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§ 90.1337 Operation near Canadian and Mexican borders.

(a) Fixed devices generally must be located at least 8 kilometers from the U.S./Canada or U.S./Mexico border if the antenna of that device looks within the 160° sector away from the border. Fixed devices must be located at least 56 kilometers from each border if the antenna looks within the 200° sector towards the border.

(b) Fixed devices may be located nearer to the U.S./Canada or U.S./Mexico border than specified in paragraph (a) of this section only if the Commission is able to coordinate such use with Canada or Mexico, as appropriate.

(c) Licensees must comply with the requirements of current and future agreements with Canada and Mexico regarding operation in U.S./Canada and U.S./Mexico border areas.

§ 90.1338 Grandfathered operation and transition to Citizens Broadband Radio Service.

(a) Fixed and base station registrations filed in ULS on or before April 17, 2015 that are constructed, in service, and fully compliant with the rules in part 90, subpart Z as of April 17, 2016 will be afforded protection from harmful interference caused by Citizens Broadband Radio Service users until the end of their license term (with one exception that fixed and base stations registered under licenses issued after January 8, 2013 will only be afforded protection until April 17, 2020), consistent with § 90.1307. Protection criteria for such registered base stations are described in § 96.21of this chapter. Registrations originally filed after April 17, 2015 will only be afforded protection from harmful interference under this section within the licensee's Grandfathered Wireless Protection Zone, as defined in §§ 96.3 and 96.21 of this chapter.

(b) Existing licensees as of April 17, 2015 may add new mobile or portable stations (as defined in § 90.1333) and/or add new subscriber units that operate above the power limit defined in § 90.1333, only if they can positively receive and decode an enabling signal from a base station. Such units will be afforded protection within the licensee's Grandfathered Wireless Protection Zone (as defined in §§ 96.3 and 96.21 of this chapter) until April 17, 2020 or until the end of their license term, whichever is later (with one exception that mobile and portable stations associated with licenses issued after January 8, 2013 will only be afforded protection until April 17, 2020).

[80 FR 36222, June 23, 2015]

PART 94 [RESERVED]

PART 95—PERSONAL RADIO SERVICES

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APPENDIX A TO PART 95—CROSS REFERENCE TO PREVIOUS RULES

AUTHORITY: 47 U.S.C. 154, 303, 307.

SOURCE: 82 FR 41104, Aug. 29, 2017, unless otherwise noted.

Subpart A—General Rules for the Personal Radio Services

§ 95.100 Basis and purpose.

This section contains a concise general statement of the basis and purpose of the rules in this part, pursuant to 5 U.S.C. 553(c).

(a) *Basis.* These rules are issued pursuant to the Communications Act of 1934, as amended, 47 U.S.C. 151 *et. seq.*

(b) *Purpose.* The purpose of these rules is to establish the requirements and conditions under which stations and devices incorporating radio transmitters may be designed, manufactured, certified, marketed, operated and used in the Personal Radio Services.

§ 95.101–95.299 [Reserved]

§ 95.301 Scope.

This subpart contains rules that apply generally to all of the Personal Radio Services.

§ 95.303 Definitions.

The following terms and definitions apply only to the rules in this part.

Antenna. A device that converts radio frequency electrical energy from a transmitter to radiated electromagnetic energy.

Authorized bandwidth. The maximum permissible occupied bandwidth of an emission.

Automatic control. Operational control of a Personal Radio Services station by automated means, such that the operator does not have to be located at a control point and monitoring communications in order to share channels and avoid interference and rule violations.

Base station. A station at a fixed location that communicates directly with mobile stations and other base stations.

Carrier power output. The average power supplied at the radio frequency output of a transmitter during one radio frequency cycle, measured under the condition of no modulation.

Certified transmitter. A transmitter of a type for which a grant of equipment certification, pursuant to part 2, subpart J of this chapter, has been issued for the Personal Radio Service(s) in which it is intended to be operated.

Citizens band radio service. Pursuant to 47 U.S.C. 307(e)(3), the term ''citizens band radio service'' means any radio service or other specific classification of radio stations used primarily for wireless telecommunications for which the FCC has determined that it serves the public interest, convenience and necessity to authorize by rule the operation of radio stations in that service or class, without individual licenses, pursuant to 47 U.S.C. 307(e)(1).

Citizens Broadband Radio Service. The rules for this service, including technical rules, are contained in part 96 of this chapter. Only Citizens Broadband Radio Service Devices authorized on a General Authorized Access basis, as those terms are defined in section 96.3, are considered part of the Citizens Band Radio Services.

Communications Act. The Communications Act of 1934, as amended; 47 U.S.C. 151 *et. seq.*

Control point. Any location where the operator of a Personal Radio Services station may reliably operate that station.

Control station. A station at a fixed location that communicates with mobile stations and other control stations through repeater stations, and may also be used to control the operation of repeater stations.

dB. Decibels.

EIRP. Equivalent Isotropically Radiated Power. Antenna input power times gain for free-space, or in-tissue measurement configurations required by MedRadio, expressed in Watts, where the gain is referenced to an isotropic radiator.

Emergency messages. Communications concerning the immediate safety of life or protection of property.

Emission. Radiated electromagnetic energy from a station.

External radio frequency power amplifier. Any device which, when used with a transmitter as a signal source, is capable of amplification of that signal, and is not an integral part of a radio transmitter as manufactured. *See* § 2.815 of this chapter.

FCC. The Federal Communications Commission.

Feedline. A cable or transmission line that conveys radio frequency electrical energy from a transmitter to an antenna.

Fixed station. A station at a fixed location that directly communicates with other fixed stations only.

Frequency accuracy. A technical requirement comprising the frequency tolerance, frequency stability, or both.

Frequency tolerance. A design requirement specifying the maximum amount that carrier frequencies of newly manufactured transmitters may normally differ from the frequency or frequencies set forth in the FCC rules.

Frequency stability. A design requirement specifying the maximum amount that carrier frequencies of transmitters may normally change from their nominal value as a result of changes in ambient temperature, power supply voltages, or other external factors.

Hand-held portable unit. A physically small mobile station that can be operated while being held in the operator's hand.

Harmful interference. Any transmission, radiation, or induction that endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with applicable laws, treaties, and regulations.

Individual. A human being, e.g., one man or one woman.

Individual license. An authorization to operate a Personal Radio Service station, granted by the FCC to a specific person.

Interference. The effect of unwanted energy due to one or a combination of emissions, radiations, or inductions upon reception in a radiocommunication system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy.

Licensee. A person that has been granted an individual license by the FCC.

Mean power output. The average power supplied at the radio frequency output of a transmitter during a time interval of at least 0.1 seconds, taken under normal operating conditions.

Mobile station. A station, intended to be used while in motion or during halts at unspecified locations, that communicates directly with base stations and other mobile stations, and with control stations and other mobile stations through repeater stations.

Modulation. A process of altering the amplitude, frequency and/or phase of a radio frequency carrier wave generated within a Personal Radio Service transmitter, for the purpose of impressing onto the carrier wave information to be transmitted.

Necessary bandwidth. For a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions.

Occupied bandwidth. For an emission, the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to 0.5% of the total mean power of the emission.

One-way communications. Communications where information always flows in one pre-arranged direction through a communications channel.

Operate. Control the functioning of a Personal Radio Service station; in particular, cause a Personal Radio Service station to begin, continue or cease transmitting.

Operator. An individual who operates a Personal Radio Service station.

Out-of-band emissions. Unwanted emissions that result from the modulation process and whose frequencies are immediately outside of the necessary bandwidth.

Person. An individual, a corporation, a partnership, an association, a joint

stock company, a trust, a state, territorial or local government unit, or other legal entity.

Personal Radio Services station. Any transmitter, with or without an incorporated antenna or receiver, which is certified by the FCC to be operated in one or more of the Personal Radio Services.

Personal Radio Services. The Personal Radio Services are the citizens band radio services, radio control radio services, the 218–219 MHz Service and individually licensed services comprising all of the radio services and other classifications of radio stations governed by the rules in this part (47 CFR part 95).

Plain language voice communications. Voice communications without codes or coded messages intended to provide a hidden meaning. Foreign languages and commonly known radio operating words and phrases, such as ''ten four'' and ''roger,'' not intended to provide a hidden meaning, are not considered codes or coded messages.

Radio control radio service. Pursuant to 47 U.S.C. 307(e)(3), the term ''radio control radio service'' means any radio service or other specific classification of radio stations used primarily for wireless telecommand and/or wireless telemetry purposes, for which the FCC has determined that it serves the public interest, convenience and necessity to authorize by rule the operation of radio stations in that service or class, without individual licenses, pursuant to 47 U.S.C. 307(e)(1).

Remote control. Operation of a Personal Radio Services station from a location that is not in the immediate vicinity of the transmitter. Operation of a Personal Radio Services station from any location on the premises, vehicle or craft where the transmitter is located is not considered to be remote control.

Repeater station. A station in a fixed location used to extend the communications range of mobile stations, hand-held portable units and control stations by receiving their signals on one channel (the input channel) and simultaneously retransmitting these signals on another channel (the output channel), typically with higher transmitting power from a favorable antenna location (typically high above the surrounding terrain).

Spurious emissions. Unwanted emissions, the level of which may be reduced without affecting the corresponding transmission of information, including harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but excluding out-of-band emissions.

Network connection. Connection of a Personal Radio Services station to the public switched network, so that operators of other stations in that service are able to make (and optionally to receive) telephone calls through the connected station.

Transmit. Radiate electromagnetic energy.

Transmitter. A device which supplies radio frequency electrical energy to an antenna, either directly or through a feedline.

Transmitter type. A sample transmitter submitted for testing to evaluate compliance with the technical and design rules in this part, for the purpose of FCC certification pursuant to part 2, subpart J of this chapter. The sample transmitter is identical to (as defined in §2.908 of this chapter) and representative of all other transmitters of the same type.

Two-way communications. Communications where information flows in both directions through a communications channel, either simultaneously (duplex operation) or alternately (simplex operation).

Uncrewed Aircraft System Services. The rules for these services, including technical rules, are contained in part 88 of this chapter. Only NNA stations authorized on a Non-Networked Access basis, as those terms are defined in §88.3 of this chapter, are considered part of the Citizens Band Radio Services.

Unwanted emissions. Emissions whose frequencies are outside of the necessary bandwidth; comprising out-of-band emissions and spurious emissions.

User. Any person who uses or benefits from the operation of a Personal Radio Service station.

Voice obscuring feature. A feature incorporated into a Personal Radio Service telephony transmitter that alters

the sound of the user's voice in such a way that the communications are intended to be understandable only to individuals using a similar unit that reverses the process on the receiving end, so that the voice again becomes intelligible.

[82 FR 41104, Aug. 29, 2017, as amended at 90 FR 1400, Jan. 8, 2025]

§ 95.305 Authorization to operate Personal Radio Services stations

Pursuant to 47 U.S.C. 307(e)(1), this rule section authorizes eligible persons to operate part 95 Personal Radio Service stations and part 96 Citizens Broadband Radio Service stations without individual licenses, except as provided in paragraph (a). Such operation must comply with all applicable rules in this part.

(a) *Individual licenses.* A valid individual license may be required under this part to operate or use stations in a particular service, certain types of stations, stations transmitting on certain channels or frequency bands, or stations transmitting with power above a certain level. Any such requirements applicable to stations in any of the Personal Radio Services are set forth in the subpart governing that specific service. *See e.g.*, § 95.1705. Otherwise, the FCC does not require or accept applications for an individual license to operate any type of Personal Radio Service station.

(b) *Operator eligibility.* Some of the Personal Radio Services have specific operator eligibility requirements, which are set forth in the subparts governing those services. Otherwise, any person is eligible to operate a Personal Radio Service station, except as stated in paragraphs (c) and (d) of this section.

(c) *Foreign government operator.* No entity that is a foreign government or which is acting in its capacity as a representative of a foreign government is authorized by this section to operate Personal Radio Service stations.

(d) *Cease and desist order.* No person subject to a cease and desist order issued pursuant to § 95.313(d) is authorized by this section to operate Personal Radio Service stations.

(e) *Federal station.* No person is authorized by this section to operate a United States Government radio station.

(f) *Foreign station.* No person is authorized by this section to operate a foreign government radio station.

§ 95.307 Authorized station locations.

Personal Radio Service stations generally may be operated in any location included within the descriptions in the following paragraphs in this section. In certain specific locations, however, coordination procedures or operating restrictions may apply, as set forth in § 95.309. Operation of Personal Radio Service stations in any location outside of those described in the following paragraphs is not authorized by this part.

(a) *Within the United States and its territories.* Those areas include the fifty United States and the District of Columbia, the Commonwealth of Puerto Rico, Navassa Island, the United States Virgin Islands (50 islets and cays), American Samoa (seven islands), Baker Island, the Commonwealth of Northern Marianna Islands, Guam Island and Howland Island, Jarvis Island, Johnston Island (Islets East, Johnston, North and Sand), Kingman Reef, Midway Island (Islets Eastern and Sand), Palmyra Island (more than 50 islets), and Wake Island (Islets Peale, Wake and Wilkes).

(b) *Aboard any vessel or aircraft registered in the United States.* With the permission of the captain, while the vessel or aircraft is within or over the United States or its territories, U.S. territorial waters, or upon or over international waters.

(c) *Aboard any unregistered vessel or aircraft owned or operated by a United States citizen or company.* While that vessel or aircraft is within or over the United States or its territories, U.S. territorial waters or upon or over international waters.

(d) *Other locations.* Any other area of the world, except within the territorial limits of areas where radio services are regulated by:

(1) An agency of the United States other than the FCC. (You are subject to its rules.)

(2) Any foreign government. (You are subject to its rules.)

§ 95.309 Coordination procedures and other restrictions for operation in certain locations.

The operator of a Personal Radio Service station may be required to coordinate operation in advance and/or may be subject to operating restrictions if the station is to be operated in certain locations, described in the following paragraphs in this section.

(a) *In a Quiet Zone or near a protected FCC field office.* Rules for these locations are set forth in §1.924 of this chapter.

(b) *Near a U.S. border or in an area that is or may be subject to an international treaty or agreement.* Treaties and agreements may be viewed or downloaded from the FCC Web site: *http://www.fcc.gov/ib/sand/agree/.*

(c) *At an environmentally sensitive site, or in a manner that may raise environmental concerns.* Rules for these locations are set forth in part 1, subpart I of this chapter (Procedures Implementing the National Environmental Policy Act of 1969).

(d) *In an area administered by the United States Government.* For example, the Department of Defense may impose restrictions on a station transmitting on land under its jurisdiction. Before operating a station at such a point, the operator should consult with the commanding officer in charge of the land.

(e) *Near the Arecibo Observatory.* Anyone planning to operate a Personal Radio Services station on the islands of Puerto Rico, Desecheo, Mona, Vieques, or Culebra in a manner that could pose an interference threat to the Arecibo Observatory must notify the observatory at least 45 days in advance of the planned operation, by mail or email, to the following address: Interference Office, Arecibo Observatory, HC3 Box 53995, Arecibo, Puerto Rico 00612; email: *prcz@naic.edu.*

(1) To determine whether a planned operation could pose an interference threat to the Arecibo Observatory, operators may consult interference guidelines provided by Cornell University.

(2) The notification must include the geographical coordinates of the station, if it is a fixed or base station.

(3) After receipt of such notifications, the FCC will allow the Arecibo Observatory 20 days to comment on or object to the proposed operation. The operator must make reasonable efforts to resolve or mitigate any potential interference concern with the Arecibo Observatory. If the FCC determines that an operator has made reasonable efforts to protect the Observatory from interference, the operator may be allowed to operate the station.

§ 95.311 Correspondence and notices from the FCC.

Operators of Personal Radio Service stations must respond to and comply with official communications from the FCC.

(a) The FCC may send a letter to the operator of a Personal Radio Service station requesting specific information about the Personal Radio Service station or its operation. Upon receipt of such a letter, the operator must respond in writing to the FCC office that sent the letter, within the time period stated in the letter. The written response must contain the information requested by the FCC, must be complete in itself, and should not rely on references to other communications or notices.

(b) If it appears to the FCC that the operator of a Personal Radio Services station has violated the Communications Act or the FCC's rules, the FCC may send that operator an official notice concerning the apparent violation. Upon receipt of such official notice, the operator must respond in writing to the FCC office that sent the letter, within the time period stated in the letter and comply with all instructions in the notice concerning the response. The written response must contain a complete written statement that fully addresses each violation, reports any action that the operator has taken to correct the violation and to prevent it from happening again, and any other pertinent information, such as other operators or stations that may have caused the violation.

(c) If the FCC notifies the operator of a Personal Radio Service station that the station is causing interference for technical reasons, the operator must follow all instructions in the official notice. The operator must comply with restricted hours of station operation if

so specified in the official notice. The notice may require the operator to stop operating the station until technical adjustments or repairs have been made to the station equipment, such that the technical problem is corrected.

§ 95.313 Penalties for violations of the Communications Act or FCC rules.

Operators of Personal Radio Service stations may be assessed penalties for violations of the Communications Act and the FCC Rules.

(a) If a Federal court finds that a Personal Radio Service station operator has willfully and knowingly violated any provision of the Communications Act, that operator may be fined up to $10,000 or be imprisoned for a period not exceeding one year, or both. Upon a subsequent violation, the imprisonment may be for a period not exceeding two years. *See* § 501 of the Communications Act (47 U.S.C. 501).

(b) If a Federal court finds that a Personal Radio Service station operator has willfully and knowingly violated any FCC rule, the operator may be fined up to $500 for each violation, or in the case of a continuing violation, $500 for each day that the violation continued. *See* section 502 of the Communications Act (47 U.S.C. 502).

(c) If the FCC finds that a Personal Radio Service station operator has willfully or repeatedly violated one or more sections of the Communications Act or of the FCC Rules, that operator may be liable for forfeiture. See § 1.80 of this chapter for details about the forfeiture procedures and amounts.

(d) If the FCC finds that a Personal Radio Service station operator is using a Personal Radio Service station in a way that violates one or more sections of the Communications Act or of the FCC Rules, the FCC may order the operator to cease and desist (*i.e.*, immediately stop operating the station). *See* § 312(b) of the Communications Act (47 U.S.C. 312(b)).

§ 95.315 [Reserved]

§ 95.317 Registration of antenna structures that may constitute a menace to air navigation.

(a) Each antenna structure used for a Personal Radio Service station is subject to the antenna structure rules set forth in part 17 of this chapter. In particular, the owner of an antenna structure that is more than 60.96 m (200 ft) in height above ground level (*see* § 17.7 of this chapter for specific criteria) may be required to notify the FAA and register the antenna structure with the FCC.

(b) Further, stations located on or near a military or public-use airport with an antenna structure that is more than 6.10 meters (20 feet) high may have to obey additional restrictions. The highest point of the antenna must not exceed one meter above the airport elevation for every hundred meters of distance from the nearest point of the nearest airport runway. Differences in ground elevation between the antenna and the airport runway may complicate this formula. For stations near an airport, *see http://appsint.fcc.gov/UlsApp/AsrSearch/towairSearch.jsp* to figure the maximum allowable height of the antenna. Consult part 17 of the FCC's Rules for more information (47 CFR part 17).

§ 95.319 Malfunctioning transmitting equipment.

If the operator of a Personal Radio Services station becomes aware that the transmitting equipment is no longer functioning properly, he or she must stop making transmissions (except for emergency communications) using the malfunctioning transmitting equipment until it has been adjusted and/or repaired, as necessary, to restore proper operation.

(a) *FCC request to discontinue operation.* If an FCC representative informs a Personal Radio Services station operator that the technical characteristics of his or her transmitted signals are not in compliance with the applicable rules (e.g., regarding power, unwanted emissions, frequency accuracy), he or she must immediately stop making transmissions with the transmitter producing the non-compliant signals.

(b) *Internal repairs.* Internal adjustments and repairs to Personal Radio Services transmitters must be performed by or under the supervision of an individual who is qualified to maintain and repair transmitters.

(c) *Test transmissions.* The operator of any Personal Radio Services station

may make brief test transmissions to verify the functional status of the transmitting equipment at any time, provided that such transmissions do not cause interference to the communications of other stations. A qualified individual maintaining or repairing a Personal Radio station transmitter in accordance with paragraph (b) of this section may make test transmissions as necessary to maintain or repair the transmitter, provided that such transmissions do not cause interference to communications of other stations.

§ 95.321 [Reserved]

§ 95.323 FCC inspection of station.

If an authorized FCC representative requests to inspect any station in the Personal Radio Services, the station operator or licensee must make the station and any applicable records available for inspection.

§ 95.325 Interference.

Operators of Personal Radio Service stations experiencing or causing interference must first attempt to eliminate the interference by means of mutually satisfactory arrangements. If the operators are unable to resolve an interference problem, the FCC may impose restrictions including specifying the channels, maximum transmitting power, maximum antenna height and geographic area or hours of operation of the stations concerned.

§ 95.327 Restricted operation.

The FCC may deny or restrict the use by any operator(s) of any specified channel(s) in a specified geographic area if, in the judgment of the FCC, such use is not in the public interest. Furthermore, the FCC may restrict the use by any particular operator(s) of any channel as to geographical area of operation, transmitting power, or other operating conditions.

§ 95.329 How to contact the FCC.

For information about the Personal Radio Services, see the FCC's internet Web site (*www.fcc.gov*). To speak with an FCC representative about the Personal Radio Services, call the FCC's information line 888–CALL–FCC (888–225–5322). To write the FCC about these services, address the Federal Communications Commission, Attention: Mobility Division, Wireless Telecommunications Bureau, at the address of the FCC's main office indicated in 47 CFR 0.401(a).

[82 FR 41104, Aug. 29, 2017, as amended at 85 FR 64411, Oct. 13, 2020]

§ 95.331 Permissible uses.

Personal Radio Services stations may be used only for the purposes set forth in the rules applicable to each specific Personal Radio Service.

§ 95.333 Prohibited uses.

No person shall use a Personal Radio Service station:

(a) In connection with any activity which is against Federal, State or local law;

(b) To transmit advertisements or program material associated with television or radio broadcasting;

(c) To transmit messages for hire or provide a common carrier service;

(d) To intentionally interfere with the communications of another station;

(e) To transmit obscene, profane or indecent words, language or meaning; or

(f) To transmit a false or deceptive communication.

§ 95.335 Operation of non-certified transmitters prohibited.

Except as provided in paragraph (a) of this section, no person shall operate a transmitter in any Personal Radio Service unless it is a certified transmitter; that is, a transmitter of a type which has obtained a grant of equipment certification for that service, pursuant to part 2, subpart J of this chapter. Use of a transmitter that is not FCC-certified voids the user's authority to operate that station. *See* sections 302(a), (b), and (e) of the Communications Act (47 U.S.C. 302(a), (b), and (e)).

(a) *Exceptions.* Under certain exceptions, non-certified Personal Radio Service transmitters, or transmitters certified for use in the land mobile radio services may be operated. Any such exceptions applicable to stations in a Personal Radio Service are set forth in the subpart governing that

specific service. *See e.g.*, §§ 95.735 and 95.1735.

(b) *Revoked or withdrawn certification.* In the event that the FCC revokes or withdraws a grant of equipment certification for a type of Personal Radio Service transmitter, existing transmitters already in service may continue to be operated unless and until the FCC determines otherwise and gives Public Notice of that decision.

(c) *Grantee permissible modifications.* Only the grantee of the equipment certification may modify the design of a certified Personal Radio Service transmitter type, and then only pursuant to and in full compliance with the requirements and procedures for permissible changes and modifications in part 2 of this chapter. *See* §§ 2.932 and 2.1043 of this chapter.

§ 95.337 Operation of impermissibly modified equipment prohibited.

No person shall modify any Personal Radio Service transmitter in a way that changes or affects the technical functioning of that transmitter such that operation of the modified transmitter results in a violation of the rules in this part. This includes any modification to provide for additional transmit frequencies, increased modulation level, a different form of modulation, or increased transmitter output power (either mean power or peak envelope power or both). Any such modification voids the certified status of the modified transmitter and renders it unauthorized for use in the Personal Radio Services. Also, no person shall operate any Personal Radio Service transmitter that has been so modified.

§ 95.339 Operation of transmitter with external device causing rule violation prohibited.

No person shall operate any Personal Radio Service transmitter to which an external device or accessory has been added such that operation of the combination results in a violation of the rules.

§ 95.341 [Reserved]

§ 95.343 Station operator responsibility and requirements.

Each Personal Radio Services station must have an operator whenever the station is transmitting. The operator of a Personal Radio Services station is responsible for proper operation of the station in compliance with all applicable rules in this part.

(a) Unless the station is operating under automatic control, the operator of a Personal Radio Services station must be located at a control point and monitoring communications while the station is transmitting.

(b) For Personal Radio Services stations operating under the authority of an individual license, the licensee is responsible for proper operation of the station in compliance with all applicable rules in this part, regardless of who is operating the station.

(c) For Personal Radio Services stations operating under the authority of an individual license, the licensee must maintain station records. If no individual license is required for a particular Personal Radio Service, the station operator must maintain the station records. Station records include copies of any FCC violation notices or other FCC letters received by the licensee or operator, any responses to such letters, each written permission received from the FCC, and other documents as the FCC may require be included.

§ 95.345 Remote control.

Operation of Personal Radio Services stations by remote control is prohibited, unless otherwise allowed for a particular Personal Radio Service by rules in the subpart governing that specific service. *See e.g.*, §§ 95.945 and 95.1745.

§ 95.347 Automatic control.

Operation of Personal Radio Services stations under automatic control is prohibited, unless otherwise allowed for a particular Personal Radio Service by rules in the subpart governing that specific service. *See, e.g.*, §§ 95.1747, 95.2347, 95.2547, 95.3347.

[82 FR 43871, Sept. 20, 2017]

§ 95.349 Network connection.

Operation of Personal Radio Services stations connected with the public switched network is prohibited, unless

otherwise allowed for a particular Personal Radio Service by rules in the subpart governing that specific service. *See e.g.*, §§ 95.949 and 95.2749.

§ 95.351 Station identification.

Operators of Personal Radio Services stations are not required to transmit any form of station identification, unless otherwise required for a Personal Radio Service by rules in the subpart governing that specific service. *See e.g.*, § 95.1751.

§ 95.353 False distress signals.

No person shall transmit or cause to be transmitted by a Personal Radio Services station any false or fraudulent signals of distress, or communication relating thereto. *See* section 325(a) of the Communications Act (47 U.S.C. 325(a)).

§ 95.355 [Reserved]

§ 95.357 Duration of transmissions.

Except as otherwise provided, the operator of a Personal Radio Services station must generally limit transmissions to the minimum duration necessary. *See e.g.*, § 95.2357. Some Personal Radio Services have specific duration limits, which are set forth in the subparts governing those services. *See e.g.*, § 95.957.

§ 95.359 Sharing of channels.

Unless otherwise provided in the subparts governing the individual services, all channels designated for use in the Personal Radio Services are available for use on a shared basis, and are not assigned by the FCC for the exclusive use of any person or station. Operators of Personal Radio Service stations must cooperate in the selection and use of channels in order to avoid interference and make efficient use of these shared channels.

§ 95.361 Transmitter Certification.

(a) Unless otherwise provided in the subpart governing that service or in other parts of this chapter, each transmitter that operates or is intended to operate in a service of the Personal Radio Service must be certified in accordance with the governing subpart and part 2 of this chapter.

(b) A copy of the instruction manual specified in § 95.393 must be forwarded to the FCC with each request for certification of the relevant transmitter. If a final copy of that manual is not available when the certification application is submitted, the applicant may include with its application a draft or preliminary copy provided it forwards a final copy to the FCC when such a copy becomes available.

(c) Equipment certification will not be issued for transmitter types where any control, switch or other type of adjustment—which, when manipulated, can result in a violation of the rules—is accessible to the user.

§ 95.363 Channels available for use.

Operators of Personal Radio Stations may transmit only on the channels or frequency bands designated for the specific Personal Radio Service being used, as listed in the individual subpart governing that service. Transmissions on any channel or frequency not designated for the service being used constitutes a violation of section 301 of the Communications Act (47 U.S.C. 301).

§ 95.365 [Reserved]

§ 95.367 Transmitting power.

For transmission of emergency messages, where operators of Personal Radio Services stations have the ability to select transmitting power levels, the highest transmitting power available may be used. In all other circumstances, the minimum amount of transmitting power necessary to carry out the desired communications must be used. *See* section 324 of the Communications Act (47 U.S.C. 324).

§ 95.369 [Reserved]

§ 95.371 Emission types.

In general, Personal Radio Services stations may transmit any emission type that is appropriate for the permissible uses of the specific service, provided that it does not exceed the authorized bandwidth for that service and is in full compliance with the modulation limits (if any) and unwanted emission limits for the specific service.

(a) *Exceptions.* In some of the Personal Radio Services, stations may

transmit only certain specific emission types. Any such limits are set forth in the emission types rule in the subpart governing that service. *See e.g.*, §§ 95.971 and 95.2971.

(b) *Emission type designators.* Emission type designators are defined in § 2.201 of this chapter. Designators for emissions commonly used in the Personal Radio Services are as follows:

Description	Designator
Voice, AM	A3E
Voice, SSB	J3E
Voice, FM	F3E
Voice, PM	G3E
Data, FSK	F1D
Data, AFSK	F2D
Data, PSK	G1D
Test, no modulation	N0N

§ 95.377 Tones and signals.

Personal Radio Service stations that transmit voice emissions may also transmit audible or subaudible tones or other signals for the purpose of selective calling and/or receiver squelch activation. These tones and signals are ancillary to voice communications and are considered to be included within the voice emission types, e.g., A3E, F3E, and G3E.

(a) Tones that are audible (having a frequency higher than 300 Hertz), must last no longer than 15 seconds at one time.

(b) Tones that are subaudible (having a frequency of 300 Hertz or less), may be transmitted continuously during a communication session.

§ 95.381 Voice obscuring features.

A grant of equipment certification will not be issued for any transmitter type that incorporates one or more voice scrambling or other obscuring features for any of the Personal Radio Services that provide for voice (telephony) communications on shared channels (*see* § 95.359), if the application for such grant is filed on or after December 27, 2017.

§ 95.385 RF exposure evaluation.

(a) Personal Radio Services devices are subject to the radio frequency radiation exposure requirements specified in §§ 1.1307(b), 2.1091 and 2.1093 of this chapter, as appropriate.

(b) FCC certification (*see* § 95.335) of transmitter types that are ''portable devices,'' as defined in § 2.1093(b) of this chapter, and are designed to operate in certain Personal Radio Services, is subject to rules requiring radiofrequency radiation exposure routine evaluation pursuant to §§ 1.1307(b) and 2.1093 of this chapter. *See* §§ 95.2385 and 95.2585.

§ 95.391 Manufacturing, importation, and sales of non-certified equipment prohibited.

No person shall manufacture, import, sell, or offer for sale non-certified equipment for the Personal Radio Services except as provided for in §§ 2.803(c)(2)(i) and 2.1204(a)(11) of this chapter. *See* § 302(b) of the Communications Act (47 U.S.C. 302a(b)). *See also* part 2, subpart I (§ 2.801 *et seq.*) of this chapter for rules governing marketing of radiofrequency devices; part 2, subpart K (§ 2.1201 *et seq.*) of this chapter for rules governing import conditions.

[86 FR 52100, Sept. 20, 2021]

§ 95.393 Instructions and warnings.

(a) A user's instruction manual must be supplied with each transmitter that can be used in a Personal Radio Service.

(b) The manual described in paragraph (a) of this section must contain all information necessary for the proper installation and operation of the transmitter including:

(1) Instructions concerning all controls, adjustments and switches that may be operated or adjusted without resulting in a violation of FCC rules;

(2) Warnings concerning any adjustment that could result in a violation of FCC rules or that is recommended to be performed only by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter maintenance and repair duties in the relevant radio service by an organization or committee representative of users of that service;

(3) Warnings concerning the replacement of any transmitter component (crystal, semiconductor, etc.) that could result in a violation of FCC rules; and

(4) For a transmitter that can only be operated with an FCC license, warnings concerning compliance with applicable licensing requirements and information concerning license application procedures.

§§ 95.395–95.499 [Reserved]

Subpart B—Family Radio Service (FRS)

§ 95.501 Scope.

This subpart contains rules that apply only to the Family Radio Service (FRS).

§ 95.503 Definitions, FRS.

Family Radio Service (FRS). A short-distance two-way voice communication service, with limited data applications, between low power hand-held radios, for facilitating individual, family, group, recreational and business activities.

FRS unit. A transceiver for use in the FRS.

§§ 95.505–95.517 [Reserved]

§ 95.519 FRS replacement parts.

The operator of a FRS unit may replace the batteries in the FRS unit with batteries of a type specified by the manufacturer. All other internal maintenance and repairs must be carried out in accordance with §95.319.

§§ 95.521–95.529 [Reserved]

§ 95.531 Permissible FRS uses.

FRS units are primarily used for short-distance two-way voice communications between individuals.

(a) *Digital data.* In addition to voice conversations, FRS units may transmit digital data containing location information, or requesting location information from one or more other FRS or GMRS units, or containing a brief text message to another specific GMRS or FRS unit. Digital data transmissions may be initiated by a manual action of the operator or on an automatic or periodic basis, and a FRS unit receiving an interrogation request may automatically respond with its location. *See also* §95.587(c).

(b) *One-way communications.* FRS units may be used for one-way communications that are emergency messages, traveler assistance communications, voice pages or brief equipment tests.

(c) *GMRS stations.* FRS units normally communicate with other FRS units, but may also be used to communicate with General Mobile Radio Service (GMRS) stations.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53564, Sept. 28, 2021]

§ 95.533 Prohibited FRS uses.

FRS units must not be used for one-way communications other than those listed in §95.531(b). Initial transmissions to establish two-way communications and data transmissions listed in §95.531(a) are not considered to be one-way communications for the purposes of this section.

§§ 95.535–95.559 [Reserved]

§ 95.561 FRS transmitter certification.

(a) Each FRS unit (a transmitter that operates or is intended to operate in the FRS) must be certficated for use in the FRS in accordance with this subpart and subpart J of part 2 of this chapter.

(b) A grant of equipment certification for the FRS will not be issued for any FRS transmitter type that fails to comply with all of the applicable rules in this subpart.

(c) A grant of equipment certification will not be issued for hand-held portable radio units capable of operating under both this subpart (FRS) and under any other subparts of this chapter (except part 15) if the application for such grant is filed on or after December 27, 2017.

§ 95.563 FRS channels.

The FRS is allotted 22 channels, each having a channel bandwidth of 12.5 kHz. All of the FRS channels are also allotted to the General Mobile Radio Service (GMRS) on a shared basis. The FRS channel center frequencies are set forth in the following table:

Channel No.	Center frequency (MHz)
1	462.5625
2	462.5875
3	462.6125
4	462.6375
5	462.6625
6	462.6875
7	462.7125
8	467.5625
9	467.5875
10	467.6125
11	467.6375
12	467.6625
13	467.6875
14	467.7125
15	462.5500
16	462.5750
17	462.6000
18	462.6250
19	462.6500
20	462.6750
21	462.7000
22	462.7250

§ 95.565 FRS frequency accuracy.

Each FRS transmitter type must be designed such that the carrier frequencies remain within ±2.5 parts-per-million of the channel center frequencies specified in § 95.563 during normal operating conditions.

§ 95.567 FRS transmit power.

Each FRS transmitter type must be designed such that the effective radiated power (ERP) on channels 8 through 14 does not exceed 0.5 Watts and the ERP on channels 1 through 7 and 15 through 22 does not exceed 2.0 Watts.

§ 95.569 [Reserved]

§ 95.571 FRS emission types.

Each FRS transmitter type must be designed such that it can transmit only the following emission types: F3E, G3E, F2D, and G2D.

§ 95.573 FRS authorized bandwidth.

Each FRS transmitter type must be designed such that the occupied bandwidth does not exceed 12.5 kHz.

§ 95.575 FRS modulation limits.

Each FRS transmitter type must be designed such that the peak frequency deviation does not exceed 2.5 kHz, and the highest audio frequency contributing substantially to modulation must not exceed 3.125 kHz.

§ 95.577 FRS tone requirements.

In addition to the tones permitted under § 95.377, FRS transmitter types may be designed to transmit brief tones to indicate the end of a transmission.

§ 95.579 FRS unwanted emissions limits.

Each FRS transmitter type must be designed to satisfy the applicable unwanted emissions limits in this paragraph.

(a) *Attenuation requirements.* The power of unwanted emissions must be attenuated below the carrier power output in Watts (P) by at least:

(1) 25 dB (decibels) in the frequency band 6.25 kHz to 12.5 kHz removed from the channel center frequency.

(2) 35 dB in the frequency band 12.5 kHz to 31.25 kHz removed from the channel center frequency.

(3) 43 + 10 log (P) dB in any frequency band removed from the channel center frequency by more than 31.25 kHz.

(b) *Measurement bandwidths.* The power of unwanted emissions in the frequency bands specified in paragraphs (a)(1) and (2) of this section is measured with a reference bandwidth of 300 Hz. The power of unwanted emissions in the frequency range specified in paragraph (a)(3) is measured with a reference bandwidth of at least 30 kHz.

(c) *Measurement conditions.* The requirements in this section apply to each FRS transmitter type both with and without the connection of permitted attachments, such as an external speaker, microphone and/or power cord.

§§ 95.581–95.585 [Reserved]

§ 95.587 FRS additional requirements.

Each FRS transmitter type must be designed to meet the following additional requirements.

(a) *Transmit frequency capability.* FRS transmitter types must not be capable of transmitting on any frequency or channel other than those listed in § 95.563.

(b) *Antenna.* The antenna of each FRS transmitter type must meet the following requirements.

(1) The antenna must be a non-removable integral part of the FRS transmitter type.

(2) The gain of the antenna must not exceed that of a half-wave dipole antenna.

(3) The antenna must be designed such that the electric field of the emitted waves is vertically polarized when the unit is operated in the normal orientation.

(c) *Digital data transmissions.* FRS transmitter types having the capability to transmit digital data must be designed to meet the following requirements.

(1) FRS units may transmit digital data containing location information, or requesting location information from one or more other FRS or GMRS units, or containing a brief text message to another specific FRS or GMRS unit or units.

(2) Digital data transmissions may be initiated by a manual action or command of the operator or on an automatic or periodic basis, and FRS units may be designed to automatically respond with location data upon receiving an interrogation request from another

(3) Digital data transmissions must not exceed one second in duration.

(4) Digital data transmissions must not be sent more frequently than one digital data transmission within a thirty-second period, except that an FRS unit may automatically respond to more than one interrogation request received within a thirty-second period.

(d) *Packet mode.* FRS transmitter types must not be capable of transmitting data in the store-and-forward packet operation mode.

(e) Effective September 30, 2019, no person shall manufacture or import hand-held portable radio equipment capable of operating under this subpart (FRS) and other licensed or licensed-by-rule services in this chapter (part 15 unlicensed equipment authorizations are permitted if consistent with part 15 rules).

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§ 95.589 [Reserved]

§ 95.591 Sales of FRS combination radios prohibited.

Effective September 30, 2019, no person shall sell or offer for sale hand-held portable radio equipment capable of operating under this subpart (FRS) and under any other licensed or licensed-by-rule radio services in this chapter (devices may be authorized under this subpart with part 15 unlicensed equipment authorizations).

§§ 95.593–95.699 [Reserved]

Subpart C—Radio Control Radio Service

§ 95.701 Scope.

This subpart contains rules that apply only to the Radio Control Radio Service (RCRS).

§ 95.703 Definitions, RCRS.

Model aircraft. A small imitation of an aircraft, such as an airplane or a helicopter.

Model surface craft. A small imitation of a boat, car, or other type of vehicle for carrying people or objects, other than an aircraft.

Radio Control Radio Service (RCRS). A non-commercial short-distance radio service for wirelessly controlling the operation of devices, including, but not limited to, model vehicles such as aircraft and surface craft.

RCRS transmitter. A transmitter that is used or intended to be used in the RCRS.

§§ 95.705–95.717 [Reserved]

§ 95.719 RCRS replacement parts.

The operator of an RCRS transmitter may replace parts of an RCRS transmitter as indicated in this section. All other internal maintenance and repairs must be carried out in accordance with § 95.319.

(a) A damaged antenna may be replaced by another antenna of the same or a compatible similar type.

(b) Batteries in the RCRS transmitter may be replaced with batteries of a type specified by the manufacturer.

(c) To change plug-in modules which were certified as part of the RCRS transmitter.

§§ 95.721–95.723 [Reserved]

§ 95.725 Interference, RCRS.

RCRS operations must not cause interference to, and must accept interference from, certain other radio service operations, as follows:

(a) RCRS stations must not cause interference to:

(1) Authorized radio operations in the 72–76 MHz band, including radio remote control of industrial equipment on the same or adjacent channels; or,

(2) Broadcast television reception on TV Channels 4 or 5.

(b) RCRS operations are not afforded protection from interference caused by the operation of:

(1) Industrial, scientific or medical devices (*see* part 18 of this chapter) operating in the 26–28 MHz band; and,

(2) Fixed and mobile stations in other services operating on the same or adjacent channels.

§§ 95.727–95.729 [Reserved]

§ 95.731 Permissible RCRS use.

RCRS transmitters may only be used to transmit one-way communications and only for the purposes set forth in this section. (One-way communications are transmissions which are not intended to establish communications with another station.)

(a) *Control of model crafts and devices.* When an RCRS transmitter is used to control a model craft or device, the RCRS channels in specific frequency bands must be used, based on the type of model craft or device being controlled, as follows:

(1) RCRS channels in the 72 MHz frequency band may be used only to control and operate model aircraft.

(2) RCRS channels in the 75 MHz frequency band may be used only to control and operate model surface craft.

(3) RCRS channels in the 26–28 MHz frequency band may be used to control or operate any kind of device.

(b) *Telecommand.* Any RCRS channel may be used by the operator to turn on and/or off a device at a remote location.

(c) *Telemetry.* Any RCRS channel in the 26–28 MHz frequency band may be used to transmit a signal from a sensor at a remote location that turns on and/or off an indicating device for the operator.

§ 95.733 Prohibited RCRS use.

The rules in this section restrict certain uses of RCRS transmitters.

(a) *Simultaneous use of multiple channels.* An RCRS station must not transmit simultaneously on more than one RCRS channel in the 72–76 MHz band when such operation would cause harmful interference to other RCRS operations.

(b) *Data transmission.* No person shall use a RCRS transmitter to transmit data. Tones or other types of signal encoding are not considered to be data for the purposes of this paragraph, when used only for the purpose of identifying the specific device among multiple devices that the operator intends to turn on/off or the specific sensor among multiple sensors intended to turn on/off an indicating device for the operator.

(c) *Pay for operation prohibited.* RCRS stations must not be used for commercial purposes. An RCRS operator must not accept direct or indirect payment for operating an RCRS transmitter. An RCRS operator may use an RCRS transmitter to help him or her provide a service and be paid for rendering that service, provided that the payment is only for the service and not for operation of the RCRS transmitter.

(d) *Limited transmission.* No person shall use an RCRS station to transmit any message other than for the operation of devices at remote locations. Accordingly, the transmission of other messages by an RCRS operator, such as voice, telegraphy, etc. is prohibited.

§ 95.735 RCRS equipment certification exception.

Notwithstanding the general requirement of § 95.335, a non-certified RCRS transmitter that transmits only in the 26–28 MHz band and complies with the applicable technical requirements in this subpart may be operated in the RCRS for the purpose of controlling a remote device.

§§ 95.737–95.739 [Reserved]

§ 95.741 RCRS antenna height limit.

If the antenna of a RCRS station operating on a channel in the 26–28 MHz frequency band (whether receiving, transmitting) is installed at a fixed location, the highest point of the antenna must not be more than 6.10 meters (20 feet) higher than the highest point of the building or tree on which it is mounted; or 18.3 meters (60 feet) above the ground. RCRS station antennas must also meet the requirements in §95.317 regarding menaces to air navigation. *See* 47 CFR 95.317 and consult part 17 of the FCC's Rules for more information (47 CFR part 17).

§ 95.743 [Reserved]

§ 95.745 Operation of an RCRS transmitter by remote control.

This section sets forth the conditions under which an RCRS station may be operated by remote control, pursuant to the exception in §95.345.

(a) *Wireless remote control.* No person shall operate a RCRS station by wireless remote control.

(b) *Wired remote control.* Before operating an RCRS station by wired remote control, the operator must obtain specific approval from the FCC. To obtain FCC approval, the operator must explain why wired remote control is needed.

§§ 95.747–95.755 [Reserved]

§ 95.757 Duration of RCRS Communications.

Communications on RCRS channels shall be limited to the minimum practicable time that is necessary.

§ 95.759 [Reserved]

§ 95.761 RCRS transmitter certification.

(a) Except as provided in §95.735, each RCRS transmitter (a transmitter that operates or is intended to operate as a station in the RCRS) must be certified in accordance with this subpart and part 2 of this chapter.

(b) A grant of equipment certification for the RCRS will not be issued for any RCRS transmitter type that fails to comply with all of the applicable rules in this subpart.

§ 95.763 RCRS channel frequencies.

The channels listed in this section are allotted for shared use in the RCRS. Each RCRS channel is designated by its center frequency in megahertz.

(a) *26–28 MHz frequency band.* The 26–28 MHz RCRS channel center frequencies are 26.995, 27.045, 27.095, 27.145, 27.195 and 27.255 MHz.

(b) *72 MHz frequency band.* The 72 MHz RCRS channel center frequencies are 72.01, 72.03, 72.05, 72.07, 72.09, 72.11, 72.13, 72.15, 72.17, 72.19, 72.21, 72.23, 72.25, 72.27, 72.29, 72.31, 72.33, 72.35, 72.37, 72.39, 72.41, 72.43, 72.45, 72.47, 72.49, 72.51, 72.53, 72.55, 72.57, 72.59, 72.61, 72.63, 72.65, 72.67, 72.69, 72.71, 72.73, 72.75, 72.77, 72.79, 72.81, 72.83, 72.85, 72.87, 72.89, 72.91, 72.93, 72.95, 72.97, and 72.99 MHz.

(c) *75 MHz frequency band.* The 75 MHz RCRS channel center frequencies are 75.41, 75.43, 75.45, 75.47, 75.49, 75.51, 75.53, 75.55, 75.57, 75.59, 75.61, 75.63, 75.65, 75.67, 75.69, 75.71, 75.73, 75.75, 75.77, 75.79, 75.81, 75.83, 75.85, 75.87, 75.89, 75.91, 75.93, 75.95, 75.97, and 75.99 MHz.

§ 95.765 RCRS frequency accuracy.

Each RCRS transmitter type must be designed to satisfy the frequency accuracy requirements in this section.

(a) Each RCRS transmitter type capable of transmitting on channels in the 72 or 75 MHz frequency band must be designed such that the carrier frequencies remain within ±20 parts-per-million (ppm) of the channel center frequencies listed in §95.763(b) and (c) during normal operating conditions.

(b) Except as allowed under paragraph (c) of this section, each RCRS transmitter type capable of transmitting in the 26–28 MHz frequency band must be designed such that the carrier frequencies remain within ±50 ppm of the channel center frequencies listed in §95.763(a) during normal operating conditions.

(c) Each RCRS transmitter type that transmits in the 26–28 MHz frequency band with a mean transmitter power of 2.5 W or less and is used solely by the operator to turn on and/or off a device at a remote location, other than a device used solely to attract attention,

must be designed such that the carrier frequencies remain within ±100 ppm of the channel center frequencies listed in § 95.763(a) during normal operating conditions.

§ 95.767 RCRS transmitter power.

Each RCRS transmitter type must be designed such that the transmitter power does not exceed the limits in this section.

(a) *72 and 75 MHz frequency bands.* For an RCRS transmitter operating in the 72 and/or 75 MHz frequency bands, the mean transmitter output power must not exceed 0.75 Watts.

(b) *26–28 MHz frequency band.* For an RCRS transmitter operating on 27.255 MHz, the mean transmitter output power must not exceed 25 Watts. For an RCRS transmitter operating on 26.995, 27.045, 27.095, 27.145, or 27.195 MHz, the mean transmitter output power must not exceed 4 Watts.

§ 95.769 [Reserved]

§ 95.771 RCRS emission types.

Each RCRS transmitter type must be designed to satisfy the emission limitations in this section.

(a) *Permitted emission types.* RCRS transmitter types may transmit any type of non-voice emission that is technically appropriate for radio control use.

(b) *Voice emissions prohibited.* RCRS transmitter types must be incapable of transmitting telephony (voice communications).

§ 95.773 RCRS authorized bandwidth.

Each RCRS transmitter type must be designed such that the occupied bandwidth does not exceed 8 kHz for any emission type.

§§ 95.775–95.777 [Reserved]

§ 95.779 RCRS unwanted emissions.

Each RCRS transmitter type must be designed to satisfy the applicable unwanted emissions limits in this paragraph.

(a) *26–28 MHz frequency band.* For an RCRS transmitter operating in the 26–28 MHz frequency band, the power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) by at least:

(1) 25 dB (decibels) in the frequency band 4 kHz to 8 kHz removed from the channel center frequency;

(2) 35 dB in the frequency band 8 kHz to 20 kHz removed from the channel center frequency;

(3) 43 + 10 log (P) dB in any frequency band removed from the channel center frequency by more than 20 kHz.

(b) *72 and 75 MHz frequency bands.* For an RCRS transmitter operating in the 72 and/or 75 MHz frequency bands, the power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) by at least:

(1) 25 dB (decibels) in the frequency band 4 kHz to 8 kHz removed from the channel center frequency;

(2) 45 dB in the frequency band 8 kHz to 10 kHz removed from the channel center frequency;

(3) 55 dB in the frequency band 10 kHz to 20 kHz removed from the channel center frequency; and

(4) 56 + 10 log (P) dB in any frequency band removed from the channel center frequency by more than 20 kHz.

(c) *Measurement bandwidths.* The power of unwanted emissions in the frequency bands specified in paragraphs (a)(1) and (2) and (b)(1) through (3) of this section is measured with a reference bandwidth of 300 Hz. The power of unwanted emissions in the frequency ranges specified in paragraphs (a)(3) and (b)(4) of this section is measured with a reference bandwidth of at least 30 kHz.

§§ 95.781–95.785 [Reserved]

§ 95.787 RCRS additional requirements.

Each RCRS transmitter type must be designed to satisfy all of the following additional requirements:

(a) The antenna of an RCRS station transmitting in the 72 and/or 75 MHz frequency bands must meet the following requirements:

(1) The antenna must be an integral part of the transmitter;

(2) The gain of the antenna must not exceed that of a half-wave dipole; and

(3) The antenna must be designed such that the electric field of the emitted radio waves is vertically polarized

when the transmitter is held in the normal orientation.

(b) Each RCRS transmitter type must be designed to transmit only on one or more of the channels listed in §95.763.

(c) For RCRS transmitter types incorporating plug-in frequency-determining modules that are intended to be changed by the operator, the modules must be submitted for certification together with the transmitter type. Each module must contain all of the frequency determining circuitry including the oscillator. Plug-in crystals are not considered modules and must not be accessible to the user.

§§ 95.789–95.899 [Reserved]

Subpart D—CB Radio Service

§ 95.901 Scope.

This subpart contains rules that apply only to the CB Radio Service.

§ 95.903 Definitions, CBRS.

CB Radio Service (CBRS). A mobile and fixed two-way voice communication service for facilitating personal, business or voluntary public service activities, including communications to provide assistance to highway travelers.

CBRS station. Any transmitter, with or without an incorporated antenna or receiver, which is certified by the FCC to be operated in the CBRS.

Conversation. An exchange of transmissions between two CBRS stations.

Wireless remote control. Operation of a CBRS station from a remote location using a wireless link.

§ 95.905 Authority to operate CBRS stations voided by violation of operating rules.

A person's authorization to operate a CBRS station without an individual license pursuant to §95.305 is voided if that person violates any of the operating rules in this subpart, this part, or other parts of this chapter.

§§ 95.907–95.917 [Reserved]

§ 95.919 CBRS replacement parts.

The operator of a CBRS transmitter may replace parts of the CBRS transmitter as stated in this section. All other internal maintenance and repairs must be carried out in accordance with §95.319.

(a) A damaged antenna on a hand-held portable CBRS transmitter may be replaced by another antenna of the same or a compatible similar type.

(b) Batteries in a hand-held portable CBRS transmitter may be replaced with batteries of a type specified by the manufacturer.

(c) A detachable external microphone may be replaced with any external microphone that does not alter the modulation characteristics in a way that results in a violation of §95.967, §95.973, §95.975 or §95.979.

(d) Changing plug-in modules which were certified as part of the CBRS transmitter.

§ 95.921 [Reserved]

§ 95.923 CBRS station inspection.

If an authorized FCC representative requests to inspect a CBRS station, the operator must make the station and any station records available for inspection.

(a) A CBRS station includes all of the equipment used in connection with that station.

(b) Station records include the following documents, as applicable:

(1) A copy of each response to an FCC violation notice or an FCC letter.

(2) Each written permission received from the FCC.

§ 95.925 CBRS harmful interference.

If harmonic or other spurious emissions result in harmful interference, the FCC may require appropriate technical changes in the CBRS station equipment to alleviate the interference, including the use of a low pass filter between the transmitter antenna terminals and the antenna feed line.

§ 95.927 CBRS quiet hours.

If a CBRS station causes harmful interference to broadcast or communications services received by the public, and such harmful interference can not be eliminated by technical means (*i.e.*,

filters), the FCC may, by written notice to the CBRS station operator, impose limits on the hours of operation of the CBRS station.

§ 95.929 [Reserved]

§ 95.931 Permissible CBRS uses.

The operator of a CBRS station may use that station to transmit two-way plain language voice communications to other CBRS stations and to other stations that are authorized to transmit on CBRS frequencies.

(a) *Emergency communications.* Any CBRS channel may be used for emergency communications or for traveler assistance.

(1) Operators of CBRS stations must, at all times and on all channels, give priority to emergency communications.

(2) CBRS Channel 9 may be used only for emergency communications or traveler assistance. It must not be used for any other purpose.

(b) *One-way communications.* The operator of a CBRS station may use that station to transmit one-way communications for the following purposes:

(1) To call for help or transmit other emergency communications;

(2) To provide warnings of hazardous road conditions to travelers;

(3) To make brief test transmissions (''radio checks''); or,

(4) To transmit voice paging.

(c) *Travelers assistance communications.* The operator of a CBRS station may transmit communications necessary to assist a traveler to reach a destination or to receive necessary services.

§ 95.933 Prohibited CBRS uses.

In addition to the prohibited uses set forth in § 95.333, the operator of a CBRS station must not use a CBRS station:

(a) To transmit one-way communications other than those permitted in § 95.931(b) (transmissions to seek to initiate two-way communications with another station are not considered to be one-way communications);

(b) To advertise or solicit the sale of any goods or services;

(c) To advertise a political candidate or political campaign (a CBRS station may be used for the business or organizational aspects of a campaign);

(d) To communicate with stations in other countries, except General Radio Service stations in Canada;

(e) To transmit communications for live or delayed broadcast on a radio or television broadcast station (a CBRS station may be used to gather news items or to prepare programs);

(f) To transmit music, whistling, sound effects or any other audio material to amuse or entertain; or

(g) To transmit any sound effects solely to attract attention.

§ 95.935 Unauthorized use of non-CBRS transmitters.

The operator of a CBRS station must not use a non-CBRS transmitter to communicate with or attempt to communicate with stations in the CBRS.

(a) *Non-CBRS transmitters.* For the purposes of this section, ''non-CBRS transmitters'' are transmitters that are technically capable of operation in the 26–30 MHz frequency range, but are intended for use in the Amateur Radio Service (*see* part 97 of this chapter) or other government or non-government radio services, and are not certified for use in the CBRS.

(b) *Unlicensed operation.* The operation of non-CBRS transmitters on the CBRS channels is not authorized by § 95.305 of this part. Accordingly, the FCC considers any such operation to be a violation of section 301 of the Communications Act (47 U.S.C. 301).

§ 95.937 [Reserved]

§ 95.939 External radio frequency power amplifiers prohibited.

The operator of a CBRS station must not use an external radio frequency power amplifier to increase the transmitting power of that CBRS station under any circumstances. There are no exceptions to this rule.

(a) The FCC will presume that the operator of a CBRS station has used an external radio frequency power amplifier in violation of this section if it is in the operator's possession or on the operator's premises and there is other evidence that the CBRS station has been operated with more transmitting power than allowed by § 95.967.

(b) The operator of a CBRS station must not attach an external radio frequency power amplifier to a certified CBRS transmitter.

§ 95.941 CBRS antenna height limits.

The operator of a CBRS station must ensure that the transmitting antenna for the station is not higher than 18.3 meters (60 feet) above the ground, or 6.1 meters (20 feet) higher than the highest point of the building or tree on which it is mounted, whichever is higher. CBRS station antennas must also meet the requirements in § 95.317 regarding menaces to air navigation. *See* § 95.317 and consult part 17 of the FCC's Rules for more information.

§ 95.943 [Reserved]

§ 95.945 Remote control of a CBRS station.

This section sets forth the conditions under which a CBRS station may be operated by remote control, pursuant to the exception in § 95.345. Operation of a CBRS station using a hands-free or other type of cordless microphone or headset authorized under part 15 is not considered to be remote control.

(a) *Wireless remote control.* No person shall operate a CBRS station by wireless remote control.

(b) *Wired remote control.* Before operating an CBRS station by wired remote control, the operator must obtain specific approval from the FCC. To obtain FCC approval, the operator must explain why wired remote control is needed. *See* § 95.329 regarding contacting the FCC.

§ 95.947 [Reserved]

§ 95.949 CBRS network connection.

A CBRS station may be connected, acoustically or electrically, to the public switched network, subject to the rules in this section. The purpose of this is to allow operators of other CBRS stations to speak to and hear individuals on the telephone through the connected CBRS station.

(a) The operator of the connected CBRS station must:

(1) Manually make the connection;

(2) Continue to control the station while it is connected;

(3) Listen to each conversation during the connection; and

(4) Stop transmissions immediately if any violation of the CBRS rules occurs.

(b) If a CBRS station is directly (electrically) connected to the public switched network, the connection, including the interface device used, must be in full compliance with all applicable rules in part 68 of this chapter.

§ 95.957 Duration of CBRS Transmissions.

(a) Except as specified in (b) and (c) of this section, the operator of a CBRS station must limit each on-air conversation with the operators of other CBRS stations to no more than five minutes. After an on-air conversation has ended, the operator of a CBRS station must not transmit again on the same channel for at least one minute.

(b) When a CBRS operator is directly participating in emergency communications, it does not have to comply with paragraph (a) of this section regarding length of transmissions and pauses between transmissions. However, the operator must obey all other rules.

(c) When an operator is using its CBRS station to assist a traveler, it does not have to comply with paragraph (a) of this section regarding length of transmissions and pauses between transmissions. However, the operator must obey all other rules.

§ 95.959 [Reserved]

§ 95.961 CBRS transmitter certification.

(a) Each CBRS transmitter (a transmitter that operates or is intended to operate at a station in the CBRS) must be certified in accordance with this subpart and part 2 of this chapter.

(b) A grant of equipment certification for the CBRS will not be issued for any CBRS transmitter type that fails to comply with all of the applicable rules in this subpart.

§ 95.963 CBRS channel frequencies.

The channels listed in this section are allotted for shared use in the CBRS. Each CBRS channel is designated by its center frequency in Megahertz (MHz).

CBRS channel No.	Center frequency (MHz)
1	26.965
2	26.975
3	26.985
4	27.005
5	27.015
6	27.025
7	27.035
8	27.055
9	27.065
10	27.075
11	27.085
12	27.105
13	27.115
14	27.125
15	27.135
16	27.155
17	27.165
18	27.175
19	27.185
20	27.205
21	27.215
22	27.225
23	27.255
24	27.235
25	27.245
26	27.265
27	27.275
28	27.285
29	27.295
30	27.305
31	27.315
32	27.325
33	27.335
34	27.345
35	27.355
36	27.365
37	27.375
38	27.385
39	27.395
40	27.405

§ 95.965 CBRS transmit frequency accuracy.

Each CBRS transmitter type must be designed such that the transmit carrier frequency (or in the case of SSB transmissions, the reference frequency) remains within 50 parts-per-million of the channel center frequencies specified in § 95.963 under all normal operating conditions.

§ 95.967 CBRS transmitter power limits.

Each CBRS transmitter type must be designed such that the transmitter power can not exceed the following limits:

(a) When transmitting amplitude modulated (AM) voice signals or frequency modulated (FM) voice signals, the mean carrier power must not exceed 4 Watts.

(b) When transmitting single sideband (SSB) voice signals, the peak envelope power must not exceed 12 Watts.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§ 95.971 CBRS emission types.

Each CBRS transmitter type must be designed such that its capabilities are in compliance with the emission type rules in this section.

(a) *Permitted emission types.* CBRS transmitter types must transmit AM voice emission type A3E or SSB voice emission types J3E, R3E or H3E, and may also transmit FM voice emission type F3E.

(b) *SSB requirements.* Each CBRS transmitter type that transmits emission type J3E, R3E, or H3E must be capable of transmitting only the upper sideband with suppressed, reduced or full carrier, respectively, but may additionally be capable of transmitting only the lower sideband, with suppressed, reduced or full carrier, respectively.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§ 95.973 CBRS authorized bandwidth.

Each CBRS transmitter type must be designed such that the occupied bandwidth does not exceed the authorized bandwidth for the emission type under test.

(a) *AM and FM.* The authorized bandwidth for emission types A3E and F3E is 8 kHz.

(b) *SSB.* The authorized bandwidth for emission types J3E, R3E, and H3E is 4 kHz.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§ 95.975 CBRS modulation limits.

Each CBRS transmitter type must be designed such that the modulation characteristics are in compliance with the rules in this section.

(a) When emission type A3E is transmitted with voice modulation, the modulation percentage must be at least 85%, but not more than 100%.

(b) When emission type A3E is transmitted by a CBRS transmitter having a transmitter output power of more than 2.5 W, the transmitter must contain a

circuit that automatically prevents the modulation percentage from exceeding 100%.

(c) When emission type F3E is transmitted the peak frequency deviation shall not exceed ±2 kHz.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§ 95.977 CBRS tone transmissions.

In addition to the tones permitted under § 95.377, CBRS transmitter types may be designed to transmit brief tones to indicate the beginning or end of a transmission.

§ 95.979 CBRS unwanted emissions limits.

Each CBRS transmitter type must be designed to comply with the applicable unwanted emissions limits in this section.

(a) *Attenuation requirements.* The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) as specified in the applicable paragraphs listed in the following table:

Emission type	Paragraph
A3E, F3E	(1), (3), (5), (6)
H3E, J3E, R3E	(2), (4), (5), (6)

(1) 25 dB (decibels) in the frequency band 4 kHz to 8 kHz removed from the channel center frequency;

(2) 25 dB in the frequency band 2 kHz to 6 kHz removed from the channel center frequency;

(3) 35 dB in the frequency band 8 kHz to 20 kHz removed from the channel center frequency;

(4) 35 dB in the frequency band 6 kHz to 10 kHz removed from the channel center frequency;

(5) 53 + 10 log (P) dB in any frequency band removed from the channel center frequency by more than 250% of the authorized bandwidth.

(6) 60 dB in any frequency band centered on a harmonic (*i.e.*, an integer multiple of two or more times) of the carrier frequency.

(b) *Measurement bandwidths.* The power of unwanted emissions in the frequency bands specified in paragraphs (a)(1) through (4) of this section is measured with a reference bandwidth of 300 Hz. The power of unwanted emissions in the frequency ranges specified in paragraphs (a)(5) and (6) of this section is measured with a reference bandwidth of at least 30 kHz.

(c) *Measurement conditions and procedures.* Subject to additional measurement standards and procedures established pursuant to part 2, subpart J, the following conditions and procedures must be used.

(1) The unwanted emissions limits requirements in this section must be met both with and without the connection of permitted attachments, such as external speakers, microphones, power cords and/or antennas.

(2) Either mean power output or peak envelope power output may be used for measurements, as appropriate for the emission type under test, provided that the same type of power measurement is used for both the transmitter output power and the power of the unwanted emissions.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§§ 95.981–95.985 [Reserved]

§ 95.987 CBRS additional requirements.

Each CBRS transmitter type must be designed to satisfy all of the additional requirements in this section.

(a) *Transmit frequency capability.* Each CBRS transmitter type must be designed to transmit only on one or more of the channels listed in § 95.963. No CBRS transmitter type will be certified for use in the CBRS service if it is capable of transmitting on any frequency or channel other than those listed in § 95.963, unless such transmitter type is also certified for use in another radio service for which the frequency capability is authorized and for which FCC certification is also required.

(b) *Frequency determining circuitry.* All frequency determining circuitry (including crystals) and programming controls in each CBRS transmitter type must be internal to the transmitter and must not be accessible from the operating panel or from the exterior of the transmitter enclosure.

(c) *Final amplifier component ratings.* The dissipation rating of all the semiconductors or electron tubes which

supply RF power to the antenna terminals of each CB transmitter must not exceed 10 Watts. For semiconductors, the dissipation rating is the greater of the collector or device dissipation value established by the manufacturer of the semiconductor. These values may be temperature de-rated by no more than 50 °C. For an electron tube, the dissipation rating is the Intermittent Commercial and Amateur Service plate dissipation value established by the manufacturer of the electron tube.

(d) *External controls.* Only the external transmitter controls, connections or devices listed in this paragraph are allowed to be incorporated in a CBRS transmitter type. The FCC, however, may authorize additional controls, connections or devices after considering the functions to be performed by such additions.

(1) Primary power connection. External power supplies may be used.

(2) Microphone connection.

(3) Antenna connection.

(4) Headphone and speaker output connections and related selector switch.

(5) On-off switch for primary power to the transmitter. This switch may be combined with receiver controls such as the receiver on-off switch and volume control.

(6) Upper/lower sideband selector switch (for a transmitter that is capable of transmitting SSB emissions).

(7) Carrier level selector control (for a transmitter that is capable of transmitting SSB emissions). This control may be combined with the sideband selector switch.

(8) Channel selector switch.

(9) Transmit/receive selector switch.

(10) Meter(s) and selector switch(es) for monitoring transmitter performance.

(11) Pilot lamp(s), meter(s), light emitting diodes, liquid crystal devices or other types of visual display devices to indicate the presence of RF output power or that the transmitter control circuits are activated to transmit.

§ 95.989 [Reserved]

§ 95.991 CBRS marketing limitations.

Marketing of devices that could be used with CBRS stations resulting in violation of the rules in this part is prohibited.

(a) *External radio frequency power amplifiers.* No person shall manufacture, import, sell or offer for sale any external radio frequency power amplifier capable of operation below 144 MHz and intended for use in the CBRS. *See* § 2.815 of this chapter.

(b) *External frequency determining devices.* No person shall manufacture, import, sell or offer for sale, any add-on device, whether internal or external, the function of which is to extend the transmitting frequency capability of a CBRS transmitter beyond that allowed by §§ 95.963 and 95.965.

§§ 95.993–95.1699 [Reserved]

Subpart E—General Mobile Radio Service

§ 95.1701 Scope.

This subpart contains rules that apply only to the General Mobile Radio Service (GMRS).

§ 95.1703 Definitions, GMRS.

General Mobile Radio Service (GMRS). A mobile two-way voice communication service, with limited data applications, for facilitating activities of individual licensees and their family members, including, but not limited to, voluntary provision of assistance to the public during emergencies and natural disasters.

Grandfathered GMRS license. A GMRS license held by a non-individual person (*i.e.*, a partnership, corporation, association or governmental unit) as a result of renewals of a GMRS license issued prior to July 31, 1987.

§ 95.1705 Individual licenses required; eligibility; who may operate; cooperative use.

A valid individual license is required to operate a GMRS station. To obtain an individual license, an applicant must be eligible and follow the applicable rules and procedures set forth in this subpart and in part 1 of this chapter, and must pay the required application and regulatory fees as set forth in part 1, subpart G of this chapter.

(a) *Eligibility*. This paragraph contains eligibility requirements for individual licenses in the GMRS.

(1) Only an individual who is at least 18 years old and who meets the requirements of § 95.305 is eligible to obtain a new individual GMRS license.

(2) Any person that holds a valid individual license is eligible to obtain a renewed license, or a modified license to reflect a change of name or address.

(b) *Individual licensee responsibility*. The holder of an individual license to operate GMRS stations is responsible at all times for the proper operation of the stations in compliance with all applicable rules in this part.

(c) *Individuals who may operate a GMRS station*. This paragraph establishes who may operate a GMRS station under the authority of an individual license.

(1) Any individual who holds an individual license may operate his or her GMRS stations.

(2) Any individual who holds an individual license may allow his or her immediate family members to operate his or her GMRS station or stations. Immediate family members are the licensee's spouse, children, grandchildren, stepchildren, parents, grandparents, stepparents, brothers, sisters, aunts, uncles, nieces, nephews, and in-laws.

(3) Any individual who holds an individual license may allow anyone to operate his or her GMRS station if necessary to communicate an emergency message.

(4) Any non-individual person that holds a grandfathered GMRS license may allow individuals to operate its grandfathered GMRS station(s) only in accordance with the following paragraphs:

(i) A partnership may allow its partners and employees to operate its GMRS station(s).

(ii) A corporation may allow its officers, directors, members and employees to operate its GMRS station(s).

(iii) An association may allow its members and employees to operate its GMRS station(s).

(iv) A governmental unit may allow its employees to operate its GMRS station(s).

(d) *Individual licensee duties*. The holder of an individual license:

(1) Shall determine specifically which individuals, including family members, are allowed to operate (*i.e.*, exercise operational control over) its GMRS station(s) (*see* paragraph (c) of this section);

(2) May allow any person to use (*i.e.*, benefit from the operation of) its GMRS repeater, or alternatively, may limit the use of its GMRS repeater to specific persons;

(3) May disallow the use of its GMRS repeater by specific persons as may be necessary to carry out its responsibilities under this section.

(e) *Individual license term*. Each individual license in the GMRS will normally have a term of ten years from the date of grant or renewal, and may be renewed pursuant to the procedures in part 1 of this chapter. The FCC may grant a shorter license term at renewal as a sanction for violation of the FCC rules.

(f) *Cooperative use of GMRS stations*. GMRS licensees may share the use of their stations with other persons eligible in the GMRS, subject to the conditions and limitations in this paragraph.

(1) The GMRS station to be shared must be individually owned by the licensee, jointly owned by the participants and the licensee, leased individually by the licensee, or leased jointly by the participants and the licensee.

(2) The licensee must maintain access to and control over all stations authorized under its license.

(3) A station may be shared only:

(i) Without charge;

(ii) On a non-profit basis, with contributions to capital and operating expenses including the cost of mobile stations and paging receivers prorated equitably among all participants; or

(iii) On a reciprocal basis, *i.e.*, use of one licensee's stations for the use of another licensee's stations without charge for either capital or operating expenses.

(4) All sharing arrangements must be conducted in accordance with a written agreement to be kept as part of the station records.

(g) *Limitations on grandfathered GMRS licenses*. GMRS licenses that were

issued prior to July 31, 1987 authorized GMRS station operation at specified locations, on specified channels, and with specified antenna height and transmitter power. Grandfathered GMRS licenses authorize only continued operation of those specific stations by these licensees, at the specified locations, channels, antenna heights and transmitting power. The FCC does not accept applications to modify, assign, or transfer grandfathered GMRS licenses (other than administrative updates to change contact information).

§§ 95.1707–95.1721 [Reserved]

§ 95.1723 GMRS station inspection.

If an authorized FCC representative requests to inspect a GMRS station, the operator must make the station and any station records available for inspection.

(a) A GMRS station includes all of the equipment used in connection with that station.

(b) Station records include the following documents, as applicable:

(1) A copy of each response to an FCC violation notice or an FCC letter.

(2) Each written permission received from the FCC.

(3) Any written agreement regarding sharing arrangements pursuant to § 95.1705(f)(4) of this part.

§§ 95.1725–95.1729 [Reserved]

§ 95.1731 Permissible GMRS uses.

The operator of a GMRS station may use that station for two-way plain language voice communications with other GMRS stations and with FRS units concerning personal or business activities.

(a) *Emergency communications.* Any GMRS channel may be used for emergency communications or for traveler assistance. Operators of GMRS stations must, at all times and on all channels, give priority to emergency communications.

(b) *One-way communications.* The operator of a GMRS station may use that station to transmit one-way communications:

(1) To call for help or transmit other emergency communications;

(2) To provide warnings of hazardous road conditions to travelers; or,

(3) To make brief test transmissions.

(c) *Travelers assistance.* The operator of a GMRS station may transmit communications necessary to assist a traveler to reach a destination or to receive necessary services.

(d) *Digital data.* GMRS hand-held portable units may transmit digital data containing location information, or requesting location information from one or more other GMRS or FRS units, or containing a brief text message to another specific GMRS or FRS unit.

§ 95.1733 Prohibited GMRS uses.

(a) In addition to the prohibited uses outlined in § 95.333 of this chapter, GMRS stations must not communicate:

(1) Messages in connection with any activity which is against Federal, State, or local law;

(2) False or deceptive messages;

(3) Coded messages or messages with hidden meanings (''10 codes'' are permissible);

(4) Music, whistling, sound effects or material to amuse or entertain;

(5) Advertisements or offers for the sale of goods or services;

(6) Advertisements for a political candidate or political campaign (messages about the campaign business may be communicated);

(7) International distress signals, such as the word ''Mayday'' (except when on a ship, aircraft or other vehicle in immediate danger to ask for help);

(8) Messages which are both conveyed by a wireline control link and transmitted by a GMRS station;

(9) Messages (except emergency messages) to any station in the Amateur Radio Service, to any unauthorized station, or to any foreign station;

(10) Continuous or uninterrupted transmissions, except for communications involving the immediate safety of life or property; and

(11) Messages for public address systems.

(12) The provision of § 95.333 apply, however, if the licensee is a corporation and the license so indicates, it may use its GMRS system to furnish

non-profit radio communication service to its parent corporation, to another subsidiary of the same parent, or to its own subsidiary.

(b) GMRS stations must not be used for one-way communications other than those listed in §95.1731(b). Initial transmissions to establish two-way communications and data transmissions listed in §95.1731(d) are not considered to be one-way communications for the purposes of this section.

§§ 95.1735–95.1739 [Reserved]

§ 95.1741 GMRS antenna height limits.

GMRS station antennas must meet the requirements in §95.317 regarding menaces to air navigation. *See* §95.317 and consult part 17 of the FCC's Rules for more information (47 CFR part 17).

§ 95.1743 Minor GMRS operators.

Operators under the age of 18 will not be held personally responsible, pursuant to §95.343, for improper operation of a GMRS repeater or base station. The holder of the individual license under which the minor operates is solely responsible for any improper operation that occurs while an individual under the age of 18 is operating the station.

§ 95.1745 GMRS remote control.

Notwithstanding the prohibition in §95.345, GMRS repeater, base and fixed stations may be operated by remote control.

§ 95.1747 GMRS automatic control.

Notwithstanding the prohibition in §95.347, GMRS repeater stations may be operated by automatic control.

§ 95.1749 GMRS network connection.

Operation of a GMRS station with a telephone connection is prohibited, as in §95.349. GMRS repeater, base and fixed stations, however, may be connected to the public switched network or other networks for the sole purpose of operation by remote control pursuant to §95.1745.

§ 95.1751 GMRS station identification.

Each GMRS station must be identified by transmission of its FCC-assigned call sign at the end of transmissions and at periodic intervals during transmissions except as provided in paragraph (c) of this section. A unit number may be included after the call sign in the identification.

(a) The GMRS station call sign must be transmitted:

(1) Following a single transmission or a series of transmissions; and,

(2) After 15 minutes and at least once every 15 minutes thereafter during a series of transmissions lasting more than 15 minutes.

(b) The call sign must be transmitted using voice in the English language or international Morse code telegraphy using an audible tone.

(c) Any GMRS repeater station is not required to transmit station identification if:

(1) It retransmits only communications from GMRS stations operating under authority of the individual license under which it operates; and,

(2) The GMRS stations whose communications are retransmitted are properly identified in accordance with this section.

§§ 95.1753–95.1759 [Reserved]

§ 95.1761 GMRS transmitter certification.

(a) Each GMRS transmitter (a transmitter that operates or is intended to operate in the GMRS) must be certified in accordance with this subpart and part 2 of this chapter.

(b) A grant of equipment certification for the GMRS will not be issued for any GMRS transmitter type that fails to comply with the applicable rules in this subpart.

(c) No GMRS transmitter will be certified for use in the GMRS if it is equipped with a frequency capability not listed in §95.1763, unless such transmitter is also certified for use in another radio service for which the frequency is authorized and for which certification is also required. No GMRS transmitter will be certified for use in the GMRS if it is equipped with the capabilities to operate in services that do not require equipment certification, such as the Amateur Radio Service. All frequency determining circuitry (including crystals) and programming controls in each GMRS transmitter

must be internal to the transmitter and must not be accessible from the exterior of the transmitter operating panel or from the exterior of the transmitter enclosure.

(d) Effective December 27, 2017, the Commission will no longer issue a grant of equipment authorization for hand-held portable unit transmitter types under both this subpart (GMRS) and subpart B of this part (FRS).

(e) Effective December 27, 2017, the Commission will no longer issue a grant of equipment authorization under this subpart (GMRS) for hand-held portable units if such units meet the requirements to be certified under subpart B of this part (FRS).

§ 95.1763 GMRS channels.

The GMRS is allotted 30 channels—16 main channels and 14 interstitial channels. GMRS stations may transmit on any of the channels as indicated below.

(a) *462 MHz main channels.* Only mobile, hand-held portable, repeater, base and fixed stations may transmit on these 8 channels. The channel center frequencies are: 462.5500, 462.5750, 462.6000, 462.6250, 462.6500, 462.6750, 462.7000, and 462.7250 MHz.

(b) *462 MHz interstitial channels.* Only mobile, hand-held portable and base stations may transmit on these 7 channels. The channel center frequencies are: 462.5625, 462.5875, 462.6125, 462.6375, 462.6625, 462.6875, and 462.7125 MHz.

(c) *467 MHz main channels.* Only mobile, hand-held portable, control and fixed stations may transmit on these 8 channels. Mobile, hand-held portable and control stations may transmit on these channels only when communicating through a repeater station or making brief test transmissions in accordance with § 95.319(c). The channel center frequencies are: 467.5500, 467.5750, 467.6000, 467.6250, 467.6500, 467.6750, 467.7000, and 467.7250 MHz.

(d) *467 MHz interstitial channels.* Only hand-held portable units may transmit on these 7 channels. The channel center frequencies are: 467.5625, 467.5875, 467.6125, 467.6375, 467.6625, 467.6875, and 467.7125 MHz.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§ 95.1765 GMRS frequency accuracy.

Each GMRS transmitter type must be designed to comply with the frequency accuracy requirements in this section under normal operating conditions. Operators of GMRS stations must also ensure compliance with these requirements.

(a) The carrier frequency of each GMRS transmitter transmitting an emission with an occupied bandwidth greater than 12.5 kHz must remain within 5 parts-per-million (ppm) of the channel center frequencies listed in § 95.1763 under normal operating conditions.

(b) The carrier frequency of each GMRS transmitter transmitting an emission with an occupied bandwidth of 12.5 kHz or less must remain within 2.5 ppm of the channel center frequencies listed in § 95.1763 under normal operating conditions.

§ 95.1767 GMRS transmitting power limits.

This section contains transmitting power limits for GMRS stations. The maximum transmitting power depends on which channels are being used and the type of station.

(a) *462/467 MHz main channels.* The limits in this paragraph apply to stations transmitting on any of the 462 MHz main channels or any of the 467 MHz main channels. Each GMRS transmitter type must be capable of operating within the allowable power range. GMRS licensees are responsible for ensuring that their GMRS stations operate in compliance with these limits.

(1) The transmitter output power of mobile, repeater and base stations must not exceed 50 Watts.

(2) The transmitter output power of fixed stations must not exceed 15 Watts.

(b) *462 MHz interstitial channels.* The effective radiated power (ERP) of mobile, hand-held portable and base stations transmitting on the 462 MHz interstitial channels must not exceed 5 Watts.

(c) *467 MHz interstitial channels.* The effective radiated power (ERP) of hand-held portable units transmitting on the 467 MHz interstitial channels must not

exceed 0.5 Watt. Each GMRS transmitter type capable of transmitting on these channels must be designed such that the ERP does not exceed 0.5 Watt.

§ 95.1769 [Reserved]

§ 95.1771 GMRS emission types.

Each GMRS transmitter type must be designed to satisfy the emission capability rules in this section. Operation of GMRS stations must also be in compliance with these rules.

(a) Each GMRS transmitter type must have the capability to transmit F3E or G3E emissions.

(b) Only emission types A1D, F1D, G1D, H1D, J1D, R1D, A3E, F3E, G3E, H3E, J3E, R3E, F2D, and G2D are authorized for use in the GMRS. Equipment for which certification is sought under this subpart may have capabilities to transmit other emission types intended for use in other services, provided that these emission types can be deactivated when the equipment is used in the GMRS.

§ 95.1773 GMRS authorized bandwidths.

Each GMRS transmitter type must be designed such that the occupied bandwidth does not exceed the authorized bandwidth for the channels used. Operation of GMRS stations must also be in compliance with these requirements.

(a) *Main channels.* The authorized bandwidth is 20 kHz for GMRS transmitters operating on any of the 462 MHz main channels (*see* § 95.1763(a)) or any of the 467 MHz main channels (*see* § 95.1763(c)).

(b) *Interstitial channels.* The authorized bandwidth is 20 kHz for GMRS transmitters operating on any of the 462 MHz interstitial channels (*see* § 95.1763(b)) and is 12.5 kHz for GMRS transmitters operating on any of the 467 MHz interstitial channels (*see* § 95.1763(d)).

(c) *Digital data transmissions.* Digital data transmissions are limited to the 462 MHz main channels and interstitial channels in the 462 MHz and 467 MHz bands.

§ 95.1775 GMRS modulation requirements.

Each GMRS transmitter type must be designed to satisfy the modulation requirements in this section. Operation of GMRS stations must also be in compliance with these requirements.

(a) *Main channels.* The peak frequency deviation for emissions to be transmitted on the main channels must not exceed ± 5 kHz.

(b) *462 MHz interstitial channels.* The peak frequency deviation for emissions to be transmitted on the 462 MHz interstitial channels must not exceed ± 5 kHz.

(c) *467 MHz interstitial channels.* The peak frequency deviation for emissions to be transmitted on the 467 MHz interstitial channels must not exceed ± 2.5 kHz, and the highest audio frequency contributing substantially to modulation must not exceed 3.125 kHz.

(d) *Overmodulation.* Each GMRS transmitter type, except for a mobile station transmitter type with a transmitter power output of 2.5 W or less, must automatically prevent a higher than normal audio level from causing overmodulation.

(e) *Audio filter.* Each GMRS transmitter type must include audio frequency low pass filtering, unless it complies with the applicable paragraphs of § 95.1779 (without filtering).

(1) The filter must be between the modulation limiter and the modulated stage of the transmitter.

(2) At any frequency (f in kHz) between 3 and 20 kHz, the filter must have an attenuation of at least 60 log (f/3) dB more than the attenuation at 1 kHz. Above 20 kHz, it must have an attenuation of at least 50 dB more than the attenuation at 1 kHz.

§ 95.1777 GMRS tone transmissions.

In addition to audible and subaudible tones used for receiver squelch activation and selective calling, to establish or maintain communications with specific stations or to access repeater stations (*see* § 95.377), GMRS transmitters may also transmit audio tones for station identification (*see* § 95.1751).

§ 95.1779 GMRS unwanted emissions limits.

Each GMRS transmitter type must be designed to comply with the applicable unwanted emissions limits in this section.

(a) *Emission masks.* Emission masks applicable to transmitting equipment in the GMRS are defined by the requirements in the following table. The numbers in the attenuation requirements column refer to rule paragraph numbers under paragraph (b) of this section.

Emission types filter	Attenuation requirements
A1D, A3E, F1D, G1D, F2D, F3E, G3E with audio filter	(1), (2), (7)
A1D, A3E, F1D, G1D, F3E, G3E without audio filter	(3), (4), (7)
H1D, J1D, R1D, H3E, J3E, R2E	(5), (6), (7)

(1) Filtering noted for GMRS transmitters refers to the requirement in § 95.1775(e).

(2) Unwanted emission power may be measured as either mean power or peak envelope power, provided that the transmitter output power is measured the same way.

(b) *Attenuation requirements.* The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) by at least:

(1) 25 dB (decibels) on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 100% of the authorized bandwidth.

(2) 35 dB on any frequency removed from the center of the authorized bandwidth by more than 100% up to and including 250% of the authorized bandwidth.

(3) 83 log ($f_d \div 5$) dB on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5 kHz up to and including 10 kHz.

(4) 116 log ($f_d \div 6.1$) dB or 50 + 10 log (P) dB, whichever is the lesser attenuation, on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz), of more than 10 kHz up to and including 250% of the authorized bandwidth.

(5) 25 dB on any frequency removed from the center of the authorized bandwidth by more than 50% up to and including 150% of the authorized bandwidth.

(6) 35 dB on any frequency removed from the center of the authorized bandwidth by more than 150% up to and including 250% of the authorized bandwidth.

(7) 43 + 10 log (P) dB on any frequency removed from the center of the authorized bandwidth by more than 250%.

(c) *Measurement bandwidths.* The power of unwanted emissions in the frequency bands specified in paragraphs (b)(1) through (4) of this section is measured with a reference bandwidth of 300 Hz. The power of unwanted emissions in the frequency range specified in paragraph (b)(5) of this section is measured with a reference bandwidth of at least 30 kHz.

(d) *Measurement conditions.* The requirements in this section apply to each GMRS transmitter type both with and without the connection of permitted attachments, such as an external speaker, microphone, power cord and/or antenna.

§§ 95.1781–95.1785 [Reserved]

§ 95.1787 GMRS additional requirements.

Each hand-held portable unit transmitter type submitted for certification under this subpart is subject to the rules in this section.

(a) *Digital data transmissions.* GMRS hand-held portable units that have the capability to transmit digital data must be designed to meet the following requirements.

(1) Digital data transmissions may contain location information, or requesting location information from one or more other GMRS or FRS units, or containing a brief text message to another specific GMRS or FRS unit. Digital data transmissions may be initiated by a manual action of the operator or on an automatic or periodic basis, and a GMRS unit receiving an interrogation request may automatically respond with its location.

(2) Digital data transmissions must not exceed one second in duration.

(3) Digital data transmissions must not be sent more frequently than one

digital data transmission within a thirty-second period, except that a GMRS unit may automatically respond to more than one interrogation request received within a thirty-second period.

(4) The antenna must be a non-removable integral part of the GMRS unit.

(5) GMRS units must not be capable of transmitting digital data on the 467 MHz main channels.

(b) [Reserved]

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§ 95.1789 [Reserved]

§ 95.1791 Sales of GMRS/FRS combination radios prohibited.

(a) Effective September 30, 2019, no person shall be permitted to manufacture or import, sell or offer for sale any radio equipment capable of operating under both this subpart (GMRS) and subpart B (FRS) of this chapter.

§§ 95.1793–95.1899 [Reserved]

Subpart F—218–219 MHz Service

§ 95.1901 Scope.

This subpart sets out the regulations governing the licensing and operation of a 218–219 MHz system. This subpart supplements part 1, subpart F of this chapter, which establishes the requirements and conditions under which commercial and private radio stations may be licensed and used in the Wireless Telecommunications Services. The provisions of this subpart contain additional pertinent information for current and prospective licensees specific to the 218–219 MHz Service.

§ 95.1903 218–219 MHz Service description.

(a) The 218–219 MHz Service is authorized for system licensees to provide communication service to subscribers in a specific service area.

(b) The components of each 218–219 MHz Service system are its administrative apparatus, its response transmitter units (RTUs), and one or more cell transmitter stations (CTSs). RTUs may be used in any location within the service area. CTSs provide service from a fixed point, and certain CTSs must be individually licensed as part of a 218–219 MHz Service system. *See* § 95.1911.

(c) Each 218–219 MHz Service system service area is one of the cellular system service areas as defined by the Commission, unless modified pursuant to § 95.1923.

§ 95.1905 Permissible communications.

A 218–219 MHz Service system may provide any fixed or mobile communications service to subscribers within its service area on its assigned spectrum, consistent with the Commission's rules and the regulatory status of the system to provide services on a common carrier or private basis.

§ 95.1907 Requesting regulatory status.

(a) Authorizations for systems in the 218–219 MHz Service will be granted to provide services on a common carrier basis or a private (non-common carrier and/or private internal-use) basis.

(1) *Initial applications.* An applicant will specify on FCC Form 601 if it is requesting authorizations to provide services on a common carrier, non-common carrier or private internal-use basis, or a combination thereof.

(2) *Amendment of pending applications.* Any pending application may be amended to:

(i) Change the carrier status requested; or

(ii) Add to the pending request in order to obtain both common carrier and private status in a single license.

(3) *Modification of license.* A licensee may modify a license to:

(i) Change the carrier status authorized; or

(ii) Add to the status authorized in order to obtain both common carrier and private status in a single license. Applications to change, or add to, carrier status in a license must be submitted on FCC Form 601 in accordance with § 1.1102 of this chapter.

(4) *Pre-existing licenses.* Licenses granted before April 9, 2001 are authorized to provide services on a private (non-common carrier) basis. Licensees may modify this initial status pursuant to paragraph (a)(3) of this section.

(b) An applicant or licensee may submit a petition at any time requesting clarification of the regulatory status

required to provide a specific communications service.

§ 95.1911 License requirements.

(a) Each 218–219 MHz Service system must be licensed in accordance with part 1, subpart F of this chapter.

(b) Each CTS where the antenna does not exceed 6.1 meters (20 feet) above ground or an existing structure (other than an antenna structure) and is outside the vicinity of certain receiving locations (*see* § 1.924 of this chapter) is authorized under the 218–219 MHz System license. All other CTSs must be individually licensed.

(c) All CTSs not meeting the licensing criteria under paragraph (b) of this section are authorized under the 218–219 MHz Service system license.

(d) Each component RTU in a 218–219 MHz Service system is authorized under the system license or, if associated with an individually licensed CTS, under that CTS license.

(e) Each CTS (regardless of whether it is individually licensed) and each RTU must be in compliance with the Commission's environmental rules (see part 1, subpart I of this chapter) and the Commission's rules pertaining to the construction, marking and lighting of antenna structures (*see* part 17 of this chapter).

§ 95.1912 License term.

(a) The term of each 218–219 MHz service system license is ten years from the date of original grant or renewal.

(b) Licenses for individually licensed CTSs will be issued for a period running concurrently with the license of the associated 218–219 MHz Service system with which it is licensed.

§ 95.1913 Eligibility.

(a) An entity is eligible to hold a 218–219 MHz Service system license and its associated individual CTS licenses if:

(1) The entity is an individual who is not a representative of a foreign government; or

(2) The entity is a partnership and no partner is a representative of a foreign government; or

(3) The entity is a corporation organized under the laws of the United States of America; or

(4) The entity is a trust and no beneficiary is a representative of a foreign government.

(b) An entity that loses its 218–219 MHz Service authorization due to failure to meet the construction requirements specified in § 95.1933 of this part may not apply for a 218–219 MHz Service system license for three years from the date the Commission takes final action affirming that the 218–219 MHz Service license has been canceled.

§ 95.1915 License application.

(a) In addition to the requirements of part 1, subpart F of this chapter, each application for a 218–219 MHz Service system license must include a plan analyzing the co- and adjacent channel interference potential of the proposed system, identifying methods being used to minimize this interference, and showing how the proposed system will meet the service requirements set forth in § 95.1931 of this part. This plan must be updated to reflect changes to the 218–219 MHz Service system design or construction.

(b) In addition to the requirements of part 1, subpart F of this chapter, each request by a 218–219 MHz Service system licensee to add, delete, or modify technical information of an individually licensed CTS (*see* § 95.1911(b) of this part) must include a description of the system after the proposed addition, deletion, or modifications, including the population in the service area, the number of component CTSs, and an explanation of how the system will satisfy the service requirements specified in § 95.1931 of this part.

§ 95.1916 Competitive bidding proceedings.

(a) *Competitive bidding.* Mutually exclusive initial applications for 218–219 MHz Service licenses are subject to competitive bidding. The general competitive bidding procedures set forth in part 1, subpart Q of this chapter will apply unless otherwise provided in this part.

(b) *Installment payments.* Eligible Licensees that elect resumption pursuant to Amendment of part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218–219 MHz Service, *Report and Order and Memorandum*

Opinion and Order, FCC 99–239 (released September 10, 1999) may continue to participate in the installment payment program. Eligible Licensees are those that were current in installment payments (*i.e.*, less than ninety days delinquent) as of March 16, 1998, or those that had properly filed grace period requests under the former installment payment rules. All unpaid interest from grant date through election date will be capitalized into the principal as of Election Day creating a new principal amount. Installment payments must be made on a quarterly basis. Installment payments will be calculated based on new principal amount as of Election Day and will fully amortize over the remaining term of the license. The interest rate will equal the rate for five-year U.S. Treasury obligations at the grant date.

(c) *Eligibility for small business provisions.* (1) A small business is an entity that, together with its affiliates and controlling interests, has average gross revenues not to exceed $15 million for the preceding three years.

(2) A very small business is an entity that, together with its affiliates and controlling interests, has average gross revenues not to exceed $3 million for the preceding three years.

(d) *Bidding credits.* A winning bidder that qualifies as a small business, as defined in this subsection, or a consortium of small businesses may use the bidding credit specified in §1.2110(f)(2)(ii) of this chapter. A winning bidder that qualifies as a very small business, as defined in this section, or a consortium of very small businesses may use the bidding credit specified in accordance with §1.2110(f)(2)(i) of this chapter.

(e) *Auction No. 2 winning bidders.* Winning bidders in Auction No. 2, which took place on July 28–29, 1994, that, at the time of auction, met the qualifications under the Commission's rules then in effect, for small business status will receive a twenty-five percent bidding credit pursuant to Amendment of part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218–219 MHz Service, Report and Order and Memorandum Opinion and Order, FCC 99–239 (released September 10, 1999).

§ 95.1919 License transferability.

(a) A 218–219 MHz Service system license, together with all of its component CTS licenses, may be transferred, assigned, sold, or given away only in accordance with the provisions and procedures set forth in §1.948 of this chapter. For licenses acquired through competitive bidding procedures (including licenses obtained in cases of no mutual exclusivity), designated entities must comply with §§1.2110 and 1.2111 of this chapter (*see* §1.948(a)(3) of this chapter).

(b) If the transfer, assignment, sale, or gift of a license is approved, the new licensee is held to the construction requirements set forth in §95.1933.

§ 95.1923 Geographic partitioning and spectrum disaggregation.

(a) *Eligibility.* Parties seeking Commission approval of geographic partitioning or spectrum disaggregation of 218–219 MHz Service system licenses shall request an authorization for partial assignment of license pursuant to §1.948 of this chapter.

(b) *Technical standards*—(1) *Partitioning.* In the case of partitioning, requests for authorization of partial assignment of a license must include, as attachments, a description of the partitioned service area and a calculation of the population of the partitioned service area and the licensed geographic service area. The partitioned service area shall be defined by coordinate points at every 3 seconds along the partitioned service area unless an FCC-recognized service area (*i.e.*, Economic Areas) is utilized or county lines are followed. The geographic coordinates must be specified in degrees, minutes, and seconds, to the nearest second of latitude and longitude, and must be based upon the 1983 North American Datum (NAD83). In the case where an FCC-recognized service area or county lines are utilized, applicants need only list the specific area(s) (through use of FCC designations or county names) that constitute the partitioned area.

(2) *Disaggregation.* Spectrum may be disaggregated in any amount.

(3) *Combined partitioning and disaggregation.* The Commission will

consider requests for partial assignments of licenses that propose combinations of partitioning and disaggregation.

(c) *Provisions applicable to designated entities*—(1) *Parties not qualified for installment payment plans.* (i) When a winning bidder (partitionor or disaggregator) that elected to pay for its license through an installment payment plan partitions its license or disaggregates spectrum to another party (partitionee or disaggregatee) that would not qualify for an installment payment plan, or elects not to pay for its share of the license through installment payments, the outstanding principal balance owed by the partitionor or disaggregator shall be apportioned according to §1.2111(e)(3) of this chapter. The partitionor or disaggregator is responsible for accrued and unpaid interest through and including the consummation date.

(ii) The partitionee or disaggregatee shall, as a condition of the approval of the partial assignment application, pay its entire *pro rata* amount of the outstanding principal balance on or before the consummation date. Failure to meet this condition will result in cancellation of the grant of the partial assignment application.

(iii) The partitionor or disaggregator shall be permitted to continue to pay its pro rata share of the outstanding balance and, if applicable, shall receive loan documents evidencing the partitioning and disaggregation. The original interest rate, established pursuant to §1.2110(g)(3)(i) of this chapter at the time of the grant of the initial license in the market, shall continue to be applied to the partitionor's or disaggregator's portion of the remaining government obligation.

(iv) A default on the partitionor's or disaggregator's payment obligation will affect only the partitionor's or disaggregator's portion of the market.

(2) *Parties qualified for installment payment plans.* (i) Where both parties to a partitioning or disaggregation agreement qualify for installment payments, the partitionee or disaggregatee will be permitted to make installment payments on its portion of the remaining government obligation.

(ii) Each party may be required, as a condition to approval of the partial assignment application, to execute loan documents agreeing to pay its *pro rata* portion of the outstanding principal balance due, as apportioned according to §1.2111(e)(3) of this chapter, based upon the installment payment terms for which it qualifies under the rules. Failure by either party to meet this condition will result in the automatic cancellation of the grant of the partial assignment application. The interest rate, established pursuant to §1.2110(f)(3)(i) of this chapter at the time of the grant of the initial license in the market, shall continue to be applied to both parties' portion of the balance due. Each party will receive a license for its portion of the partitioned market.

(iii) A default on an obligation will affect only that portion of the market area held by the defaulting party.

[82 FR 41104, Aug. 29, 2017, as amended at 82 FR 41549, Sept. 1, 2017

§ 95.1931 Service requirements.

Subject to the initial construction requirements of §95.1933 of this subpart, each 218–219 MHz Service system license must demonstrate that it provides substantial service within the service area. Substantial service is defined as a service that is sound, favorable, and substantially above a level of service which might minimally warrant renewal.

§ 95.1933 Construction requirements.

(a) Each 218–219 MHz Service licensee must make a showing of ''substantial service'' within ten years of the license grant. Until January 1, 2023, ''substantial service'' assessment will be made at renewal pursuant to the provisions and procedures contained in §1.949 of this chapter.

(b) Until January 1, 2023, each 218–219 MHz Service licensee must file a report to be submitted to inform the Commission of the service status of its system. The report must be labeled as an exhibit to the renewal application. At minimum, the report must include:

(1) A description of its current service in terms of geographic coverage and population served;

(2) An explanation of its record of expansion, including a timetable of new construction to meet changes in demand for service;

(3) A description of its investments in its 218–219 MHz Service systems;

(4) A list, including addresses, of all component CTSs constructed; and

(5) Copies of all FCC orders finding the licensee to have violated the Communications Act or any FCC rule or policy; and a list of any pending proceedings that relate to any matter described in this paragraph.

(c) Failure to demonstrate that substantial service is being provided in the service area will result in forfeiture of the license, and will result in the licensee's ineligibility to apply for 218–219 MHz Service licenses for three years from the date the Commission takes final action affirming that the 218–219 MHz Service license has been canceled pursuant to § 95.1913 of this part.

[82 FR 41104, Aug. 29, 2017, as amended at 82 FR 41549, Sept. 1, 2017

§ 95.1935 Station identification.

No RTU or CTS is required to transmit a station identification announcement.

§ 95.1937 Station inspection.

Upon request by an authorized Commission representative, the 218–219 MHz Service system licensee must make any component CTS available for inspection.

§ 95.1951 Certification.

Each CTS and RTU transmitter must be certified for use in the 218–219 MHz Service in accordance with subpart J of part 2 of this chapter.

§ 95.1953 Frequency segments.

There are two frequency segments available for assignment to the 218–219 MHz Service in each service area. Frequency segment A is 218.000–218.500 MHz. Frequency segment B is 218.501–219.000 MHz.

§ 95.1955 Transmitter effective radiated power limitation.

The effective radiated power (ERP) of each CTS and RTU shall be limited to the minimum necessary for successful communications. No CTS or fixed RTU may transmit with an ERP exceeding 20 Watts. No mobile RTU may transmit with an ERP exceeding 4 Watts.

§ 95.1957 Emission standards.

(a) All transmissions by each CTS and by each RTU shall use an emission type that complies with the following standard for unnecessary radiation.

(b) All spurious and out-of-band emissions shall be attenuated:

(1) Zero dB on any frequency within the authorized frequency segment.

(2) At least 28 dB on any frequency removed from the midpoint of the assigned frequency segment by more than 250 kHz up to and including 750 kHz;

(3) At least 35 dB on any frequency removed from the midpoint of the assigned frequency segment by more than 750 kHz up to and including 1250 kHz;

(4) At least 43 plus 10 log (base 10) (mean power in Watts) dB on any frequency removed from the midpoint of the assigned frequency segment by more than 1250 kHz.

(c) When testing for certification, all measurements of unnecessary radiation are performed using a carrier frequency as close to the edge of the authorized frequency segment as the transmitter is designed to be capable of operating.

(d) The reference bandwidth of the instrumentation used to measure the emission power shall be 100 Hz for measuring emissions up to and including 250 kHz from the edge of the authorized frequency segment, and 10 kHz for measuring emissions more than 250 kHz from the edge of the authorized frequency segment. If a video filter is used, its bandwidth shall not be less than the reference bandwidth. The power level of the highest emission within the frequency segment, to which the attenuation is referenced, shall be remeasured for each change in reference bandwidth.

§ 95.1959 Antennas.

(a) The overall height from ground to topmost tip of the CTS antenna shall

not exceed the height necessary to assure adequate service. Certain CTS antennas must be individually licensed to the 218–219 MHz System licensee (*see* § 95.1911(b) of this part). CTS antennas must also meet the requirements in § 95.317 regarding menaces to air navigation. *See* 47 CFR 95.317 and consult part 17 of the FCC's Rules for more information (47 CFR part 17).

(b) [Reserved]

(c) The RTU may be connected to an external antenna not more than 6.1 m (20 feet) above ground or above an existing man-made structure (other than an antenna structure). Connectors that are used to connect RTUs to an external antenna shall not be of the types generally known as ''F-type'' or ''BNC type.'' Use of an external antenna is subject to § 95.1961.

§ 95.1961 Interference.

(a) When a 218–219 MHz Service system suffers harmful interference within its service area or causes harmful interference to another 218–219 MHz Service system, the licensees of both systems must cooperate and resolve the problem by mutually satisfactory arrangements. If the licensees are unable to do so, the Commission may impose restrictions including, but not limited to, specifying the transmitter power, antenna height or area, duty cycle, or hours of operation for the stations concerned.

(b) The use of any frequency segment (or portion thereof) at a given geographical location may be denied when, in the judgment of the Commission, its use in that location is not in the public interest; the use of a frequency segment (or portion thereof) specified for the 218–219 MHz Service system may be restricted as to specified geographical areas, maximum power, or other operating conditions.

(c) A 218–219 MHz Service licensee must provide a copy of the plan required by § 95.1915 (a) of this part to every TV Channel 13 station whose Grade B predicted contour overlaps the licensed service area for the 218–219 MHz Service system. The 218–219 MHz Service licensee must send the plan to the TV Channel 13 licensee(s) within 10 days from the date the 218–219 MHz Service licensee submits the plan to the Commission, and the 218–219 MHz Service licensee must send updates to this plan to the TV Channel 13 licensee(s) within 10 days from the date that such updates are filed with the Commission pursuant to § 95.1915.

(d) Each 218–219 MHz Service system licensee must provide upon request, and install free of charge, an interference reduction device to any household within a TV Channel 13 station Grade B predicted contour that experiences interference due to a component CTS or RTU.

(e) Each 218–219 MHz Service system licensee must investigate and eliminate harmful interference to television broadcasting and reception, from its component CTSs and RTSs, within 30 days of the time it is notified in writing, by either an affected television station, an affected viewer, or the Commission, of an interference complaint. Should the licensee fail to eliminate the interference within the 30-day period, the CTS(s) or RTU(s) causing the problem(s) must discontinue operation.

(f) The boundary of the 218–219 MHz Service system, as defined in its authorization, is the limit of interference protection for that 218–219 MHz Service system.

§§ 95.1963–95.1999 [Reserved]

Subpart G—Low Power Radio Service

§ 95.2101 Scope.

This subpart contains rules that apply only to the Low Power Radio Service (LPRS).

§ 95.2103 Definitions, LPRS.

Automated maritime telecommunications system (AMTS). An automatic maritime communications system administered under part 80 of this chapter.

Individuals with disabilities. Individuals with a physical or mental impairment that substantially limits one or more of the major life activities of such individuals. *See* section 3(2)(A) of the Americans with Disabilities Act of 1990 (42 U.S.C. 12102(2)(A)).

Low Power Radio Service (LPRS). A short-distance voice and data communication service for providing auditory assistance to persons with disabilities

(and others), health care related communications, law enforcement tracking, and for certain other purposes.

§ 95.2105 LPRS operator eligibility.

Subject to the requirements of §§ 95.305 and 95.307, any person is eligible to operate a station in the Low Power Radio Service, except that only a person that holds an AMTS license issued under part 80 of this chapter may operate an LPRS station for AMTS purposes (*see* § 95.2131(d)).

§ 95.2107 [Reserved]

§ 95.2109 Notification to affected TV stations required for AMTS use.

Prior to operating a LPRS transmitter with an AMTS, the AMTS licensee must notify, in writing, each television station that may be affected by such operations, as defined in § 80.215(h) of this chapter. The notification provided with the station's license application (under part 80 of this chapter) is sufficient to satisfy this requirement if no new television stations would be affected.

§§ 95.2111–95.2123 [Reserved]

§ 95.2125 LPRS interference.

Operation of LPRS stations must not cause harmful interference to the United States Air Force Space Surveillance system (operating in the 216.88–217.08 MHz frequency band) or to reception within the service contour of any type of DTV or TV Broadcast station operating on Channel 13.

§§ 95.2127–95.2129 [Reserved]

§ 95.2131 Permissible LPRS uses.

LPRS stations may be used to transmit voice, data, or tracking signals, as appropriate, to provide:

(a) Auditory assistance communications (including, but not limited to, applications such as assistive listening devices, audio description for the blind, and simultaneous language translation) for:

(1) Individuals with disabilities;

(2) Individuals who require language translation; or

(3) Individuals who may otherwise benefit from auditory assistance communications in educational settings.

(b) Health care related communications for the ill;

(c) Law enforcement tracking signals (for homing or interrogation) including the tracking of persons or stolen goods under authority or agreement with a law enforcement agency (Federal, state, or local) having jurisdiction in the area where the transmitters are placed;

(d) Point-to-point network control communications for AMTS licensed under part 80 of this chapter.

§ 95.2133 Prohibited LPRS uses.

LPRS stations must not be used for two-way voice communications.

§ 95.2141 LPRS antenna height and directivity requirements.

LPRS operators must ensure that their stations satisfy the antenna requirements in this section.

(a) For LPRS units where the antenna is an integral part of the unit, and for LPRS stations operating entirely within an enclosed structure, e.g., a building, there is no limit on antenna height.

(b) For all other LPRS units, the tip of the antenna must not exceed 30.5 meters (100 feet) above ground level. If harmful interference occurs, the FCC may require that the LPRS station antenna height be reduced.

(c) Directional transmit antennas must be used for LPRS stations used with AMTS.

(d) LPRS antennas must also meet the requirements in § 95.317 regarding menaces to air navigation. *See* 47 CFR 95.317 and consult part 17 of the FCC's Rules for more information (47 CFR part 17).

§§ 95.2143–95.2159 [Reserved]

§ 95.2161 LPRS transmitter certification.

(a) Each LPRS transmitter (a transmitter that operates or is intended to operate in the LPRS) must be certified in accordance with this subpart and part 2 of this chapter.

(b) A grant of equipment certification for the LPRS will not be issued for any LPRS transmitter type that fails to comply with all of the applicable rules in this subpart.

§ 95.2163 LPRS channels.

LPRS transmitters may operate on any channel listed in paragraphs (a), (b), and (c) of this section. Channels 19, 20, 50, and 151–160 are available exclusively for law enforcement tracking purposes. AMTS transmissions are limited to the 216.750–217.000 MHz frequency band for low power point-to-point network control communications by AMTS coast stations. Other AMTS transmissions in the 216–217 MHz frequency band are prohibited.

(a) *Standard band channels.* The following table lists the standard band channel numbers and corresponding center frequencies in Megahertz.

Channel No.	Center frequency (MHz)
1	216.0125
2	216.0375
3	216.0625
4	216.0875
5	216.1125
6	216.1375
7	216.1625
8	216.1875
9	216.2125
10	216.2375
11	216.2625
12	216.2875
13	216.3125
14	216.3375
15	216.3625
16	216.3875
17	216.4125
18	216.4375
19	216.4625
20	216.4875
21	216.5125
22	216.5375
23	216.5625
24	216.5875
25	216.6125
26	216.6375
27	216.6625
28	216.6875
29	216.7125
30	216.7375
31	216.7625
32	216.7875
33	216.8125
34	216.8375
35	216.8625
36	216.8875
37	216.9125
38	216.9375
39	216.9625
40	216.9875

(b) *Extra band channels.* The following table lists the extra band channel numbers and corresponding center frequencies in Megahertz.

Channel No.	Center frequency (MHz)
41	216.025
42	216.075
43	216.125
44	216.175
45	216.225
46	216.275
47	216.325
48	216.375
49	216.425
50	216.475
51	216.525
52	216.575
53	216.625
54	216.675
55	216.725
56	216.775
57	216.825
58	216.875
59	216.925
60	216.975

(c) *Narrowband channels.* The following table lists the narrowband channel numbers and corresponding center frequencies in Megahertz.

Channel No.	Center frequency (MHz)
61	216.0025
62	216.0075
63	216.0125
64	216.0175
65	216.0225
66	216.0275
67	216.0325
68	216.0375
69	216.0425
70	216.0475
71	216.0525
72	216.0575
73	216.0625
74	216.0675
75	216.0725
76	216.0775
77	216.0825
78	216.0875
79	216.0925
80	216.0975
81	216.1025
82	216.1075
83	216.1125
84	216.1175
85	216.1225
86	216.1275
87	216.1325
88	216.1375
89	216.1425
90	216.1475
91	216.1525
92	216.1575
93	216.1625
94	216.1675
95	216.1725
96	216.1775
97	216.1825
98	216.1875
99	216.1925
100	216.1975
101	216.2025

Channel No.	Center frequency (MHz)
102	216.2075
103	216.2125
104	216.2175
105	216.2225
106	216.2275
107	216.2325
108	216.2375
109	216.2425
110	216.2475
111	216.2525
112	216.2575
113	216.2625
114	216.2675
115	216.2725
116	216.2775
117	216.2825
118	216.2875
119	216.2925
120	216.2975
121	216.3025
122	216.3075
123	216.3125
124	216.3175
125	216.3225
126	216.3275
127	216.3325
128	216.3375
129	216.3425
130	216.3475
131	216.3525
132	216.3575
133	216.3625
134	216.3675
135	216.3725
136	216.3775
137	216.3825
138	216.3875
139	216.3925
140	216.3975
141	216.4025
142	216.4075
143	216.4125
144	216.4175
145	216.4225
146	216.4275
147	216.4325
148	216.4375
149	216.4425
150	216.4475
151	216.4525
152	216.4575
153	216.4625
154	216.4675
155	216.4725
156	216.4775
157	216.4825
158	216.4875
159	216.4925
160	216.4975
161	216.5025
162	216.5075
163	216.5125
164	216.5175
165	216.5225
166	216.5275
167	216.5325
168	216.5375
169	216.5425
170	216.5475
171	216.5525
172	216.5575
173	216.5625
174	216.5675
175	216.5725
176	216.5775
177	216.5825
178	216.5875
179	216.5925
180	216.5975
181	216.6025
182	216.6075
183	216.6125
184	216.6175
185	216.6225
186	216.6275
187	216.6325
188	216.6375
189	216.6425
190	216.6475
191	216.6525
192	216.6575
193	216.6625
194	216.6675
195	216.6725
196	216.6775
197	216.6825
198	216.6875
199	216.6925
200	216.6975
201	216.7025
202	216.7075
203	216.7125
204	216.7175
205	216.7225
206	216.7275
207	216.7325
208	216.7375
209	216.7425
210	216.7475
211	216.7525
212	216.7575
213	216.7625
214	216.7675
215	216.7725
216	216.7775
217	216.7825
218	216.7875
219	216.7925
220	216.7975
221	216.8025
222	216.8075
223	216.8125
224	216.8175
225	216.8225
226	216.8275
227	216.8325
228	216.8375
229	216.8425
230	216.8475
231	216.8525
232	216.8575
233	216.8625
234	216.8675
235	216.8725
236	216.8775
237	216.8825
238	216.8875
239	216.8925
240	216.8975
241	216.9025
242	216.9075
243	216.9125
244	216.9175
245	216.9225

Channel No.	Center frequency (MHz)
246	216.9275
247	216.9325
248	216.9375
249	216.9425
250	216.9475
251	216.9525
252	216.9575
253	216.9625
254	216.9675
255	216.9725
256	216.9775
257	216.9825
258	216.9875
259	216.9925
260	216.9975

(d) *AMTS network control communications.* LPRS stations operating as part of an AMTS may use the 216.750–217.000 MHz frequency range as a single 250 kHz bandwidth channel.

§ 95.2165 LPRS frequency accuracy.

Each LPRS transmitter type must be designed to satisfy the frequency accuracy requirements in this section.

(a) LPRS transmitters operating on standard band (25 kHz) or extra band (50 kHz) channels must be designed such that the carrier frequencies remain within ±50 ppm of the channel center frequencies specified in § 95.2163(a) and (b), respectively, during normal operating conditions.

(b) LPRS transmitters operating on narrowband (5 kHz) channels must be designed such that the carrier frequencies remain within ±1.5 ppm of the channel center frequencies specified in § 95.2163(c) during normal operating conditions.

§ 95.2167 LPRS transmitting power.

Each LPRS transmitter type not intended for use with an AMTS station must be designed to satisfy the transmitting power limits in paragraph (a) of this section. The licensee of each AMTS station is responsible for compliance with paragraph (b) of this section.

(a) The ERP of an LPRS transmitter, other than an LPRS transmitter used with an AMTS station, must not exceed 100 mW.

(b) The ERP of an LPRS transmitter used with an AMTS station must not exceed 1 Watt.

§§ 95.2169–95.2171 [Reserved]

§ 95.2173 LPRS authorized bandwidths.

Each LPRS transmitter type must be designed such that the occupied bandwidth does not exceed the authorized bandwidth for the channel bandwidth used.

(a) The authorized bandwidth for emissions transmitted on the narrowband channels listed in § 95.2163(c) is 4 kHz.

(b) The occupied bandwidth for emissions transmitted on the standard band, extra band or AMTS channels listed in § 95.2163(a), (b), or (d), respectively, is limited through compliance with the unwanted emissions rule (§ 95.2179).

§§ 95.2175–95.2177 [Reserved]

§ 95.2179 LPRS unwanted emission limits.

The requirements in this section apply to each LPRS transmitter type both with and without the connection of attachments, such as an external microphone, power cord and/or antenna.

(a) *Emission masks.* Emission masks applicable to transmitting equipment in the LPRS are defined by the requirements in the following table. The numbers in the paragraphs column refer to attenuation requirement rule paragraph numbers under paragraph (b) of this section.

Channels	Paragraphs
narrowband 5 kHz	(1), (2)
standard band 25 kHz	(3), (4)
extra band 50 kHz	(5), (6)
AMTS 250 kHz	(7), (8)

(b) *Attenuation requirements.* The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) by at least:

(1) $30 + 20(f_d - 2)$ dB, $55 + 10 \log (P)$ dB, or 65 dB, whichever is the least attenuation, on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d, in kHz) of more than 2 kHz, up to and including 3.75 kHz.

(2) $55 + 10 \log (P)$ dB on any frequency removed from the center of the authorized bandwidth by more than 3.75 kHz.

(3) 30 dB on any frequency removed from the channel center frequency by 12.5 kHz to 22.5 kHz.

(4) 43 + 10 log (P) dB on any frequency removed from the channel center frequency by more than 22.5 kHz.

(5) 30 dB on any frequency removed from the channel center frequency by 25 kHz to 35 kHz.

(6) 43 + 10 log (P) dB on any frequency removed from the channel center frequency by more than 35 kHz.

(7) 30 dB on any frequency removed from the channel center frequency by 125 kHz to 135 kHz.

(8) 43 + 10 log (P) dB on any frequency removed from the channel center frequency by more than 135 kHz.

(c) *Measurement conditions and procedures.* The power of unwanted emissions in the frequency bands specified in paragraphs (b)(1), (3), (5), and (7) of this section is measured with a reference bandwidth of 300 Hz. The power of unwanted emissions in the frequency ranges specified in paragraphs (b)(2), (4), (6), and (8) is measured with a reference bandwidth of at least 30 kHz.

§§ 95.2181–95.2189 [Reserved]

§ 95.2191 LPRS marketing limitations.

Transmitters intended for operation in the LPRS may be marketed and sold only for those uses described in § 95.2131.

§ 95.2193 LPRS labeling requirements.

Each LPRS transmitting device must be labeled with the following statement in a conspicuous location on the device:

This device may not interfere with TV reception or Federal Government radar.

(a) Where the LPRS device is constructed in two or more sections connected by wire and marketed together, the statement specified in this section is required to be affixed only to the main control unit.

(b) When the LPRS device is so small or for such use that it is not practicable to place the statement specified in this section on it, the statement must be placed in a prominent location in the instruction manual or pamphlet supplied to the user or, alternatively, must be placed on the container in which the device is marketed.

§ 95.2195 LPRS disclosures.

Manufacturers of LPRS transmitters used for auditory assistance, health care assistance, and law enforcement tracking purposes must include with each transmitting device the following statement:

This transmitter is authorized by rule under the Low Power Radio Service (47 CFR part 95) and must not cause harmful interference to TV reception or to the United States Air Force Space Surveillance System operating in the 216.88–217.08 MHz band. With the exception of automated maritime telecommunications system (AMTS) devices, you do not need an FCC license to operate this transmitter. This transmitter may only be used to provide: auditory assistance to persons with disabilities, persons who require language translation, or persons in educational settings; health care services to the ill; law enforcement tracking services under agreement with a law enforcement agency; or AMTS network control communications. Two-way voice communications and all other types of uses not mentioned above are expressly prohibited.

§§ 95.2197–95.2999 [Reserved]

Subpart H—Wireless Medical Telemetry Service

§ 95.2301 Scope.

This subpart contains rules that apply only to the Wireless Medical Telemetry Service (WMTS) operating in the 608–614 MHz, 1395–1400 MHz and 1427–1432 MHz frequency bands.

§ 95.2303 Definitions, WMTS.

Authorized health care provider. A physician or other individual authorized under state or Federal law to provide health care services, or any other health care facility operated by or employing individuals authorized under state or Federal law to provide health care services, or any trained technician operating under the supervision and control of an individual or health care facility authorized under state or Federal law to provide health care services.

Health care facility. A health care facility includes hospitals and other establishments that offer services, facilities and beds for use beyond a 24-hour period in rendering medical treatment, and institutions and organizations regularly engaged in providing medical services through clinics, public health facilities, and similar establishments, including government entities and agencies such as Veterans Administration hospitals; except the term health care facility does not include an ambulance or other moving vehicle.

Wireless Medical Telemetry Service (WMTS). A short-distance data communication service for the transmission of physiological parameters and other patient medical information via radiated electromagnetic signals.

Wireless medical telemetry. The measurement and recording of physiological parameters and other patient-related information via radiated bi-or unidirectional electromagnetic signals in the 608–614 MHz, 1395–1400 MHz and 1427–1432 MHz frequency bands.

§ 95.2305 WMTS operator eligibility.

Only the following persons are eligible to operate transmitters in the Wireless Medical Telemetry Service:

(a) Authorized health care providers are eligible to operate transmitters in the WMTS without an individual license issued by the FCC provided the coordination requirements in § 95.2309 have been met.

(b) Manufacturers of wireless medical telemetry devices and their representatives are eligible to operate WMTS transmitters solely for the purpose of demonstrating such equipment to, or installing and maintaining such equipment for, authorized health care providers.

§ 95.2307 [Reserved]

§ 95.2309 WMTS frequency coordination.

Operation of WMTS devices is subject to the frequency coordination procedures in this section.

(a) *Frequency coordinators*. The FCC designates one or more frequency coordinators to manage WMTS use of the frequency bands designated for the operation of WMTS devices.

(1) Contact information for the frequency coordinator can be obtained from the FCC's Web site at: *https://www.fcc.gov/encyclopedia/wireless-medical-telemetry-service-wmts* or by calling the FCC at 1–888–CALL–FCC (1–888–225–5322).

(2) The duties of the frequency coordinators are to:

(i) Review and process coordination requests submitted by authorized health care providers as required by this section;

(ii) Maintain a database of WMTS use;

(iii) Notify users of potential conflicts;

(iv) Coordinate WMTS operation with radio astronomy observatories and Federal Government radar systems as specified in paragraphs (f) and (g).

(v) Notify licensees operating pursuant to § 90.259(b) of this chapter of the need to comply with the field strength limit of § 90.259(b)(11) prior to initial activation of WMTS equipment in the 1427–1432 MHz band.

(vi) Notify licensees operating in the 1392–1395 MHz band (pursuant to subpart I of part 27 of this chapter) of the need to comply with the field strength limit of § 27.804 prior to initial activation of WMTS equipment in the 1395–1400 MHz band.

(b) *Initial registration*. Prior to first use of a WMTS device for wireless medical telemetry in a health care facility, the authorized health care provider shall register the device with a designated frequency coordinator. After April 14, 2010, no registrations may be accepted for frequencies where WMTS does not have primary status. Previously registered secondary facilities may continue to operate as registered.

(c) *Maintaining current information*. The authorized health care provider shall maintain the information contained in each registration current in all material respects, and shall notify the frequency coordinator when any material change is made in the location or operating parameters previously reported.

(d) *Discontinuation*. The authorized health care provider shall notify the frequency coordinator whenever a medical telemetry device is permanently taken out of service, unless the device

is replaced with another transmitter utilizing the same technical characteristics as those reported on the effective registration.

(e) *Registration information.* Each registration includes the following information:

(1) The specific frequency range(s);

(2) The modulation scheme and/or emission type (including bandwidth);

(3) The effective radiated power;

(4) The number of WMTS devices in use at the health care facility as of the date of registration, including manufacturer name(s) and model numbers;

(5) The legal name of the authorized health care provider;

(6) The location of the WMTS device (e.g., coordinates, street address, building, as appropriate); and,

(7) Contact information for the authorized health care provider (e.g., name, title, office address, telephone number, fax number, email address).

(f) *Specific requirements for WMTS devices in the 608–614 MHz frequency band.* For a wireless medical telemetry device operating within the frequency range 608–614 MHz that will be located near the radio astronomy observatories listed below, operation is not permitted until a WMTS frequency coordinator referenced in §95.2309 has coordinated with, and obtained the written concurrence of, the director of the affected radio astronomy observatory before the equipment can be installed or operated—

(1) Within 80 kilometers of:

(i) National Astronomy and Ionosphere Center, Arecibo, Puerto Rico: 18°–20′–38.28′ North Latitude, 66°–45′–09.42′ West Longitude;

(ii) National Radio Astronomy Observatory, Socorro, New Mexico: 34°–04′–43′ North Latitude, 107°–37′–04′ West Longitude; or

(iii) National Radio Astronomy Observatory, Green Bank, West Virginia: 38°–26′–08′ North Latitude, 79°–49′–42′ West Longitude.

(2) Within 32 kilometers of any of the National Radio Astronomy Observatory (NRAO) facilities (Very Long Baseline Array Stations) centered on the following geographical coordinates:

NRAO facilities	N. lat.	W. long.
Pie Town, NM	34°–18′	108°–07′
Kitt Peak, AZ	31°–57′	111°–37′
Los Alamos, NM	35°–47′	106°–15′
Fort Davis, TX	30°–38′	103°–57′
North Liberty, IA	41°–46′	91°–34′
Brewster, WA	48°–08′	119°–41′
Owens Valley, CA	37°–14′	118°–17′
Saint Croix, VI	17°–46′	64°–35′
Mauna Kea, HI	19°–49′	155°–28′
Hancock, NH	42°–56′	71°–59′

(3) The National Science Foundation (NSF) point of contact for coordination is: Division of Astronomical Sciences, Electromagnetic Spectrum Management Unit, 2415 Eisenhower Avenue, Alexandria, VA 22314; Email: *esm@nsf.gov*.

(g) *Specific requirements for WMTS devices in the 1395–1400 and 1427–1432 MHz bands.* Due to the critical nature of communications transmitted under this part, the frequency coordinator in consultation with the National Telecommunications and Information Administration will determine whether there are any Federal Government systems whose operations could affect, or could be affected by, proposed WMTS operations in the 1395–1400 MHz and 1427–1432 MHz bands. The locations of government systems in these bands are specified in footnotes US351 and US352 of §2.106 of this chapter.

(h) *Obtaining interference protection.* To receive interference protection, parties operating WMTS networks in the 608–614 MHz frequency band shall notify one of the white space database administrators of their operating location pursuant to §§15.713(j)(11) and 15.715(p) of this chapter.

[82 FR 41104, Aug. 29, 2017, as amended at 85 FR 38740, June 26, 2020; 84 FR 34799, July 19, 2019]

§§ 95.2311–95.2323 [Reserved]

§ 95.2325 WMTS interference.

Authorized health care providers, in conjunction with the equipment manufacturers, must cooperate in the selection and use of frequencies in order to reduce the potential for interference with other wireless medical telemetry devices, or other co-primary users. However, WMTS operations in the 608–

614 MHz band are not entitled to protection from adjacent band interference from broadcast television stations transmitting on TV Channels 36 and 38.

§§ 95.2327–95.2329 [Reserved]

§ 95.2331 Permissible WMTS uses.

WMTS transmitters are used to transmit wireless medical telemetry, on a unidirectional or bidirectional basis. All transmissions must be related to the provision of medical care.

§ 95.2333 Prohibited WMTS uses.

Operators of WMTS transmitters must not use them for any purpose not set forth in § 95.2331 or in a manner prohibited in this section.

(a) WMTS transmitters must not be operated in moving vehicles, such as ambulances, even if the vehicles are associated with a health care facility.

(b) The operation of a wireless medical telemetry transmitter under this part is authorized anywhere within a health care facility provided the facility is located anywhere Personal Radio Service station operation is permitted under §§ 95.307 and 95.309. Operation in any other area outside of such health care facilities is prohibited.

(c) WMTS transmitters must not be used to transmit voice or video communications. Medical waveforms, such as electrocardiograms, are not considered to be video for the purpose of this section.

§§ 95.2335–95.2345 [Reserved]

§ 95.2347 WMTS automatic control.

Notwithstanding the provisions of § 95.347, WMTS operations may be conducted under manual or automatic control.

§§ 95.2349–95.2355 [Reserved]

§ 95.2357 WMTS duration of transmissions.

WMTS operations may be conducted on a continuous basis, notwithstanding the provisions of § 95.357.

§ 95.2359 [Reserved]

§ 95.2361 WMTS transmitter certification.

(a) WMTS transmitters (transmitters that operate or are intended to operate in the WTMS) must be certified in accordance with this subpart and the provisions of part 2, subpart J of this chapter.

(b) A grant of equipment certification for the WMTS will not be issued for any WMTS transmitter type that fails to comply with the applicable rules in this subpart.

§ 95.2363 WMTS frequency bands and channels.

The channels listed in this section are allotted for shared use in the WMTS and channels will not be assigned for exclusive use of any entity.

(a) WMTS transmitter types must operate in one or more of these frequency bands:

(1) 608–614 MHz (co-primary);

(2) 1395–1400 MHz (co-primary); or,

(3) 1427–1429.5 MHz (co-primary) and 1429.5–1432 MHz (secondary), except at the locations listed in § 90.259(b)(4) of this chapter where WMTS transmitters may operate in the 1429–1431.5 MHz frequency band on a primary basis and in the 1427–1429 MHz and 1431.5–1432 MHz bands on a secondary basis. *See* note US350 to the Table of Frequency Allocations in § 2.106 of this chapter for additional details.

(b) WMTS transmitter types utilizing broadband technologies (such as spread spectrum modulation) in the 608–614 MHz frequency band must be capable of using one or more of the following 1.5 MHz bandwidth channels (a maximum of 6 MHz bandwidth). Such transmitter types must be designed to use the minimum number of channels necessary to avoid harmful interference to other WMTS devices.

(1) 608.0–609.5 MHz
(2) 609.5–611.0 MHz
(3) 611.0–612.5 MHz
(4) 612.5–614.0 MHz

(c) In the 1395–1400 MHz and 1427–1432 MHz bands, no specific channels are specified. Wireless medical telemetry devices may operate on any channel within the bands authorized for wireless medical telemetry use in this part.

§ 95.2365 WMTS frequency accuracy.

Manufacturers of wireless medical telemetry devices are responsible for ensuring frequency accuracy such that all emissions are maintained within the designated bands of operation under all of the manufacturer's specified conditions.

§ 95.2367 [Reserved]

§ 95.2369 WMTS field strength limits.

Each WMTS transmitter type must satisfy the field strength limits in this section.

(a) For WMTS transmitter types operating in the 608–614 MHz band, the field strength of the transmitted signal must not exceed 200 mV/m, measured at a distance of 3 meters, using instrumentation with a CISPR quasi-peak detector.

(b) For WMTS transmitter types operating in the 1395–1400 MHz and 1427–1432 MHz bands, the field strength of the transmitted signal must not exceed 740 mV/m, measured at 3 meters, using instrumentation with an averaging detector and a 1 MHz reference bandwidth.

§§ 95.2371–95.2377 [Reserved]

§ 95.2379 WMTS unwanted emissions limits.

Each WMTS transmitter type must be designed to comply with the requirements in this paragraph.

(a) Unwanted emissions on frequencies below 960 MHz must not exceed 200 μV/m, measured at a distance of 3 meters using measuring instrumentation with a CISPR quasi-peak detector.

(b) Unwanted emissions on frequencies above 960 MHz must not exceed 500 μV/m, measured at a distance of 3 meters using measuring equipment with an averaging detector and a 1 MHz measurement bandwidth.

§§ 95.2381–95.2383 [Reserved]

§ 95.2385 WMTS RF exposure evaluation.

Mobile and portable devices as defined in §§ 2.1091(b) and 2.1093(b) of this chapter operating in the WMTS are subject to radio frequency radiation exposure requirements as specified in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of WMTS devices must contain a statement confirming compliance with these requirements. Technical information showing the basis for this statement must be submitted to the Commission upon request.

[85 FR 18151, Apr. 1, 2020]

§§ 95.2387–95.2391 [Reserved]

§ 95.2393 WMTS labeling requirements.

Each WMTS device must be labeled with the following statement: ''Operation of this equipment requires the prior coordination with a frequency coordinator designated by the FCC for the Wireless Medical Telemetry Service.''

§ 95.2395 WMTS disclosure.

Manufacturers, installers and users of WMTS equipment are cautioned that the operation of this equipment could result in harmful interference to other nearby medical devices.

§§ 95.2397–95.2499 [Reserved]

Subpart I—Medical Device Radio Communications Service

§ 95.2501 Scope.

This subpart contains rules that apply only to the Medical Device Radio Communications (MedRadio) Service.

§ 95.2503 Definitions, MedRadio.

Duly authorized health care professional. A physician or other individual authorized under State or Federal law to provide health care services.

Medical Body Area Network (MBAN). An MBAN is a low power network consisting of a MedRadio programmer/control transmitter and one or more medical body-worn devices all of which transmit or receive non-voice data or related device control commands for the purpose of measuring and recording physiological parameters and other patient information or performing diagnostic or therapeutic functions via radiated bi-directional or uni-directional electromagnetic signals

Medical body-worn device. Apparatus that is placed on or in close proximity to the human body (e.g., within a few centimeters) for the purpose of performing diagnostic or therapeutic functions.

Medical body-worn transmitter. A MedRadio transmitter intended to be placed on or in close proximity to the human body (e.g., within a few centimeters) used to facilitate communications with other medical communications devices for purposes of delivering medical therapy to a patient or collecting medical diagnostic information from a patient.

Medical Device Radio Communications (MedRadio) Service. An ultra-low power radio service for the transmission of non-voice data for the purpose of facilitating diagnostic and/or therapeutic functions involving implanted and body-worn medical devices.

Medical implant device. Apparatus that is placed inside the human body for the purpose of performing diagnostic or therapeutic functions.

Medical implant event. An occurrence or the lack of an occurrence recognized by a medical implant device, or a duly authorized health care professional, that requires the transmission of data from a medical implant transmitter in order to protect the safety or well-being of the person in whom the medical implant transmitter has been implanted.

Medical implant transmitter. A MedRadio transmitter in which both the antenna and transmitter device are designed to operate within a human body for the purpose of facilitating communications from a medical implant device.

Medical Micropower Network (MMN). An ultra-low power wideband network consisting of a MedRadio programmer/control transmitter and medical implant transmitters, all of which transmit or receive non-voice data or related device control commands for the purpose of facilitating functional electric stimulation, a technique using electric currents to activate and monitor nerves and muscles.

MedRadio channel. Any continuous segment of spectrum that is equal to the MedRadio emission bandwidth of the device with the largest bandwidth that is to participate in a MedRadio communications session.

MedRadio communications session. A collection of transmissions, that may or may not be continuous, between MedRadio system devices.

MedRadio emission bandwidth. The difference in frequency between the nearest points on either side of the carrier center frequency where the emission power is at least 20 dB below the maximum level of the modulated carrier power, measured using instrumentation employing a peak detector function and a resolution bandwidth approximately equal to 1% of the emission bandwidth.

MedRadio equivalent isotropically radiated power (M–EIRP). Antenna input power times gain for free-space or in-tissue measurement configurations required for MedRadio equipment, expressed in Watts, where the gain is referenced to an isotropic radiator.

MedRadio programmer/control transmitter. A MedRadio transmitter that operates or is designed to operate outside of a human body for the purpose of communicating with a receiver, or for triggering a transmitter, connected to a medical implant device or to a medical body-worn device used in the MedRadio Service; and which also typically includes a frequency monitoring system that initiates a MedRadio communications session.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53565, Sept. 28, 2021]

§ 95.2505 MedRadio operator eligibility.

Only the following persons are eligible to operate transmitters in the MedRadio Service:

(a) Duly authorized health care professionals are permitted to operate MedRadio transmitters.

(b) Individuals may also operate MedRadio transmitters that they use at the direction of a duly authorized health care professional. This includes medical devices that have been implanted in or placed on the body of the individual by, or under the direction of, a duly authorized health care professional.

(c) Manufacturers of medical devices that include MedRadio transmitters, and their representatives, are eligible

to operate MedRadio transmitters for the purpose of demonstrating such equipment to duly authorized health care professionals.

§ 95.2507 MBAN devices restricted to indoor operation within a health care facility.

Use of Medical Body Area Network (MBAN) devices in the 2360–2390 MHz band is restricted to indoor operation within a health care facility registered with the MBAN frequency coordinator under § 95.2509. For the purposes of this subpart, health care facilities are limited to hospitals and other establishments, both Federal and non-Federal, that offer services, facilities and beds for use beyond a 24 hour period in rendering medical treatment.

§ 95.2509 MBAN registration and frequency coordination.

Operation of Medical Body Area Network (MBAN) devices is subject to the frequency coordination procedures in this section.

(a) The FCC will designate a frequency coordinator(s) to manage the operation of medical body area networks by eligible health care facilities.

(b) The frequency coordinator shall perform the following functions:

(1) Register health care facilities that operate MBAN transmitters, maintain a database of these MBAN transmitter locations and operational parameters, and provide the FCC with information contained in the database upon request;

(2) Determine if an MBAN is within line-of-sight of an Aeronautical Mobile Telemetry (AMT) receive facility in the 2360–2390 MHz band and coordinate MBAN operations with the designated AMT frequency coordinator, as specified in § 87.305 of this chapter;

(3) Notify a registered health care facility when an MBAN has to change frequency within the 2360–2390 MHz band or to cease operating in the band, consistent with a coordination agreement between the MBAN and AMT frequency coordinators;

(4) Develop procedures to ensure that registered health care facilities operate an MBAN consistent with the coordination requirements under this section; and,

(5) Identify the MBAN that is the source of interference in response to a complaint from the AMT coordinator and notify the health care facility of alternative frequencies available for MBAN use or to cease operation consistent with the rules.

(c) *Registration.* Prior to operating MBAN devices that are capable of operation in the 2360–2390 MHz band, a health care facility must register with a frequency coordinator designated under § 95.2509. Operation of MBAN devices in the 2360–2390 MHz band is prohibited prior to the MBAN coordinator notifying the health care facility that registration and coordination (to the extent coordination is required under paragraph (e) of this section) is complete. The registration must include the following information:

(1) Specific frequencies or frequency range(s) within the 2360–2390 MHz band to be used, and the capabilities of the MBAN equipment to use the 2390–2400 MHz band;

(2) Equivalent isotropically radiated power;

(3) Number of MedRadio programmer/control transmitters in use at the health care facility as of the date of registration, including manufacturer name(s) and model number(s) and FCC identification number(s);

(4) Legal name of the health care facility;

(5) Location of MedRadio programmer/control transmitters (e.g., geographic coordinates, street address, building);

(6) Point of contact for the health care facility (e.g., name, title, office address, phone number, fax number, email address); and,

(7) In the event that an MBAN has to cease operating in all or a portion of the 2360–2390 MHz band due to interference under § 95.2525 or changes in coordination under paragraph (e) of this section, a point of contact (including contractors) for the health care facility that is responsible for ensuring that this change is effected whenever it is required (e.g., name, title, office address, phone number, fax number, email address). The health care facility also must state whether, in such cases, its MBAN operation is capable of defaulting to the 2390–2400 MHz band and

that it is responsible for ceasing MBAN operations in the 2360–2390 MHz band or defaulting traffic to other hospital systems.

(d) *Notification.* A health care facility shall notify the MBAN frequency coordinator whenever an MBAN programmer/control transmitter in the 2360–2390 MHz band is permanently taken out of service, unless it is replaced with transmitter(s) using the same technical characteristics as those reported on the health care facility's registration, which will cover the replacement transmitter(s). A health care facility shall keep the information contained in each registration current and shall notify the MBAN frequency coordinator of any material change to the MBAN's location or operating parameters. In the event that the health care facility proposes to change the MBAN's location or operating parameters, the MBAN coordinator must first evaluate the proposed changes and comply with paragraph (e) of this section as appropriate before the health care facility may operate the MBAN in the 2360–2390 MHz band under changed operating parameters.

(e) *Coordination procedures.* The MBAN coordinator will determine if an MBAN is within the line-of-sight of an AMT receive facility in the 2360–2390 MHz band and notify the health care facility when it may begin MBAN operations under the applicable procedures below.

(1) If the MBAN is beyond the line-of-sight of an AMT receive facility, it may operate without prior coordination with the AMT coordinator, provided that the MBAN coordinator provides the AMT coordinator with the MBAN registration information and the AMT frequency coordinator concurs that the MBAN is beyond the line-of-sight prior to the MBAN beginning operations in the band.

(2) If the MBAN is within line-of-sight of an AMT receive facility, the MBAN frequency coordinator shall achieve a mutually satisfactory coordination agreement with the AMT frequency coordinator prior to the MBAN beginning operations in the band. Such coordination agreement shall provide protection to AMT receive stations consistent with International Telecommunication Union (ITU) Recommendation ITU–R M.1459, ''Protection criteria for telemetry systems in the aeronautical mobile service and mitigation techniques to facilitate sharing with geostationary broadcasting-satellite and mobile-satellite services in the frequency bands 1 452–1 525 and 2 310–2 360 MHz,'' May 2000, as adjusted using generally accepted engineering practices and standards that are mutually agreeable to both coordinators to take into account the local conditions and operating characteristics of the applicable AMT and MBAN facilities, and shall specify when the device shall limit its transmissions to segments of the 2360–2390 MHz band or must cease operation in the band. This ITU document is incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Federal Communications Commission must publish a document in the FEDERAL REGISTER and the material must be available to the public. Copies of the recommendation may be obtained from ITU, Place des Nations, 1211 Geneva 20, Switzerland, or online at *http://www.itu.int/en/publications/Pages/default.aspx*. You may inspect a copy at the Federal Communications Commission, 445 12th Street SW, Washington, DC 20554, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*. ''Generally accepted engineering practices and standards'' include, but are not limited to, engineering analyses and measurement data as well as limiting MBAN operations in the band by time or frequency.

(3) If an AMT operator plans to operate a receive site not previously analyzed by the MBAN coordinator to determine line-of-sight to an MBAN facility, the AMT operator shall consider using locations that are beyond the line-of-sight of a registered health care facility. If the AMT operator determines that non-line-of-sight locations

are not practical for its purposes, the AMT coordinator shall notify the MBAN coordinator upon no less than 7 days notice that the registered health care facility must cease MBAN operations in the 2360–2390 MHz band, unless the parties can achieve a mutually satisfactory coordination agreement under paragraph (e)(2) of this section.

(f) *Coordinator functions.* The MBAN frequency coordinator shall:

(1) Provide registration and coordination of MBAN operations to all eligible health care facilities on a non-discriminatory basis;

(2) Provide MBAN registration and coordination services on a not-for-profit basis;

(3) Notify the FCC of its intent to no longer serve as frequency coordinator at least six months prior to ceasing to perform these functions; and

(4) Transfer the MBAN registration data in usable form to a frequency coordinator designated by the FCC if it ceases to be the coordinator.

[82 FR 41104, Aug. 29, 2017, as amended at 85 FR 64411, Oct. 13, 2020; 86 FR 53565, Sept. 28, 2021]

§§ 95.2511–95.2521 [Reserved]

§ 95.2523 MedRadio transmitter inspection.

Any non-implanted MedRadio transmitter must be made available for inspection upon request by an authorized FCC representative. Persons operating implanted or body-worn MedRadio transmitters shall cooperate reasonably with duly authorized FCC representatives in the resolution of interference.

§ 95.2525 MedRadio interference.

(a) To reduce interference and make the most efficient use of the authorized facilities, MedRadio transmitters must share the spectrum in accordance with § 95.2559.

(b) MedRadio operations must not cause harmful interference to, and must accept any interference from, stations operating in the 400.150–406.000 MHz band in the Meteorological Aids, Meteorological Satellite or Earth Exploration Satellite Services, and other authorized stations operating in the 413–419 MHz, 426–432 MHz, 438–444 MHz, 451–457 MHz, and 2360–2400 MHz bands. MedRadio programmer/control transmitters must have the ability to operate in the presence of primary and secondary users in the 413–419 MHz, 426–432 MHz, 438–444 MHz, 451–457 MHz, and 2360–2400 MHz bands.

§§ 95.2527–95.2529 [Reserved]

§ 95.2531 Permissible MedRadio uses.

MedRadio programmer/control transmitters may be operated only for the uses set forth in this section.

(a) MedRadio programmer/control transmitters may transmit only non-voice data containing operational, diagnostic and therapeutic information associated with a medical implant device or medical body-worn device that has been implanted or placed on the person by or under the direction of a duly authorized health care professional.

(b) MedRadio programmer/control transmitters may be operated for the purposes of testing and demonstrating MedRadio operation to health care professionals.

§ 95.2533 Prohibited MedRadio uses.

MedRadio Service transmitters must not be operated for uses other than those set forth in § 95.2531.

(a) Voice communications are prohibited in the MedRadio Service.

(b) MedRadio programmer/control transmitters may not be used to relay information in the 401–406 MHz band to a receiver that is not included with a medical implant or medical body-worn device. Wireless retransmission of information intended to be transmitted by a MedRadio programmer/control transmitter or information received from a medical implant or medical body-worn transmitter shall be performed using other radio services that operate in spectrum outside of the 401–406 MHz band.

(c) MedRadio programmer/control transmitters and medical implant transmitters may not be used to relay information in the 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz bands to a receiver that is not a part of the same Medical Micropower Network (MMN). Wireless retransmission of information to a receiver that is not part

of the same MMN must be performed using other radio services that operate in spectrum outside of the 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz bands. Notwithstanding the above restrictions, a MedRadio programmer/control transmitter of an MMN may communicate with a MedRadio programmer/control transmitter of another MMN to coordinate transmissions, so as to avoid interference between the two MMNs.

(d) Medical body-worn transmitters may relay only information in the 2360–2400 MHz band to a MedRadio programmer/control transmitter or another medical body-worn transmitter device that is part of the same Medical Body Area Network (MBAN). A MedRadio programmer/control transmitter must not be used to relay information in the 2360–2400 MHz band to other MedRadio programmer/control transmitters. Wireless retransmission of all other information from an MBAN transmitter to a receiver that is not a part of the same MBAN shall be performed using other radio services that operate in spectrum outside of the 2360–2400 MHz band. Notwithstanding the above restriction, a MedRadio programmer/control transmitter in the 2360–2400 MHz band may communicate with another MedRadio programmer/control transmitter in the 2360–2400 MHz band to coordinate transmissions so as to avoid interference between the two MBANs.

(e) Except as provided in §95.2559(b), no MedRadio implant or body-worn transmitter shall transmit except in response to—

(1) A transmission from a MedRadio programmer/control transmitter; or

(2) A non-radio frequency actuation signal generated by a device external to the body with respect to which the MedRadio implant or body-worn transmitter is used.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53566, Sept. 28, 2021]

§95.2535 MedRadio equipment certification exception.

Non-certified medical implant or medical body-worn transmitters that are not marketed for use in the United States, but which otherwise comply with the technical requirements in this subpart, may be used by individuals who travel to the United States.

§§95.2537–95.2539 [Reserved]

§95.2541 MedRadio outdoor antenna restrictions.

The antenna for a MedRadio transmitter, other than a MedRadio transmitter operating in the 2390–2400 MHz band, must not be configured for permanent outdoor use. Furthermore, except for MedRadio operations in the 2390–2400 MHz band, any MedRadio antenna used outdoors must not be affixed to any structure for which the height to the tip of the antenna would exceed three meters (9.8 feet) above ground level.

§§95.2543–95.2545 [Reserved]

§95.2547 MedRadio automatic control.

Notwithstanding the provisions of §95.347, MedRadio transmitters may be operated under automatic control or manual control.

§95.2549 MedRadio network connection.

MedRadio programmer/control transmitters may be interconnected with other telecommunications systems including the public switched network.

§§95.2551–95.2555 [Reserved]

§95.2557 MedRadio duration of transmissions.

For the purpose of facilitating MedRadio system operation during a MedRadio communications session, the duration of transmissions is to be limited in accordance with this section.

(a) MedRadio transmitters may transmit in the 401–406 MHz band in accordance with the provisions of §95.2559(a) for no more than 5 seconds without the communications of data.

(b) MedRadio transmitters may transmit in the 401–406 MHz band in accordance with the provisions of §95.2559(b)(2) and §95.2559(b)(3) for no more than 3.6 seconds in total within a one hour time period.

(c) MedRadio transmitters may transmit in the 401–406 MHz band in accordance with the provisions of

§ 95.2559(b)(4) for no more than 360 milliseconds in total within a one hour time period.

(d) MedRadio programmer/control transmitters operating in the 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz bands shall not transmit with a duty cycle greater than 3 percent.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53566, Sept. 28, 2021]

§ 95.2559 MedRadio channel access requirements.

To reduce interference and make the most effective use of the MedRadio frequency bands, MedRadio transmitter types must be designed to operate in accordance with the rules in this section.

(a) *Frequency monitoring in the 401–406 MHz band.* Except as provided in paragraph (b) of this section, all MedRadio programmer/control transmitters operating in the 401–406 MHz band must operate under the control of a monitoring system that incorporates a mechanism for monitoring the channel or channels that the MedRadio system devices intend to occupy. The monitoring system antenna shall be the antenna normally used by the programmer/control transmitter for a MedRadio communications session. Before the monitoring system of a programmer/control transmitter initiates a MedRadio communications session, the following access criteria must be met:

(1) The monitoring system bandwidth, measured at its 20 dB down points, must be equal to or greater than the MedRadio emission bandwidth of the intended transmission.

(2) Within 5 seconds prior to initiating a MedRadio communications session, circuitry associated with a MedRadio programmer/control transmitter must monitor the channel or channels the system devices intend to occupy for a minimum of 10 milliseconds per channel.

(3) The monitoring threshold power level, P_{MT}, in dBm, is calculated using the following formula.

$$P_{MT} = 10 \log B - 150 \text{ (dBm/Hz)} + G$$

Where:

(i) B is the MedRadio emission bandwidth in Hertz of the MedRadio communications session transmitter having the widest emission; and,

(ii) G is the MedRadio programmer/control transmitter monitoring system antenna gain, in decibels, relative to the gain of an isotropic antenna (dBi).

(4) For the purposes of showing compliance with the above provisions, the above calculated threshold power level must be increased or decreased by an amount equal to the monitoring system antenna gain above or below the gain of an isotropic antenna, respectively.

(5) If no signal above the monitoring threshold power level is detected in a MedRadio channel, the MedRadio programmer/control transmitter may initiate on that channel a MedRadio communications session involving transmissions to and from a medical implant or medical body-worn device. The MedRadio communications session may continue as long as any silent period between consecutive data transmission bursts does not exceed 5 seconds. If no channel meeting the requirements in paragraphs (a)(3) and (4) of this section is available, MedRadio transmitters that are capable of operating on multiple channels may transmit on the alternate channel accessible by the device with the lowest monitored ambient power level.

(6) When a channel is selected prior to a MedRadio communications session, it is permissible to select an alternate channel for use if communications are interrupted, provided that the alternate channel selected is the next best choice using the criteria specified in paragraphs (a)(1) through (5) of this section. The alternate channel may be accessed in the event a communications session is interrupted by interference. The following criteria must be met:

(i) Before transmitting on the alternate channel, the channel must be monitored for a period of at least 10 milliseconds.

(ii) The detected power level during this 10 millisecond or greater monitoring period must be no higher than 6 dB above the power level detected when the channel was chosen as the alternate channel.

(iii) In the event that this alternate channel provision is not used by the

MedRadio system, or if the criteria in paragraphs (i) and (ii) of this section are not met, a channel must be selected using the access criteria specified in paragraphs (a)(1) through (5) of this section.

(7) Except as provided in paragraph (b) of this section, MedRadio transmitters that operate on a single channel and thus do not have the capability of operating on alternate channels may not transmit unless no signal on the single channel of operation exceeds the monitoring threshold power level.

(b) *Exceptions to frequency monitoring in the 401–406 MHz band.* MedRadio devices or communications sessions that meet any one of the following criteria are not required to be operated in accordance with the access rules set forth in paragraph (a) of this section:

(1) MedRadio communications sessions that are initiated by a medical implant event.

(2) MedRadio devices operating in either the 401–401.85 MHz or 405–406 MHz bands, provided that the transmit power is not greater than 250 nanowatts EIRP and the duty cycle for such transmissions does not exceed 0.1%, based on the total transmission time during a one-hour interval, and a maximum of 100 transmissions per hour.

(3) MedRadio devices operating in the 401.85–402 MHz band, provided that the transmit power is not greater than 25 microwatts EIRP and the duty cycle for such transmissions does not exceed 0.1%, based on the total transmission time during a one-hour interval, and a maximum of 100 transmissions per hour.

(4) MedRadio devices operating with a total emission bandwidth not exceeding 300 kHz, centered at 403.65 MHz, provided that the transmit power is not greater than 100 nanowatts EIRP and the duty cycle for such transmissions does not exceed 0.01%, based on the total transmission time during a one-hour interval and a maximum of 10 transmissions per hour.

(c) *Shared access.* The provisions of this section shall not be used to extend the range of spectrum occupied over space or time for the purpose of denying fair access to spectrum for other MedRadio systems.

(d) *Frequency monitoring in the 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz bands.* MedRadio programmer/control transmitters must incorporate a mechanism for monitoring the authorized bandwidth of the frequency band that the MedRadio transmitters intend to occupy. The monitoring system antenna shall be the same antenna used by the programmer/control transmitter for a communications session.

(1) The MedRadio programmer/control transmitter shall be capable of monitoring any occupied frequency band at least once every second and monitoring alternate frequency bands within two seconds prior to executing a change to an alternate frequency band.

(2) The MedRadio programmer/control transmitter shall move to another authorized frequency band within one second of detecting a persistent (*i.e.*, lasting more than 50 milliseconds) signal level greater than −60 dBm as received by a 0 dBi gain antenna in any 12.5 kHz bandwidth within the authorized bandwidth.

(3) The MedRadio programmer/control transmitter shall be capable of monitoring the authorized bandwidth of the occupied frequency band to determine whether either direction of the communications link is becoming degraded to the extent that communications is likely to be lost for more than 45 milliseconds. Upon making such a determination the MedRadio programmer/control transmitter shall move to another authorized frequency band.

(e) *System shutdown.* MedRadio transmitters shall incorporate a programmable means to implement a system shutdown process in the event of communication failure, on command from the MedRadio programmer/control transmitter, or when no authorized alternate frequency band is available. The shutdown process shall commence within 45 milliseconds after loss of the communication link or receipt of the shutdown command from the MedRadio programmer/control transmitter. This requirement does not apply to MedRadio operations in the 401–406 MHz band.

(f) *Requirements for MBANs.* A MedRadio programmer/control transmitter and its associated medical body-

worn transmitters shall not commence operating in, and shall automatically cease operating in, the 2360–2390 MHz band if the programmer/control transmitter does not receive, in accordance with the protocols specified by the manufacturer, a control message permitting such operation. Medical body-worn transmitters shall cease operating in 2360–2390 MHz if they lose communication with their associated programmer/control transmitter. Additionally, a MedRadio programmer/control transmitter and its associated medical body-worn transmitters operating in the 2360–2390 MHz band shall comply with a control message that notifies the devices to limit transmissions to segments of the 2360–2390 MHz band or to cease operation in the band.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53566, Sept. 28, 2021]

§ 95.2561 MedRadio transmitter certification.

(a) Except as provided § 95.2535, each MedRadio transmitter (a transmitter that operates or is intended to operate as a station in the MedRadio Service) must be certified in accordance with this subpart and part 2 of this chapter.

(b) A grant of equipment certification for the MedRadio Service will not be issued for any MedRadio transmitter type that fails to comply with all of the applicable rules in this subpart.

§ 95.2563 MedRadio frequency bands.

MedRadio transmitters operate in the 401–406 MHz, 413–419 MHz, 426–432 MHz, 438–444 MHz, 451–457 MHz, and 2360–2400 MHz bands. The FCC does not specify a channeling scheme for MedRadio systems.

(a) MedRadio transmitters associated with medical implant devices, which incorporate a frequency monitoring system as set forth in § 95.2559(a), may transmit on any frequency in the 401–406 MHz band.

(b) MedRadio transmitters associated with medical implant devices, which do not incorporate a frequency monitoring system as set forth in § 95.2559(a), may transmit on any frequency in the 401–402 MHz or 405–406 MHz bands, or on the frequency 403.65 MHz in the 402–405 MHz band.

(c) MedRadio transmitters associated with medical body-worn devices, regardless of whether a frequency monitoring system as set forth in § 95.2559(a) is employed, may transmit on any frequency in the 401–402 MHz or 405–406 MHz bands.

(d) MedRadio transmitters that are used externally to evaluate the efficacy of a more permanent medical implant device, regardless of whether a frequency monitoring system as set forth in § 95.2559(a) is employed, may operate on any frequency in the 402–405 MHz band, provided that:

(1) Such external body-worn operation is limited solely to evaluating with a patient the efficacy of a fully implanted permanent medical device that is intended to replace the temporary body-worn device;

(2) RF transmissions from the external device must cease following the patient evaluation period, which may not exceed 30 days, except where a health care practitioner determines that additional time is necessary due to unforeseen circumstances;

(3) The maximum output power of the temporary body-worn device must not exceed 200 nW EIRP; and

(4) The temporary body-worn device must comply fully with all other MedRadio rules applicable to medical implant device operation in the 402–405 MHz band.

(e) Only MedRadio transmitters that are part of a Medical Micropower Network (MMN) may operate in the 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz bands. Each MedRadio transmitter that is part of an MMN must be capable of operating in each of the following bands: 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz. All MedRadio transmitters that are part of a single MMN must operate in the same band.

(f) Only MedRadio transmitters that are part of a Medical Body Area Network (MBAN) may operate in the 2360–2400 MHz band.

§ 95.2565 MedRadio frequency accuracy.

Each MedRadio transmitter type must be designed to maintain a frequency stability of ±100 ppm of the operating frequency over the applicable temperature range set forth in this section. Frequency stability testing shall be performed over the appropriate temperature range.

(a) 25 °C to 45 °C in the case of medical implant transmitters; and

(b) 0 °C to 55 °C in the case of MedRadio programmer/control transmitters and medical body-worn transmitters.

§ 95.2567 MedRadio radiated power limits.

Each MedRadio transmitter type must be designed such that the MedRadio equivalent isotropically radiated power (M–EIRP) does not exceed the limits in this section. Compliance with these limits must be determined as set forth in § 95.2569.

(a) *Transmitters subject to frequency monitoring—401–406 MHz.* For MedRadio transmitters that are not excepted under § 95.2559(b) from the frequency monitoring requirements of § 95.2559(a):

(1) The M–EIRP within any 300 kHz bandwidth within the 402–405 MHz band must not exceed 25 microwatts.

(2) The M–EIRP within any 100 kHz bandwidth within the 401–402 MHz or 405–406 MHz bands must not exceed 25 microwatts.

(b) *Transmitters excepted from frequency monitoring—401–402 MHz and 405–406 MHz.* For MedRadio transmitters that are excepted under § 95.2559(b)(2) or (3) from the frequency monitoring requirements of § 95.2559(a):

(1) The M–EIRP of any transmitter operating in the 401–401.85 MHz or 405–406 MHz bands must not exceed 250 nanowatts in any 100 kHz bandwidth.

(2) The M–EIRP of any transmitter operating in the 401.85–402 MHz band must not exceed 25 microwatts in any 150 kHz bandwidth.

(c) *Transmitters excepted from frequency monitoring—403.65 MHz.* For MedRadio transmitters that are excepted under § 95.2559(b)(4) from the frequency monitoring requirements of § 95.2559(a), the M–EIRP must not exceed 100 nanowatts in the 300 kHz bandwidth centered at 403.65 MHz.

(d) *Transmitters—other frequency bands.* For MedRadio transmitters operating in the 413–419 MHz, 426–432 MHz, 438–444 MHz, or 451–457 MHz bands:

(1) The peak M–EIRP over the frequency bands of operation must not exceed the lesser of zero dBm (1 mW) or 10 log (B) − 7.782 dBm, where B is the MedRadio 20 dB emission bandwidth in megahertz.

(2) The peak power spectral density must not exceed 800 microwatts per megahertz in any one megahertz band.

(e) *Transmitters—2360–2390 MHz band.* For MedRadio transmitters operating in the 2360–2390 MHz band, the M–EIRP over the bands of operation must not exceed the lesser of zero dBm (1 mW) or 10 log (B) dBm, where B is the MedRadio 20 dB emission bandwidth in megahertz.

(f) *Transmitters—2390–2400 MHz band.* For MedRadio transmitters operating in the 2390–2400 MHz band, the M–EIRP over the bands of operation must not exceed the lesser of 13 dBm (20 mW) or 16 + 10 log (B) dBm, where B is the MedRadio 20 dB emission bandwidth in megahertz.

§ 95.2569 MedRadio field strength measurements.

Compliance with MedRadio equivalent isotropic radiated power (M–EIRP) limits can be determined by measuring the radiated field strength from the transmitter type, in accordance with the rules in this section.

(a) Radiated field strength values corresponding to the M–EIRP limits in § 95.2567 are given in the table in this paragraph, for an open area test site, and for a test site equivalent to free space, such as a fully anechoic test chamber. Field strength is measured at a distance of 3 meters from the equipment under test.

M–EIRP limit	Open area (mV/m)	Free space (mV/m)
1 mW	115.1	57.55
25 μW	18.2	9.1
250 nW	1.8	0.9
100 nW	1.2	0.6

(b) Compliance with the maximum transmitter power requirements in § 95.2567 is based on measurements

using a peak detector function and measured over an interval of time when transmission is continuous and at its maximum power level. In lieu of using a peak detector function, measurement procedures that have been found to be acceptable to the FCC in accordance with §2.947 of this chapter may be used to demonstrate compliance.

(c) For a MedRadio transmitter intended to be implanted in a human body, radiated emissions and M–EIRP measurements for transmissions by stations authorized under this section may be made in accordance with an FCC-approved human body simulator and test technique. Guidance regarding dielectric parameters for the tissue-equivalent material can be found in the Office of Engineering and Technology (OET) Laboratory Division Knowledge Database (KDB).

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53566, Sept. 28, 2021]

§ 95.2571 MedRadio emission types.

A MedRadio station may transmit any emission type appropriate for communications in this service. Voice communications, however, are prohibited.

§ 95.2573 MedRadio authorized bandwidths.

Each MedRadio transmitter type must be designed such that the MedRadio emission bandwidth (as defined in §95.2503) does not exceed the applicable limits set forth in this section.

(a) For MedRadio transmitters operating in the 402–405 MHz band, the maximum MedRadio emission bandwidth is 300 kHz. Such transmitters must not use more than 300 kHz of bandwidth (total) during a MedRadio communications session. This provision does not preclude full duplex or half duplex communications provided that the total bandwidth of all of the channels employed in a MedRadio communications session does not exceed 300 kHz.

(b) For MedRadio transmitters operating in the 401–401.85 MHz band or the 405–406 MHz band, the maximum MedRadio emission bandwidth is 100 kHz. Such transmitters must not use more than 100 kHz of bandwidth (total) during a MedRadio communications session. This provision does not preclude full duplex or half duplex communications provided that the total bandwidth of all of the channels employed in a MedRadio communications session does not exceed 100 kHz.

(c) For MedRadio transmitters operating in the 401.85–402 MHz band, the maximum MedRadio emission bandwidth is 150 kHz. Such transmitters must not use more than 150 kHz of bandwidth (total) during a MedRadio communications session. This provision does not preclude full duplex or half duplex communications, provided that the total bandwidth of all of the channels employed in a MedRadio communications session does not exceed 150 kHz.

(d) For MedRadio transmitters operating in the 413–419 MHz, 426–432 MHz, 438–444 MHz or 451–457 MHz bands, the maximum MedRadio emission bandwidth is 6 MHz.

(e) For MedRadio transmitters operating in the 2360–2400 MHz band, the maximum MedRadio emission bandwidth is 5 MHz.

(f) Lesser emission bandwidths may be employed, provided that the unwanted emissions are attenuated as provided in §95.2579. See also §95.2567 regarding maximum radiated power limits, §95.2565 on frequency accuracy, §95.2569 on field strength measurements, and §95.2585 on RF exposure.

[86 FR 53566, Sept. 28, 2021]

§§ 95.2575–95.2577 [Reserved]

§ 95.2579 MedRadio unwanted emissions limits.

Unwanted emission field strength limits and attenuation requirements apply to each MedRadio transmitter type, as set forth in this section and part 2.

(a) *Field strength limits.* The field strengths of unwanted emissions from each MedRadio transmitter type, measured at a distance of 3 meters, must not exceed the field strength limits shown in the table in this paragraph for the indicated frequency ranges, if the frequencies of these emissions are:

(1) More than 250 kHz outside of the 402–405 MHz band (for devices designed to operate in the 402–405 MHz band);

(2) More than 100 kHz outside of either the 401–402 MHz or 405–406 MHz bands (for devices designed to operate in the 401–402 MHz or 405–406 MHz bands);

(3) In the 406.000–406.100 MHz band (for devices designed to operate in the 401–402 MHz or 405–406 MHz bands); or

(4) More than 2.5 MHz outside of the 413–419 MHz, 426–432 MHz, 438–444 MHz or 451–457 MHz bands (for devices designed to operate in these four bands).

(5) More than 2.5 MHz outside of the 2360–2400 MHz band (for devices designed to operate in the 2360–2400 MHz band).

Frequency range (MHz)	Field strength (μV/m)
30–88	100
88–216	150
216–960	200
960 and above	500

Note to table in paragraph (a)(5): At the boundaries between frequency ranges, the tighter limit (lower field strength) applies. Below 1 GHz, field strength is measured using a CISPR quasi-peak detector. Above 1 GHz, field strength is measured using an average detector with a minimum reference bandwidth of 1 MHz. *See also* part 2, subpart J of this chapter.

(b) *Harmonic emissions.* Radiated unwanted emissions from a MedRadio transmitter type must be measured to at least the tenth harmonic of the highest fundamental frequency emitted.

(c) *Attenuation requirements, 402–405 MHz.* For MedRadio transmitter types designed to operate in the 402–405 MHz band, unwanted emissions must be attenuated below the maximum permitted transmitter output power by at least:

(1) 20 dB, on any frequency within the 402–405 MHz band that is more than 150 kHz away from the center frequency of the MedRadio channel the transmission is intended to occupy;

(2) 20 dB, on any frequency between 401.750 MHz and 402.000 MHz, and on any frequency between 405 MHz and 405.250 MHz.

(d) *Attenuation requirements, 401–402 MHz, 405–406 MHz.* For MedRadio transmitter types designed to operate in the 401–402 MHz band or 405–406 MHz band, the power of unwanted emissions must be attenuated below the maximum permitted transmitter output power by at least:

(1) 20 dB, on any frequency within the 401–401.85 MHz or 405–406 MHz bands that is:

(i) More than 75 kHz away from the center frequency of the MedRadio channel the transmission is intended to occupy if the MedRadio transmitter type is operating on a frequency between 401.85 and 402 MHz; or,

(ii) More than 50 kHz away from the center frequency of the MedRadio channel the transmission is intended to occupy and 100 kHz or less below 401 MHz or above 406 MHz.

(2) 20 dB, on any frequency between 400.900 MHz and 401.000 MHz, and on any frequency between 406.000 MHz and 406.100 MHz.

(e) *Attenuation requirements, 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz.* For MedRadio transmitter types designed to operate in the 413–419 MHz, 426–432 MHz, 438–444 MHz and 451–457 MHz bands: In the first 2.5 megahertz above or below any of the frequency bands authorized for Medical Micropower Network operation, the EIRP of any unwanted emission must be attenuated within a 1 megahertz bandwidth by at least 20 dB relative to the maximum EIRP within any 1 megahertz bandwidth of the fundamental emission.

(f) *Attenuation requirements, 2360–2400 MHz.* For MedRadio transmitter types designed to operate in the 2360–2400 MHz band: In the first 2.5 megahertz above or below any of the frequency bands authorized for MBAN operation, the EIRP of any unwanted emission must be attenuated within a 1 megahertz bandwidth by at least 20 dB relative to the maximum EIRP within any 1 megahertz bandwidth of the fundamental emission.

(g) *Measurements.* Compliance with the limits in paragraphs (c), (d) and (e) of this section is based on the use of measurement instrumentation using a

peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 53566, Sept. 28, 2021]

§§ 95.2581–95.22583 [Reserved]

§ 95.2585 MedRadio RF exposure evaluation.

A MedRadio medical implant device or medical body-worn transmitter is subject to the radiofrequency radiation exposure requirements specified in §§ 1.1307(b) and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of devices operating under this section must demonstrate compliance with these requirements using either computational modeling or laboratory measurement techniques. Where a showing is based on computational modeling, the Commission retains the discretion to request that supporting documentation and/or specific absorption rate (SAR) measurement data be submitted, as described in § 2.1093(d)(1) of this chapter.

[85 FR 18151, Apr. 1, 2020]

§ 95.2587 MedRadio additional requirements.

(a) The antenna associated with any MedRadio transmitter must be supplied with the transmitter and is considered part of the transmitter subject to equipment authorization.

(b) MedRadio transmitters shall be tested for frequency stability, radiated emissions and EIRP limit compliance in accordance with applicable rules.

§ 95.2589 [Reserved]

§ 95.2591 MedRadio marketing limitations.

Transmitters intended for operation in the MedRadio Service may be marketed and sold only for the use in accordance with § 95.2531.

§ 95.2593 MedRadio labeling requirements.

MedRadio transmitters must be labeled in accordance with the requirements in this section.

(a) MedRadio programmer/control transmitters operating in the 401–406 MHz band shall be labeled as provided in part 2 of this chapter and shall bear the following statement in a conspicuous location on the device:

This device may not interfere with stations operating in the 400.150–406.000 MHz band in the Meteorological Aids, Meteorological Satellite, and Earth Exploration Satellite Services and must accept any interference received, including interference that may cause undesired operation.

(b) MedRadio programmer/control transmitters operating in the 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz bands shall be labeled as provided in part 2 of this chapter and shall bear the following statement in a conspicuous location on the device:

This device may not interfere with stations authorized to operate on a primary basis in the 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz bands, and must accept any interference received, including interference that may cause undesired operation.

(c) MedRadio programmer/control transmitters operating in the 2360–2400 MHz band shall be labeled as provided in part 2 of this chapter and shall bear the following statement in a conspicuous location on the device:

This device may not interfere with stations authorized to operate on a primary basis in the 2360–2400 MHz band, and must accept any interference received, including interference that may cause undesired operation.

(d) If it is not feasible to place the statement specified by paragraph (a), (b), or (c) of this section on the device, it may be placed in the instruction manual for the transmitter instead.

(e) If a MedRadio programmer/control transmitter is constructed in two or more sections connected by wire and marketed together, the statement specified in this section is required to be affixed only to the main control unit.

(f) MedRadio transmitters shall be identified with a serial number on each device, except as noted in paragraphs (f)(1) and (2) of this section.

(1) For MedRadio transmitters that operate in the 2360–2400 MHz band, only the programmer/control transmitter

shall be identified with a serial number.

(2) The FCC ID number associated with a medical implant transmitter and the information required by § 2.925 of this chapter may be placed in the instruction manual for the transmitter and on the shipping container for the transmitter, in lieu of being placed directly on the transmitter.

§ 95.2595 MedRadio disclosures.

Manufacturers of MedRadio transmitters must include with each transmitting device the statement set forth in this section that applies to the frequency bands in use.

(a) For MedRadio transmitters operating in the 401–406 MHz band, the following statement applies:

This transmitter is authorized by rule under the Medical Device Radiocommunication Service (in part 95 of the FCC Rules) and must not cause harmful interference to stations operating in the 400.150–406.000 MHz band in the Meteorological Aids (*i.e.*, transmitters and receivers used to communicate weather data), the Meteorological Satellite, or the Earth Exploration Satellite Services and must accept interference that may be caused by such stations, including interference that may cause undesired operation. This transmitter shall be used only in accordance with the FCC Rules governing the Medical Device Radiocommunication Service. Analog and digital voice communications are prohibited. Although this transmitter has been approved by the Federal Communications Commission, there is no guarantee that it will not receive interference or that any particular transmission from this transmitter will be free from interference.

(b) For MedRadio transmitters operating in the 413–419 MHz, 426–432 MHz, 438–444 MHz and 451–457 MHz bands, the following statement applies:

This transmitter is authorized by rule under the MedRadio Service (47 CFR part 95). This transmitter must not cause harmful interference to stations authorized to operate on a primary basis in the 413–419 MHz, 426–432 MHz, 438–444 MHz, and 451–457 MHz bands, and must accept interference that may be caused by such stations, including interference that may cause undesired operation. This transmitter shall be used only in accordance with the FCC Rules governing the MedRadio Service. Analog and digital voice communications are prohibited. Although this transmitter has been approved by the Federal Communications Commission, there is no guarantee that it will not receive interference or that any particular transmission from this transmitter will be free from interference.

(c) For MedRadio transmitters operating in the 2360–2400 MHz band, the following statement applies:

This transmitter is authorized by rule under the MedRadio Service (47 CFR part 95). This transmitter must not cause harmful interference to stations authorized to operate on a primary basis in the 2360–2400 MHz band, and must accept interference that may be caused by such stations, including interference that may cause undesired operation. This transmitter shall be used only in accordance with the FCC Rules governing the MedRadio Service. Analog and digital voice communications are prohibited. Although this transmitter has been approved by the Federal Communications Commission, there is no guarantee that it will not receive interference or that any particular transmission from this transmitter will be free from interference.

§§ 95.2597–95.2699 [Reserved]

Subpart J—Multi–Use Radio Service

§ 95.2701 Scope.

This subpart contains rules that apply only to the Multi-Use Radio Service (MURS).

§ 95.2703 Definitions, MURS.

MURS. A two-way, short distance voice or data communication service for facilitating personal or business activities of the general public.

§ 95.2705 Grandfathered MURS stations.

MURS stations that were licensed under part 90 of this chapter to operate on MURS frequencies as of November 13, 2000, are authorized by this rule to continue to operate under terms identical to those of such nullified part 90 authorizations, including any associated rule waivers.

§ 95.2707 Airborne use of MURS not authorized.

Notwithstanding the provisions of § 95.307, MURS operation is not authorized aboard aircraft in flight.

§§ 95.2709–95.2717 [Reserved]

§ 95.2719 MURS replacement parts.

The operator of an MURS transmitter may replace parts of an MURS transmitter as indicated in this section. All other internal maintenance and repairs must be carried out in accordance with § 95.319.

(a) A damaged antenna may be replaced by another antenna of the same or a compatible similar type.

(b) Batteries in the MURS transmitter may be replaced with batteries of a type specified by the manufacturer.

§§ 95.2721–95.2723 [Reserved]

§ 95.2725 MURS interference.

MURS station operators must take reasonable precautions to avoid causing harmful interference. This includes monitoring the transmitting frequency for communications in progress before transmitting, and other measures as may be necessary to minimize the potential for causing interference.

§§ 95.2727–95.2729 [Reserved]

§ 95.2731 Permissible MURS uses.

The operator of a MURS station may use it for the purposes listed in this section.

(a) MURS stations may be used to transmit voice, data or image signals.

(b) MURS stations may be used for telecommand and telemetry functions.

§ 95.2733 Prohibited MURS uses.

MURS stations must not be operated as repeater stations or signal boosters. This prohibition includes store-and-forward packet operation.

§§ 95.2735–95.2739 [Reserved]

§ 95.2741 MURS antenna height limit.

The highest point of any MURS station antenna must not be more than 18.3 meters (60 feet) above the ground or 6.10 meters (20 feet) above the highest point of the structure on which it is mounted. MURS station antennas must also meet the requirements in § 95.317 regarding menaces to air navigation. *See* 47 CFR 95.317 and consult part 17 of the FCC's Rules for more information (47 CFR part 17).

§§ 95.2743–95.2747 [Reserved]

§ 95.2749 MURS network connection.

MURS stations are prohibited from interconnection with the public switched network. *Interconnection Defined.* Connection through automatic or manual means of multi-use radio stations with the facilities of the public switched telephone network to permit the transmission of messages or signals between points in the wireline or radio network of a public telephone company and persons served by multi-use radio stations. Wireline or radio circuits or links furnished by common carriers, which are used by licensees or other authorized persons for transmitter control (including dial-up transmitter control circuits) or as an integral part of an authorized, private, internal system of communication or as an integral part of dispatch point circuits in a multi-use radio station are not considered to be interconnection for purposes of this rule part.

§§ 95.2751–95.2755 [Reserved]

§ 95.2757 MURS duration of transmissions.

MURS stations may not be operated in the continuous carrier transmit mode.

§ 95.2759 [Reserved]

§ 95.2761 MURS transmitter certification.

(a) Each MURS transmitter (a transmitter that operates or is intended to operate in MURS) must be certified in accordance with this subpart and part 2 of this chapter.

(b) A grant of equipment certification will not be issued for any MURS transmitter type that fails to comply with all of the applicable rules in this subpart.

(c) A grant of equipment certification will not be issued for MURS transmitters capable of operating under both this subpart (MURS) and under any other subparts of this chapter (except part 15).

§ 95.2763 MURS channels.

Five VHF channels are allotted for shared use in the MURS. These channels, designated by their center frequencies in megahertz, are as follows: 151.820, 151.880, 151.940, 154.570, and 154.600 MHz. Each MURS transmitter type must be designed to transmit on one or more of these channels.

§ 95.2765 MURS frequency accuracy.

Each MURS transmitter type must be designed to meet the applicable frequency tolerance and stability requirements of this section.

(a) MURS transmitters that operate with an emission bandwidth of 6.25 kHz or less must be designed such that the carrier frequencies remain within ±2.0 parts-per-million (ppm) of the channel center frequencies specified in § 95.2763 during normal operating conditions.

(b) MURS transmitters that operate with an emission bandwidth greater than 6.25 kHz must be designed such that the carrier frequencies remain within ±5.0 ppm of the channel center frequencies specified in § 95.2763 during normal operating conditions.

§ 95.2767 MURS transmitting power limit.

Each MURS transmitter type must be designed such that the transmitter power output does not exceed 2 Watts under normal operating conditions.

§ 95.2769 [Reserved]

§ 95.2771 MURS emission types.

A MURS transmitter must transmit only emission types A1D, A2B, A2D, A3E, F2B, F1D, F2D, F3E, and G3E. Emission types A3E, F3E and G3E may include selective calling or tone-operated squelch tones to establish or continue voice communications. MURS transmitters are prohibited from transmitting in the continuous carrier mode.

§ 95.2773 MURS authorized bandwidths.

Each MURS transmitter type must be designed to meet the emission bandwidth limitations in this section.

(a) The occupied bandwidth of emissions transmitted on the center frequencies 151.820 MHz, 151.880 MHz, and 151.940 MHz must not exceed 11.25 kHz.

(b) The occupied bandwidth of emissions transmitted on the center frequencies 154.570 MHz and 154.600 MHz must not exceed 20.0 kHz.

(c) The occupied bandwidth of type A3E emissions must not exceed 8.0 kHz.

§ 95.2775 MURS audio filter.

The audio filter referenced in § 95.2779 must satisfy the requirements in this section.

(a) The audio filter must be between the modulation limiter and the modulated stage of the transmitter.

(b) At any frequency (f in kHz) between 3 and 15 kHz, the filter must have an attenuation of at least 40 log (f/3) dB more than the attenuation at 1 kHz. Above 15 kHz, it must have an attenuation of at least 28 dB more than the attenuation at 1 kHz.

§ 95.2777 [Reserved]

§ 95.2779 MURS unwanted emissions limits.

The requirements in this section apply to each MURS transmitter type both with and without the connection of attachments, such as an external microphone, power cord and/or antenna.

(a) *Emission masks.* Emission masks applicable to transmitting equipment in the MURS are defined by the requirements in the following table. The numbers in the paragraphs column refer to attenuation requirement rule paragraph numbers under paragraph (b) of this section. The words ''audio filter'' refer to the audio filter described in § 95.2775.

Channel center frequencies (MHz)	Paragraphs
151.820, 151.880 and 151.940	(1), (2).
154.570 & 154.600, with audio filter	(3), (4), (7).
154.570 & 154.600, without audio filter	(5), (6), (7).

(1) Each MURS transmitter type that transmits F3E or G3E emissions on 154.570 MHz or 154.600 MHz and incorporates an audio filter satisfying the requirements of § 95.2775 in its design may comply with the less stringent unwanted emissions attenuation requirements set forth in paragraphs (b)(3), (4), and (7) of this section.

(2) Each MURS transmitter type that transmits on 154.570 MHz or 154.600 MHz, but does not incorporate an audio filter satisfying the requirements of §95.2775 in its design, must comply with the unwanted emissions attenuation requirements set forth in paragraphs (b)(5) through (7) of this section.

(b) *Attenuation requirements.* The power of unwanted emissions must be attenuated below the transmitter output power in Watts (P) by at least:

(1) $7.27(f_d - 2.88$ kHz) dB on any frequency removed from the channel center frequency by a displacement frequency (f_d in kHz) that is more than 5.625 kHz, but not more than 12.5 kHz.

(2) 50 + 10 log (P) dB or 70 dB, whichever is the lesser attenuation, on any frequency removed from the channel center frequency by more than 12.5 kHz.

(3) 25 dB on any frequency removed from the channel center frequency by more than 10 kHz, but not more than 20 kHz.

(4) 35 dB on any frequency removed from the channel center frequency by more than 20 kHz, but not more than 50 kHz.

(5) 83 log ($f_d \div 5$) dB on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) that is more than 5 kHz, but not more than 10 kHz.

(6) 29 log ($f_d^2 \div 11$) dB or 50 dB, whichever is the lesser attenuation on any frequency removed from the channel center frequency by a displacement frequency (f_d in kHz) that is more than 10 kHz, but not more than 50 kHz.

(7) 43 + 10 log(P) dB on any frequency removed from the channel center frequency by more than 50 kHz.

(c) *Measurement bandwidths.* The power of unwanted emissions in the frequency bands specified in paragraphs (b)(1) and (3) through (6) of this section is measured with a reference bandwidth of 300 Hz. The power of unwanted emissions in the frequency ranges specified in paragraphs (b)(2) and (7) of this section is measured with a reference bandwidth of at least 30 kHz.

§§ 95.2781–95.2899 [Reserved]

Subpart K—Personal Locator Beacons and Maritime Survivor Locating Devices

§ 95.2901 Scope.

This subpart contains rules that apply only to Personal Locator Beacons (PLBs) and Maritime Survivor Locating Devices (MSLDs).

§ 95.2903 Definitions, PLBs and MSLDs.

Identification code. An identification code issued by the National Oceanic and Atmospheric Administration (NOAA) to establish a unique identification for each PLB.

National Oceanic and Atmospheric Administration (NOAA). The U.S. Government Agency that is the United States Program Manager for the 406 MHz COSPAS/SARSAT satellite system.

Maritime Survivor Locating Device (MSLD). A device intended to aid in the location of persons in the water.

Personal Locator Beacon (PLB). A small portable transmitter, compliant with all of the rules in this subpart, that is intended to provide individuals in remote areas a means to alert others of an emergency situation and to aid search and rescue personnel to locate those in distress.

§ 95.2905 PLB registration.

Each PLB owner must initially register their PLB with National Oceanic and Atmospheric Administration (NOAA) and must advise NOAA of any subsequent change of ownership or other change in the registration information. Each PLB is registered by its identification code (*see* §95.2987(b)).

(a) PLB owners are encouraged to register their PLBs through the internet using the following Web site: *http://www.beaconregistration.noaa.gov*

(b) PLB owners may also register their PLBs by mailing a completed registration card to the following address: NOAA SARSAT Beacon Registration, NSOF, E/SPO53, 1315 East West Hwy., Silver Spring, MD 20910–9684.

§§ 95.2907–95.2929 [Reserved]

§ 95.2931 Permissible use of PLBs and MSLDs.

(a) PLBs may be used only for transmission of distress and safety of life communications.

(b) MSLDs may be used only to aid in the location of persons in the water.

§ 95.2933 Prohibited use of PLBs and MSLDs.

(a) PLBs must not be used for any purpose other than transmission of distress and safety of life communications.

(b) Use of MSLDs on land is not authorized.

§§ 95.2935–95.2959 [Reserved]

§ 95.2961 PLB and MSLD transmitter certification.

(a) Each PLB and MSLD transmitter must be certified in accordance with this subpart and part 2 of this chapter.

(b) A grant of equipment certification will not be issued for any PLB or MSLD transmitter type that fails to comply with all of the applicable rules in this subpart.

§ 95.2963 PLB and MSLD frequency bands.

(a) The frequency band 406.0–406.1 MHz is an emergency and distress frequency band available for use by Personal Locator Beacons (PLBs). Use of these frequencies must be limited to transmission of distress and safety of life communications.

(b) MSLDs must:

(1) Transmit on at least one of the following frequencies: 121.5 MHz, 156.525 MHz, 156.750 MHz, 156.800 MHz, 156.850 MHz, 161.975 MHz, or 162.025 MHz; or

(2) Include a function intended to send a distress message directly to the U.S. Coast Guard or any other search and rescue organization.

§§ 95.2965–95.2969 [Reserved]

§ 95.2971 PLB emission type.

PLB transmitter types must be designed to use emission type G1D on the frequency band 406.0–406.1 MHz.

§§ 95.2973–95.2985 [Reserved]

§ 95.2987 Additional PLB and MSLD certification requirements.

(a) To be certified for use under this subpart, 406 MHz PLB transmitter types must be designed to satisfy the following additional requirements.

(1) *Certifications.* Beginning January 17, 2018, before submitting an application for FCC certification of a 406 MHz PLB transmitter type, the applicant must obtain:

(i) Certification from a test facility recognized by one of the COSPAS/SARSAT Partners that the PLB transmitter type satisfies the standards in RTCM 11010; and,

(ii) Certification from an independent test facility that the PLB transmitter type complies with the electrical and environmental standards associated with RTCM 11010.

(2) *Identification code.* An identification code, recognized by the National Oceanic and Atmospheric Administration (NOAA), the United States Program Manager for the 406 MHz COSPAS/SARSAT satellite system, must be programmed into each PLB to establish a unique identification for that PLB.

(b) To be certified for use under this subpart, MSLD transmitter types must be designed to satisfy the following additional requirements.

(1) A test report from a test laboratory which shows that the MSLD complies with the electrical and environmental standards associated with RTCM 11901. The test laboratory must be accredited to ISO–IEC 17025 with a scope covering the applicable requirements and test procedures.

(2) After the MSLD has been certified by a test laboratory, the following information must be submitted in duplicate to the U.S. Coast Guard, 2703 Martin Luther King Jr. Ave. SE., Stop 7126, Washington, DC 20593–7126:

(i) The name of the manufacturer or grantee and model number of the MSLD;

(ii) Copies of the test report and test data showing that the MSLD complies with the electrical and environmental standards associated with RTCM 11901; and

(iii) Instruction manuals associated with the MSLD, description of the test characteristics of the MSLD including assembly drawings, electrical schematics, description of parts list, specifications of materials and the manufacturer's quality assurance program.

(3) After reviewing the information described in paragraph (b)(2) of this section, the U.S. Coast Guard will issue a letter stating whether the MSLD satisfies all RTCM Recommended Standards. In the case of an MSLD that includes a function intended to send a distress message directly to the U.S. Coast Guard or any other search and rescue organization, the letter will also state whether the U.S. Coast Guard endorses that function.

(4) A certification application for an MSLD must contain a copy of the U.S. Coast Guard letter stating that the device satisfies all RTCM Recommended Standards, a copy of the technical test data, and the instruction manual(s).

§ 95.2989 PLB and MSLD technical standards.

(a) PLB transmitter types must be designed to comply with technical standard RTCM 1010.2. MSLD transmitter types must be designed to comply with technical standard RTCM 11901.1.

(b) *Incorporation by reference.* The material listed in this paragraph (b) is incorporated by reference in this section with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. All approved incorporation by reference (IBR) material is available for inspection at the FCC and the National Archives and Records Administration (NARA). Contact the FCC through the Federal Communications Commission's Reference Information Center, phone: (202) 418–0270. For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations.html* or email *fr.inspection@nara.gov*. The material may be obtained from the following source in this paragraph (b):

(1) The following standards are available from the Radio Technical Commission for Maritime Services, 1611 N. Kent St., Suite 605, Arlington, Virginia 22209–2128.

(i) RTCM 11010.2, ''406 MHz Satellite Personal Locator Beacons (PLBs),'' including Amendments 1 and 2, dated June 8, 2012 (RTCM 11010).

(ii) RTCM 11901.1, ''Maritime Survivor Locating Devices (MSLD),'' dated June 4, 2012.

(2) [Reserved].

[82 FR 41104, Aug. 29, 2017, as amended at 85 FR 64411, Oct. 13, 2020; 88 FR 21451, Apr. 10, 2023]

§ 95.2991 PLB and MSLD marketing limitations.

(a) No device may be marketed or sold in the United States as a ''PLB'' or ''Personal Locator Beacon'' unless it is compliant with all of the rules in this subpart. Previously approved PLBs that do not meet the requirements of RTCM 11010 shall not be manufactured, imported, or sold in the United States beginning January 17, 2020.

(b) No device may be marketed or sold in the United States as a ''MSLD'' or ''Maritime Survivor Locating Device'' unless it complies with the requirements of RTCM 11901. Previously approved devices intended to aid in the location of persons in the water that do not meet the requirements of this subpart shall not be manufactured, imported, or sold in the United States beginning January 17, 2018.

§ 95.2993 PLB identification plate or label and registration card.

To enhance protection of life and property, it is mandatory that each 406 MHz PLB be registered with NOAA and that information be kept up-to-date.

(a) *Identification plate or label.* In addition to the identification plate or label requirements contained in §§ 2.925 and 2.926 of this chapter, each 406 MHz PLB must be provided on the outside with a clearly discernable permanent plate or label.

(1) The plate or label must contain the following statement:

The owner of this 406 MHz PLB must register the identification code on this label with the National Oceanic and Atmospheric Administration (NOAA) whose address is: NOAA/SARSAT Beacon Registration, NSOF, E/SPO53, 1315 East West Hwy., Silver Spring, MD 20910–9684.

(2) For PLBs with identification codes that can be changed after manufacture, the identification code shown on the plate or label must be easily replaceable using commonly available tools.

(b) *Registration card.* With each marketable PLB unit, the manufacturer or equipment certification grantee must include a postage pre-paid registration card.

(1) The identification code of the PLB (*see* § 95.2987(c)) must be printed on the registration card.

(2) The registration card must be addressed to: NOAA SARSAT Beacon Registration, NSOF, E/SPO53, 1315 East West Hwy., Silver Spring, MD 20910–9684.

(3) The registration card must request the owner's name, address, telephone number and alternate emergency contact.

(4) The registration card must include the following statement:

WARNING—failure to register this PLB with NOAA could result in a monetary forfeiture order being issued to the owner.

§§ 95.2995–95.3099 [Reserved]

Subpart L—Intelligent Transportation Systems (ITS) On-Board Units (OBUs) in the 5895–5925 MHz Band

§ 95.3101 Scope.

This subpart contains rules that apply only to ITS On-Board Units (OBUs) transmitting in the 5895–5925 MHz frequency band. ITU Roadside Units (RSUs) are authorized under part 90, subpart M of this chapter.

[89 FR 100855, Dec. 13, 2024]

§ 95.3103 Definitions.

Cellular Vehicle to Everything (C–V2X). See § 90.7 of this chapter.

Dedicated Short-Range Communications Services (DSRCS). See § 90.7 of this chapter.

Geofenced Onboard Unit. An OBU that incorporates geofencing to protect the appropriate areas around federal radiolocation sites currently enumerated in 47 CFR 90.387(b) by reducing power within those areas. Such OBUs programmed with information about these sites have the option of operation under the transmit power limits set forth in section 95.3404 of this subpart.

Geofencing. For the purposes of this subpart, geofencing is used to create a virtual boundary around a physical location by enabling a radiofrequency device using a geolocation capability to determine whether its geographic coordinates are within a defined geographic area.

On-Board Unit (OBU). See § 90.7 of this chapter.

Roadside Unit (RSU). See § 90.7 of this chapter.

[82 FR 41104, Aug. 29, 2017, as amended at 89 FR 100855, Dec. 13, 2024]

REGULATIONS GOVERNING THE USE OF FREQUENCIES IN THE 5895–5925 MHZ BAND FOR DEDICATED SHORT-RANGE COMMUNICATIONS SERVICES (DSRCS) ON BOARD UNITS (OBUS)

SOURCE: 89 FR 100855, Dec. 13, 2024, unless otherwise noted.

EFFECTIVE DATE NOTE: At 89 FR 100855, Dec. 13, 2024, the undesignated center heading above § 95.3105 was removed, effective Feb. 11, 2025. At 90 FR 5724, Jan. 17, 2025, the effective date was corrected to Dec. 14, 2026.

§§ 95.3105–95.3129 [Reserved]

§ 95.3131 Permissible uses, OBUs.

On-Board Units (OBUs) may transmit signals to other OBUs and to Roadside Units (RSUs), which are authorized under part 90 of this chapter.

EFFECTIVE DATE NOTE: At 89 FR 100855, Dec. 13, 2024, §§ 90.3105—95.3189 were removed, effective Feb. 11, 2025. At 90 FR 5724, Jan. 17, 2025, the effective date was corrected to Dec. 14, 2026.

§§ 95.3133–95.3159 [Reserved]

§ 95.3161 OBU transmitter certification.

(a) Each Dedicated Short Range Communications On-Board Unit IDSRCS–OBU) that operates or is intended to operate in the DSRCS must be certified in accordance with this subpart and subpart J of part 2 of this chapter.

(b) A grant of equipment certification for this subpart will not be issued for any OBU transmitter type that fails to comply with all of the applicable rules in this subpart.

EFFECTIVE DATE NOTE: At 89 FR 100855, Dec. 13, 2024, §§ 90.3105—95.3189 were removed, effective Feb. 11, 2025. At 90 FR 5724, Jan. 17, 2025, the effective date was corrected to Dec. 14, 2026.

§ 95.3163 OBU frequencies.

DSRCS On-Board Units (OBUs) are permitted to operate in the 5895–5925 MHz band.

[86 FR 23299, May 3, 2021]

EFFECTIVE DATE NOTE: At 89 FR 100855, Dec. 13, 2024, §§ 90.3105—95.3189 were removed, effective Feb. 11, 2025. At 90 FR 5724, Jan. 17, 2025, the effective date was corrected to Dec. 14, 2026.

§ 95.3165 [Reserved]

§ 95.3167 OBU transmit power limit.

(a) The maximum output power for portable DSRCS On-Board Unit (OBU) transmitter types is 1.0 mW.

(b) The power limits in paragraph (a) of this section may be referenced to the antenna input, so that cable losses are taken into account.

(c) For purposes of this section, a portable unit is a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

[86 FR 23299, May 3, 2021]

EFFECTIVE DATE NOTE: At 89 FR 100855, Dec. 13, 2024, §§ 90.3105—95.3189 were removed, effective Feb. 11, 2025. At 90 FR 5724, Jan. 17, 2025, the effective date was corrected to Dec. 14, 2026.

§§ 95.3169–95.3187 [Reserved]

§ 95.3189 OBU technical standard.

(a) DSRCS On-Board Unit (OBU) transmitter types operating in the 5895–5925 MHz band must be designed to comply with the technical standard Institute of Electrical and Electronics Engineers (IEEE) 802.11p–2010.

(b) 802.11p–2010, IEEE Standard for Information technology—Local and metropolitan area networks—Specific requirements—Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment 6: Wireless Access in Vehicular Environments, 15 July 2010 is incorporated by reference into this section with the approval of the Director of the Federal Register under 5 U.S.C. 552(a) and 1 CFR part 51. All approved material is available for inspection at the address of the FCC's main office indicated in 47 CFR 0.401(a) and is available from Institute of Electrical and Electronics Engineers (IEEE), 3025 Boardwalk Drive, Suite 220, Ann Arbor, MI 48108, 1–855–999–9870, *www.techstreet.com/ieee*. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email *fedreg.legal@nara.gov* or go to *www.archives.gov/federal-register/cfr/ibrlocations.html*.

[86 FR 23299, May 3, 2021]

EFFECTIVE DATE NOTE: At 89 FR 100855, Dec. 13, 2024, §§ 90.3105—95.3189 were removed, effective Feb. 11, 2025. At 90 FR 5724, Jan. 17, 2025, the effective date was corrected to Dec. 14, 2026.

REGULATIONS GOVERNING THE USE OF FREQUENCIES IN THE 5895–5925 MHZ BAND FOR CELLULAR VEHICLE TO EVERYTHING (C–V2X) ON BOARD UNITS (OBUS)

SOURCE: 89 FR 100855, Dec. 13, 2024, unless otherwise noted.

§ 95.3201 Permissible uses.

C–V2X OBUs may transmit signals to other C–V2X OBUs and to C–V2X Roadside Units (RSUs) authorized under part 90 of this chapter or any licensed commercial mobile radio service station as defined in part 20 of this chapter.

[89 FR 100855, Dec. 13, 2024]

§ 95.3202 OBU transmitter certification.

(a) Each C–V2X OBU that operates or is intended to operate in the 5895–5925 MHz band must be certified in accordance with this subpart and subpart J of part 2 of this chapter.

(b) A grant of equipment certification for this subpart will not be issued for any C–V2X OBU transmitter type that fails to comply with all of the applicable rules in this subpart.

[89 FR 100855, Dec. 13, 2024]

§ 95.3203 OBU frequencies.

C–V2X OBUs are permitted to operate in the 5895–5925 MHz band.

[89 FR 100855, Dec. 13, 2024]

§ 95.3204 OBU transmit power limit.

(a) The following power limits apply for OBUs without a geofencing capability at all locations and for OBUs with a geofencing capability when operating within any coordination zone specified in § 90.387(b) of this chapter:

(1) 10 MHz channel (5895–5905 MHz): 23 dBm/10 MHz EIRP;

(2) 10 MHz channel (5905–5915 MHz): 33 dBm/10 MHz EIRP, reduced to 27 dBm within ±5 degrees of horizontal;

(3) 10 MHz channel (5915–5925 MHz): 33 dBm/10 MHz EIRP, reduced to 27 dBm within ±5 degrees of horizontal;

(4) 20 MHz channel (5895–5915 MHz): 23 dBm/20 MHz EIRP;

(5) 20 MHz channel (5905–5925 MHz): 33 dBm/20 MHz EIRP, reduced to 27 dBm within ±5 degrees of horizontal; and

(6) 30 MHz channel: 23 dBm/30 MHz EIRP.

(b) The following power limits apply to OBUs with a geofencing capability when operating at locations outside any coordination zone specified in § 90.387(b) of this chapter:

(1) 10 MHz channel (5895–5905 MHz): 33 dBm/10 MHz EIRP;

(2) 10 MHz channel (5905–5915 MHz): 33 dBm/10 MHz EIRP;

(3) 10 MHz channel (5915–5925 MHz): 33 dBm/10 MHz EIRP;

(4) 20 MHz channel (5895–5915 MHz): 33 dBm/20 MHz EIRP;

(5) 20 MHz channel (5905–5925 MHz): 33 dBm/20 MHz EIRP; and

(6) 30 MHz channel: 33 dBm/30 MHz EIRP.

(c) For purposes of this section, the EIRP is root mean squared (RMS) measured as the maximum EIRP toward the horizon or horizontal, whichever is greater, of the gain associated with the main or center of the transmission beam.

(d) For purposes of this section, a portable unit is a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

[89 FR 100855, Dec. 13, 2024]

§ 95.3205 Unwanted emissions limits.

(a) C–V2X OBUs must comply with the following out-of-band emissions limits. Conducted emissions limits measured at the antenna input shall not exceed:

(1) −16 dBm/100 kHz within ±1 megahertz of the band edges;

(2) −13 dBm/MHz within ±1 megahertz to ±5 megahertz of the band edges;

(3) −16 dBm/MHz within ±5 megahertz to ±30 megahertz of the band edges; and

(4) −28 dBm/MHz beyond 30 megahertz from the band edges.

[89 FR 100855, Dec. 13, 2024]

Subpart M—The 76–81 GHz Band Radar Service

SOURCE: 82 FR 43871, Sept. 20, 2017, unless otherwise noted.

ADMINISTRATIVE RULES

§ 95.3301 Scope.

This subpart sets out the regulations that apply to radar systems operating in the 76–81 GHz band. This subpart does not apply to Level Probing Radars that operate under part 15 of this title.

§ 95.3303 Definitions, the 76–81 GHz Band Radar Service.

(a) *Air operations area*. See § 87.5 of this chapter.

(b) *Field disturbance sensor*. See § 15.5(l) of this chapter.

(c) *Foreign object debris (FOD) detection radar*. A radar device designed to detect foreign object debris in airport air operations areas and to monitor aircraft as well as service vehicles on taxiways, and other airport vehicle service areas that have no public vehicle access.

(d) *Radar*. See § 2.1(c) of this chapter.

§ 95.3305 Radar operator eligibility in the 76–81 GHz Band.

Subject to the requirements of §§ 95.305 and 95.307, any person is eligible to operate a radar in the 76–81 GHz band without an individual license; such operation must comply with all applicable rules in this subpart.

OPERATING RULES

§ 95.3331 Permissible 76–81 GHz Band Radar Service uses.

Radar systems operating in the 76–81 GHz band may operate as vehicular radars, or as fixed or mobile radars in airport air operations areas, including but not limited to FOD detection radars and aircraft-mounted radars for ground use only.

§ 95.3333 Airborne use of 76–81 GHz Band Radar Service is prohibited.

Notwithstanding the provisions of § 95.3331, 76–81 GHz Band Radar Service is prohibited aboard aircraft in flight. Aircraft-mounted radars shall be equipped with a mechanism that will prevent operations once the aircraft becomes airborne.

§ 95.3347 76–81 GHz Band Radar Service automatic control.

Notwithstanding the provisions of § 95.347, 76–81 GHz Band Radar Service operations may be conducted under manual or automatic control.

TECHNICAL RULES

§ 95.3361 Certification.

Radar equipment operating in the 76–81 GHz band shall be certificated in accordance with this subpart and subpart J of part 2 of this chapter.

§ 95.3367 76–81 GHz Band Radar Service radiated power limits.

The fundamental radiated emission limits within the 76–81 GHz band are expressed in terms of Equivalent Isotropically Radiated Power (EIRP) and are as follows:

(a) The maximum power (EIRP) within the 76–81 GHz band shall not exceed 50 dBm based on measurements employing a power averaging detector with a 1 MHz Resolution Bandwidth (RBW).

(b) The maximum peak power (EIRP) within the 76–81 GHz band shall not exceed 55 dBm based on measurements employing a peak detector with a 1 MHz RBW.

§ 95.3379 76–81 GHz Band Radar Service unwanted emissions limits.

(a) The power density of any emissions outside the 76–81 GHz band shall consist solely of spurious emissions and shall not exceed the following:

(1) Radiated emissions below 40 GHz shall not exceed the field strength as shown in the following emissions table.

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009–0.490	2400/F(kHz)	300
0.490–1.705	24000/F(kHz)	30
1.705–30.0	30	30
30–88	100	3
88–216	150	3
216–960	200	3
Above 960	500	3

(i) In the emissions table in paragraph (a)(1) of this section, the tighter limit applies at the band edges.

(ii) The limits in the table in paragraph (a)(1) of this section are based on the frequency of the unwanted emissions and not the fundamental frequency. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.

(iii) The emissions limits shown in the table in paragraph (a)(1) of this section are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9.0–90.0 kHz, 110.0–490.0 kHz, and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector with a 1 MHz RBW.

(2) The power density of radiated emissions outside the 76–81 GHz band above 40.0 GHz shall not exceed the following, based on measurements employing an average detector with a 1 MHz RBW:

(i) For radiated emissions outside the 76–81 GHz band between 40 GHz and 200 GHz from field disturbance sensors and radar systems operating in the 76–81 GHz band: 600 pW/cm^2 at a distance of 3 meters from the exterior surface of the radiating structure.

(ii) For radiated emissions above 200 GHz from field disturbance sensors and radar systems operating in the 76–81 GHz band: 1000 pW/cm^2 at a distance of 3 meters from the exterior surface of the radiating structure.

(3) For field disturbance sensors and radar systems operating in the 76–81 GHz band, the spectrum shall be investigated up to 231.0 GHz.

(b) Fundamental emissions must be contained within the frequency bands specified in this section during all conditions of operation. Equipment is presumed to operate over the temperature range −20 to +50 degrees Celsius with an input voltage variation of 85% to 115% of rated input voltage, unless justification is presented to demonstrate otherwise.

§ 95.3385 76–81 GHz Band Radar Service RF exposure evaluation.

Regardless of the power density levels permitted under this subpart, devices operating under the provisions of this subpart are subject to the radio-frequency radiation exposure requirements specified in §§ 1.1307(b), 2.1091, and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of devices operating under this section must contain a statement confirming compliance with these requirements for both fundamental emissions and unwanted emissions. Technical information showing the basis for this statement must be submitted to the Commission upon request.

Appendix A to Part 95—Cross Reference to Previous Rules

This table in this appendix to part 95 shows the current subpart or section number(s) (or ''removed'' if the section was eliminated) of the CFR unit containing the corresponding subject material, for each of the part 95 subparts, rules and appendices that, in general, were in effect prior to September 28, 2017.

Previous CFR unit	Current CFR unit
Subpart A—General Mobile Radio Service (GMRS)	Part 95, Subpart E.
95.1 The General Mobile Radio Service (GMRS)	95.1703.
95.3 License required	95.1705.
95.5 Licensee eligibility	95.1705.
95.7 Channel sharing	95.325, 95.327, 95.359.
95.21 GMRS system description	Removed.
95.23 Mobile station description	Removed.
95.25 Land station description	Removed.
95.27 Paging receiver description	Removed.
95.29 Channels available	95.1763.
95.33 Cooperative use of radio stations in the GMRS	95.1705(f).
95.45 Considerations on Department of Defense land and in other circumstances.	95.309.
95.51 Antenna height	95.317.
95.101 What the license authorizes	95.307, 95.331, 95.333, 95.1705, 95.1731.
95.103 Licensee duties	95.1705.
95.105 License term	95.1705(e).
95.115 Station inspection	95.323.
95.117 Where to contact the FCC	95.329.
95.119 Station identification	95.1751.
95.129 Station equipment	95.335, 95.1761.
95.135 Maximum authorized transmitting power	95.367, 95.1767.
95.139 Adding a small base station or a small control station	Removed.
95.141 Interconnection prohibited	95.349, 95.1749.
95.143 Managing a GMRS system in an emergency	95.1705(c), 95.1731.
95.171 Station operator duties	95.305, 95.1705.
95.179 Individuals who may be station operators	95.305, 95.1705.
95.181 Permissible communications	95.331, 95.377, 95.381, 95.1731.
95.183 Prohibited communications	95.333, 95.377, 95.381, 95.1733.
Appendix A to Subpart A of Part 95—Locations Where GMRS Is Regulated by the FCC.	95.307.
Subpart B—Family Radio Service (FRS)	Part 95, Subpart B.
95.191 (FRS Rule 1) Eligibility and responsibility	95.305, 95.359.
95.192 (FRS Rule 2) Authorized locations	95.307, 95.309.
95.193 (FRS Rule 3) Types of communications	95.331, 95.333, 95.349, 95.377, 95.531, 95.533, 95.577, 95.587.
95.194 (FRS Rule 4) FRS units	95.335, 95.337, 95.339, 95.519, 95.561, 95.587.
Subpart C—Radio Control (R/C) Radio Service	Part 95, Subpart C.
95.201 (R/C Rule 1) What is the Radio Control (R/C) Radio Service?	95.703.
95.202 (R/C Rule 2) How do I use these rules?	Removed.
95.203 (R/C Rule 3) Am I eligible to operate an R/C station?	95.305.
95.204 (R/C Rule 4) Do I need a license?	95.305.
95.205 (R/C Rule 5) Where may I operate my R/C station?	95.307.
95.206 (R/C Rule 6) Are there any special restrictions on the location of my R/C station?.	95.309

Previous CFR unit	Current CFR unit
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95.209 (R/C Rule 9) What equipment may I use at my R/C station?	95.335, 95.337, 95.361, 95.735, 95.761.
95.210 (R/C Rule 10) How much power may I use?	95.337, 95.767.
95.211 (R/C Rule 11) What communications may be transmitted?	95.731, 95.771.
95.212 (R/C Rule 12) What communications are prohibited?	95.333, 95.733, 95.745.
95.213 (R/C Rule 13) May I be paid to use my R/C station?	95.333, 95.733(c).
95.214 (R/C Rule 14) Who is responsible for R/C communications I make?	95.343.
95.215 (R/C Rule 15) Do I have to limit the length of my communications?	95.357, 95.757.
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95.411 (CB Rule 11) May I use power amplifiers?	95.939.
95.412 (CB Rule 12) What communications may be transmitted?	95.377, 95.931, 95.933.
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Previous CFR unit	Current CFR unit
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[82 FR 41104, Aug. 29, 2017, as amended at 86 FR 23298, May 3, 2021

PART 96—CITIZENS BROADBAND RADIO SERVICE

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