

460-470 MHz

1. Band Introduction

The 460-470 MHz band is allocated to the non-Federal fixed and land mobile radio services on primary basis and to the Federal meteorological-satellite (space-to-earth) service on a secondary basis. The Federal agencies use this band (subject to mutual agreement and coordination with non-Federal users) for land mobile radio communication systems that are shared with State and local public safety partnering agencies for mutual aid responses, such as fire fighting, disaster preparedness, and law enforcement operations. On a secondary basis, the National Oceanic and Atmospheric Administration (NOAA) operates the Geostationary Operational Environmental Satellites (GOES) downlink in this band. Medical radiocommunications and telemetry equipment also operates in this band.

2. Allocations

2a. Allocation Table

The frequency allocation table shown below is extracted from the NTIA Manual of Regulations and Procedures for Federal Radio Frequency Management, Chapter 4 – Allocations, Allotments and Plans.

Table of Frequency Allocations

United States Table

460-470 Meteorological-satellite (space-to-Earth)	460-462.5375 FIXED LAND MOBILE 5.289 US201 US209 NG124	Private Land Mobile (90)
	462.5375-462.7375 LAND MOBILE 5.289 US201	Personal Radio (95)
	462.7375-467.5375 FIXED LAND MOBILE 5.287 5.289 US201 US209 US216 NG124	Private Land Mobile (90)
	467.5375-467.7375 LAND MOBILE 5.287 5.289 US201	Personal Radio (95)
	467.7375-470 FIXED LAND MOBILE 5.288 5.289 US201 US216 NG124	Private Land Mobile (90)
	5.287 5.288 5.289 US201 US209 US216	

2b. Additional Allocation Table Information

5.287 In the maritime mobile service, the frequencies 457.525 MHz, 457.550 MHz, 457.575 MHz, 467.525MHz, 467.550 MHz and 467.575 MHz may be used by on-board communication stations. Where needed, equipment designed for 12.5 kHz channel spacing using also the additional frequencies 457.5375 MHz, 457.5625MHz, 467.5375 MHz and 467.5625 MHz may be introduced for on-board communications. The use of these frequencies in territorial waters may be subject to the national regulations of the administration concerned. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174 (see Resolution 341 (WRC-97)).

5.288 In the territorial waters of the United States and the Philippines, the preferred frequencies for use by on-board communication stations shall be 457.525 MHz, 457.550 MHz, 457.575 MHz and 457.600 MHz paired, respectively, with 467.750 MHz, 467.775 MHz, 467.800 MHz and 467.825 MHz. The characteristics of the equipment used shall conform to those specified in Recommendation ITU-R M.1174-1. (WRC-03)

5.289 Earth exploration-satellite service applications, other than the meteorological-satellite service, may also be used in the bands 460-470 MHz and 1690-1710 MHz for space-to-Earth transmissions subject to not causing harmful interference to stations operating in accordance with the Table.

NG124 In the bands 30.85-34, 37-38, 39-40, 42-47.41, 150.995-156.25, 158.715-159.465, 453.0125-453.9875, 458.0125-458.9875, 460.0125-465.6375, and 467.9375-467.9875 MHz, police licensees are authorized to operate low power transmitters on a secondary basis in accordance with the provisions of 47 CFR 2.803 and 90.20(e)(5).

US201 In the band 460-470 MHz, space stations in the Earth exploration-satellite service may be authorized for space-to-Earth transmissions on a secondary basis with respect to the fixed and mobile services. When operating in the meteorological-satellite service, such stations shall be protected from harmful interference from other applications of the Earth exploration-satellite service. The power flux-density produced at the Earth's surface by any space station in this band shall not exceed -152 dBW/m²/4 kHz.

US209 The use of frequencies 460.6625, 460.6875, 460.7125, 460.7375, 460.7625, 460.7875, 460.8125, 460.8375, 460.8625, 465.6625, 465.6875, 465.7125, 465.7375, 465.7625, 465.7875, 465.8125, 465.8375, and 465.8625 MHz may be authorized, with 100 mW or less output power, to Federal and non-Federal radio stations for one-way, non-voice bio-medical telemetry operations in hospitals, or medical or convalescent centers.

US216 The frequencies 150.775 MHz, 150.790 MHz, 152.0075 MHz, and 163.250 MHz, and the bands 462.94688-463.19688 MHz and 467.94688-468.19688 MHz shall be authorized for the purpose of delivering or rendering medical services to individuals (medical radiocommunication systems), and shall be authorized on a primary basis for Federal and non-Federal use. The frequency 152.0075 MHz may also be used for the purpose of conducting public safety radio communications that include, but are not limited to, the delivering or rendering of medical services to individuals.

3. Federal Agency Use

3a. Federal Agency Frequency Assignments Table

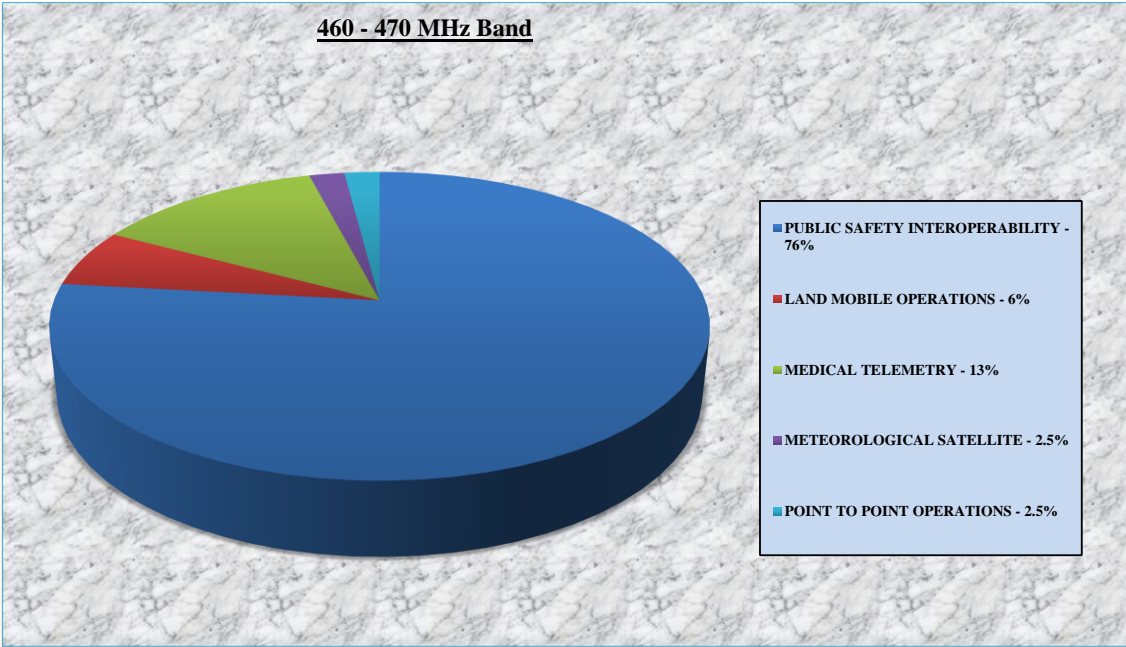
The following table identifies the frequency band, type(s) of allocation(s), types of application, and the number of frequency assignments in the Government Master File (GMF) by agency.

Federal Frequency Assignment Table

460-470 MHz Band							
SHARED BAND							
FIXED							
LAND MOBILE							
Meteorological-satellite (space-to-Earth)							
AGENCY	PUBLIC SAFETY INTEROPERABILITY	LAND MOBILE OPERATIONS	MEDICAL TELEMETRY	METEOROLOGICAL SATELLITE	MOBILE	POINT-TO-POINT OPERATIONS	TOTAL
A	42						42
AF	14						14
AR	23	21	20			2	66
CG							0
DHS	138						138
DOC				17			17
DOE	66	22			18	15	121
DOI	6						6
DOJ	137						137
FRS	3	15					18
HHS	189						189
N	33		1				34
NASA	22						22
USPS		1					1
VA	99		108				207
TOTAL	772	59	129	17	18	17	1012
The number of actual systems, or number of equipments, may exceed and sometimes far exceed, the number of frequency assignments in a band. Also, a frequency assignment may represent, a local, state, regional, or nationwide authorization. Therefore, care must be taken in evaluating bands strictly on the basis of assignment counts or percentages of assignments.							

3b. Percentage of Frequency Assignments Chart

The following chart displays the percentage of frequency assignments for the various types of applications operating in the frequency band 460-470 MHz. The greatest Federal use in the band for is public safety interoperability.



4. Frequency Band Analysis By Application

4a. Public Safety Interoperability

Most of the Federal frequency assignments in the 460-470 MHz band are used for land mobile systems for public safety interoperable communications between Federal, State and local public safety entities. Federal agencies work in conjunction with State, local, tribal public safety and law enforcement, to respond in the case of extraordinary natural and man-made disasters, and fulfill unmet public safety needs in carrying out their primary duties. These operations geographically occur where their non-Federal partners are already operating. Federal agencies that operate systems in this band include the Department of Defense, Department of Homeland Security, Department of Justice, Department of Energy and Department of Interior. Federal agency use of this band is subject to coordination and cooperation (for example, through a Memorandum of Understanding) with State and local partners.

4b. Medical Communications

Federal agencies are authorized to use this band (footnote US 209) for one-way, low-power, non-voice bio-medical telemetry systems in hospitals, medical centers, and

convalescent centers. Medical telemetry systems transmit data on patient information that is used by medical personnel to assess patient status. The transmissions from telemetry systems can be short-range such as on a hospital floor, or longer-range such as from a medical emergency vehicle. Medical telemetry systems can assist in saving lives by providing critical data to medical personnel on a real-time basis. These systems are used in Veterans Affairs Administration hospitals and are subject to the provisions in Section 4.3.11 of the NTIA Manual.

Further, the Army and Navy use portions of this band for delivering and rendering medical services to individuals using medical radiocommunication via voice/data systems (footnote US 216). These systems are used at or near military installations/hospitals.

4c. Meteorological Satellite

NOAA operates, on a secondary basis, GOES meteorological satellite downlinks in the 468.75-468.95 MHz portion of this band for satellite interrogation of Data Collection Platforms (DCPs). GOES satellites provide continuous monitoring necessary for intensive data analysis for atmospheric "triggers" for severe weather conditions such as tornadoes, flash floods, hail storms, and hurricanes. This data is used to create forecasts for the public, television, radio, and weather advisory services. Satellite information is also shared with various Federal agencies, such as the Departments of Agriculture, Interior, Defense, and Transportation; with other countries, such as Japan, India, and Russia, and members of the European Space Agency (ESA) and the United Kingdom Meteorological Office; and with the private sector.¹

5. Planned Use

With the need for better coordination efforts between all levels of government, increased emphasis on homeland and border security protection, and a more effective and efficient response and recovery, Federal agencies will continue to operate, for the foreseeable future, land mobile communication systems in this band that are used in coordination and cooperation with State and local partners.

Federal Government use of the 460-470 MHz band for medical radiocommunications and telemetry systems is expected to continue.

NOAA use of meteorological GOES satellite downlinks will continue to operate in this band indefinitely.

¹ <http://noaasis.noaa.gov/NOAASIS/ml/genlsatl.html>