

AEROSPACE & FLIGHT TEST RADIO COORDINATING COUNCIL®

REQUEST FOR TELEMETRY FREQUENCY COORDINATION
(1435-1525 MHz)
(2310-2320 MHz and 2345-2390 MHz)

Date of Application 11 September 2015

Identity Control No. _____
(Not to be filled in by applicant.)

Date Required 1 October 2015

Date Complete _____
(Not to be filled in by applicant.)

NOTE: PROPRIETARY DATA/CLASSIFIED INFORMATION SHOULD NOT BE SUBMITTED.

1. (a) Name of applicant Avwatch Inc
(b) Number and street 246 South Meadow Road; Gate 6 Office S-1
(c) City, state and zip code Plymouth, MA 02360
(d) Name and telephone for system contact 617-784-1181
(e) Email rak@avwatch.us
2. (a) Application for (check one): New Station ☒ Renewal ☐ Modification ☐
For Renewal or Modification please enclose a copy of the existing License, Call Sign: _____
(b) If for modification state modification proposed _____
3. Frequency(ies) requested 2377.00 MHz
4. Bandwidth and emission: (See instructions)
(a) Occupied bandwidth-kHz 10 MHz
Emission bandwidth-kHz 10 MHz
(b) Emission designator 22M0D1D
5. Category(ies) of station(s): Air-to-ground ☒ Air-to-air ☐ Ground checkout ☐
Other ☐ (Explain) _____

6. Transmitter and associated antenna(s):

(a) Power 10W (19.95 EIRP) Ave ☐ Peak ☒
 (b) Transmitter nomenclature: Make Persistent Systems Model Wave Relay QRR
 (c) Transmitter frequency range 2370.00 – 2390.00 MHz XTAL ☐ Synthesized ☐
 (d) Frequency stability under all operating conditions <0.0015 %
 (e) JFP status or Type Acceptance No. of transmitter FCC ID: SWX-XR2
 (f) Type of transmitting antenna Omnidirectional No. per vehicle 2
 (g) Gain in dB above isotropic 3 dBi Polarization _____
 (h) Altitude and area of operation Max 6,000 Feet AGL/ Joint Base Cape Cod/ 62miles(100km)
 (i) Ground (Receiver): Address 5204 Ent Street (Near Wings Inn)
 City Buzzards Bay County Barnstable State MA
 Latitude 41-39-32.78 Longitude 070-34-03.50
 (j) Receiver Antenna Type Parabolic - Tracking Gain in dB 24 dBi
 (k) Receiver Antenna Elevation above MSL in feet 15 Feet

7. Duration and description of proposed operational program (attach additional sheets if required):

See Attached.

8. **AFTRCC COORDINATION TERMS AND CONDITIONS**

- AFTRCC recommends use of the 2360 to 2390 MHz bands for all telemetry operations required within the "S" band. Coordination for telemetry operations in the bands 2310-2320 MHz and 2345-2360 MHz will be on a secondary basis, and may require additional coordination with the Wireless Communications Services.

- All requests for frequency coordination by Aerospace & Flight Test Radio Coordinating Council ("AFTRCC") are subject to the following terms and conditions:

- AFTRCC provides recommendations to the Federal Communications Commission ("FCC") for non-Government use of flight test voice and telemetry frequencies. AFTRCC's role is strictly advisory; in all cases the FCC makes the decision whether to issue a license.

- Applicants are advised that no representations or warranties, express or implied, are made as to the interference-free nature of any given frequency or frequencies which AFTRCC coordinates, or as to whether any given frequency recommendation is best suited for the Applicant's purposes.

- Applicants should also be aware that frequencies coordinated by AFTRCC are shared with other users; no one user is entitled to exclusive use of a frequency in any given area. Multiple users may be, and often are, licensed or have government assignments for use of the same frequencies. Hence, notwithstanding FCC issuance of a license to the Applicant, transmission on any given frequency may be subject to day-to-day, hour-by-hour scheduling with Government Area Frequency Coordinators ("AFC's") or other agencies.

- In return for AFTRCC's processing of the Applicant's request, the Applicant agrees to release and hold harmless AFTRCC, its officers, directors, agents, representatives, and member companies (and their respective officers, directors, employees, owners, and agents) from and against any and all claims, losses, liabilities, damages or expenses which may arise now or in the future as a result of the Applicant's acceptance of AFTRCC's recommendation, or its use of the recommended frequency(ies).

- By the signature of its duly authorized official below, the applicant accepts and acknowledges these limitations and conditions.

- Information supplied in support of this coordination request is part of the FCC application process. Accordingly, this information is considered public record material.

Signature: _____

Print Name: Ryan A. Kowalske

Title: CTO/Spectrum Manager

Date: 11 September 2015



Avwatch Inc
246 South Meadow Road
Gate 6; Office S-1
Plymouth, MA 02360
617.784.1181

SUBJ: Coordination Request for JBCC – FAA UAS Test Center

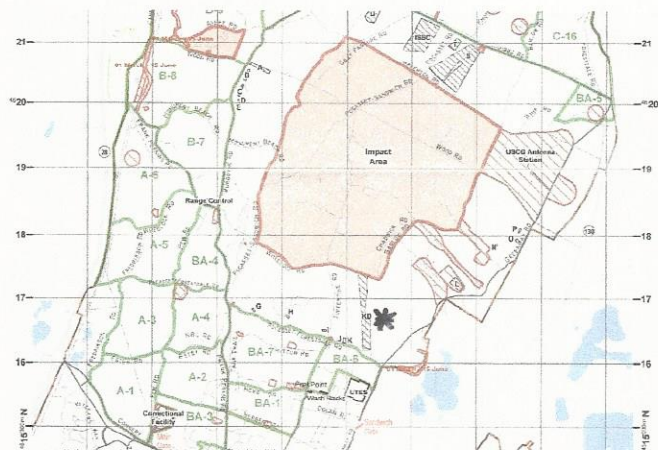
In March 2015, Mass Development selected Avwatch to operate and manage the Massachusetts Unmanned Aircraft Systems (UAS) Test Ranges at Joint Base Cape Cod and other test sites throughout Massachusetts. For more information on the Test Site, please see:

<http://www.massdevelopment.com/news/massdevelopment-selects-avwatch-to-operate-and-manage-test-ranges-for-unman/>

As part of the required operations, Avwatch is responsible for the safety of flight of each UAS and surrogate UAS flown on the test site. The ability to get safety information and telemetry data in real-time is critical to the testing of UAS on the test site.

The operational testing of UAS and surrogate UAS on Joint Base Cape Cod has already begun, however it is growing and the need for real-time data has become a necessity for safe operations. As such, Avwatch is requesting a four (4) year coordination through AFTRCC on 2377.00 MHz (10 MHz channel) at a 10W maximum power output to facilitate building this RF network. Local coordination has been conducted with the Coast Guard Air Station on Joint Base Cape Cod (POC: Pat Perseille, USCG, First Coast Guard District Spectrum Manager @ 617.223.3168).

Primary area of operations will be the KD Range (see below with asterisk) with transmitter power at 2W (2377.00 MHz @ 10MHz channel width). All flights will be conducted during daylight hours and transmitters can be locally and remotely secured within fifteen (15) minutes of notification. All flights will be conducted during weekdays only (Monday-Friday).



Secondary tests will be conducted via surrogate UAS platforms (piloted aircraft) to test systems and subsystems prior to integration on UAS platforms. Primary flight locations will be between JBCC and Plymouth Municipal Airport (KPYM) and directly South-East of JBCC in the offshore environment. Avwatch is requesting a 100 KM radius around JBCC, however surrogate UAS flights will only be conducted in the aforementioned operational areas. Avwatch is requesting the coordination of up to 10W of transmitter power to facilitate the distance required to conduct operations. All flights will be conducted during daylight hours and transmitters can be locally and remotely secured within fifteen (15) minutes of notification. All flights will be conducted during weekdays only (Monday-Friday). See below for map.

