

EXPLANATION OF MODIFICATION APPLICATION WJ2XUP

The purpose of this modification application to WJ2XUP is to secure the Commission's approval to permit flights at the Lanai, HI site to reach 85,000 feet at the adjusted power levels noted. The modification addresses 5040.8825 MHz and 454.7-454.975 MHz and 459.7-454.975 MHz.

The coordination of the Federal Aviation Administration (FAA) is attached as to 5040.8825.

The concurrence of the license holder of 454.7-454.975 MHz and 459.7-454.975 MHz at Lanai, HI is attached.

The information addressing the transmitters and antenna remain:

- The Harris p/n 102721-001 will use 5040.8825 for purposes of sending ground based command and control data to and from the unmanned aircraft system (UAS). Operations will be consistent with RTCA DO-362 including ability to select a discrete channel. The waveform is compatible with the Command and Control (C2) Data Link Minimum Operational Performance Standards (MOPS).
- The transmitting equipment for the 454/459 MHz segment is Microhard Systems, Inc. Pico 400.

These tests are in further support of AeroVironment's Hawk30 High Altitude Platform System (HAPS) for unmanned aircraft. The project is a solar-powered high altitude long-endurance (HALE) unmanned aircraft. The tests examine integrating the transceivers at different altitudes in the solar environment.

The second successful test flight of the HAWK30 solar-powered HAPS took place on October 23, 2019 at the NASA Armstrong Flight Research Center in California. The test flight reached altitudes higher than those of the previous flight, and was conducted continuously for approximately one hour and 30 minutes. The HAWK30 successfully achieved more than two dozen test points, including 180-degree turns and further validation of avionics, power and propulsion performance. The team also simulated precise landing control on the runway, similar to its commercial operation concept.

AV's project is solely to flight test a prototype aircraft on an intermittent basis. It does not encompass ongoing commercial operations.