

Special TCAS Testing

The Boeing Company
Seattle, WA

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by

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Why an Experimental License is Necessary:

An experimental license is required to conduct special TCAS testing of production aircraft in support of aircraft test and certification.

Purpose of Operation:

The purpose of this license is to allow for operation of the TCAS test set to verify proper TCAS system operations in support of the FAA Aircraft Certification Program.

Test Description:

The experimental license supports TCAS and IFF Testing at three (3) Puget Sound locations. The testing involves operation of the TCAS test set with an altitude set above ground level. We are currently conducting this type testing under the authorization of STA's, which were coordinated with the FAA, and granted through the FCC Wireless Bureau, ULS Aviation and Marine branch. The current Call Signs are WQEJ885, WQHA294 and WQHA295. These STA's are of short duration, and therefore we are seeking a longer term license. After discussion with the FAA Spectrum Office, it was recommended that we seek licensing through the Office of Engineering and Technology as an experimental operation.

The test location and parameters are indicated below, and we will comply with the special condition of the current

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licenses, which requires that; If the aircraft transponder reports an altitude above ground, either the test set must be directly connected to the aircraft, or the test altitude, squak code, time, and emergency contact point must be coordinated with the affected FAA Air Traffic Control Facility.

The test locations are:

1. Renton Field, WA (RNT)
2. Boeing Field, WA (KBFI)
3. Paine Field, WA (PAE)

Frequency: 1030 and 1090 MHz.

Power: 0.01 watts

Emission: 14M0V1D, 14M0K1D and 6M00M1D

PRR: 235 (1030 MHz only)

Type Aircraft: Various, as required to support aircraft testing and certification.

IFF Modes: Mode 1, Mode 2, Mode 3, Mode 4, Mode A, Mode C, Squitter, Extended Squitter and Enhanced Surveillance. Mode 4 testing will be done using a low power interrogator.

Type of Test Equipment: We have the ability of utilizing 12 different sets of test boxes. All test sets meet ICAO Annex 10 Volume 4 standards, FCC Rules, and the will be used as coordinated with the FAA. These test sets are all currently licensed for use under permanent RLT licenses held by The Boeing Company.

Required Dates:

This experimental license will be required beginning in May 2008, and will be needed for a 2 year period.

FAA Coordination:

Attached as a separate exhibit.