

## 1710-1755 MHz

### 1. Band Introduction

The 1710-1755 MHz band was reallocated to non-Federal use for Advanced Wireless Services (AWS). The Commercial Spectrum Enhancement Act (CSEA) enacted in December 2004 included provision for a relocation trust fund to be set aside from the proceeds of the AWS auction to reimburse the Federal agencies for relocating systems to other frequency bands or use alternate non-spectrum methods (e.g. fiber optics, commercial) to satisfy their communication requirements. The National Telecommunications and Information Administration (NTIA) worked with the Federal agencies to: identify the systems operating in the 1710-1755 MHz band that had to be relocated; develop an estimated timeline for the relocation of those systems; and estimate the relocation costs. The Department of Commerce is required to submit an annual progress report on relocation process to Congress. Based on the most recent progress report the relocation of federal systems from the 1710-1755 MHz band is for the most part on schedule. While the vast majority of the Federal operations have moved out of the band, it is estimated that the few remaining operations will have relocated by the end of 2013.

### 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*

1710 - 1755 MHz

*United States Table*

Federal	Non-Federal	FCC Rule Part(s)
1700-1710 FIXED G118 METEOROLOGICAL-SATELLITE (space-to-Earth)  5.289 5.341	1700-1710 METEOROLOGICAL-SATELLITE (space-to-Earth) Fixed  5.289 5.341	

**2b. Additional Allocation Table Information**

**5.341** In the bands 1 400-1 727 MHz, 101-120 GHz and 197-220 GHz, passive research is being conducted by some countries in a programme for the search for intentional emissions of extraterrestrial origin.

**US311** Radio astronomy observations may be made in the bands 1350-1400 MHz, 1718.8-1722.2 MHz, and 4950-4990 MHz on an unprotected basis at the following radio astronomy observatories:

Allen Telescope Array, Hat Creek, CA	Rectangle between latitudes 40° 00' N and 42° 00' N and between longitudes 120° 15' W and 122° 15' W.	
NASA Goldstone Deep Space Communications Complex, Goldstone, CA	80 kilometers (50 mile) radius centered on 35° 20' N, 116° 53' W.	
National Astronomy and Ionosphere Center, Arecibo, PR	Rectangle between latitudes 17° 30' N and 19° 00' N and between longitudes 65° 10' W and 68° 00' W.	
National Radio Astronomy Observatory, Socorro, NM	Rectangle between latitudes 32° 30' N and 35° 30' N and between longitudes 106° 00' W and 109° 00' W.	
National Radio Astronomy Observatory, Green Bank, WV	Rectangle between latitudes 37° 30' N and 39° 15' N and between longitudes 78° 30' W and 80° 30' W.	
National Radio Astronomy Observatory, Very Long Baseline Array Stations	80 kilometer radius centered on:	
	North latitude	West longitude
Brewster, WA	48° 08'	119° 41'
Fort Davis, TX	30° 38'	103° 57'
Hancock, NH	42° 56'	71° 59'
Kitt Peak, AZ	31° 57'	111° 37'
Los Alamos, NM	35° 47'	106° 15'
Mauna Kea, HI	19° 48'	155° 27'
North Liberty, IA	41° 46'	91° 34'
Owens Valley, CA	37° 14'	118° 17'
Pie Town, NM	34° 18'	108° 07'
Saint Croix, VI	17° 45'	64° 35'
Owens Valley Radio Observatory, Big Pine, CA	Two contiguous rectangles, one between latitudes 36° 00' N and 37° 00' N and between longitudes 117° 40' W and 118° 30' W and the second between latitudes 37° 00' N and 38° 00' N and between longitudes 118° 00' W and 118° 50' W.	

In the bands 1350-1400 MHz and 4950-4990 MHz, every practicable effort will be made to avoid the assignment of frequencies to stations in the fixed and mobile services that could interfere with radio astronomy observations within the geographic areas given above. In addition, every practicable effort will be made to avoid assignment of frequencies in these bands to stations in the aeronautical mobile service which operate outside of those geographic areas, but which may cause harmful interference to the listed observatories. Should such assignments result in harmful interference to these observatories, the situation will be remedied to the extent practicable.

**US378** In the band 1710-1755 MHz, the following provisions apply:

(a) Federal fixed and tactical radio relay stations may operate indefinitely on a primary basis within 80 km of Cherry Point, NC (34° 58' N, 076° 56' W) and Yuma, AZ (32° 32' N, 113° 58' W).

(b) Federal fixed and tactical radio relay stations shall operate on a secondary basis to primary non-Federal operations at the 14 sites listed below:

80 km radius of operation centered on:		
State	Location	Coordinates
CA	China Lake	35° 41' N 117° 41' W
CA	Pacific Missile Test Range/Point Mugu	34° 07' N 119° 30' W
FL	Eglin AFB	30° 29' N 086° 31' W
MD	Patuxent River	38° 17' N 076° 25' W
NM	White Sands Missile Range	33° 00' N 106° 30' W
NV	Nellis AFB	36° 14' N 115° 02' W
UT	Hill AFB	41° 07' N 111° 58' W
50 km radius of operation centered on:		
AL	Fort Rucker	31° 13' N 085° 49' W
CA	Fort Irwin	35° 16' N 116° 41' W
GA	Fort Benning	32° 22' N 084° 56' W

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GA	Fort Stewart	31° 52' N 081° 37' W
KY	Fort Campbell	36° 41' N 087° 28' W
NC	Fort Bragg	35° 09' N 079° 01' W
WA	Fort Lewis	47° 05' N 122° 36' W

(c) In the sub-band 1710-1720 MHz, precision guided munitions shall operate on a primary basis until inventory is exhausted or until December 31, 2008, whichever is earlier.

(d) All other Federal stations in the fixed and mobile services shall operate on a primary basis until reaccommodated in accordance with the Commercial Spectrum Enhancement Act.

**3. Federal Agency Use:**

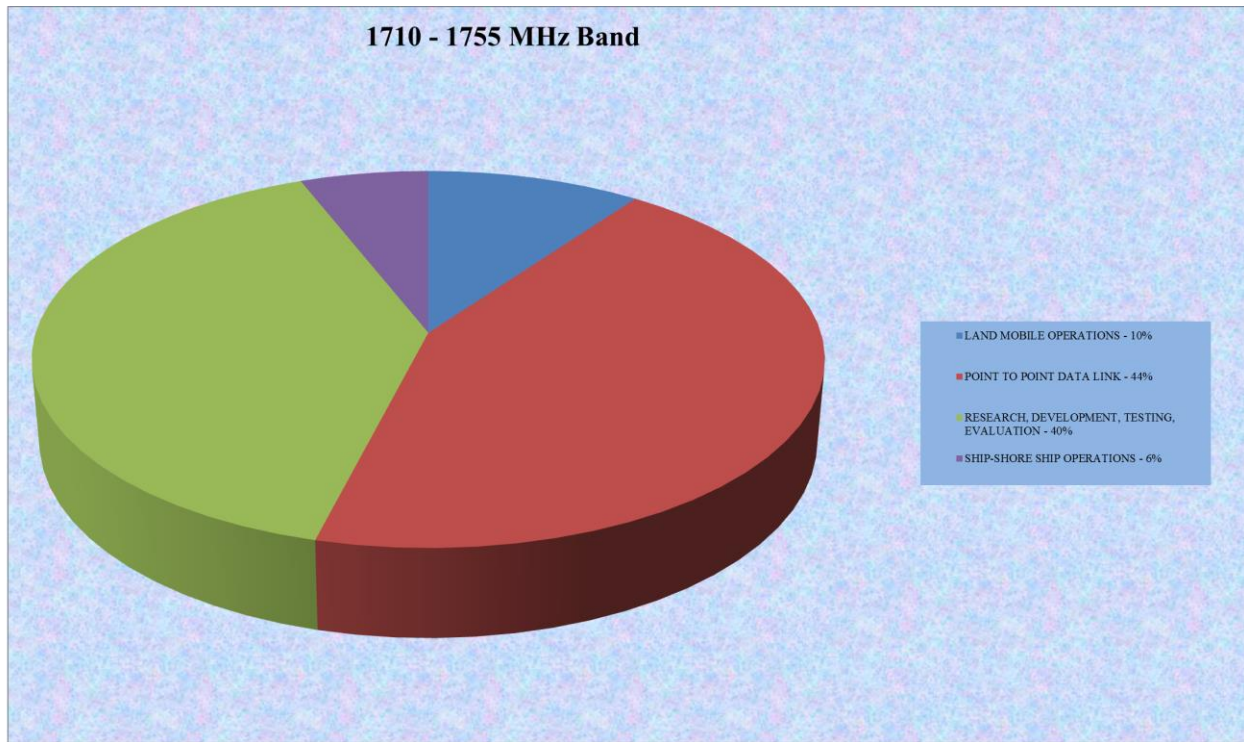
**3a. Federal Agency Frequency Assignments Table:**

The following table identifies the frequency band, types of allocations, types of applications, and the number of frequency assignments by agency.

*Federal Frequency Assignment Table*

1710-1755 MHz Band					
NON-FEDERAL EXCLUSIVE BAND					
AGENCY	TYPE OF APPLICATION				
	FIXED	MOBILE			
	LAND MOBILE OPERATIONS	POINT-TO-POINT DATA LINK	SHIP-SHORE-SHIP	RESEARCH DEVELOPMENT TESTING EVALUATION	TOTAL
AR	5	10			15
N			3	21	24
MC		13			13
<b>TOTAL</b>	<b>5</b>	<b>23</b>		<b>21</b>	<b>52</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



## 4. Frequency Band Analysis By Application

A description of the types of systems that operate in the band 1300 to 1350 MHz and how they are used, organized by station class, is contained in the following paragraphs.

### 4a. Aeronautical Telemetry

The Navy operates an aeronautical telemetry system for transmission of data from an aircraft to a ground-based receiver that is used to support the development of new aircraft. The Air Force operates a telemetry system that provides data from airborne robotic platforms. The National Aeronautics and Space Administration operates an aeronautical telemetry system for real time data transfer from high performance aircraft.

### 4b. Flight Telemetry

The Marine Corps operates a telemetry system for the transmission of video data from an aircraft to a ground receiver in support of combat training operations.

### 4c. Land Mobile Operations

This wireless target scoring system is used by the Army to provide a video data link from the target to the command center in support of the analysis provided to those soldiers in training. The Marine Corps operates a transportable microwave data link system to provide communications support at various bases throughout the United States for tactical training.

#### **4d. Point to Point Data Link**

These point to point microwave data link systems are used by multiple federal agencies in support of their mission requirements. A system can be as small as a single link or as large as 40 links. The Department of Agriculture point to point microwave system is used to support fire suppression operations in the national forests. The Department of Energy uses its systems to maintain a balanced electrical grid system in the Western portion of the United States and to allow the transfer of power to areas that may be without power due to unusual weather conditions or equipment outages. The FAA uses microwave systems to support flight safety within the Air Traffic Control system. Within the national parks the Department of Interior's Park Service has point to point data link systems that support law enforcement, parkway management and public safety. Interior's Bureau of Land Management uses their data link systems in support of power generation and water facilities. The Tennessee Valley Authority systems are used for control, protection and operations of their power network including nuclear generating facilities.

#### **4e. Surface Telemetry**

The Air Force uses surface telemetry to provide a data link between a ground-based robot and its control center for research, development, testing, and evaluation of new equipment.

#### **5. Planned Use:**

There is no federal agency planned use for this band.