

1427-1429.5 MHz

1. Band Introduction

Federal agencies operate medical data communication systems in this band. The Department of Defense (DOD) also operates fixed point-to-point and ground-to-air communication systems in this band at a limited number of test and training sites.

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)
1427-1429.5 LAND MOBILE (medical telemetry And medical telecommand) US350 5.341 US352 US398	1427-1429.5 LAND MOBILE (telemetry and telecommand) Fixed (telemetry) 5.341 US350 US352 US398	Private Land Radio (90) Personal (95)

2b. Additional Allocation Table Information

5.341 In the bands 1400-1727 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.

US350 In the band 1427-1432 MHz, Federal use of the land mobile service and non-Federal use of the fixed and land mobile services is limited to telemetry and telecommand operations as described below:

(a) Medical operations. The use of the band 1427-1432 MHz for medical telemetry and telecommand operations (medical operations) shall be authorized for both Federal and non-Federal stations.

(1) Medical operations shall be authorized on a primary basis in the band 1427-1429.5 MHz and on a secondary basis in the band 1429.5-1432 MHz in the United States and its insular areas, except in the following locations: Austin/Georgetown, TX; Detroit and Battle Creek, MI; Pittsburgh, PA; Richmond/Norfolk, VA; Spokane, WA; and Washington, DC metropolitan area (collectively, the “carved-out” locations). See 47

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CFR 90.259(b)(4) and 95.630(b) for a detailed description of these locations.

(2) In the carved-out locations, medical operations shall be authorized on a primary basis in the band 1429-1431.5 MHz and on a secondary basis in the bands 1427-1429 MHz and 1431.5-1432 MHz.

(b) Non-medical operations. The use of the band 1427-1432 MHz for non-medical telemetry and telecommand operations (non-medical operations) shall be limited to non-Federal stations.

(1) Non-medical operations shall be authorized on a secondary basis to the Wireless Medical Telemetry Service (WMTS) in the band 1427-1429.5 MHz and on a primary basis in the band 1429.5-1432 MHz in the United States and its insular areas, except in the carved-out locations.

(2) In the carved-out locations, non-medical operations shall be authorized on a secondary basis in the band 1429-1431.5 MHz and on a primary basis in the bands 1427-1429 MHz and 1431.5-1432 MHz.

US352 In the band 1427-1432 MHz, Federal operations, except for medical telemetry and medical telecommand operations, are on a non-interference basis to authorized non-Federal operations and shall not hinder the implementation of any non-Federal operations.

US398 In the bands 1390-1400 MHz and 1427-1432 MHz, airborne and space-to-Earth operations, except for feeder downlinks for the Non-Voice Non-Geostationary Mobile-Satellite Service in the band 1430-1432 MHz (see US368), are prohibited.

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 by agency.

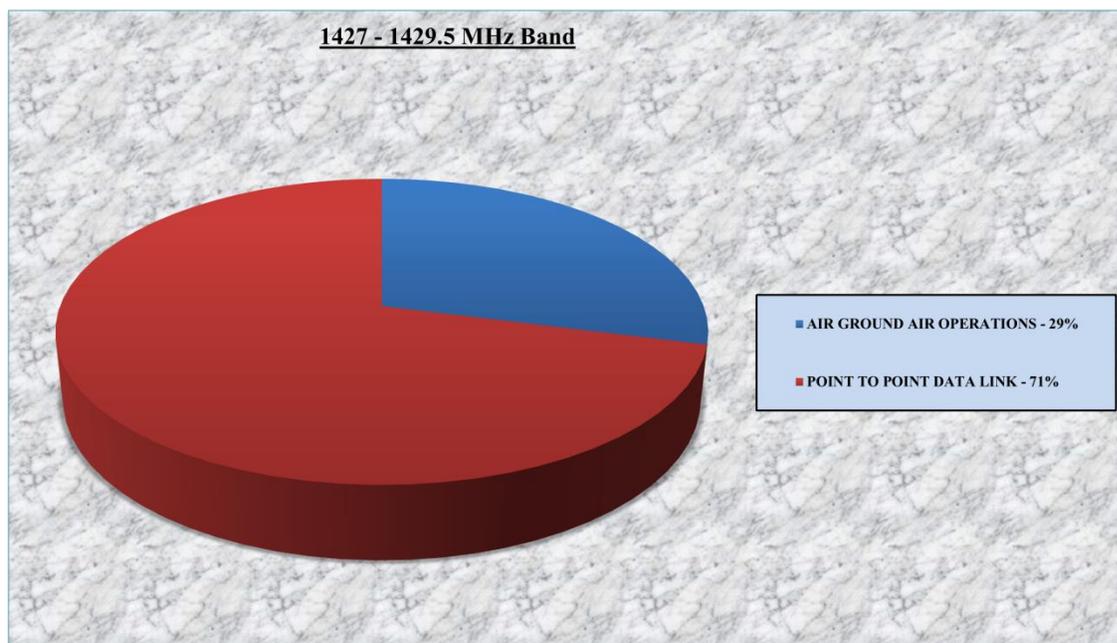
Federal Frequency Assignment Table

1427-1429.5 MHz Band						
SHARED BAND						
AGENCY	LAND MOBILE (medical telemetry and medical telecommand) LAND MOBILE (telemetry and telecommand) FIXED (telemetry)					
	TYPE OF APPLICATION					
	POINT TO POINT DATA LINK	SHIP-SHORE-SHIP OPERATION				TOTAL
AR	1					1
N		1				1
TOTAL		1	1			2

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 1427-1429.5 MHz.



4. Frequency Band Analysis By Application

4a. Medical Data Communication

In June of 2000, the Federal Communications Commission (FCC) established the Wireless Medical Telemetry Service (WMTS).¹ In doing so, the FCC designated the 608-614 MHz, 1395-1400 MHz, 1427-1429.5 MHz bands to be used for medical telemetry. Physicians use medical telemetry equipment in hospitals and health care facilities to monitor a patient’s electrocardiograms and other physiologic parameters, such as hemoglobin oxygen saturation and blood pressure, and transmit this information via radio frequency signal to a central station display and/or to a bedside receiver for monitoring and analysis by clinical personnel.

¹ See *Report and Order* in ET Docket No. 99-255 and PR Docket No. 92-235 (Amendment of Parts 2 and 95 of the Commission’s Rules to Create a Wireless Medical Telemetry Service), 15 FCC Rcd 11206 (2000).

The FCC authorizes medical telemetry equipment operating in this band under Part 95 of the FCC rules.² The primary Federal users of medical telemetry equipment are the DOD and the Department of Veterans Affairs (VA). The VA has more than 1300 medical facilities throughout the contiguous United States, Alaska, Hawaii, Philippines, Guam, American Samoa, Puerto Rico, and the Virgin Islands. These locations include Veterans Health Administration Medical Centers, Outpatient Clinics, Community Based Outpatient Clinics, and Veteran Centers. VA is currently not using the 1395-1400 MHz and 1427-1429.5 MHz bands because equipment is not available.

Section 7.5.9 of the Manual of Regulations and Procedures for Federal Radio Frequency Management provides guidance to Federal agencies operating medical telemetry devices operating in the 1427-1429.5 MHz band pursuant to the FCC rules. Medical telemetry equipment operating in the 1427-1429.5 MHz band are authorized by rule and do not require frequency assignment in the Government Master File.

4b. Fixed Point-to-Point Communication

The DOD uses this band for fixed point-to-point links. The links provide voice and data communications in support of military training at specific sites on a non-interference basis to Federal/non-Federal medical communication systems.

4c. Ground-to-Air Communications

The DOD also uses this band for ground-to-air communications in support of remotely piloted drones at military training at specific sites on a non-interference basis to Federal/non-Federal medical communication systems.

5. Planned Use

Federal use of the band is expected to remain the same for the foreseeable future.

² See 47 C.F.R. Part 95 Personal Radio Services.