

Question 7: Purpose of Experiment

a) The equipment to be tested is COM radios installed in general aviation aircraft developed, produced and sold by Cessna Aircraft Company. All radios are FCC type accepted, and described further in Exhibit 1, Transmitter Descriptions, attached to this application.

Test Procedure

COM 1 is set to a frequency (channel), and COM 2 is set to an adjacent channel. Transmit on COM1 and monitor on COM 2 for interference. Then transmit on COM 2 and monitor on COM 1. If interference is detected, increase the channel separation by one channel and repeat until no interference is detected. This procedure is performed at the lower, middle and upper ranges of the 118 to 137 MHz aviation band. *

b) The purpose of the transmissions is to determine the minimum channel separation required to eliminate cross talk and/or interference between COM radios installed in a single aircraft. If the test results indicate that the minimum channel separation requirement is excessive, the configuration will be modified to reduce necessary channel separation and the tests repeated. When the configuration is acceptable, the minimum separation will be included in the Pilots Operational Handbook Supplement regarding any limitations on split COM operation.

c) This test is only performed to certify a given configuration. Herein, a configuration is defined as being aircraft of the same model using radios, antennas and coax of the same model in the same location on the aircraft. Once a configuration has passed the test, it need not be performed on subsequent production aircraft using the same configuration. The information gained by performing the tests is essential for reliable COM radio communications, and flight safety.

* Mike Bowers, FAA Frequency Management Officer/Central Region recommended the frequency bands contained in the application.