# 3700-4200 MHz

## 1. Band Introduction

Federal civilian and military agencies predominantly use the 3700-4200 MHz band for satellite earth stations in support of voice, data, and video transmissions used in conjunction with commercial geostationary satellites. This band is used for the reception of space-to-Earth signals and is paired with the band 5925-6425 MHz for transmission of the Earth-to-space signals.

## 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)** |
| 3700-4200 | 3700-4200<br>FIXED NG41<br>FIXED-SATELLITE (space-to-Earth)<br>NG180 | International Fixed (23)<br>Satellite<br>Communications (25)<br>Fixed Microwave (101) |

### 2b. Additional Allocation Table Information

**NG41** Frequencies in the bands 3700-4200 MHz and 5925-6425 MHz, may also be assigned to stations in the international fixed public and international control services located in Puerto Rico, the U.S. Virgin Islands, and Navassa Island.

**NG180** In the band 3700-4200 MHz (space-to-Earth) earth stations on vessels (ESVs) may be authorized to communicate with space stations of the fixed-satellite service and, while docked, may be coordinated for up to 180 days, renewable. ESVs in motion must operate on a secondary basis.

# 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.

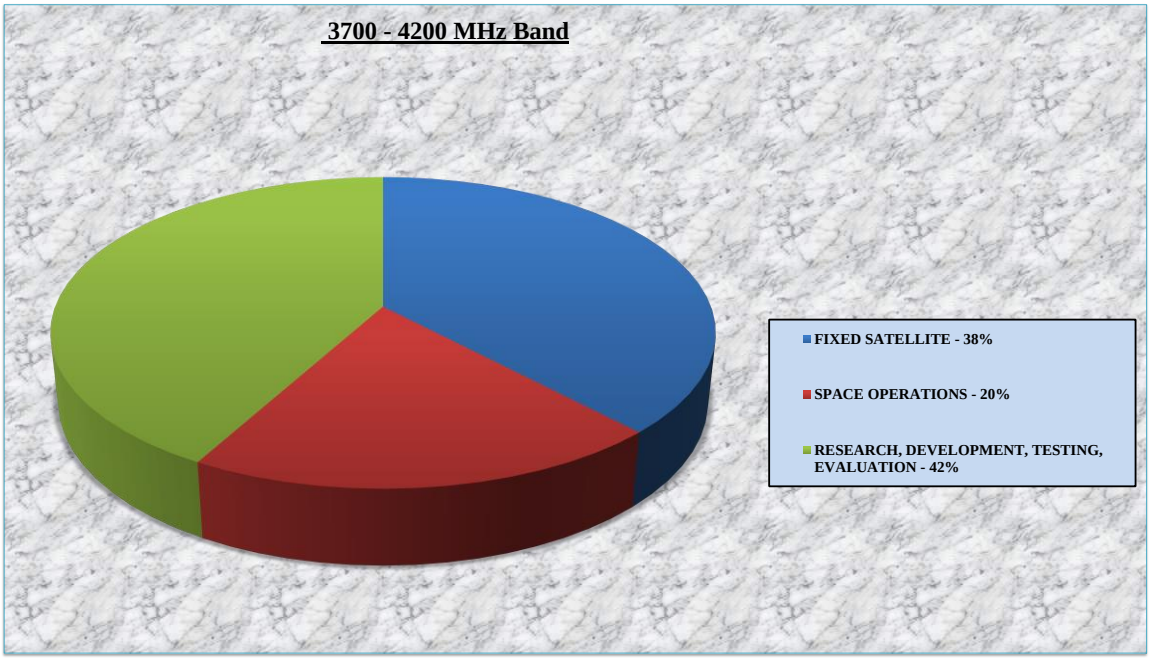
***Federal Frequency Assignment Table***

| 3700-4200 MHz Band | | | | |
|---|---|---|---|---|
| NON-FEDERAL EXCLUSIVE BAND | | | | |
| | FIXED<br>FIXED SATELLITE (space-to-Earth) | | | |
| AGENCY | FIXED SATELLITE | SPACE OPERATIONS | RESEARCH, DEVELOPMENT TESTING,EVALUATION | TOTAL |
| AF | | | 10 | 10 |
| AR | 7 | | | 7 |
| DOC | | 5 | | 5 |
| N | | | 7 | 7 |
| S | 1 | | | 2 |
| TOTAL | 8 | 5 | 17 | 31 |

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 Government Master File (GMF) for the systems operating in the frequency band 3700-4200 MHz.




## 4. Frequency Band Analysis By Application

In the band 3700-4200 MHz, the predominant use of this band by the Federal agencies is for receiving earth stations in the fixed-satellite service accessing commercial systems. Federal earth stations can be authorized by NTIA on a non-interference basis. The assignments to the Army, Department of Commerce, and Department of State are for fixed-satellite service operations. As a Federal receiving earth station authorized by NTIA would not be protected from interference, most agencies do not submit these to NTIA; however, the transmitting Federal earth stations in the band 5925-6425 MHz are required to be authorized by NTIA. Additionally, Federal agencies contract earth station support through a non-Federal third party that is licensed by the FCC as a non-Federal earth station.

To the maximum extent possible, Federal agencies are required to use commercial communication satellite systems unless specific mission requirements cannot be satisfied. There are concerns among the Federal agencies regarding their ability to meet their mission requirements in the absence of the protection from interference.

The military assignments are experimental and used for research, development, test, and evaluation (RDT&E) for testing and tactical exercises at specified test ranges.

## 5. Planned Use

The Federal use of the band is expected to increase.