

## 941-944 MHz

### 1. Band Introduction

The 941-944 MHz band is allocated to the fixed service on a shared, co-equal basis between Federal and non-Federal users. The Federal agencies operate low-capacity voice and/or data point-to-point, point-to-multipoint microwave communication systems in this band. In addition, Federal Government off-shore radiolocation operation is permitted on a non-interference basis limited to the military agencies.

### 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)
941-944 FIXED  US268 US301 G2	941-944 FIXED  US268 US301 NG30 NG120	Public Mobile (22) Aural Broadcast Auxiliary (74E) Fixed Microwave (101)

#### 2b. Additional Allocation Table Information

**G2** In the bands 216-217 MHz, 220-225 MHz, 420-450 MHz (except as provided by US217 and G129), 890-902 MHz, 928-942 MHz, 1300-1390 MHz, 2310-2390 MHz, 2417-2450 MHz, 2700-2900 MHz, 3300-3500 MHz (except as provided by footnote US108), 5650-5925 MHz, and 9000-9200 MHz, the Federal radiolocation service is limited to the military services.

**NG30** In Puerto Rico, the band 942-944 MHz is alternatively allocated to the fixed service (aural broadcast auxiliary stations).

**NG120** Frequencies in the band 928-960 MHz may be assigned for multiple address systems and mobile operations on a primary basis as specified in 47 CFR part 101.

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**US268** The bands 890-902 MHz and 928-942 MHz are also allocated to the radiolocation service for Federal ship stations (off-shore ocean areas) on the condition that harmful interference is not caused to non-Federal land mobile stations. The provisions of footnote US116 apply.

**US301** Except as provided in NG30, broadcast auxiliary stations licensed as of November 21, 1984, to operate in the band 942-944 MHz may continue to operate on a co-equal primary basis to other stations and services operating in the band in accordance with the Table of Frequency Allocations.

### 3. Federal Agency Use

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

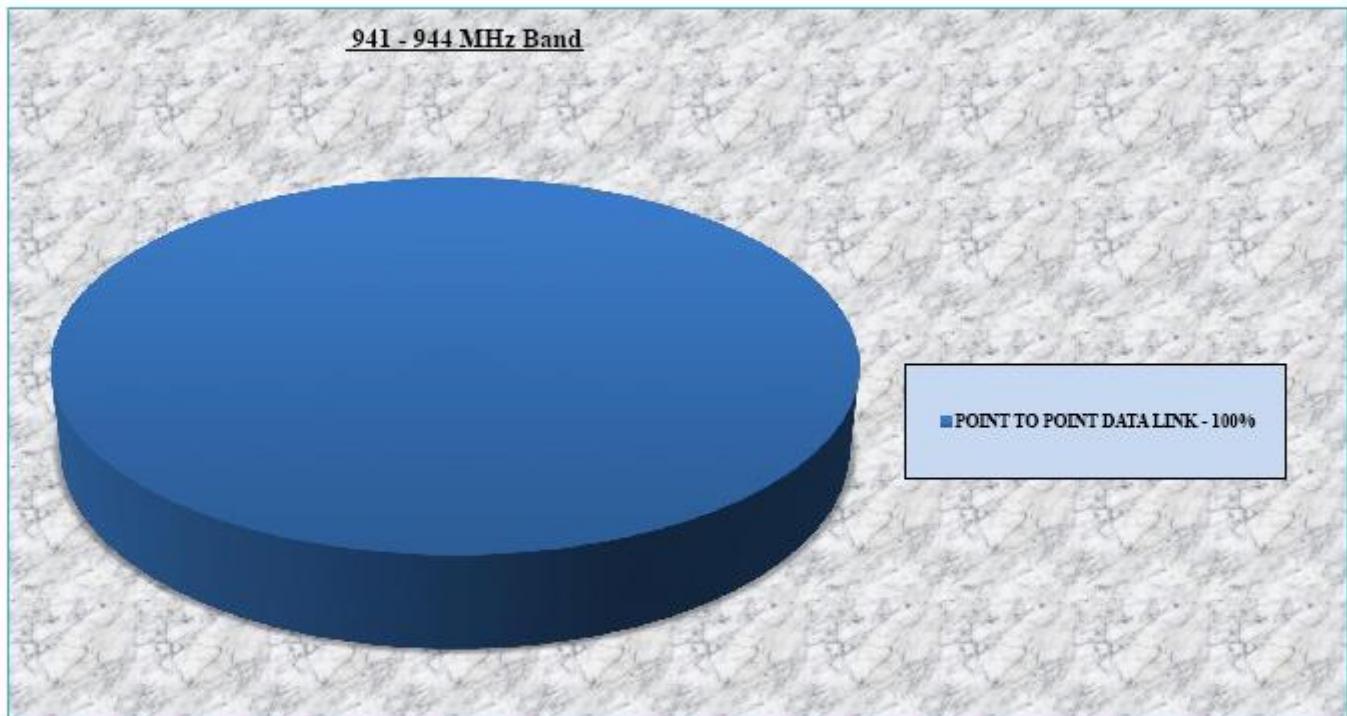
The following table identifies the frequency band, types of allocations, types of applications, and the number of frequency assignments in the Government Master File by agency.

*Federal Frequency Assignment Table*

941-944 MHz Band			
AGENCY	SHARED BAND		
	FIXED		
	TYPE OF APPLICATION		
POINT TO POINT DATA LINK			TOTAL
A	20		20
AF	16		16
CG	15		15
DHS	48		48
DOE	104		104
DOI	31		31
FAA	95		95
TVA	14		14
<b>TOTAL</b>	<b>343</b>		<b>343</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 assignments counts or percentages of assignments.			

**3b. Percentage of Frequency Assignments Chart**

The following chart displays the percentage of frequency assignments for the applications operating in the frequency band 941-944 MHz.



## **4. Frequency Band Analysis By Application**

The 941-944 MHz band is paired with the 932-935 MHz band and is used by the Federal agencies for fixed point-to-point/multipoint, low-capacity microwave communication systems. The Federal agencies that use these bands include, but are not limited to, the: Federal Aviation Administration (FAA), United States Department of Agriculture (USDA), Department of Energy (DOE), Department of Interior (DOI), and Department of Homeland Security (DHS). Spectrum use for each agency is similar in both the bands 932-935 and 941-944 MHz. Usually, a transmit frequency in one band has a corresponding receive frequency in the other band. Section 4.3.14 of the NTIA Manual contains a channeling plan for Federal assignments in these bands using pairs of channels with bandwidths of 25 kHz, 50 kHz, 100 kHz and 200 kHz.

The FAA uses the 941-944 MHz and 932-935 MHz bands for low-density communication (voice and/or data) systems. The majority of the FAA frequency assignments are for the Low-Density Radio Communication Link (LDRCL) systems that are deployed across the United States and used to transfer data between air traffic control ground installations in support of the National Airspace System. The frequency assignments for the USDA are concentrated on the West Coast and in the North-central States and are used for point-to-point, microwave backbone communication systems. The DOE operates fixed point-to-point microwave systems primarily located in remote areas of the United States, that are not accessible by commercial services (e.g., telephone), for the transmission of telemetry data and supervisory control and data acquisition (SCADA).<sup>1</sup> The DOI operates fixed point-to-point microwave systems that directly support law enforcement and fire suppression activities; and resources management applications (water meter interrogation). DHS operates fixed point-to-point microwave systems in this band in direct support of law enforcement activities.

## **5. Planned Use**

The Federal Government use of the 941-944 MHz band for fixed point-to-point/multipoint microwave systems is expected to continue indefinitely.

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<sup>1</sup> SCADA refers to a system that collects data from various sensors at a factory, plant or in other remote locations and then sends this data to a central computer which then manages and controls the data.