

2483.5-2495 MHz

1. Band Introduction

The primary Federal use of this band is for mobile earth stations used in conjunction with the Globalstar commercial mobile-satellite service (MSS) system.

The National Aeronautics and Space Administration (NASA) operates point-to-point microwave communication systems to distribute television programming.

The military agencies operate systems used in testing and training exercises.

2. Allocations

2a. Allocation Table

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

Table of Frequency Allocations

United States Table

Federal Table	Non-Federal Table	FCC Rule Part(s)
2483.5-2495 MOBILE-SATELLITE (space-to-Earth) US319 US380 RADIODETERMINATION-SATELLITE (space-to-Earth) 5.398 5.150 5.402 US41	2483.5-2495 MOBILE-SATELLITE (space-to-Earth) US319 US380 RADIODETERMINATION-SATELLITE (space-to-Earth) 5.398 5.150 5.402 US41 NG147	ISM Equipment (18) Satellite Communications (25)

2b. Additional Allocation Table Information

5.150 The following bands:

- 13553-13567 kHz (centre frequency 13560 kHz),
- 26957-27283 kHz (centre frequency 27120 kHz),
- 40.66-40.70 MHz (centre frequency 40.68 MHz),
- 902-928 MHz in Region 2 (centre frequency 915 MHz),
- 2400-2500 MHz (centre frequency 2450 MHz),
- 5725-5875 MHz (centre frequency 5800 MHz), and
- 24-24.25 GHz (centre frequency 24.125 GHz)

are also designated for industrial, scientific and medical (ISM) applications.

Radiocommunication services operating within these bands must accept harmful interference which may be caused by these applications. ISM equipment operating in these bands is subject to the provisions of No. 15.13.

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5.398 In respect of the radiodetermination-satellite service in the band 2483.5-2500 MHz, the provisions of No. 4.10 do not apply.

5.402 The use of the band 2483.5-2500 MHz by the mobile-satellite and the radiodetermination satellite services is subject to the coordination under No. 9.11A. Administrations are urged to take all practicable steps to prevent harmful interference to the radio astronomy service from emissions in the 2483.5-2500 MHz band, especially those caused by second-harmonic radiation that would fall into the 4990-5000 MHz band allocated to the radio astronomy service worldwide.

NG 147 In the band 2483.5-2500 MHz, non-Federal stations in the fixed and mobile services that are licensed under 47 CFR parts 74, 90, or 101, which were licensed as of July 25, 1985, and those whose initial applications were filed on or before July 25, 1985, may continue to operate on a primary basis with the mobile-satellite and radiodetermination-satellite services, and in the sub-band 2495-2500 MHz, these grandfathered stations may also continue to operate on a primary basis with stations in the fixed and mobile except aeronautical mobile services that are licensed under 47 CFR part 27.

US 41 In the band 2450-2500 MHz, the Federal radiolocation service is permitted on condition that harmful interference is not caused to non-Federal services.

US 319 In the bands 137-138 MHz, 148-149.9 MHz, 149.9-150.05 MHz, 399.9-400.05 MHz, 400.15-401 MHz, 1610-1626.5 MHz, and 2483.5-2500 MHz, Federal stations in the mobile-satellite service shall be limited to earth stations operating with non-Federal space stations.

US 380 In the bands 1525-1544 MHz, 1545-1559 MHz, 1610-1645.5 MHz, 1646.5-1660.5 MHz, 2000-2020 MHz, 2180-2200 MHz, and 2483.5-2500 MHz, a non-Federal licensee in the mobile-satellite service (MSS) may also operate an ancillary terrestrial component in conjunction with its MSS network, subject to the Commission's rules for ancillary terrestrial components and subject to all applicable conditions and provisions of its MSS authorization.

3. Federal Agency Use

3a. Federal Agency Frequency Assignments Table

The following table identifies the frequency band, type(s) of allocation(s), types of applications, and the number of frequency assignments by agency. Mobile earth station equipment operating in the 2483.5-2495 MHz band licensed by the Federal Communications Commission (FCC), do not require a frequency assignment in the Government Master File.

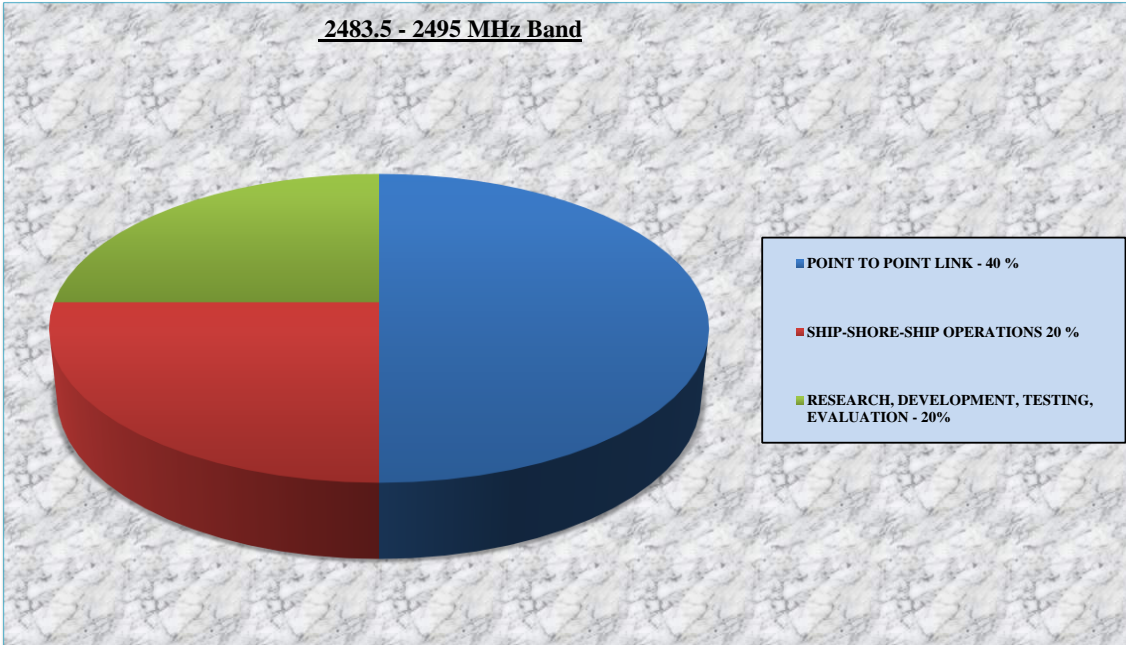
Pursuant to Section 7.23 of the NTIA Manual, Federal agencies may operate radio devices as end users of MSS. Such use must be in accordance with FCC rules governing the specified service. Some Federal agencies obtain FCC blanket licenses for operation of multiple radio devices used in conjunction with these non-Federal systems.

Federal Frequency Assignment Table

2483.5-2495 MHz Band				
SHARED BAND				
AGENCY	MOBILE SATELLITE (space-to-Earth) RADIODETERMINATION-SATELLITE (space-to-Earth)			
	TYPE OF APPLICATION			
	POINT TO POINT DATA LINK	SHIP SHORE SHIP OPERATIONS	RESEARCH DEVELOPMENT TESTING EVALUATION	TOTAL
AF			2	2
N		1		1
NASA	2			2
TOTAL	2	1	2	5
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 assignments.				

3b. Percentage of Frequency Assignments Chart

The following chart displays the percentage of frequency assignments for the systems operating in the frequency band 2483.5-2495 MHz.



4. Frequency Band Analysis By Application

The primary Federal use of this band is for earth stations operating in conjunction with commercial MSS systems. The use of this band for MSS is in the space-to-Earth direction. These operations may occur anywhere in the United States and its Possessions (US&P) and in many cases support emergency communications. Operation of mobile terminals with satellite systems offers service to locations out of reach by terrestrial services and provides critical support during disasters or other emergencies.

This system provides continuously available voice communications and low data-rate capabilities to Federal users anywhere in the United States or around the world. Federal law enforcement agencies, Federal emergency management teams, the Department of Defense, and the Department of Homeland Security use mobile earth stations operating in this band. Mobile earth stations can be used to provide flexible and easily deployable communication systems during emergency support efforts.

In the 1610.6-1618.725 MHz band, the Federal agencies operate associated earth stations in conjunction with the Globalstar commercial non-geostationary MSS system.¹

¹ Globalstar is may also operate base stations using an Ancillary Terrestrial Component service supporting an integrated satellite and terrestrial communication network.

Globalstar transmissions are in the Earth-to-space direction in the 1610.6-1618.725 MHz band.

The Federal Government has a limited number of frequency assignments in this band. The Air Force has frequency assignments for research, development, and testing. The use of these frequencies is coordinated prior to use on a non-interference basis. The Navy also has frequency assignments in this band that are used for shipboard calibration of new or upgraded systems. Transmissions in such cases are made between the ship and the shore, with short transmissions, which are made only after the radio frequency environment is first monitored.

NASA has frequency assignments in this band to support distribution of television programming throughout the Johnson Space Center and to certain outlying NASA locations. The television programming is distributed using point-to-point microwave communication systems.

5. Planned Use

The Federal use in this band is anticipated to stay the same for the foreseeable future.