

Federal Aviation Agency

ADVISORY CIRCULAR

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AIR CARRIER AND
COMMERCIAL OPERATIONS

EFFECTIVE :

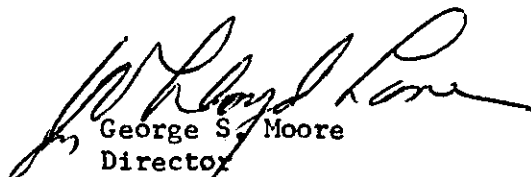
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Cancelled

SUBJECT : CONTINUANCE OF FLIGHT WITH INOPERATIVE NAVIGATION EQUIPMENT

1. **PURPOSE.** This advisory circular sets forth the guidelines for approving the procedures specified in air carrier and commercial operator manuals for the continuance of flight with inoperative radio navigational equipment.
2. **PROBLEM.** Sections 40.232(c), 41.232(c) and 42.23(d) of the Civil Air Regulations require that at least one approved distance measuring equipment unit (DME) be installed on all air carrier airplanes (and those of commercial operators certificated under Part 45 of the Civil Air Regulations) after June 30, 1963, when the airplanes are operated at or above 24,000 feet MSL within the 48 contiguous states and the District of Columbia, if VOR navigational receivers are required. The same requirement applies to turbojet airplanes after June 30, 1963, and other airplanes after subsequent dates, irrespective of the altitude flown. Guidelines are needed for the approval of procedures in the manuals for continuance of flight in the event of failure enroute of the DME, any one of the VOR's or any low frequency navigational aids utilized.
3. **FAA POLICY.** Aircraft minimum equipment lists may be amended to permit flights experiencing en route failure of required airborne radio navigation equipment to continue to points designated in the operations manual where repair or replacement and testing facilities are available. The following guide will be used by FAA air carrier inspectors in approving such amendments to minimum equipment lists:
 - a. When two operative VOR receivers and one DME interrogator are installed and the DME fails, the flight may continue to the next point of intended landing. Thereafter, the flight may continue no further than the next maintenance point where equipment repairs or replacements are normally made.

- b. When two operative VOR receivers and one DME interrogator are installed and one VOR fails, the flight may continue to the next point of intended landing.
 - c. DME is not required for dispatch, redispach, or flight continuance when no DME ground facilities are available on the route/routes to be flown.
 - d. When operations are conducted over routes using low frequency aids in DME equipped aircraft in accordance with CARs 40.232(b), 41.232(b), or 42.23(f) (one L/MF or ADF; and two VOR receivers) and one VOR fails, the flight may continue to the next point of intended landing. Thereafter, the flight may continue no further than the next maintenance point where equipment repairs or replacements are normally made, provided, that transition can be made to VOR routes having adequate DME coverage so that required radio fixes can be readily determined using both VOR and DME, and the airplane is fueled accordingly. When transition to VOR routes is required due to the failure of the ADF receiver, the flight may not continue beyond the next point of intended landing.
 - e. When operations are conducted over VOR routes in aircraft equipped with two VOR receivers and two ADF (or two L/MF) receivers and one VOR fails, the flight may continue to the next point of intended landing. Thereafter, the flight may continue no further than the next maintenance point where equipment repairs or replacements are normally made, provided, that ADF (or L/MF) navigational aids are so located and the airplane is so fueled that, in the case of failure of the remaining VOR receiver, the flight at all times is able to proceed safely to a suitable airport using ADF (or L/MF) aids and complete an instrument let down by use of the remaining airplane radio systems.
4. REPORTING MALFUNCTIONS. The above policy in no way modifies the requirements of Section 91.129 of Part 91 (New) of the Federal Aviation Regulations, which applies to the operation of aircraft within controlled airspace under the Instrument Flight Rules of that Part. This states that the pilot in command shall report immediately to Air Traffic Control any in-flight malfunction of specified navigation or air/ground communications equipment.



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