

April 26, 2017

Question 7: Purpose of Experiment

The purpose of the transmissions is to certify that VHF comm. radio communications will not interfere with GPS navigation systems on board aircraft. The testing is required by the FAA for experimental aircraft during certification, and also for each production aircraft. All of the transmitters used are FCC certified.

The test frequencies were chosen because their 12th or 13th harmonics fall within +/- 1 MHz of the GPS L1 frequency, M1575.42. The procedure requires that the GPS system acquire satellites. The VHF radio is tuned to a test frequency and transmits for up to 20 seconds while the GPS system is monitored to verify that no satellites are dropped, or other indication of interference is observed. This procedure is repeated until all of the test frequencies required for certification have been tested.

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