

# 470-512 MHz

## 1. Band Introduction

The 470-512 MHz band is allocated exclusively for non-Federal use for fixed, land mobile and broadcasting services. The Federal agencies use this band for land mobile radio communication systems that are shared with State and local public safety partnering agencies for mutual aid responses such as firefighting, disaster preparedness, and law enforcement operations, subject to mutual agreement and coordination with non-Federal users. On a very limited basis, the Federal agencies also use this band for experimental research, development, testing and evaluation of various programs.

## 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*

470-512	470-512 FIXED LAND MOBILE BROADCASTING NG66 NG115 NG128 NG142 NG149	Public Mobile (22) Broadcast Radio (TV)(73) LPTV, TV Translator/Booster (74G) Low Power Auxiliary (74H) Private Land Mobile (90)
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### 2b. Additional Allocation Table Information

**NG66** The band 470-512 MHz (TV channels 14-20) is allocated to the broadcasting service on an exclusive basis throughout the United States and its insular areas, except as described below:

(a) In the urbanized areas listed in the table below, the indicated frequency bands are allocated to the land mobile service on an exclusive basis for assignment to eligibles in the Public Mobile Services, the Public Safety Radio Pool, and the Industrial/Business Radio Pool, except that:

(1) Licensees in the land mobile service that are regulated as Commercial Mobile Radio Service (CMRS) providers may also use their assigned spectrum to provide fixed service on a primary basis.

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(2) The use of the band 482-488 MHz (TV channel 16) is limited to eligibles in the Public Safety Radio Pool in or near (i) the Los Angeles urbanized area; and (ii) New York City; Nassau, Suffolk, and Westchester Counties in New York State; and Bergen County, NJ.

Urbanized area	Bands (MHz)	TV channels
Boston, MA.....	470-476, 482-488.....	14, 16
Chicago, IL-Northwestern IN.....	470-476, 476-482.....	14, 15
Cleveland, OH.....	470-476, 476-482.....	14, 15
Dallas-Fort Worth, TX.....	482-488.....	16
Detroit, MI.....	476-482, 482-488.....	15, 16
Houston, TX.....	488-494.....	17
Los Angeles, CA.....	470-476, 482-488, 506-512.....	14, 16, 20
Miami, FL.....	470-476.....	14
New York, NY-Northeastern NJ.....	470-476, 476-482, 482-488.....	14, 15, 16
Philadelphia, PA-NJ.....	500-506, 506-512.....	19, 20
Pittsburgh, PA.....	470-476, 494-500.....	14, 18
San Francisco-Oakland, CA.....	482-488, 488-494.....	16, 17
Washington, DC-MD-VA.....	488-494, 494-500.....	17, 18

(b) In the Gulf of Mexico offshore from the Louisiana-Texas coast, the band 476-494 MHz (TV channels 15-17) is allocated to the fixed and mobile services on a primary basis for assignment to eligibles in the Public Mobile and Private Land Mobile Radio Services.

(c) In Hawaii, the band 488-494 MHz (TV channel 17) is allocated exclusively to the fixed service for use by common carrier control and repeater stations for point-to-point inter-island communications only.

(d) The use of these allocations is further subject to the conditions set forth in 47 CFR parts 22 and 90.

**NG115** In the bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-608 MHz, and 614-806 MHz, wireless microphones and wireless assist video devices may be authorized on a non-interference basis, subject to the terms and conditions set forth in 47 CFR part 74, subpart H.

**NG128** In the band 535-1705 kHz, AM broadcast licensees or permittees may use their AM carrier on a secondary basis to transmit signals intended for both broadcast and non-broadcast purposes. In the band 88-108 MHz, FM broadcast licensees or permittees are permitted to use subcarriers on a secondary basis to transmit signals intended for both broadcast and non-broadcast purposes. In the bands 54-72, 76-88, 174-16, 470-608 and 614-806 MHz, TV broadcast licensees or permittees are permitted to use subcarriers on a secondary basis for both broadcast and non-broadcast purposes.

**NG142** TV broadcast stations authorized to operate in the bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-608 MHz, and 614-806 MHz may use a portion of the television vertical blanking interval for the transmission of telecommunications signals, on the condition that harmful interference will not be caused to the reception of primary services, and that such telecommunications services must accept any interference caused by primary services operating in these bands.

**NG149** The bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-512 MHz, 512-608 MHz, and 614-698 MHz are also allocated to the fixed service to permit subscription television operations in accordance with 47 CFR part 73.

### 3. Federal Agency Use

#### 3a. Federal Agency Frequency Assignments Table

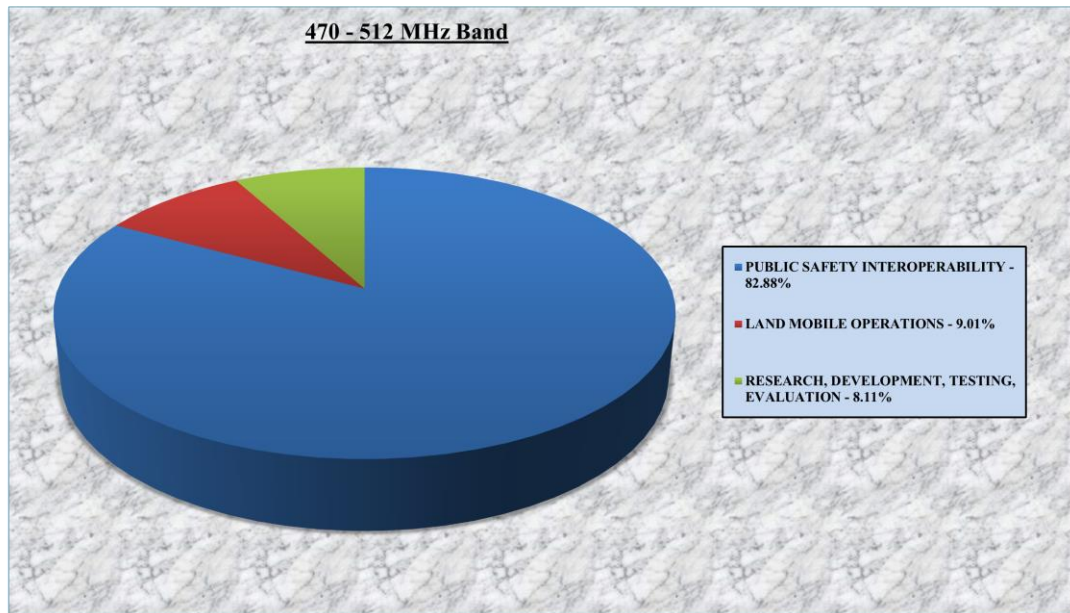
The following table identifies the frequency band, type(s) of allocation(s), types of application, and the number of frequency assignments in the Government Master File (GMF) by agency.

*Federal Frequency Assignment Table*

<b>470-512 MHz Band</b>				
<b>NON-FEDERAL EXCLUSIVE BAND</b>				
<b>AGENCY</b>	<b>FIXED LAND MOBILE BROADCASTING</b>			
	<b>TYPE OF APPLICATION</b>			
	<b>PUBLIC SAFETY INTEROPERABILITY</b>	<b>LAND MOBILE OPERATIONS</b>	<b>RESEARCH DEVELOPMENT TESTING EVALUATION</b>	<b>TOTAL</b>
<b>A</b>	<b>18</b>			<b>18</b>
<b>AF</b>			<b>3</b>	<b>3</b>
<b>AR</b>	<b>3</b>			<b>3</b>
<b>DOE</b>	<b>20</b>			<b>20</b>
<b>DOI</b>	<b>1</b>			<b>1</b>
<b>DOJ</b>	<b>50</b>			<b>50</b>
<b>N</b>			<b>6</b>	<b>6</b>
<b>NASA</b>		<b>10</b>		<b>10</b>
<b>TOTAL</b>	<b>92</b>	<b>10</b>	<b>9</b>	<b>111</b>
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 in the GMF for the systems operating in the frequency band 470-512 MHz.



## 4. Frequency Band Analysis By Application

The 470-512 MHz band is used for systems operating in the fixed, land mobile and broadcasting services. The Federal agencies operate land mobile communication systems in this band that are used in support of public safety interoperability. The Federal systems operating in this band are used for cooperative, interoperable, public safety communications and are shared by Federal, and State and local emergency service agencies. Federal agency use of this band is subject to coordination and cooperation (for example, through a Memorandum of Understanding) with State and local partners. 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. Therefore, these operations geographically occur where their non-Federal partners are already operating. The United States Department of Agriculture, Department of Interior, and Department of Justice use this band with State and local partners through agreements for authorized use for such things as fire fighting, wildlife management, and law enforcement, respectively.

The balance of the Federal operations in this band is for Navy research and development projects, and National Aeronautics and Space Administration (NASA) use of land mobile operations for internal communication (wireless intercom) systems at Houston, TX.

## **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 agency use of this band — in coordination and cooperation with State and local partners — is expected to continue for the foreseeable future.

NASA use of this band, as described above, is also expected to continue.