST FOR SPECIAL TEMPORARY AUTHORITY

Lockheed Martin Corporation (“Lockheed Martin”) hereby seeks further Special Temporary Authority to operate a developmental system that Lockheed Martin is testing in connection with a Defense Advanced Research Projects Agency (“DARPA”) program.

Lockheed Martin currently holds an experimental STA under call sign WM9XQP (File No. 0540-EX-ST-2018). Based on preliminary testing conducted under that authority, Lockheed Martin has refined its testing needs with DARPA and, accordingly, seeks to authorize the following changes under a new STA:

1. To ensure compatibility with local operations and to avoid interference into S-band operations being conducted by law enforcement agencies in the area, Lockheed Martin limits its operations to 430.0 MHz in the UHF band and 3400.0 MHz in the S-band.
2. Based on discussions with the Albuquerque ARTCC, Lockheed Martin is seeking authority to fly at up to 18,000 ft AGL, in order to facilitate air traffic management of commercial aircraft. The Albuquerque ARTCC identified that it may require Lockheed Martin to operate above 10,000 ft to ensure effective air traffic separation.
3. For similar reasons, Lockheed Martin has slightly modified the waypoints identified on its request to account for the flight area in and around Buckeye. Reshaping the flight area is intended to facilitate effective air traffic management in the area.

Lockheed Martin has made every effort to limit both the area of operation as well as the frequencies required to satisfy the proposed testing. Testing is designed to occur during two testing periods of up to 4 hours a day for 3-5 days within a week. We expect several weeks of total testing to validate the proof of concept and system functionality. An individual test consists of transmissions of up to 30 minutes. Within an individual test, we expect to switch among bands (UHF, S, and X) multiple times a minute to understand channel performance characteristics. The frequencies requested in the current STA cover the frequencies that DARPA requires for post-production use of the system.

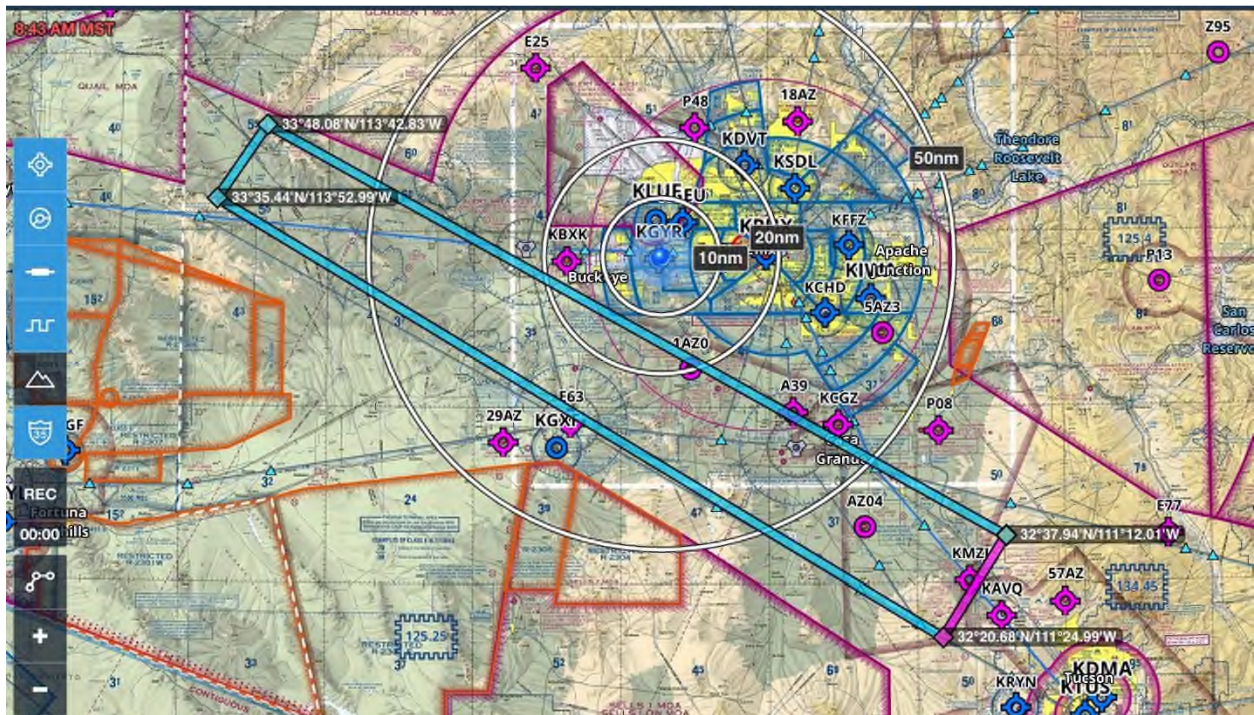
Prior Coordination.

Lockheed Martin has eliminated the use of any frequencies requiring prior coordination with satellite operators in the 449.75-450.25 MHz band.

Areas of Operation.

Lockheed Martin has identified two areas of operation.

- (1) Ground (fixed) operations will be conducted at the Lockheed Martin facility in Goodyear, AZ, to conduct initial testing of the data link between transmitter and receiver.
- (2) Ground-to-air operations will be conducted between a fixed transmitter and an airborne receiver, in the area identified by the following coordinate points. Bi-directional radio communications will be conducted only within this area of operation:



Coordinates: 33° 48.08 N / 113° 42.83 W
 33° 35.44 N / 113° 52.99 W
 32° 37.94 N / 111° 12.01 W
 32° 20.68 N / 111° 24.99 W

Flights will be conducted at up to 18,000 ft AGL.

