



M-494.6

AC NO: 170-6B

DATE: 3/14/78

ADVISORY CIRCULAR

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

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 (FCC) Rules and Regulations. This circular gives information received from the FCC 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 170-6A dated 3/30/66 is canceled.

3. HAZARD TO RADIONAVIGATION. A radiated 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 MHz
VOR (X Channel)	108.0 MHz
VOR (Y Channel)	108.05 MHz
Localizer	108.1 MHz
Glide Slope	334.7 MHz
DME	978.0 MHz
	979.0 MHz
<u>1/</u> Beacon	1030 MHz
DME (Y Channel)	1104 MHz

1/ The pulse repetition rate (PRR) of the 1030 MHz ATC beacon test set will be 235 pulses per second (pps) \pm 5 pps.

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5. OPERATION ON FREQUENCIES OTHER THAN THE ABOVE.

a. 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.

b. 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, Safety and Special Radio Services Bureau, Aviation and Marine Division, Washington, D. C. 20554, and from the Federal Aviation Administration, Airway Facilities Service, Frequency Management Staff, Washington, D. C. 20591, or from the Federal Aviation Administration's * Regional Offices, Frequency Management Officers. Addresses of the regional Frequency Management Officers are given in appendix 1. *


JAMES BISPO

Acting Director, Airway Facilities Service

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Appendix 1

APPENDIX 1. REGIONAL FREQUENCY MANAGEMENT OFFICERS' ADDRESSES

<u>Office</u>	<u>Area of Responsibility</u>
Frequency Management Officer, ANW-426 Federal Aviation Administration FAA Building, Boeing Field Seattle, Washington 98108	Idaho; Oregon; Washington
Frequency Management Officer, AWE-406 Federal Aviation Administration P.O. Box 92007 Worldway Center Los Angeles, California 90009	Arizona; California (including all offshore islands); Nevada
Frequency Management Officer, ARM-406 Federal Aviation Administration Box 7213, Park Hill Station Denver, Colorado 80207	Colorado; Montana; North Dakota; South Dakota; Utah; Wyoming
Frequency Management Officer, ACE-432 Federal Aviation Administration 601 E. 12th Street Kansas City, Missouri 64106	Iowa; Kansas; Missouri; Nebraska
Frequency Management Officer, ASW-406 Federal Aviation Administration P.O. Box 1689 Fort Worth, Texas 76101	Arkansas; Louisiana; New Mexico; Oklahoma; Texas
Frequency Management Officer, AGL-438 Federal Aviation Administration 2300 East Devon Avenue Des Plaines, Illinois 60018	Illinois; Indiana; Michigan; Minnesota; Ohio; Wisconsin
Frequency Management Officer, ASO-406 Federal Aviation Administration P.O. Box 20636 Atlanta, Georgia 30320	Alabama; Florida; Georgia; Kentucky; Mississippi; North Carolina; South Carolina; Tennessee

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Office (cont)

Frequency Management Officer, AEA-426
Federal Aviation Administration
JFK International Airport
New York, New York 11430

Frequency Management Officer, ANE-431E
Federal Aviation Administration
154 Middlesex Street
Burlington, Massachusetts 01803

Frequency Management Officer, AAL-431C
Federal Aviation Administration
632 Sixth Avenue
Anchorage, Alaska 95501

Frequency Management Officer, APC-420.2
Federal Aviation Administration
P. O. Box 4009
Honolulu, Hawaii 96813

Area of Responsibility

Delaware; District of
Columbia; Maryland;
New Jersey; New York;
Pennsylvania; Virginia;
West Virginia

Connecticut; Maine;
Massachusetts; New Hampshire;
Rhode Island; Vermont

Alaska

Hawaii; Guam; Samoa



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