

March 28, 2018

Question 7: Experimentation Description/Purpose

Purpose

The purpose of this testing is to ensure no Electromagnetic Interference (EMI) exists between the VHF COMMs and GNSS installed on board an aircraft. The FAA requires the evaluation for certification of a new airplane model and for airworthiness approval on production aircraft. The test is conducted using FCC certified transmitters installed on the aircraft as part of the avionics systems.

Description

The lack of interference from VHF radios must be demonstrated on a completed GNSS installation by tuning each VHF transmitter to the frequencies listed on the experimental application and transmitting for a period of 30 seconds while observing the signal status of each GNSS satellite being received. Degradation of individually received satellite signals below a point where navigation is no longer possible is not acceptable. The 12th or 13th harmonics of the selected frequencies fall within +/- 1 MHz of the GNSS L1 center frequency (1575.42 MHz).

Don Hoehn
Design Specialist Sr.
Learjet Inc.