

27-Jun-17

Question 7: Purpose of Experiment

- a) The equipment to be tested is commercially available, certified aircraft VHF COM radios operating in the 118-137 MHz band. The radios are installed in aircraft developed and produced by Textron Aviation. For performance tests requiring communication with a fixed ground station, the ground radios will also be commercially available FCC Part 87 certified.

The aircraft antennas are a variety of commercially available $\frac{1}{4}$ wave monopole blade antennas. Effective Radiated Power will always be less than 20 W mean. The fixed ground station utilize commercially available vertically polarized antennas.

- b) The tests are required by 14 CFR 25.1301(d), 25.1353(a) 25.1461(c) for FAA certification of the aircraft for EMI/EMC and minimum performance standards. The tests for performance involve verification of air-ground-air voice communications of acceptable quality at ranges up to 200 miles while the aircraft makes a variety of maneuvers. The EMI/EMC testing usually involves one or two transmissions of 20 seconds or less.
- c) The testing is required to ensure the radios function as required and do not interfere with other systems on the aircraft.

Very Respectfully,

Dan Hankins
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Textron Aviation, Inc.