

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

EXPERIMENTAL

(Nature of Service)

XT      FX

(Class of Station)

WJ2XNS

(Call Sign)

0217-EX-CR-2020

(File Number)

NAME Liquid Robotics 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(j) of the Commission's Rules

Station Locations

(1) Kamuela (HAWAII), HI - NL 20-02-17; WL 155-49-51

Frequency Information

Kamuela (HAWAII), HI - NL 20-02-17; WL 155-49-51

| Frequency   | Station Class | Emission Designator | Authorized Power  | Frequency Tolerance (+/-) |
|-------------|---------------|---------------------|-------------------|---------------------------|
| 1227.6 MHz  | FX            | 24M0G1D             | 10.7646 pW (ERP)  |                           |
| 1575.42 MHz | FX            | 24M0G1D             | 20.51162 pW (ERP) |                           |

Special Conditions:

- (1) In lieu of frequency tolerance, the occupied bandwidth of the emission shall not extend beyond the band limits set forth above.
- (2) 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.
- (3) The station identification requirements of Section 5.115 of the Commission's Rules are waived.

This authorization effective July 01, 2020 and  
will expire 3:00 A.M. EST July 01, 2022

**FEDERAL  
COMMUNICATIONS  
COMMISSION**



**Special Conditions:**

- (4) GPS re-radiators are limited to a maximum EIRP value that will result in power levels not to exceed a power spectral density of -140 dBm/24 MHz measured at a distance of 100 ft from the building where the test is being conducted. Any malfunction, misalignment, or tampering of the equipment or its location which results in an increased power spectral density outside the building could cause harmful radio frequency interference to GPS receivers, including those in aircraft and/or ground based facilities.
- (5) Operation is limited to activity for the purpose of testing radionavigation satellite service (RNSS) equipment and systems.
- (6) The test equipment shall only be used indoors and shall be under the control of Liquid Robotics Inc.
- (7) Liquid Robotics Inc. shall post signs on doors to the test area notifying that, "GPS re-radiator is in use and the GPS information you receive may be in error."
- (8) GPS users in the area of potential interference to GPS reception must be notified that GPS information may be impacted for periods of time.
- (9) The designated point-of-contact to terminate transmissions if interference occurs is Tony San Jose at (808) 352-1640.