

Description of ASB Avionics Medium Frequency Experiment

The proposed experiment will test five radio frequencies for suitability for use in a new air born avionics system. This STA request covers the ground testing phase of the equipment development process. Once that phase is completed applicant will file a separate STA Request covering the flight test phase of its equipment tests.

The frequencies to be tested are: 520 KHz; 470 KHz; 1000 KHz; 1570KHz; and, 1710 KHz. A circularly polarized antenna will be mounted on an aircraft and excited with a Collins Defense Division Communications Type No. MF-8022, frequency agile transmitter. Applicant will transmit short bursts of RF carrier with no modulation, unless they are required to identify the transmitter (i.e. plus mode operation). Each test will require only a single pulse long enough in duration to permit measurements on test equipment, about 5 seconds in duration. Although the transmitter is capable of producing 10,000 Watts of RF, the initial tests will be conducted with only a few Watts of power, e.g. 10 Watts, and the level will be increased only as much as is needed to perform the desired tests. The ground testing should last about five days.

During this phase of the experiment the aircraft will be parked on an all metal, windowless hanger at the Dryden Flight Research Center near Mohave, AZ. As a result, very little leakage of the signal beyond the test site is expected. The entire area of the research center is dedicated to commercial activities and has a very low resident population. This applicant has been advised that the Commission recently authorized the use of these frequencies for an experiment being conducted nearby by another company. To its knowledge, no interference has resulted from that experiment. Applicant believes that its experiment will not to cause interference to other spectrum users.