From FCC Form 442
Item 10:

NARRATIVE STATEMENT

(a) The complete program of research and experimentation proposed including description of equipment and theory of operation:

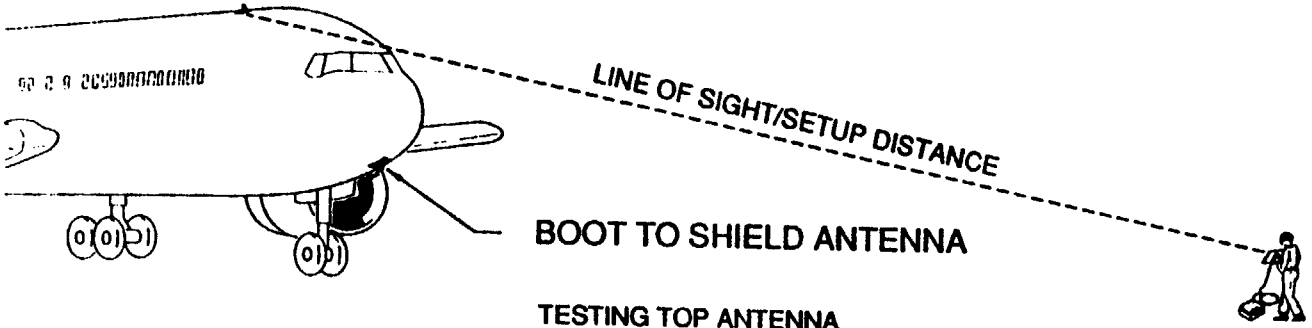
The method of testing proposed is identical to those being performed by existing ramp test equipment (see Figures 1 and 2) which are type accepted and licensed for use as Radionavigation Land Test (RLT) devices under CFR 47, Part 87. The difference is that the T/CAS ramp test device must emit an RF signal on 1090 MHz which Part 87 does not address.

(b) The specific objectives sought to be accomplished:

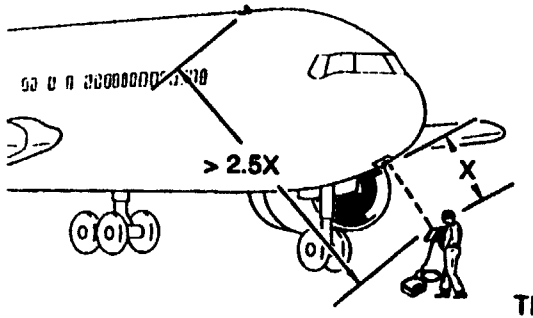
Use of T/CAS ramp test devices to perform the ground tests required for Initial and Follow-On Certification of aircraft as defined in the FAA Advisory Circular # 20-131, Airworthiness and Operational Approval of Traffic Alert and Collision Avoidance Systems (T/CAS II) and Mode S Transponders.

(c) How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion, or utilization of the radio art, or is along line not already investigated:

The implementation of the FAA/NTSB mandated T/CAS program will gradually increase the number of aircraft equipped with T/CAS transponders. Prior to FAA certification of these aircraft, each avionic system must be thoroughly tested. Although the avionics equipment is bench tested prior to installation, the best way to test avionics systems is to perform a complete system test of the equipment, its associated wiring, and antenna as it is installed on the aircraft. Currently, such testing is performed using a ramp test device which simulates, in a low power, limited range, mode, the operational receive and transmit parameters of the aircraft avionics systems. To perform such a test on a T/CAS equipped aircraft, however, a T/CAS ramp tester, capable of transmitting on 1090 MHz, must be used. The Vendor equipment cited in Item 12 of this Application represents the device we will use in the test, evaluation, and certification of Company controlled, T/CAS equipped, aircraft. The vendor has advised us that the FCC type certification application for this equipment will be filed in the near future. The Rules in CFR 47, Part 87, in this case, have not kept up with the FAA/NTSB T/CAS mandate and do not list 1090 MHz as an authorized RLT frequency. Until the necessary changes are incorporated in the Rules, an Experimental License must be obtained to support our use of these devices. Other functions which this equipment is capable of performing are currently covered under the Company's existing RLT licenses at these locations.

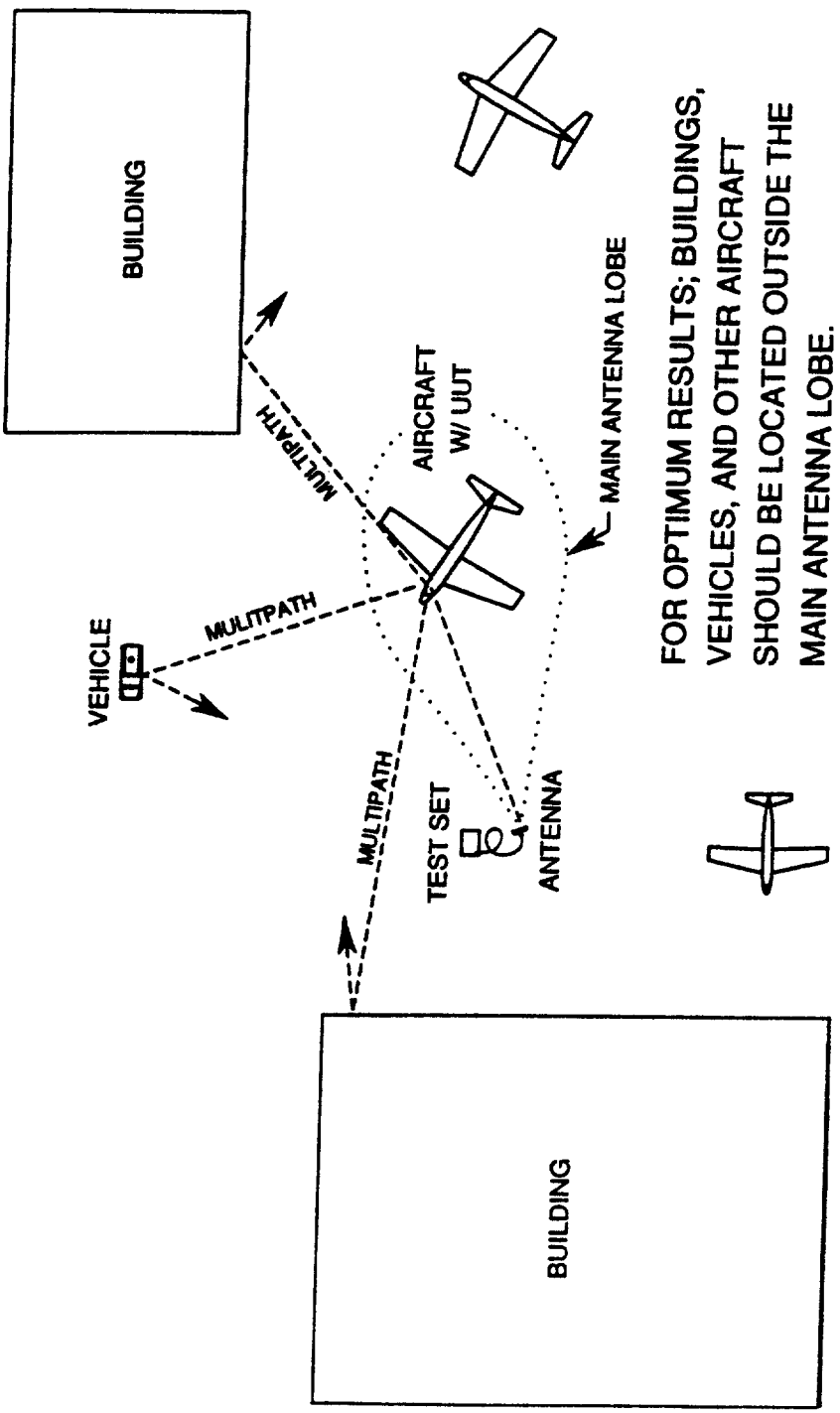


TESTING TOP ANTENNA



WHEN SHIELDING TOP ANTENNA IS NOT PRACTICAL, SUGGESTED SETUP SHOULD HAVE DISTANCE TO TOP ANTENNA GREATER THAN 2.5 TIMES THE DISTANCE TO THE BOTTOM ANTENNA.

TESTING BOTTOM ANTENNA



Suggested Layout to Reduce Multipath Errors