

# Federal Aviation Agency



AC NO: 170-6A

AIR NAVIGATIONAL  
FACILITIES

EFFECTIVE :

3/30/66

**SUBJECT : USE OF RADIONAVIGATION TEST GENERATORS**

1. **PURPOSE.** Information vital to all users of radionavigation test generators is now incorporated in parts 2 and 87 of the Federal Communications Commission's Rules and Regulations. This Circular gives information received from the Federal Communications Commission as to the frequencies on which the FCC will license test generators (used to radiate a radionavigation signal) within the scope of its regulations. This Circular also gives additional information to assist the user when checking aircraft navigation receivers.
2. **CANCELLATION.** Advisory Circular AC No: 170-6 dated 7/21/65. Essential information contained in AC 170-6 has been incorporated in this Circular.
3. **HAZARD TO RADIONAVIGATION.** A radiated RF test signal is sometimes useful for checking navigation receivers; i.e., VOR, Localizer, Glide Slope, DME, etc., without removing them from the aircraft. Uncontrolled radiation of such test signals creates a potential hazard since it may cause errors in aircraft receivers tuned to operating navigational facilities. Authorized receiver test facilities are assigned specific frequencies and power limits which are selected to avoid such interference to operating facilities.
4. **PROTECTED FREQUENCIES.** Radionavigation test generators will be licensed by the Federal Communications Commission to operate on the following frequencies with 1 watt power output authorization.

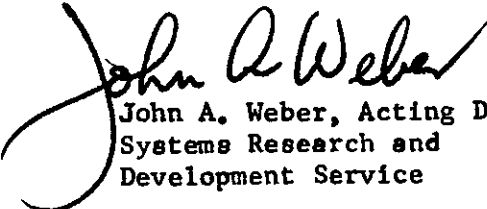
Marker	75.0 Mc/s
VOR	108.0 Mc/s
Localizer	108.1 Mc/s
Glide Slope	334.7 Mc/s
DME	978.0 Mc/s
	979.0 Mc/s
Beacon	1030 Mc/s

5. OPERATION ON FREQUENCIES OTHER THAN THE ABOVE. Under certain circumstances Federal Communications Commission licenses will be issued for operation on additional frequencies. Radiation on these frequencies will be restricted to a maximum field intensity level. These levels are listed below and have been determined to be adequate for ramp testing and nonhazardous to operational facilities.

The suggested generator outputs to produce the specified maximum field limits at a distance of 100 feet using omnidirectional antennas attached directly to the generators are as follows:

<u>Band</u>	<u>Maximum Field Intensity</u>	<u>50 Ohm Generator Output</u>
VOR/Localizer	20 uv/m RMS @ 100 feet	4 millivolts RMS
Glide Path	60 uv/m RMS @ 100 feet	12 millivolts RMS
DME	600 uv/m Peak @ 100 feet	23 millivolts Peak (.01 milliwatts Peak)

6. FURTHER INFORMATION. Further information may be obtained from the Federal Communications Commission, Aviation Radio Division, Washington, D. C. 20554, and from the Federal Aviation Agency, Systems Research and Development Service, Frequency Management Division, Washington, D. C. 20553, or from the Federal Aviation Agency's Regional Offices, Airway Facilities Divisions.

  
John A. Weber, Acting Director  
Systems Research and  
Development Service