

AC NO: 37-3

DATE: 1/10/69



# ADVISORY CIRCULAR

## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

**SUBJECT: RADIO TECHNICAL COMMISSION FOR AERONAUTICS DOCUMENT DO-138**

1. **PURPOSE.** This circular calls attention to the Radio Technical Commission for Aeronautics (RTCA) Document DO-138, "Environmental Conditions and Test Procedures for Airborne Electronic/Electrical Equipment and Instruments," dated June 27, 1968; and discusses how it may be used in connection with technical standard order authorizations.
2. **REGULATIONS AFFECTED.** Part 37
3. **BACKGROUND.** Document DO-138 was developed by RTCA, at FAA's request, to provide a more up-to-date environmental test standard (for airborne electronic/electrical equipment and instruments) than those currently referenced in Part 37, e.g. RTCA Document 120-61/DO-108, RTCA Document 100-54/DO-60, FAA's "Document for Environmental Test Procedures for Airborne Electronic Equipment" in Section 37.195, and environmental standards in various instrument TSOs. FAA plans to undertake rule making aimed at up-dating its environmental standards, and may make use of DO-138 for this purpose. Pending rule making, however, the question has been asked whether applicants for TSO authorizations could use the environmental test standards in DO-138 in lieu of those referenced, or prescribed, in various Part 37 TSOs.
4. **HOW TO USE RTCA DOCUMENT DO-138.** An applicant for a TSO authorization for any electrical/electronic equipment, and instrument, covered by Part 37 may use an environmental test procedure set forth in RTCA Document DO-138 in lieu of the corresponding environmental test procedure in the TSO if he shows that the substitute procedure provides an equivalent level of safety. In each instance, the applicant must request approval to deviate, as prescribed in Section 37.9.

5. WHERE TO OBTAIN COPIES OF DO-138. Copies of DO-138 may be obtained from:

RTCA Secretariat  
Suite 302  
2000 K Street, N. W.  
Washington, D. C. 20006  
\$4.00 per copy.

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