

**Panasonic Avionics Corporation
Modification of Call Sign WH2XCJ
T-PED Interference Ground Testing at
Charlotte Douglas International Airport, Charlotte, North Carolina
March 3, 2016**

MODIFICATION NARRATIVE

Panasonic Avionics Corporation (“Panasonic”) respectfully requests a modification of its existing two-year experimental license (Call Sign WH2XCJ) to add an additional commercial airfield test location to conduct ground testing in support of Panasonic’s Global Communications Suite (“GCS”), featuring the “eXConnect” Ku-band aeronautical mobile-satellite service (“AMSS”) that provides onboard connectivity for transmit portable electronic devices (“T-PEDs”). Authorization is sought to conduct limited testing in Wi-Fi frequency bands only at Charlotte Douglas International Airport in Charlotte, North Carolina, commencing no later than March 14, 2016.

I. Background

Panasonic was recently granted a modification of the subject two-year experimental license to consolidate T-PED interference testing operations at over twenty commercial airfield test locations under Call Sign WH2XCJ,¹ which includes authority to operate in the Wi-Fi frequency bands requested herein. This application now requests authority to add one additional airfield location in Charlotte, North Carolina (35°12’28.5” N, 80°56’47.9” W) to Call Sign WH2XCJ, where Panasonic will test and gather electromagnetic interference (“EMI”) data on T-PED RF transmissions in the aircraft cabin in Wi-Fi frequency bands.² All tests will be conducted inside closed cabins onboard aircraft parked at a remote location at the airfields.

II. Testing Plan and Frequencies

Attached is Table 1, which lists each frequency bands in which Panasonic is authorized to conduct testing under Call Sign WH2XCJ. Also listed are the proposed wireless standards and associated technical information for each test band: modulation

¹ See Panasonic Avionics Corporation, File No. 0165-EX-ML-2015 (Call Sign WH2XCJ).

² For a detailed description of the proposed T-PED testing, see File No. 0117-EX-PL-2014 (Call Sign WH2XCJ), Attachment 1.

(pulse or continuous wave), maximum EIRP, maximum ERP, emission designator, among others. A single 1 MHz test frequency in each uplink band, also identified, will be used for testing. In this modification application, Panasonic only seeks to test in the following Wi-Fi frequency bands at the Charlotte, North Carolina location:

- 2400-2497 MHz: 97 MHz
- 5150-5250 MHz: 100 MHz
- 5250-5350 MHz: 100 MHz
- 5725-5825 MHz: 100 MHz

Panasonic is not seeking any changes in the other technical aspects of proposed tests in these bands as previously authorized and as described in the earlier experimental license application³ or previous modification application.⁴

Panasonic confirms that there are no Educational Broadband Service (“EBS”) or Fixed Microwave (“FM”) service licensees within the applicable radius of operations (1 kilometer) that require coordination. In addition, while Panasonic has identified one affected Broadband Radio Service (“BRS”) licensee within the radius of operations, there is no potential for interference to the subject BRS licensee because Panasonic’s proposed operations in the 2400-2497 MHz band will be limited to a maximum of 1 MHz at 2462 MHz, well below the BRS licensee operations in the 2496-2502 MHz band.⁵

Panasonic is currently in the process of coordinating with the local Society of Broadcast Engineers (“SBE”) coordinator in Charlotte, North Carolina for its proposed operations in the 2400-2497 MHz band and will update the Commission upon receiving input from the SBE coordinator. Finally, Panasonic has requested from the FAA a non-governmental tracking number (“NGT#”) for its proposed operations in the 5150-5250 MHz frequency band and will submit its assigned NGT# for this site to the Commission

³ *Id.*

⁴ *Supra* footnote 1. Panasonic notes that the Commission’s Experimental Licensing System (“ELS”) automatically generated the Form 442 for this experimental modification application and included Panasonic’s existing authority across all T-PED test frequencies and locations, in addition to the herein requested authority.

⁵ *See* Broadband Radio Service License, NSAC, LLC (Call Sign B074), <http://wireless2.fcc.gov/UlsApp/UlsSearch/license.jsp?licKey=2589820> (accessed on March 2, 2016).

immediately upon receipt. The Commission may grant the requested experimental license modification application subject to the existing condition to coordinate with any potentially affected operations prior to conducting T-PED testing in Wi-Fi frequencies at Charlotte Douglas International Airport.

As Panasonic has explained in its previous applications, its access to aircraft is dependent upon the manufacturer, airline or other owner making the airplane available at a time convenient for them. Panasonic has only a short window – in most cases only a few days – once an airplane is available to conduct the testing before the airplane must be returned to the owner. Testing and re-testing in the authorized frequencies will be conducted at scheduled intervals during the periods that the airplanes are available within the authorized testing period.

III. Expedited Processing and Public Interest

Panasonic respectfully requests expedited processing of this application. As discussed, there is extensive Commission precedent to allow Panasonic to conduct the proposed tests because Panasonic is currently authorized under the license for broader T-PED frequency testing, including for the herein proposed Wi-Fi frequency bands. The Commission has previously reviewed and approved identical test operations at similarly situated airfield locations across the U.S. and, being familiar with Panasonic's T-PED testing procedure, may expeditiously grant this application.

Grant of the requested authority will serve the public interest by allowing Panasonic to satisfy FAA certification requirements and to continue development of its innovative eXConnect AMSS system, which enables in-flight voice and broadband Internet access to passengers and crew. In addition, Panasonic has demonstrated that its proposed experimental operations raise no concern regarding potential interference to co-frequency EBS, FM and BRS services, and any necessary coordination with other potentially affected users (through the SBE and FAA) will be completed prior to commencing T-PED testing at the airport facility. Of course, Panasonic's operations will be conducted on an unprotected, non-interference basis and will otherwise comply with Part 5 of the FCC Rules.

IV. Conclusion

Based on the foregoing, Panasonic respectfully requests that the Commission grant this application to modify its existing two-year experimental license, Call Sign WH2XCJ to permit T-PED testing in the Wi-Fi bands identified above at Charlotte Douglas International Airport in Charlotte, North Carolina, commencing on March 14, 2016.