

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of
Review of the Commission's Part 95 Personal Radio Services Rules
1998 Biennial Regulatory Review - 47 C.F.R. Part 90 - Private Land Mobile Radio Services
Petition for Rulemaking of Garmin International, Inc.
Petition for Rulemaking of Omnitronics, L.L.C.
WT Docket No. 10-119
WT Docket No. 98-182 RM-9222
RM-10762
RM-10844

NOTICE OF PROPOSED RULE MAKING
AND MEMORANDUM OPINION AND ORDER ON RECONSIDERATION

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I. INTRODUCTION

1. By the *Notice of Proposed Rule Making (NPRM)* below, we commence a proceeding to review the Commission’s Part 95 Personal Radio Services rules.¹ Part 95 Services include a variety of short-range, low-power, mostly non-commercial² applications that are generally not provided for in other wireless services. Part 95 uses include walkie-talkie radios for use by families and friends, remote-control hobby applications, devices to aid persons with hearing difficulties, medical telemetry devices, and devices to track persons and property for law enforcement purposes.

2. Our goal in this proceeding is to simplify, streamline, and update the Part 95 rules to reflect technological advances and changes in the way the American public uses the various Personal Radio Services. Implementation of the rule changes proposed below should result in clearer, more consistent rules, benefiting Personal Radio Service users, equipment manufacturers, and the Commission.

3. In the *NPRM*, we propose to streamline and consolidate Part 95 rules where practicable. The Commission generally intended that Part 95 Services would be used by the public for a wide range of applications, and therefore adopted technical rules designed to minimize harmful interference, while providing flexibility in where and how Part 95 devices could be used. Many of the Commission’s Part 95 rules are now decades old, however, and the Personal Radio Services have evolved since adoption of those rules. Based on our examination of Part 95 and review of two related rulemaking petitions, we tentatively conclude that both organizational and substantive changes to Part 95 are warranted. For example, we propose to simplify Part 95 by conforming and consolidating administrative requirements that are common to various Personal Radio Services in a new Subpart A–General Information. We also propose to update and consolidate the general technical rules in a new Subpart B–Technical Requirements.³

4. Further, we propose to revise individual service rules to reflect more accurately current technologies and the ways in which services are used today, and to provide users additional flexibility. Specifically, we propose to (1) license General Mobile Radio Service (GMRS) operations by rule; (2) relax GMRS eligibility requirements; (3) implement 12.5 kilohertz channelization for GMRS; and

¹ 47 C.F.R. Part 95.

² Most Part 95 services are intended for personal uses and, with the exception of the 218-219 MHz Service, not for commercial uses. The 218-219 MHz Service however may be operated as a common carrier or private service. *See* 47 C.F.R. § 95.807.

³ The proposed rules are contained in Appendix B below.

(4) allow the transmission of Global Positioning System (GPS) location information and user-generated text messages on certain GMRS channels.⁴ We also propose to prohibit the authorization of radios that combine Family Radio Service (FRS) with safety-related services.

5. In addition, we evaluate various requirements regarding the Citizens Band (CB) Radio Service in order to determine whether they all are still needed, and whether to permit the use of “hands-free” microphones in that service.⁵ We propose to transfer the 218-219 MHz Service rules from Part 95 to Part 27, and to refine certain rules to provide licensees additional flexibility to better serve the public. We also propose to clarify that the term “personal locator beacons” (PLBs) in the 406 MHz band refers only to a beacon that meets the requirements of Part 95, Subpart K. Finally, we solicit comment on the rules governing other Part 95 services.

6. In the *Memorandum Opinion and Order on Reconsideration* below, we deny the petition filed by the Personal Radio Steering Group (PRSG) for reconsideration of the *Memorandum Opinion and Order*, WT Docket No. 98-182,⁶ regarding certain Part 95 Multi-Use Radio Service (MURS) rules.⁷

II. BACKGROUND

7. The Personal Radio Services include a variety of short-range, low-power radio services for personal use that are generally not provided for in other wireless services. Over time, the range of applications supported by the Personal Radio Services has expanded beyond its original purposes: short-distance, simplex,⁸ mobile voice communications and radio control used by hobbyists for model aircraft. Today, Part 95 applications include devices to enable the location of persons who are lost or in danger, the retrieval of data from implanted medical devices, the provision of auditory assistance in public venues for persons who are hearing impaired, tracking of persons or property for law enforcement purposes, and increased highway safety through vehicle electronics that are integrated with Intelligent Transportation Systems. Part 95 Personal Radio Services include the following eleven services:

- General Mobile Radio Service (GMRS) - GMRS is a land mobile service available on a shared basis for short-distance, two-way communications to facilitate the activities of licensees and their immediate family members.⁹
- Family Radio Service (FRS) - FRS is a two-way, short-distance, voice and data communications service for facilitating family and group activities as well as emergency messages, traveler assistance and location information.¹⁰

⁴ See Garmin International, Inc. Petition for Rulemaking, RM-10762 (filed July 22, 2003) (Garmin Petition); *Public Notice*, Report No. 2619 (rel. Aug. 6, 2003).

⁵ See Omnitronics, L.L.C. Petition for Rulemaking, RM-10844 (filed Dec. 17, 2003) (Omnitronics Petition); *Public Notice*, Report No. 2644 (rel. Jan. 23, 2004).

⁶ 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 – Private Land Mobile Services, WT Docket No. 98-182, *Memorandum Opinion and Second Report and Order*, 17 FCC Rcd 9830, 9837-38 ¶¶ 15-17 (2002) (*MURS MO&O*).

⁷ MURS is a two-way, short-distance, voice, data or image communication service for the personal or business activities of the general public. See Personal Radio Steering Group (PRSG) Petition for Reconsideration (filed November 14, 2002) (PRSG Petition).

⁸ “Simplex” refers to a communications system where each person may either speak or listen, but not at the same time. With a simplex system, each party to the communication must wait until the person speaking has finished before replying. By contrast, most commercial wireless systems are “duplex,” which refers to a communications system where all parties to a communication may both speak to and hear the other parties simultaneously.

⁹ 47 C.F.R. § 95.1(a).

¹⁰ 47 C.F.R. §§ 95.193(a), 95.401(b).

- Radio Control (R/C) Radio Service - The R/C Radio Service is a one-way, short-distance non-voice communications service for the operation of devices at remote locations.¹¹
- Citizens Band (CB) Radio Service - The CB Radio Service is a two-way, short-distance voice communications service for personal or business activities of the general public, which may also be used for voice paging.¹²
- 218-219 MHz Service - The 218-219 MHz Service authorizes system licensees to provide communication service to subscribers in a specific service area.¹³
- Low Power Radio Service (LPRS) - LPRS is a short-distance communication service providing auditory assistance to persons with disabilities, persons who require language translation, and persons in educational settings; health care assistance for the ill; law enforcement tracking services in cooperation with law enforcement; and point-to-point network control for automated maritime telecommunications system (AMTS) coast stations.¹⁴
- Wireless Medical Telemetry Service (WMTS) - WMTS is a short-distance data communication service for the transmission of patient medical information to a central monitoring location in a hospital or other medical facility.¹⁵
- Medical Device Radiocommunications Service (MedRadio) - MedRadio is 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.¹⁶
- Multi-Use Radio Service (MURS) - MURS is a two-way, short-distance voice or data communications service for personal or business activities of the general public.¹⁷
- Personal Locator Beacons (PLBs) - PLBs are beacons that meet the requirements set forth in Subpart K of this Part for 406 MHz PLBs, and are 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.¹⁸
- Dedicated Short Range Communications Service On-Board Units (DSRCS-OBUs) - DSRCS refers to the use of non-voice radio techniques to transfer data over short distances between roadside and mobile radio units, between mobile units, and between portable and mobile units, to perform operations related to the improvement of traffic flow, traffic safety, and other Intelligent Transportation Service applications in a variety of public and commercial environments. DSRCS

¹¹ 47 C.F.R. § 95.201.

¹² 47 C.F.R. § 95.401(a).

¹³ 47 C.F.R. § 95.803(a).

¹⁴ 47 C.F.R. §§ 95.401(c), 95.1009.

¹⁵ 47 C.F.R. §§ 95.401(e), 95.1105.

¹⁶ 47 C.F.R. §§ 95.401(d), 95.1201. The Commission recently released a Report and Order where, among other things, the former Medical Implant Communications Service (MICS) was renamed the Medical Device Radiocommunications Service (MedRadio). See Investigation of the Spectrum Requirements for Advanced Medical Technologies, ET Docket No. 06-135, Amendment of Parts 2 and 95 of the Commission's Rules to Establish the Medical Radio Service at 401-402 and 405-406 MHz, RM-11271, Report and Order, 24 FCC Rcd 3474 (2009) (MedRadio R&O).

¹⁷ 47 C.F.R. § 95.401(f).

¹⁸ 47 C.F.R. § 95.1400.

systems may also transmit status and instructional messages related to the units involved.¹⁹

8. Each Personal Radio Service has its own subpart under Part 95. These subparts have unique requirements, as well as general operating and administrative rules that are similar and often identical both in language and effect to other subparts. For example, of the eleven Personal Radio Services, most have the same or similar rule language governing authorized locations, station identification, station inspection, license requirements, and licensee responsibility and eligibility. Similarly, the transmitters for most of these services are mass marketed and used by millions of Americans and have traditionally been licensed by rule.²⁰

9. In recognition of the evolving nature of the Personal Radio Services, we initiate this proceeding to examine the Part 95 rules comprehensively. Such an examination will enable us to increase the regulatory symmetry among these services and streamline our Part 95 rules. Additionally, we propose to simplify the wording and format of the rules to increase clarity and reduce potential confusion. We also seek comment on whether additional changes to the Part 95 rules are needed to account for technological developments and changes in how these services are being used by the public.

III. NOTICE OF PROPOSED RULEMAKING

A. General Reorganization/Streamlining of the Part 95 Personal Radio Services

10. In view of the commonality among most of the service-specific Part 95 subparts, we propose to eliminate obsolete or redundant rules where appropriate and to consolidate, conform, and update general operating rules under a new subpart (Subpart A—General Information) to apply to all Personal Radio Services that we propose to keep under Part 95.²¹ Specifically, we propose to relocate and consolidate rules for the following subjects in a new Subpart A:

- Definitions
- License requirement and eligibility
- Authorized locations
- Licensee responsibility
- Station inspection
- Correspondence from the FCC
- Penalties for violating the rules

¹⁹ See 47 C.F.R. §§ 90.7, 95.401(g). Equipment in the DSRC Service includes on-board units (OBUs) and roadside units (RSUs). An OBU is a “transceiver that is normally mounted in or on a vehicle, or which may be a portable unit.” 47 C.F.R. § 90.7. OBUs are licensed by rule under Part 95 and communicate with other OBUs and RSUs. RSUs are licensed under Part 90 and are “transceivers mounted along a road or pedestrian passageway,” that collect and distribute information to OBUs. 47 C.F.R. Part 90 Subpart M.

²⁰ The 218-219 MHz Service, however, is not licensed by rule, but instead is subject to the requirements and conditions for the grant of authorizations set for in Part 1, Subpart F of our rules. See 47 C.F.R. § 95.811. Recognizing that the cost of licensing individual stations in certain shared Personal Radio Service bands may not justify the limited public interest benefits of such licensing, the Congress, in 1982, amended the Communications Act of 1934 to permit the Commission to grant authority to operate certain radio stations “by rule” without individual licenses. See Public Law (Pub. L.) 97-259, Section 113(a), enacted September 13, 1982. See also 47 U.S.C. § 307(e).

²¹ This proposal and the proposals to consolidate and conform other Part 95 rules do not apply to the 218-219 MHz Service, which we propose to integrate into our Part 27 rules for Miscellaneous Wireless Communications Services.

- Contacting the FCC

This consolidation should improve the utility of the rules and result in more consistent treatment of Part 95 services. Nevertheless, we realize that in some cases, it might be beneficial to maintain certain general requirements in individual service subparts so the public can find relevant operational requirements in one subpart. Therefore, we seek comment on how the Part 95 rules should be structured. Should general requirements like those listed above be consolidated and streamlined to promote consistency across all Part 95 Services? Should such requirements be repeated in each individual subpart to allow unique requirements for different Part 95 Services and “one-stop” rule reading; or is some other approach more desirable? For example, should we consolidate and streamline our Part 95 rules to the extent possible and provide “user friendly” service rule fact sheets on our website? Finally, which general regulatory requirements should be consolidated into Subpart A and which should be maintained in the individual service rule subparts?

11. We also note that the current rules governing the FRS, R/C, and the CB Radio Services are written in a “plain-language” question-and-answer format to facilitate the public’s understanding of the rules. We believe this format has been successful in eliminating confusion regarding the applicable regulatory requirements for these services, but this format is not used for any other services. We seek comment on whether the question-and-answer format should be maintained. If we change the format, should we provide a consumer education campaign that highlights which rules are still in force, but have only been relocated or re-formatted? Additionally, if we consolidate and streamline all Part 95 Services, should we create “plain-language” question-and-answer format rules for all Part 95 Services and make them available on our website?

1. Technical Requirements

12. We propose to consolidate the technical requirements for all Part 95 services in a new Subpart B–Technical Requirements. Presently, for some Personal Radio Services, the technical requirements are listed in both the individual service rules and in Subpart E–Technical Regulations.²² In other cases, technical requirements are listed in the individual service rules, but not in Subpart E.²³ We propose to consolidate and harmonize, to the maximum extent possible, all basic technical requirements in a new Subpart B. We do this with an understanding that most technical requirements for Part 95 Services are only reviewed by equipment manufacturers when designing devices and not by the users of the devices, because the user is not permitted to change certain technical parameters of the device. However, there are some technical requirements, such as antenna requirements, that permit users some flexibility in how they operate their systems.²⁴ We seek to streamline and simplify these technical rules where appropriate, including eliminating obsolete rules and revising technical rules to reflect current technologies and the way people use the services. For example, we propose to place the frequencies for each service in a table and designate each frequency by channel number. This approach reflects our understanding that Personal Radio Service users generally prefer to reference communication channels by channel number rather than by frequency. Nevertheless, we seek comment on whether all technical rules should be consolidated and/or streamlined into a new Subpart B. We note in particular, that the technical requirements for MedRadio devices and PLBs follow unique industry guidelines and protocols that are not easily integrated with other Part 95 Services, so the technical rules for these services might be more easily understood if they stayed in their individual subparts.

²² For example, the rules concerning power in the GMRS, CB and R/C Radio Services are listed in both the respective individual service subpart and Subpart E. *See* 47 C.F.R. §§ 95.135, 95.210, 95.410, 95.639.

²³ *See, e.g.*, 47 C.F.R. §§ 95.135, 95.194, 95.1115.

²⁴ *See, e.g.*, 47 C.F.R. §§ 95.51, 95.208, 95.639(a).

2. Frequency Tolerance

13. Part 95, like other parts of the Commission's rules, contains frequency tolerance rules²⁵ that are intended to prevent interference by ensuring that transmitters initially operate when new, and continue to operate during their service lives, on or very close to their assigned frequencies. Historically, there has been a trade-off between manufacturing cost and the amount of frequency accuracy that can reasonably be obtained. As a result of improvements in technology and manufacturing processes over the years, however, transmitters today are manufactured economically with much greater frequency accuracy than in the past. As a result, frequency tolerance and stability in industry specifications are now normally expressed in terms of "parts per million" ("ppm") instead of percent (which means "parts per hundred"), as was common when rules for the CB and several of the other older Part 95 services were first adopted. Consequently, Part 95 currently contains several rules addressing frequency tolerance, some in percent, and others in ppm.

14. We propose to amend our Part 95 rules to express frequency tolerance requirements in terms of parts per million, instead of percent, of the carrier or reference frequency. This approach will modernize our rules and ensure consistency in the units used to specify frequency tolerance. We seek comment on this proposal. We also welcome comment as to whether the current frequency tolerance requirements for the older services, such as CB, R/C and GMRS are still appropriate, given the capabilities of modern manufacturing processes. Finally, noting that the Commission's goal is to prevent interference caused by off-frequency operation, we invite comment on whether these requirements are the best method of meeting that objective. For example, instead of specifying frequency tolerance limits, should we adopt requirements similar to current section 95.1115(e), which requires manufacturers of wireless medical telemetry devices to ensure frequency stability such that an emission is maintained within the band of operation under all of the manufacturers' specified conditions?

3. Power Limits

15. The Part 95 technical rules also specify power limits and equipment certification requirements²⁶ for transmitters²⁷ used in the Personal Radio Services. We note, however, that the power limits for different Part 95 devices were adopted at different times and are expressed variously as limits on a device's transmitter output power, effective radiated power (ERP), equivalent isotropically radiated power (EIRP), field strength at a certain distance, maximum carrier power, and peak envelope power.²⁸ Compliance is measured using different techniques as well.²⁹ The Commission adopted these power limits to account for how various devices are used. For example, devices with integrated antennas are required to meet an ERP limit, while devices that use external antennas would have to meet a maximum transmitter output power limit.

²⁵ Frequency tolerance standards specify the maximum allowable amount that the transmit frequency of any individual transmitter may differ from the assigned reference frequency as a result of variations in the manufacturing process. Frequency stability standards specify the maximum allowable amount that the transmit frequency of any transmitter may change during operation as a result of changes in the ambient temperature and/or power supply voltage.

²⁶ See 47 C.F.R. Part 2 Subpart J, §§ 95.603, 95.605, 95.1109.

²⁷ A transmitter is an apparatus that converts electrical energy received from a source into radio frequency energy capable of being radiated. 47 C.F.R. § 95.601.

²⁸ See 47 C.F.R. § 2.1 for definitions of the various power designations.

²⁹ 47 C.F.R. Part 95 Subpart E; see Revision of Operating Rules for Class D Stations in the Citizens Radio Service, Docket No. 20120, *Third Report and Order*, 63 F.C.C. 2d 32 (1976); Personal Radio Services; Update and Simplification of Technical Rules, *Order*, 50 Fed. Reg. 5074 (1985); Amendment of the Part 95, Subpart E, Technical Regulations in the Personal Radio Service Rules, *Order*, 3 FCC Rcd 5032 (1988). We note, however, that Subpart E currently does not apply to PLBs or the 218-219 MHz Service.

16. We are mindful that one approach would not be appropriate for all Part 95 services due to the use of integrated and non-integrated antennas, and we recognize the need to measure field strength for medical implant devices to simulate their implantation into a body. Nevertheless, we think that a review and possible consolidation and simplification of our power limits are appropriate. Below we make a specific proposal for GMRS devices, but here we generally invite comment regarding power limits and measurement techniques for each Part 95 service. We seek comment on whether the current power limits for each Part 95 service continue to be appropriate, and if not, on how they should be changed. If commenting parties support higher powers for certain applications, they should explain the technical basis for the higher power and provide an analysis for the associated impact on interference potential.

4. Unwanted Emissions

17. The Commission's limits on unwanted emissions are intended to reduce the probability of adjacent channel interference and interference to services in non-adjacent spectrum. There are two types of unwanted emissions: out-of-band emissions (OOBE) and spurious emissions. OOBE are unwanted emissions generated by the modulation process that are located outside of and immediately adjacent to the authorized bandwidth.³⁰ Spurious emissions are unwanted emissions that are unrelated to the modulation process and can be located anywhere in the spectrum outside of the authorized bandwidth.³¹ These unwanted by-products are reduced through proper transmitter design and the use of filters in order to prevent interference outside of the intended transmission band. However, the suppression of unwanted emissions has to be balanced with the desire for affordable equipment.

18. Part 95 contains both attenuation requirements and field strength limit rules to reduce unwanted emissions. These unwanted emissions rules were adopted over time, and vary considerably. Based on our review of these rules, we believe that the organization of this section could be improved. Accordingly, we propose to revise the emission limit rule section to reduce duplication, conform the way the requirements are presented and to increase clarity. The proposed rule (section 95.41 in appendix B) would not substantively change any current requirement, but rather would specify the existing requirements more clearly. In particular, the proposed rule separates the attenuation requirements (paragraphs (a) and (b)) from the field strength limits (paragraphs (c) and (d)). In addition, we would remove certain outdated spurious emission requirements that applied only to CB equipment manufactured before 1976 and R/C equipment marketed or imported before 1993. We assume that the transmitting equipment that was manufactured and operated under these old standards has long been retired from service. Also, we propose to remove the table entry for DSRCS-OBUs from this section because these Intelligent Transportation Service devices follow unique industry standards that are incorporated by reference in Section 95.1003. Although we have not proposed any substantive change in the emission limit rule section, we nevertheless welcome comment on whether any particular emission limit or limits should be changed given the evolution of filtering technology.

5. Voice Scrambling

19. The FRS, GMRS, and CB Radio Service are shared channel services (*i.e.*, all channels are available to users and users must cooperate in sharing the channels to prevent conflicting communications). To allow users of these services to readily hear, understand, and communicate with each other, our rules generally prohibit "scrambling" of communications in these services. Specifically, the Part 95 emission rules prohibit non-voice emissions in the FRS, GMRS, and CB Radio Service, except to establish or continue voice communications or, for FRS, to transmit certain types of location data (*e.g.*, GPS).³² In addition, the rules prohibit digital modulation or emissions in the CB Radio Service

³⁰ In this regard, we note that international guidelines consider the out-of-band emission domain (*i.e.*, where OOBE are located) to extend outside the authorized bandwidth by 250% of the authorized bandwidth.

³¹ See 47 C.F.R. § 2.1.

³² See 47 C.F.R. §§ 95.181, 95.193, 95.412.

and the GMRS.³³ Further, GMRS and FRS rules require that messages be in plain language, without codes or hidden meanings.³⁴ Not only do these requirements facilitate channel sharing, but they also enable emergency communications if needed.

20. Recently, several GMRS and FRS radios have been certified with an optional voice “scrambling” feature that purports to add a level of privacy to communications within a particular group of users.³⁵ We believe that voice-obscuring techniques, which go beyond the ubiquitous, standardized tone squelch, are inappropriate for these services. Specifically, we believe that these voice-obscuring techniques could thwart the channel sharing protocols in these services and the ability to communicate during an emergency. To ensure there is no future confusion on this matter, we propose to clarify our rules to specifically prohibit voice obscuring or scrambling in the GMRS, FRS, and CB Radio Service, and to provide that any such equipment with those features will be prohibited from receiving a grant of equipment certification for operation under Part 95 of our rules. We seek comment on this proposal and whether other Part 95 Services should prohibit voice “scrambling.” We invite commenters to address whether there are alternatives that may allow voice altering features while still addressing the concerns identified above. We also seek comment on how to phase-out the marketing and sales of existing equipment. Should we impose a specific cut-off date or dates? Should the same date apply to the manufacture, import, and sales of devices? Should we allow existing inventory on shelves to be sold or should it be removed? What are the trade-offs of the various approaches?

6. Crystal Control

21. Section 95.651 provides that transmitters in the Personal Radio Services, with certain exceptions, must be crystal controlled.³⁶ The Commission adopted this requirement to ensure that personal radio transmitters utilize a stable and accurate transmit frequency-determining method. In the early years of CB Radio Service, some operators used radios with coil and capacitor based variable frequency oscillators (VFOs)—electronic circuits that generate an alternating current or voltage—as the frequency-determining method. VFOs of this type are susceptible to greater frequency inaccuracy and variation with time and temperature, relative to crystal oscillators.

22. Today’s personal radio transmitters utilize a digital frequency synthesizer to generate the transmitted signals.³⁷ These synthesizers have at their heart a crystal time base which ensures that frequencies of the transmitted signals are stable and accurate, and such synthesizer-based radios satisfy the crystal control requirement. Synthesizer technology is also less expensive to manufacture than the older VFO technology and has largely, if not entirely, supplanted it. In view of the evolution in technology, we seek comment on whether section 95.651 is necessary, or whether frequency tolerance and stability requirements discussed *supra* alone are sufficient. If section 95.651 is retained, we seek comment on whether the rule should be revised to clarify that crystal-based frequency synthesizers satisfy the rule.

B. General Mobile Radio Service

23. The GMRS (formerly Class A of the Citizens Radio Service) is a personal radio service available for the conduct of an individual's personal and family communications. GMRS was created

³³ See 47 C.F.R. §§ 95.631(a), 95.631(c).

³⁴ See 47 C.F.R. §§ 95.181(e), 95.183(a)(4), 95.412(a).

³⁵ See “Two-Way Radios,” at http://www.consumersearch.com/www/electronics/two_way_radios/types-of-two-way-radios (site last visited May 24, 2010).

³⁶ See 47 C.F.R. § 95.651.

³⁷ See Amendment of Parts 2 and 95 of the Commission’s Rules to Require Type Acceptance of Transmitters Used by Class B and Class D Stations in the Citizens Radio Service, Docket 17196, *Report and Order*, 43 F.C.C. 2d 375 at ¶ 11 (1973).

more than 50 years ago for use by individuals and entities that were not eligible at the time for licenses in the Public Safety or the Industrial and Land Transportation Radio Services.³⁸ The GMRS rules define mobile, fixed, base and repeater station classes and include technical rules for each station class.³⁹ The GMRS rules also provide for “small base” and “small control” stations, which are restricted to five watts ERP and to an antenna height of no more than six meters (approximately 20 feet) above ground level.⁴⁰ Unlike most other Personal Radio Services, a license is required to transmit on GMRS channels.⁴¹ The most popular type of GMRS radios today is lightweight portable units, which offer good mobility and flexibility of use; however, these devices are not specifically addressed in the GMRS rules.

24. GMRS portable and mobile stations can communicate over several miles, depending upon the terrain. GMRS base stations can communicate with mobile and portable units over a somewhat longer distance, depending upon the height of the base station antenna. GMRS repeater stations greatly extend the range of GMRS mobile and portable units, making communications between mobile units across a large area (*e.g.*, 25 miles) possible. Repeater stations, however, occupy two channels (a base channel and a mobile channel, which are referred to as a channel pair) throughout their coverage area, and only one station may transmit through the repeater at a time (*i.e.*, the communications are simplex). Thus, extended range is achieved at the expense of spectrum re-use.⁴² Only individuals may obtain a license for a GMRS repeater station. However, because establishing and maintaining a repeater station is often considered complicated and costly, this activity is often undertaken by an organized group or club. There are GMRS clubs that operate GMRS repeaters (licensed to an individual member) for the use of all members.⁴³

1. Station Licensing

25. The regulatory structure of GMRS was patterned after the traditional view of a land mobile radio system during the 1940s: a base-to-mobile dispatch operation transmitting on an assigned shared channel in a specific geographic location. Later, as repeater stations were incorporated into Part 90 private land mobile systems, they were incorporated into the GMRS rules.⁴⁴ While both GMRS and Part 90 land mobile services require a license to operate, the Commission’s rules no longer require GMRS applicants to file technical information relating to system configuration and equipment.⁴⁵ Therefore, while Part 90 licensees generally avoid interference through coordination on a license-by-license basis, GMRS licensees rely on operating rules and a listen before transmitting etiquette. We also note that there are reports that most purchasers of portable FRS/GMRS combination radios (as well as purchasers of portable GMRS-only radios) use the licensed GMRS channels, while only a small percentage obtain the

³⁸ See Amendment of Subparts A and E of Part 95 to Improve the General Mobile Radio Service (GMRS), PR Docket 87-265, *Report and Order*, 3 FCC Rcd 6554, 6554 ¶ 3 (1988) (*GMRS R&O*).

³⁹ See 47 C.F.R. § 95.21.

⁴⁰ See 47 C.F.R. § 95.51(b).

⁴¹ See 47 C.F.R. § 95.3.

⁴² That is, shorter range communications enable a higher degree of frequency reuse. This is particularly important in shared bands where a number of entities may want to communicate in the same area at the same time. If higher powers are allowed and communication distances are increased in a shared environment, frequency reuse would decline.

⁴³ This is similar to the situation with repeater stations in the Amateur Radio Service.

⁴⁴ A repeater station is a base station that receives signals on one frequency and automatically retransmits that signal on another frequency. In GMRS, signals received on frequencies in the 467 MHz band are automatically retransmitted in the 462 MHz band.

⁴⁵ See *ULS Report and Order*, 13 FCC Rcd at 21113 ¶ 197.

required license.⁴⁶ Although the Commission has made several regulatory changes over the years to enhance the GMRS, the basic regulatory structure remains.⁴⁷ Consequently, given the evolution of how people communicate, the creation of other services and the passage of time, we believe it is appropriate to reevaluate the GMRS licensing rules. Section 307(e)(1) of the Communications Act of 1934, as amended (the Act), provides that upon a determination that it would serve the public interest, convenience, and necessity, “the Commission may, by rule, authorize the operation of radio stations without individual licenses” in the citizens band and certain other services.⁴⁸ Section 307(e)(3) provides these services “shall have the meaning given to them by the Commission.”⁴⁹ The Commission eliminated individual licensing in the CB and R/C Radio Services in 1983, finding that individual licensing is unnecessary when services allow licensees to use any channel at any location and spectrum management is implemented by the operating rules rather than the licensing function.⁵⁰ In 1988, however, the Commission sought to discourage a surge in business radio use of the GMRS by adopting rules limiting eligibility for new GMRS systems, combined with an individual licensing requirement to control proliferation of GMRS systems.⁵¹ Currently, GMRS and the 218-219 MHz service are the only Personal Radio Services with individual licensing requirements.⁵² The rest of the Part 95 services are licensed by rule pursuant to Section 307(e), based on determinations that the administrative burdens associated with individual licensing outweighed any potential benefits from such licensing and that no regulatory purpose would be served by requiring station licenses.⁵³

26. We believe that current GMRS operations more closely resemble other Part 95 Personal Radio Services that are licensed by rule rather than Part 90 private land mobile systems that require an individual station license. For example, once authorized, a GMRS licensee may operate on any GMRS frequency;⁵⁴ there is no requirement for frequency coordination; and none of the GMRS frequencies are assigned on an exclusive-use basis. In addition, all licensees must cooperate in the selection and sharing of the available channels to make the most effective use of the channels and to reduce the possibility of interference.⁵⁵ Furthermore, we believe that licensing GMRS by rule would reduce administrative and other burdens on GMRS users, as well as on the Commission. For example, users would no longer be

⁴⁶ See, e.g., Bob Parks, *Radio Hyperactive*, Outside Magazine (Apr. 2004) (noting that hundreds of FRS/GMRS combination radios have been sold for every GMRS license that has been issued).

⁴⁷ See *ULS Report and Order*, 13 FCC Rcd at 21108 ¶ 186.

⁴⁸ 47 U.S.C. § 307(e)(1).

⁴⁹ 47 U.S.C. § 307(e)(3).

⁵⁰ See Amendment of Parts 1 and 95 of the Commission’s Rules to Eliminate Individual Station Licenses in the Remote Control (R/C) Radio Service and the Citizens Band (CB) Radio Service, PR Docket No. 82-799, *Report and Order*, FCC 83-169, 48 Fed. Reg. 24884 (rel. June 3, 1983).

⁵¹ See *GMRS R&O*, 3 FCC Rcd at 6556 ¶ 16.

⁵² We also note that the 218-219 MHz Service, which we are proposing to relocate to Part 27, is the only Personal Radio Service where licenses are issued by competitive bidding for exclusive use over a defined geographic area. Further, while Part 80 AMTS licensees are permitted to operate LPRS systems, they are not individually licensed through Part 95. See 47 C.F.R. §§ 95.816, 95.1001.

⁵³ See, e.g., Amendment of Part 95 of the Commission’s Rules to Establish a Very Short Distance Two-Way Voice Radio Service, WT Docket No. 95-102, *Report and Order*, 11 FCC Rcd 12977, 12983-84 ¶ 17 (1996) (*FRS Report and Order*).

⁵⁴ There are twenty-three GMRS frequencies. Specifically, there are eight GMRS “primary” channel pairs (462/467.550, 462/467.575, 462/467.600, 462/467.625, 462/467.650, 462/467.675, 462/467.700, and 462/467.725 MHz), and seven interstitial or split GMRS frequencies (462.5625, 462.5875, 462.6125, 462.6375, 462.6625, 462.6875 and 462.7125 MHz) which are shared with the FRS channels.

⁵⁵ See 47 C.F.R. § 95.7.

subject to application and regulatory fees,⁵⁶ and would not be at risk of losing their authorization to operate for failing to file a timely renewal application.

27. In view of the foregoing, we propose to eliminate the requirement for individual station licenses in the GMRS. Instead, we would, by rule, authorize operation of these stations without individual licenses. In addition, if GMRS is licensed by rule, GMRS operators would no longer receive call signs for their radios and we would, therefore, eliminate the station identification requirements in current section 95.119. As of the day the revised rules became effective, all existing GMRS licenses would be void. In addition, all pending applications for such licenses, and all applications for such licenses subsequently received, would result in no official Commission action. We seek comment on the proposal to license GMRS by rule, including whether all classes of GMRS stations should be licensed by rule or only hand-held portable units. Additionally, we seek comment on the pros and cons of licensing GMRS by rule versus maintaining the individual licensing requirement. Additionally, if we only license certain classes of GMRS by rule, should we maintain the station identification requirements for GMRS?⁵⁷

28. Alternatively, if we were to maintain the individual licensing requirement for all or some types of GMRS operations, we propose to extend the GMRS license term from five⁵⁸ to ten years, to conform with most other wireless services, where the license terms have been extended from five to ten years.⁵⁹ Extending GMRS license terms to ten years would decrease the administrative burden on both the general public and the Commission without, we believe, any adverse impact.⁶⁰ It also would promote standardization of general licensing rules and streamlining of administrative requirements. We seek comment on the proposal to extend the license term from five to ten years if the individual licensing requirement is maintained for GMRS.

2. Eligibility

29. Under the current GMRS rules, only individuals who are 18 or older are eligible to obtain a GMRS license.⁶¹ An individual's family members of all ages may operate GMRS stations and units

⁵⁶ If the Commission licenses GMRS by rule, we would delete GMRS from the Commission's Application and Regulatory Fee Schedules, sections 1.1102 and 1.1152, respectively. See 47 C.F.R. §§ 1.1102, 1.1152.

⁵⁷ 47 C.F.R. § 95.119.

⁵⁸ See 47 C.F.R. § 95.105.

⁵⁹ See, e.g., 1998 Biennial Regulatory Review -- 47 C.F.R. Part 90 - Private Land Mobile Radio Services, WT Docket No. 98-182, RM-9222, Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket No. 92-235, and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Services, *Report and Order*, 15 FCC Rcd at 16673, 16677-78 ¶¶ 9-10 (2000).

⁶⁰ In 1983, the Commission declined to extend the GMRS license term because the GMRS community argued that, lacking frequency coordination procedures, users must be able to rely on reasonably current license records in order to determine which frequencies have been assigned to which licensees. See Amendment of Part 95 of the Commission's Rules to authorize ten year license terms in the General Mobile Radio Service (GMRS), PR Docket No. 83-330, *Report and Order*, FCC 83-455, 48 Fed. Reg. 49314 (rel. Oct. 6, 1983). In 1998, however, the Commission amended the rules to authorize GMRS licensees to use any channel, ending the practice of licensing specific channels to each licensee. See *ULS Report and Order*, 13 FCC Rcd at 21110-12 ¶¶ 191-95.

⁶¹ See 47 C.F.R. § 95.5. The Commission has specifically declined to make an exception for public service organizations or other non-profit organizations. The Commission was concerned that it could not adequately prevent licensing of organizations formed for the purpose of providing communications to commercial entities. See Amendment of Subparts A and E of Part 95 to Improve the General Mobile Radio Service (GMRS), *Report and Order*, 3 FCC Rcd. 6556 (1988). In 2003, the Public Safety and Private Wireless Division denied a Petition for Rulemaking requesting that the Commission reconsider its 1988 decision and amend its rules (*i.e.*, 47 C.F.R. §§ 95.1-95.183) for the GMRS to allow certain tax-exempt organizations to be eligible to apply for a GMRS license, in part because the requested revisions would result in the use of GMRS again for communications by entities

(continued....)

within a licensed system.⁶² Given that there is no age restriction on using radios in the other Personal Radio Services, we see no reason why, if we maintain the GMRS licensing requirement, younger individuals should be prohibited from operating a GMRS device or obtaining their own GMRS license. Therefore, we see little benefit to maintaining a minimum age requirement for GMRS. We seek comment on this proposal.

30. Furthermore, while individual licensees are permitted to use GMRS to communicate business activities, the rules have not permitted businesses to obtain GMRS licenses since July 31, 1987.⁶³ If we license GMRS by rule, should we maintain the eligibility requirement that only individuals are permitted to operate GMRS or should we remove the prohibition on business use of GMRS devices? We note that businesses successfully use FRS radios,⁶⁴ but that FRS operates at significantly lower power than GMRS, so frequency reuse is still achieved and significant spectrum congestion does not appear to be a problem. If we remove the individual licensing requirement for GMRS, are any eligibility requirement changes needed to ensure that a shared spectrum approach remains viable?

3. GMRS Portable Devices

31. Currently, there are no power limits specifically addressing portable GMRS radios. Instead, such devices fall under the GMRS mobile station category and are subject only to the 50 watts ERP limit established for that category. This has allowed manufacture of handheld GMRS radios that operate between one and five watts ERP. Given the increasing popularity of portable GMRS radios and the ubiquitous marketing of such devices, we believe the public interest would be served by establishing specific power rules for portable GMRS devices. In addition, because GMRS portable devices are, for the most part, used by the general public, we believe the public interest would be served by no longer categorically excluding portable GMRS devices from routine evaluation of human RF exposure.

32. We propose to prohibit GMRS portable devices from operating at more than two watts ERP. This is the same power limit that applies to portable units used in licensed low power industrial / business pool Part 90 land mobile operations in the 450-470 MHz range (the same frequency range as GMRS).⁶⁵ A review of equipment authorization applications for portable GMRS units reveals that many units already operate at less than two watts ERP.⁶⁶ This power limit should be adequate to ensure the devices meet the RF exposure limit for the general public. We also note that it will promote economies of scale, because Canada's license-exempt radios operating in this band are limited to two watts ERP.⁶⁷ We seek comment on all aspects of this proposal.

33. All GMRS stations, including portable devices, are currently categorically excluded from routine evaluation of human RF exposure.⁶⁸ The Commission's decision to categorically exclude GMRS

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eligible for licensing in business and other radio services. *See* Amendment of Part 95 of the Commission's Rules Regarding General Mobile Radio Service License Eligibility, Memorandum Opinion and Order, 18 FCC Rcd 20030 (WTB PSPWD 2003).

⁶² *See* 47 C.F.R. § 95.179(a).

⁶³ *See* 47 C.F.R. §§ 95.181(a), 95.5(a)-(c).

⁶⁴ *See* Amendment of Part 95 of the Commission's Rules to Establish a Very Short Distance Two-way Voice Radio Service, *Order*, RM-10564, DA 04-1035, released April 21, 2004.

⁶⁵ 47 C.F.R. § 90.267(b)(2)(i).

⁶⁶ Staff review performed on January 5, 2010 by searching the equipment authorization database at <http://www.fcc.gov/oet/ea> for GMRS handheld portable radios.

⁶⁷ *See* Industry Canada Radio Standards Specification RSS-210 at A6.2.4.

⁶⁸ 47 C.F.R. § 2.1093.

transmitters was based on certain assumptions concerning their operating configurations in mobile exposure conditions (*e.g.*, vehicular mobile installation where the antenna is away from the body, *see* § 2.1091) combined with a low transmit duty cycle (ratio of transmit time to receive time), particularly for “push-to-talk” type operations.⁶⁹ As noted above, our current rules have allowed the manufacture of hand-held GMRS transceivers that typically operate at power levels between one and five watts ERP. Because these portable GMRS devices are intended for use by the general public, the Commission has been requiring specific absorption rate (SAR) evaluation, on a case-by-case basis, for the higher powered portable GMRS devices, particularly those with very thin body worn accessories.⁷⁰ In order to apply RF exposure standards that are appropriate for GMRS hand-held portable transmitters that are used by the public, we propose to require routine SAR evaluation for portable GMRS devices⁷¹ to meet the General Population/Uncontrolled exposure limits of section 2.1093(d)(2)⁷² of the Commission’s rules within 60 days of the effective date of the Order that adopts such changes.⁷³ We seek comment on this proposal. We also seek comment on whether GMRS devices operating in mobile exposure conditions should continue to be categorically excluded from routine evaluation of human RF exposure for all power levels. In the same context, we seek comment from manufacturers regarding considerations to reduce SAR test requirements for portable GMRS devices that are designed to operate at lower power or using thicker body-worn accessories to reduce exposure potentials.

34. We also seek comment on power limits for other classes of GMRS operations. Most GMRS station classes currently may transmit with up to 50 watts output power.⁷⁴ This is a relatively high power for stations that are not coordinated, and with the use of gain antennas, the actual radiated power could be much higher. Given that GMRS licenses are not issued on a coordinated or exclusive use basis, should we continue to permit 50-watt operations? Should the existing station classes and power limits be maintained? In this regard, we request comment on whether we should reduce power limits or establish antenna height limits to increase frequency reuse for, and minimize interference to, GMRS communications. We recognize that the authorized level of station power and antenna height may impact spectrum efficiency. Furthermore, we note that the personal communications environment has evolved substantially since the Commission adopted the rules allowing repeater operation for GMRS. For example, most wide-area personal communication needs are now met by commercial communication providers.⁷⁵ We seek comment on whether repeater and base station operations are still needed in the GMRS given the availability of commercial alternatives that allow for more efficient use of the spectrum.

35. Furthermore, in order to account for the way a base station’s power is measured, we propose

⁶⁹ *See* Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, ET Docket 93-62, *Report and Order*, 11 FCC Rcd 15123, 15149 at ¶67 (1996).

⁷⁰ We note that the SAR test data for certain portable GMRS devices filed for equipment certification indicate that at conducted power levels of 1.5 – 2 watts, face and body-worn SAR can be close to the general public SAR limit for some models. In some cases, when feasible, the equipment authorization must be restricted for use in the occupational/controlled exposure environment.

⁷¹ For purposes of a portable GMRS device, we use the definition found in section 2.1093(b) of the Commission’s rules. *See* 47 C.F.R. § 2.1093(b).

⁷² 47 C.F.R. §§ 1.1307(b)(2), 2.1093(d)(2).

⁷³ *See* proposed § 95.49.

⁷⁴ A small control station north of Line A or east of Line C (*i.e.*, near the U.S./Canada border area) must transmit with no more than five watts ERP on the 467 MHz channels. *See* 47 C.F.R. §§ 95.25(d), 95.29(b), 95.135(c).

⁷⁵ At the end of December 2007, there were 263 million mobile phone subscribers, representing nearly 86 percent of the U.S. population. *See* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Thirteenth Report and Order*, FCC 09-54 at 6 (rel. January 16, 2009).

to change the power limit for GMRS small base stations to five watts transmitter output power, instead of five watts ERP. This approach would ease the accuracy of power measurement and would allow for the use of directional antennas to focus the signal's energy in the desired direction. We seek comment on the proposal to change the power limit for GMRS small base stations to five watts transmitter power and on whether we should also adopt antenna limitations for such stations.

4. Narrowbanding GMRS Channels

36. GMRS "primary" channels are currently spaced 25 kHz apart and are subject to the technical parameters generally associated with 25 kHz operation (*e.g.*, an authorized bandwidth of 20 kHz). To facilitate more efficient use of the private land mobile radio (PLMR) spectrum below 800 MHz, the Commission adopted a schedule to migrate Part 90 PLMR systems from 25 kHz technology to narrowband (12.5 kHz) technology.⁷⁶ A similar narrowbanding of GMRS channels could foster more efficient spectrum use and reduce the interference potential between GMRS and FRS. Moreover, we note that GMRS radio equipment (base/mobile) is essentially the same as PLMR equipment operating in the 450-470 MHz band and FRS equipment, both of which already employ 12.5 kHz technology. Thus, it does not appear that narrowbanding GMRS would impose an undue burden on GMRS manufacturers, and could even reduce manufacturing costs.

37. Accordingly, we propose to implement 12.5 kHz narrowbanding in the GMRS. In implementing this proposal, we note that the manufacture and importation of Part 90 PLMR 25 kHz bandwidth equipment would be prohibited beginning January 1, 2011.⁷⁷ However, we question whether sufficient time remains to accomplish all of the necessary regulatory and technical prerequisites to implementing GMRS narrowbanding before the January 2011 date. Therefore, we seek comment on the time that would be needed for GMRS manufacturers to transition to narrowband equipment if we adopt narrowbanding rules for GMRS. We would prohibit the marketing of 25 kHz GMRS equipment after that date. We request comment on whether this proposal would be overly burdensome on GMRS licensees, in particular repeater operators. At this time, we do not propose to implement a date after which 25 kHz operation is no longer permitted in the GMRS. However, we do seek comment on possible requirements that would assist in the transition to narrowband technology.

5. Section 95.29(g)

38. Section 95.29(g) provides that GMRS fixed stations "authorized before March 18, 1968, located 160 kilometers (100 miles) or more from the geographic center of urbanized areas of 200,000 or more," as defined by the 1960 U.S. Census, may transmit on channels other than those specified in Section 95.29, provided the Commission assigned such channels and the licensee causes no interference with Part 90 private land mobile radio services.⁷⁸ The Commission's licensing records do not reflect whether there are any such legacy operations. We believe that given the passage of over 40 years, any such operations have been discontinued and we therefore propose to delete this rule. Nevertheless, we seek comment on whether the rule should be retained and, if so, why.

⁷⁶ See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, WT Docket No. 99-87, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 18 FCC Rcd 3034 (2003); Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, WT Docket No. 99-87, *Third Memorandum Opinion and Order and Third Notice of Proposed Rulemaking and Order*, 19 FCC Rcd 25045 (2004).

⁷⁷ See 47 C.F.R. § 90.203(j)(11). We note that a petition to stay the January 2011 date to 2013 is currently pending. See Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau Seek Comment on National Public Safety Telecommunications Council Petition for Stay of Interim Narrowband Implementation Dates, *Public Notice*, DA 09-2364 (WTB/PSPWD rel. Nov. 2, 2009).

⁷⁸ 47 C.F.R. § 95.29(g).

6. Garmin International, Inc. Petition for Rulemaking

39. In 2003, the Commission, at the request of Garmin International, Inc. (Garmin), a designer and manufacturer of electronic devices, amended Part 95 to permit the transmission of Global Positioning System (GPS)⁷⁹ location information and user-generated text messages on certain FRS channels.⁸⁰ On July 22, 2003, Garmin filed a petition for rulemaking requesting that the Commission amend Part 95 to permit such transmissions on the 462 MHz GMRS channels.⁸¹ Garmin requests that we amend sections 95.29(f)(1),⁸² 95.119(a)(1),⁸³ 95.181,⁸⁴ 95.183(a)(4),⁸⁵ 95.631(a), (e), and (f),⁸⁶ and 95.633(a)⁸⁷ to authorize the transmission of GPS location information and text messaging using emission type F2D⁸⁸ in a digital data burst of not more than one second. The digital transmissions (data or text) would have basically the same limitations as those applicable to the transmission of GPS data and text messaging in the FRS.⁸⁹

40. Garmin notes that the Commission has already acknowledged the benefits (*e.g.*, the ability to locate lost or injured persons) of allowing such transmissions on FRS spectrum, and argues that these benefits will be even greater in the GMRS because the higher power permitted in this service allows coverage over a larger area.⁹⁰ Garmin contends that the safety of life and property benefits associated with

⁷⁹ GPS is a satellite-based navigation and positioning system consisting of twenty-eight satellites. *See, e.g.*, Amendment of Part 95 of the Commission's Rules to authorize the use of 406.025 MHz for Personal Locator Beacons (PLB), WT Docket No. 9-366, *Report and Order*, 17 FCC Rcd 19871, 19880 n. 69 (2002); *see also* Garmin Petition at 3 n.4.

⁸⁰ *See* Garmin International, Inc., Amendment of Sections 95.193(a), 95.193(b) and 95.631(d) of the Commission's Rules in the Family Radio Service, WT Docket No. 01-339, *Report and Order*, 18 FCC Rcd 2349 (2003) (*FRS GPS R&O*).

⁸¹ Garmin Petition at 2; Garmin RM-10762 Reply Comments at 1.

⁸² 47 C.F.R. § 95.29(f)(1) (limiting use of 462 MHz channels to voice transmissions).

⁸³ 47 C.F.R. § 95.119(a)(1) (station identification shall follow the transmission of communication or a series of communications).

⁸⁴ 47 C.F.R. § 95.181 (permissible communications).

⁸⁵ 47 C.F.R. § 95.183(a)(4) (prohibiting coded messages).

⁸⁶ 47 C.F.R. § 95.631(a), (e), (f) (limiting GMRS emission types to voice communications, prohibiting digital modulation or emission and non-voice data communications on GMRS frequencies).

⁸⁷ 47 C.F.R. § 95.633(a) (authorized bandwidth for voice communications).

⁸⁸ Emissions are designated according to their classification and their necessary bandwidth. F2D is an emission in which the main carrier is frequency modulated, the signal modulating the main carrier is a single channel containing quantized or digital information with the use of a modulating subcarrier, and the type of information to be transmitted is data, telemetry, or telecommand. *See* 47 C.F.R. § 2.201 for a description of emission types.

⁸⁹ Garmin Petition at 1 (citing *FRS GPS R&O*). Specifically, Garmin recommends amending the GMRS rules to provide that transmission of GPS location data be limited to GMRS mobile units that have integrated (*i.e.*, non-detachable) antennas and be limited to an authorized bandwidth of no more than 12.5 kHz. Garmin also proposes that GMRS mobile unit may transmit digital data (1) containing location information, (2) requesting location information from one or more GMRS units, or (3) containing a brief text message to another specific GMRS unit. Garmin also recommends that digital data transmissions (1) must be initiated by a manual action or command by the user, except that a GMRS unit receiving an interrogation request may automatically respond with its location; (2) not exceed one second; and (3) generally be limited to no more than one digital 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. *Id.* at 4; Garmin Reply Comments at 2-10.

⁹⁰ Garmin Petition at 2, 5 (citing *FRS GPS R&O*, 18 FCC Rcd at 2360 ¶¶ 26, 28).

allowing the transmission of GPS and text information can be obtained while still maintaining the integrity of GMRS and without causing interference.⁹¹

41. Several commenters oppose the Garmin petition in whole or in part.⁹² For example, the Personal Radio Steering Group (PRSG) acknowledges a role for the transmission of GPS information, but only on the GMRS spectrum that is shared with FRS.⁹³ It contends that the transmission of GPS data and text messages on the frequencies proposed by Garmin will interfere with GMRS operations, especially if operation is not subject to pre-transmission monitoring.⁹⁴ The Northern California GMRS Users Group (NCGUG) states that while allowing location transmissions on GMRS channels would benefit the public, Garmin's approach "could open up potential loopholes" that could result in abuse and interference.⁹⁵ Popular Wireless Magazines argues that allowing such operations will lead to more interference in the GMRS and generally agrees with NCGUG's comments.⁹⁶ Garmin responds that the interference concerns raised by commenters largely relate to interference potential that is already present under the existing GMRS rules.⁹⁷

42. As explained above, GMRS is similar to FRS. Both are voice services used by families and other small groups for personal communications, and they share certain spectrum. Further, FRS/GMRS combination radios are currently being used by the general public, including models that incorporate GPS capability.⁹⁸ The public interest is served by the ability to automatically locate individuals in distress, especially when they are injured or in an unfamiliar environment.⁹⁹ The Commission recognized these benefits when it adopted rules allowing the transmission of location information and text messages on FRS channels.¹⁰⁰ We see similar benefits in allowing such transmissions on GMRS spectrum and propose to amend the GMRS rules to permit the transmission of GPS location information and user-generated text messages under the same limitations that apply to FRS.¹⁰¹ We seek comment on this proposal and on the public interest and personal safety benefits of allowing such transmissions in the GMRS. Interested

⁹¹ *Id.* at 5-6.

⁹² Comments in the RM-10762 proceeding were filed by Tony Drake, Personal Radio Steering Group (PRSG), Popular Wireless Magazines (PWM), Northern California GMRS Users Group (NCGUG), F.E. Brody, Ralph J. Pellegrini, David Wehrwein, and Thomas H. Adler. Garmin filed reply comments.

⁹³ PRSG RM-10762 Comments at 3.

⁹⁴ *Id.*

⁹⁵ NCGUG RM-10762 Comments at 2-5. For example, NCGUG is concerned that large transit fleets or other industries that require location capability could take advantage of the GMRS GPS capability if safeguards are not put in place. Furthermore, NCGUG states that assurances need to be made that the limited number of GMRS channels are not abused by unlicensed individuals or large organizations (commercial or otherwise).

⁹⁶ *See* PWM RM-10762 Comments at 9-13.

⁹⁷ *See* Garmin RM-10762 Reply Comments at 2. Garmin states that commenters have not demonstrated that a data communication will cause any more or different interference than a voice or tone transmission.

⁹⁸ *See, e.g.*, <http://www.garmin.com/products/rino/> (last visited on February 19, 2009).

⁹⁹ *See, e.g.*, Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, CC Docket No. 94-102, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 18676, 18679 ¶ 5 (1996).

¹⁰⁰ *See FRS GPS R&O*, 18 FCC Rcd at 2353 ¶ 7.

¹⁰¹ We note that the Wireless Telecommunication Bureau has previously granted Garmin a temporary waiver to permit FCC certification for a GMRS transceiver that is capable of transmitting location information and text messages, pending the resolution of the subject petition for rulemaking. *See* Garmin International, *Order*, 20 FCC Rcd 982 (WTB PSCID 2004) (granting two-year waiver); Garmin International, *Order*, 21 FCC Rcd 15072 (MD 2006); Garmin International, *Order*, DA 08-2806 (rel. December 24, 2008).

parties should address any concerns regarding increased interference potential to voice communications as well as ways to minimize such interference, including channel restrictions and duty cycle requirements. Finally, commenters should address whether all or only some GMRS channels should be permitted to transmit location information.

C. Family Radio Service

43. The FRS is designed to provide individuals with short-range mobile communications and is licensed by rule.¹⁰² It was established in 1996 when the Commission allocated to FRS fourteen channels then allocated to GMRS.¹⁰³ In doing so, the Commission found that (1) the GMRS channels were not heavily used; (2) the two services were similar in that both were intended to operate in a shared environment and provide for the personal voice communications needs of the general public; and (3) given the low power of FRS, the potential for interference between the two services was small.¹⁰⁴ The Commission envisioned that the FRS would provide an affordable and convenient means of direct, short-range, two-way voice communications among small groups of persons, including families, with minimal regulation.¹⁰⁵

44. FRS radios are now widely available in a variety of styles from competing manufacturers. No license is needed to operate FRS radios, which are generally inexpensive, small, reasonably rugged, and easy to use. Most FRS radios also have good voice quality and use common, inexpensive, disposable batteries. Recently, more elaborate FRS radios have been developed that incorporate GPS capabilities to enable users to determine their location and automatically pass that information to nearby similarly equipped FRS radios. The transmission range between FRS radios is typically less than one half mile, but could be further depending on terrain. The popularity of FRS radios has resulted in intensive use of FRS channels in public venues such as beaches, parks, ski areas, sporting events, and festivals.

1. Combination Radios

45. With the increasing popularity of FRS radios, some manufacturers have begun to market radios that can be used by consumers to access FRS frequencies as well as frequencies in other services (*i.e.*, the frequencies are accessible using front panel controls). For example, several manufacturers market radios that operate on both FRS and GMRS frequencies.¹⁰⁶ While we recognize the convenience of these combination radios, we are concerned that manufacturers are starting to include FRS frequencies in radios that include VHF marine frequencies.¹⁰⁷ FRS combination radios that include VHF marine

¹⁰² See generally *FRS Report and Order*.

¹⁰³ See *FRS Report and Order*, 11 FCC Rcd at 12980 ¶ 8. Seven of the fourteen channels designated for to FRS are shared between FRS and GMRS (462.5625, 462.5875, 462.6125, 462.6375, 462.6625, 462.6875, and 462.7125 MHz). The other seven channels are interstitial channels (channels between GMRS channels commonly referred to as “split” channels) and available only to FRS (467.5625, 467.5875, 467.6125, 467.6375, 467.6625, 467.6875, and 467.7125 MHz). Compare 47 C.F.R. § 95.621 (GMRS frequencies) with 47 C.F.R. § 95.627 (FRS frequencies).

¹⁰⁴ See *FRS Report and Order*, 11 FCC Rcd at 12980 ¶ 8.

¹⁰⁵ *Id.* at 12978 ¶ 2. Businesses also may use FRS spectrum. See, e.g., Industrial Telecommunications Association, Inc., *Order*, 19 FCC Rcd 6988 (WTB PSCID 2004) (denying petition for rulemaking to prohibit business use of FRS).

¹⁰⁶ When operating as an FRS radio, the radio meets the FRS technical requirements; when operating as a GMRS radio, the radio meets the GMRS technical requirements.

¹⁰⁷ Standard Horizon’s HX471S radio, for example, includes both FRS channels and marine frequencies. See <http://www.standardhorizon.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=85&encProdID=71726205E5C6EC181DE69A09BC8877EA&DivisionID=3&isArchived=0> (last visited February 19, 2009).

channels could raise an eligibility issue.¹⁰⁸ Moreover, depending on the VHF marine frequencies available in the radio, a possible interference problem to marine distress, safety or navigation communications on Channels 16 and 70 could arise.¹⁰⁹ Allowing VHF marine frequencies to be front panel accessible on radios manufactured and mass marketed to the American public for personal communications could result in disruptions to the United States Coast Guard during distress calls or confusion between communications by the general public and actual maritime distress calls. Additionally, widespread capability to transmit on these distress frequencies could result in increased hoax mayday calls.

46. Against this backdrop, we question whether certain or all Personal Radio Service combination radios should be prohibited or otherwise restricted. In this regard, we note that the Commission's Part 95 rules already prohibit certain types of combination radios.¹¹⁰ We are concerned that the type of risks outlined above may outweigh the benefits of flexible use afforded by combination radios. In licensed services, the Commission can limit inappropriate or improper use by permissible communication rules and the associated range of sanctions for violation of such rules. For services licensed by rule, experience has shown that permissible communication restrictions are difficult to enforce, and such limitations tend to be more effective if they are imposed at the equipment certification stage rather than if they require user compliance.¹¹¹

47. We are particularly concerned with services that may be used for communications related to safety of life and property or communications during distress, and therefore propose to prohibit the certification of radios that combine Personal Radio Service channels with the capability to transmit on frequencies in the licensed services of Parts 80, 87, 90, and 97 of the Commission's rules. Prohibiting such combination radios with these licensed services would prevent unauthorized use of maritime, aviation, public safety, and amateur frequencies to the benefit of those licensees and the public more generally. We seek comment on this conclusion and whether we should prohibit any other services from being combined with Personal Radio Services. Additionally, we seek comment on whether our proposal should be more narrowly focused on certain Personal Radio Services. Commenters should address what sort of grandfathering, if any, would be appropriate for currently certified FRS combination radios and any other radios that combine Personal Radio Services with licensed services.

D. Citizens Band Radio Service

48. The Citizens Band (CB) Radio Service is a two-way, short distance voice communication service for use in personal and business activities of the general public.¹¹² Adopted in 1983 to prevent certain abuses, Section 95.419 prohibits the operation of a CB station transmitter by remote control (*i.e.*,

¹⁰⁸ Specifically, Part 80 marine operations are restricted to licensees that meet the eligibility requirements in section 80.15, but FRS radios are easily obtained at retail stores, have no licensing requirement for domestic operations and the only eligibility restriction applies to representatives of foreign governments. *See* 47 C.F.R. §§ 80.15(d), 95.191(a).

¹⁰⁹ For example, VHF marine channel 16 (156.8 MHz) is the international distress, safety and calling channel and channel 70 (156.525 MHz) is the frequency used for distress, safety and calling when using digital selective calling techniques. 47 C.F.R. § 80.373(f).

¹¹⁰ *See, e.g.*, 47 C.F.R. §§ 95.655(a), (d) (prohibiting equipment that combines CB with other frequencies and MURS with other frequencies).

¹¹¹ The Commission recognized this and the potential for abuse when it adopted service rules that prohibit combination radios involving spectrum allocated to MURS. *See MURS MO&O*, 17 FCC Rcd at 9848 ¶ 38.

¹¹² 47 C.F.R. § 95.401. “[T]he purpose of the CB Radio Service is to provide for short-distance personal and business radiocommunications and ... this purpose has not changed since the service's initial authorization.” *See* Amendment of Section 95.413 of Commission's Rules Prohibiting Communications or Attempts to Communicate with Citizens Band Radio Services Stations than More than 250 Kilometers Away, *Order*, 16 FCC Rcd 14825, 18830-31 ¶ 6 (WTB 2001) (*CB Order*).

operation from any place other than the location of the CB transmitter).¹¹³ Similarly, section 95.607 prohibits the addition of any “accessory” or device not specified in the application for certification and authorized by the FCC in granting the certification.¹¹⁴ There is no exception to section 95.419 for wireless hands-free microphones.¹¹⁵

1. CB Hands-Free Microphones

49. On December 17, 2003, Omnitronics, L.L.C. (Omnitronics), a manufacturer of communications equipment, filed a petition for rulemaking requesting that we amend Part 95 to authorize the manufacture, sale, and use of wireless microphones to permit hands-free operation of CB transmitters.¹¹⁶ Specifically, Omnitronics proposes that we amend the rules “to (i) provide that authorized wireless microphones in the Citizens Band Radio Service (‘CB Hands-Free Microphones’) may be used with authorized CB transmitters, (ii) allow manufacturers to obtain stand-alone equipment authorizations for CB Hands-Free Microphones designed and marketed as after market add-ons, and (iii) set forth technical standards for CB Hands-Free Microphones.”¹¹⁷ Omnitronics also requests that we amend section 95.419 to provide that use of CB hands-free microphones does not constitute remote control.¹¹⁸

50. Omnitronics contends that its proposed changes are necessary because the Commission’s current rules frustrate the development and use of hands-free technology by CB users,¹¹⁹ and that the proposed changes would not undermine the purpose of section 95.419. It notes that section 95.419(c) already provides that direct mechanical control or electrical control by wire from some point on the same premises, craft, or vehicle as the CB transmitter is not considered remote control.¹²⁰ Omnitronics states that its proposed parameters would limit use of CB hands-free microphones to the immediate vicinity of the CB transmitter, just as if a direct wire were used.¹²¹

51. Omnitronics also proposes that we amend section 95.607 to exempt CB hands-free microphones from the prohibition on adding an accessory not specified in the equipment certification.¹²² Omnitronics contends that the Commission would have greater control over the design and operation of

¹¹³ See 47 C.F.R. § 95.419(a), (c).

¹¹⁴ 47 C.F.R. § 95.607(a).

¹¹⁵ See Omnitronics, LLC, *Order on Reconsideration*, 18 FCC Rcd 23064 (WTB PSPWD 2003) (affirming denial of request for a waiver of Section 95.419 to permit manufacture and marketing of an earphone/microphone device that would permit hands-free operation of a CB station transmitter).

¹¹⁶ Omnitronics Petition at 1. No comments were filed against the Omnitronics Petition.

¹¹⁷ *Id.* at 5. It proposes to define CB Hands-Free Microphone as

[A] simplex system consisting of a head-worn microphone and associated transmitter unit and a receiver unit with a connector that is intended to attach to the existing microphone connector on a CB transmitter. The hands free transmitter shall include a voice activation circuit (VOX) that will activate a relay in the receiver unit when voice is present at the head worn microphone. The receive unit shall be designed to activate the relay only when the hands free transmitter is in range and voice is present at the head-worn microphone. Each system shall use a unique user code meeting the specifications outlined in section 15.214(d) to ensure that the specific CB operator only controls the CB transmitter. The associated transmitter shall be limited 1 mW (0.001 watt) final collector current. The transmitter shall be designed to meet or exceed the specifications of Part 15, specifically including 15.249.

¹¹⁸ *Id.* at 4-5.

¹¹⁹ *Id.* at 1-2.

¹²⁰ *Id.* (citing 47 C.F.R. § 95.419(c)).

¹²¹ *Id.*

¹²² *Id.* at 5-6.

these devices, and that competition among manufacturers would provide the public with greater choices and lower prices for this technology, if manufacturers other than the CB transmitter manufacturer may obtain equipment authorization.¹²³ Omnitronics also states that CB transmitter manufacturers have “standardized the use of open external connectors to allow CB microphones to connect with the CB transmitter” so that no changes to the CB transmitter are necessary to add a microphone, and such microphones cannot affect the transmission characteristics of a CB transmitter.¹²⁴

52. Finally, Omnitronics contends that the proposed rule changes serve the public interest, particularly in facilitating safer operation of CB transmitters by the long-haul trucking community.¹²⁵ It argues that use of hands-free microphones will enhance road safety.¹²⁶ Additionally, to the extent that States prohibit the use of hand-held wireless devices in motor vehicles, hands-free microphones may be the only means to ensure that some CB users can continue to operate.¹²⁷

53. We agree with Omnitronics that the rule sections at issue were not specifically intended to prohibit the use of wireless hands-free microphones.¹²⁸ Accordingly, we propose to amend Part 95 to make it clear that use of wireless hands-free microphones with CB transceivers is not considered to be remote control. Operation of such hands-free microphones, however, will be limited to the immediate vicinity of the CB transmitter. To effect such a limit, we propose to allow only hands-free microphones that operate under Part 15 of our rules. We seek comment on whether the operating range should be constrained by means of a field strength limit specifically for CB wireless hands-free microphones, for example, a fundamental emission level of one thousand $\mu\text{V}/\text{m}$ (microvolts/meter), as measured at three meters based on measuring equipment using a quasi-peak detector function.¹²⁹ Wireless microphones used with CB transmitters would have to comply fully with Part 15 of our rules,¹³⁰ and must not change any of the operating parameters of the CB transmitter or affect the CB transmission. We seek comment on whether the one thousand $\mu\text{V}/\text{m}$ emission limit proposed for Part 15 is appropriate. Additionally, we seek comment as to whether we should allow only the CB transmitter manufacturer to obtain certification for a CB hands-free microphone or alternatively, as Omnitronic suggests, to permit separate equipment authorizations for CB hands-free microphones. Additionally, we seek comment on whether we should allow hands-free devices that are widely available for cellular telephones used in vehicles to be used with CB transceivers.¹³¹

2. Review of Operating Rules

54. While CB radio was extensively used in prior decades, the widespread introduction of wireless telephony and other forms of communication in the 1990s have resulted in a sharp decline in the number of CB users. In view of this marked decline, we question whether the rules adopted to ensure a reasonable spectrum sharing environment in the CB Service are still timely and appropriate. Below we will review various rules for the CB Service and seek comment on whether the rules are needed, effective, enforceable, and make sense for this Personal Radio Service.

¹²³ *Id.* at 8-10.

¹²⁴ *Id.* at 5-6.

¹²⁵ *Id.* at 2, 8-10.

¹²⁶ *Id.* at 8.

¹²⁷ *Id.*

¹²⁸ *Id.* at 9-10.

¹²⁹ *See* 47 C.F.R. § 15.35.

¹³⁰ *See* 47 C.F.R. §§ 15.227, 15.229, 15.235, 15.249.

¹³¹ *See* www.bluetooth.com for further information.

55. We note that section 95.416 (CB Rule 16) provides that CB communications must be limited to the minimum practical time, that each CB station must limit its conversations to no more than five continuous minutes, and that after each conversation, CB stations must not transmit again for at least one minute.¹³² These restrictions were adopted long before the introduction, and now pervasive use, of wireless telephony, which has effectively relieved the CB service of congestion. Similarly, the GMRS prohibits continuous or uninterrupted transmissions¹³³ and are generally required to share channels to reduce interference.¹³⁴ The FRS rules state that the user must share each channel with other users and no channel is available for private or exclusive use.¹³⁵ Given that these three services are basically used for the same purpose, should we apply the same general channel sharing requirements across all the services or does CB continue to need specific limits on the length of communications and a required pause before initiating a new conversation? Does there continue to be congestion in the CB band or is the rule needed due to interference concerns with uses outside the CB band? We seek comment on whether to limit the duration of any single continuous transmission to prevent the use of CB radios as broadcast stations, transmitting continuously for long periods and thereby preventing others from using a channel. If they do favor such a limit, commenters should address how long a continuous transmission the rule should allow. We also seek comment on whether the Commission should amend or eliminate section 95.413(a)(6), which prohibits the transmission of music, whistling, sound effects or any material to amuse or entertain, and section 95.413(a)(7), which prohibits the transmission of any sound effect solely to attract attention.¹³⁶ Obviously, some of these types of transmissions could be detrimental if not kept in check, but would some allowances be reasonable and consistent with how we treat other Part 95 Services? If the Commission amends or eliminates such restrictions, should it retain a time limit on continuous transmissions?

56. Section 95.607 specifies certain types of design modifications to certificated CB transmitters that would not be permissive, and would in fact require the manufacturer holding the certification to seek written FCC permission prior to incorporating such changes in current production.¹³⁷ This section essentially elaborates on the general requirement of section 2.932, regarding changes to certificated equipment.¹³⁸ To avoid possible confusion from such duplication, we propose to remove section 95.607 and consolidate this requirement with similar requirements for other Personal Radio Services into section 95.33, which will contain a general reference to the Part 2 equipment certification rules, an outline of the equipment certification process, and any special certification requirements for Personal Radio Services. While section 95.607 and the new section 95.33 are primarily intended for manufacturers of CB equipment that hold the FCC equipment authorization, we observe that interference to other services is frequently caused by the use of CB equipment that has been modified by the CB operator or persons other than the manufacturer to operate on unauthorized frequencies or increase power beyond what is allowed. To emphasize that CB operators are not permitted to change the technical operating parameters of their equipment, or to operate equipment that has been so modified, we will repeat the prohibition in section 95.311 (What equipment may I use at my CB station?) and also point to the administrative and technical subparts (Subpart A and B of Part 95, respectively) in section 95.301 (Scope). We also seek comment on whether CB or other Part 95 Services need special equipment certification provisions or other changes to the rules to ensure that only proper equipment is used.

¹³² 47 C.F.R. § 95.416.

¹³³ 47 C.F.R. § 95.183(a)(14).

¹³⁴ 47 C.F.R. § 95.7(a).

¹³⁵ 47 C.F.R. § 95.191(b).

¹³⁶ 47 C.F.R. §§ 95.413(a)(6), (7).

¹³⁷ See 47 C.F.R. § 95.607.

¹³⁸ See 47 C.F.R. § 2.932.

57. Section 95.413(a)(9) prohibits communications or attempted communications with any CB station located more than 250 kilometers (155.3 miles) away.¹³⁹ The purpose of this rule is to ban CB radio communications using sky wave propagation, because the Commission intended CB radio to be used for short-distance communications.¹⁴⁰ CB radios operate in the upper portion of the high frequency (HF) band, where radio wave propagation includes two modes, direct and sky wave. Direct waves move along the earth's surface, while sky waves reach the ionosphere and then reflect (bend) downward reaching long distances. CB stations can communicate by direct waves with other CB stations within approximately 15 miles at all times, and also with stations up to several hundred miles away via sky wave propagation, provided solar conditions permit.¹⁴¹ When conditions for sky wave propagation are favorable, it may actually be easier to communicate with distant stations than closer ones. This presents a unique problem with allowing a "commons" band regulatory structure¹⁴² in the HF band that allows the capability to transmit over long distances. Section 95.413(a)(9) can be a difficult rule to enforce because regular CB radios are capable of communicating over hundreds of miles without any attempts to modify their operations. Nevertheless, this ability to communicate over long distances has tempted some to use illegal linear amplifiers and directional antennas to see how far they can communicate. Such operations can result in harmful interference to television operations, as well as other services in the HF band. Therefore, we seek comment on how best to deal with this natural phenomenon. Amplifiers for CB stations are already illegal, but should we consider prohibiting directional antennas for CB operations in order to facilitate its intended use for short range communications? Should we consider power reductions for the CB Service? Is there harm in allowing CB operators to communicate in sky wave mode, or would such an allowance tempt the use of illegal amplifiers which cause interference? We seek comment on how best to deal with section 95.413(a)(9) and other challenges in permitting a "commons" band regulatory structure in the HF band.¹⁴³

E. Radio Control (R/C) Service

58. Section 95.215(b) of the R/C Service rules provides that "[t]he only time your R/C communications may be a continuous signal for more than three minutes is when operation of the device requires at least one or more changes during each minute of the communications."¹⁴⁴ Given the evolution of applications in the R/C Service since adoption of this rule, we seek comment regarding whether we should eliminate this restriction, while maintaining the requirement in section 95.215(a) that transmissions be limited to the minimum practical time.¹⁴⁵ We also seek comment on whether some limit

¹³⁹ 47 C.F.R. § 95.413(a)(9).

¹⁴⁰ See In the Matter of Amendment of Part 19 Citizens Radio Service, to Revise Subpart D, Station Operating Requirements and to Make Other Changes, Docket No. 14843, *Report and Order*, 42 F.C.C. 1195, 1206 (1964).

¹⁴¹ We are now in a period between the predictable, recurrent peaks of solar sunspot activity that enable high-frequency sky wave propagation, and sky wave (or "skip") communications in the 27 MHz band are currently infrequent. Conditions for sky wave propagation will become increasingly favorable until the years 2011-2013, when the current sunspot cycle (number 24) is predicted to peak. See National Oceanic and Atmospheric Administration website at: <http://www.swpc.noaa.gov/SolarCycle/SC24/index.html>.

¹⁴² Typically, "commons" bands are made available for short range communications where everyone can operate on the same spectrum with appropriate etiquettes to avoid interference and maximize spectrum reuse.

¹⁴³ We note that in 2000, the Wireless Telecommunications Bureau denied a petition for rulemaking to amend this limit. See Amendment of Section 95.413 of Commission's Rules Prohibiting Communications or Attempts to Communicate with Citizens Band Radio Services Stations than More than 250 Kilometers Away, *Order*, 15 FCC Rcd 18828 (WTB 2001), *recon denied*, 16 FCC Rcd 14825 (2001). We remind CB operators that the use of RF power amplifiers to facilitate sky wave propagation is a principal source of interference to TV reception and remains illegal.

¹⁴⁴ 47 C.F.R. § 95.215(b).

¹⁴⁵ 47 C.F.R. § 95.215(a).

greater than three minutes should be established to prevent unforeseen applications that would continually use the channels to the detriment of R/C hobbyists.

F. 218-219 MHz Service

59. The Commission established the current 218-219 MHz Service as the “Interactive Video and Data Service” (IVDS) in 1992.¹⁴⁶ IVDS was established with a 500 kilohertz frequency segment for two licenses in each of the 734 cellular-defined service areas, and was envisioned as a short-distance communications service by which licensees could provide information, products, or services to, and allow interactive responses from, subscribers within the licensee’s service area.¹⁴⁷ The original service rules included: a five-year license term; restrictions on holding both licenses in a market; and specific construction benchmarks.¹⁴⁸ The Commission also adopted technical requirements to reduce the potential for harmful interference to nearby operations, including reception of TV Channel 13 broadcasts in the 210-216 MHz band.¹⁴⁹

60. The Commission renamed IVDS the “218-219 MHz Service” in 1996, and amended the technical and service rules to provide licensees more flexibility in using this spectrum.¹⁵⁰ Specifically, the Commission removed the restriction on holding both licenses in a market; permitted partitioning and disaggregation; extended the license term to ten years; eliminated the three- and five-year construction benchmarks; and adopted a “substantial service” analysis to be assessed at the expiration of the 218-219 MHz Service license term as a condition of renewal.¹⁵¹ We seek to further streamline the 218-219 MHz Service rules to provide a more flexible regulatory environment that would enable licensees to more effectively and efficiently use this spectrum. We seek comment on specific measures detailed below, and more generally regarding whether there are measures we can take to provide additional flexibility to 218-219 MHz Service licensees.

1. Part 27 Designation

61. As an initial matter, we believe that the 218-219 MHz Service rules, now in Subpart F of Part 95, are better suited to Part 27 (Miscellaneous Wireless Communications Services).¹⁵² The Commission originally decided to regulate IVDS under Part 95, rather than as a common carrier service, because it expected the services to be of a personal nature (*i.e.*, a consumer interactive service) and offered by subscription.¹⁵³ As noted above, the Commission subsequently modified the rules to allow a variety of

¹⁴⁶ Amendment of Parts 0, 1, 2 and 95 of the Commission's Rules to Provide Interactive Video and Data Services, GEN Docket No. 91-2, *Report and Order*, 7 FCC Rcd 1630, 1630-33 (1992) (*1992 Allocation Report and Order*), *on recon.*, *Memorandum Opinion and Order*, 7 FCC Rcd 4923 (1992) (*IVDS MO&O*), *further recon.*, *Second Memorandum Opinion and Order*, 8 FCC Rcd 2787 (1993).

¹⁴⁷ *1992 Allocation Report and Order*, 7 FCC Rcd at 1630-33. The 218.0-218.5 MHz block is frequency segment A, and the 218.5-219.0 MHz block is frequency segment B. 47 C.F.R. § 95.853(a). These service areas consist of 306 Metropolitan Statistical Areas (MSAs) and 428 Rural Service Areas (RSAs). Thus, a total of 1468 licenses — consisting of 612 MSA licenses and 856 RSA licenses — were allocated for this service.

¹⁴⁸ *1992 Allocation Report and Order*, 7 FCC Rcd at 1637-41.

¹⁴⁹ *Id.* at 1633-37.

¹⁵⁰ See Amendment of Part 95 of the Commission’s Rules to Modify Construction Requirements for Interactive Video and Data Service (IVDS), *Report and Order*, 11 FCC Rcd 2472 (1996) (eliminating the one-year construction requirement); and 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*, 15 FCC Rcd 1497 (1999) (*218-219 MHz Order*).

¹⁵¹ *218-219 MHz Order*, 15 FCC Rcd at 1517, 1537-1538 ¶¶ 31, 68, 70.

¹⁵² See 47 C.F.R. Part 27.

¹⁵³ See *1992 Allocation Report and Order*, 7 FCC Rcd at 1637 ¶ 54.

fixed and mobile services on either a common-carrier or private basis.¹⁵⁴ For example, mobile service providers may elect their regulatory status as either commercial (under the Commercial Mobile Radio Service rules) or private (under the Private Mobile Radio Service rules).¹⁵⁵ This flexibility makes the 218-219 MHz Service unique among the Personal Radio Services in that it may be used for commercial applications, is licensed on a geographic, exclusive-use basis, and is subject to the Commission's competitive bidding procedures and secondary markets policies.¹⁵⁶ By contrast, all other Part 95 services are personal in nature and operate on a shared basis.

62. In view of the foregoing, we propose to integrate the 218-219 MHz Service rules into Part 27, using the current format of the Part 27 rules and, as necessary, making conforming changes so that the 218-219 MHz Service rules are aligned with similar Part 27 rules. For example, to promote consistency and clarity in how we regulate various commercial licensees, we propose to integrate most of the 218-219 MHz Service rules into Part 27 Subpart A—General Information, Subpart B—Applications and Licenses, and Subpart C—Technical Standards. We also propose to create a new Subpart N—“218-219 MHz Service” for any rule sections relocated from Part 95 that are not integrated into Part 27 Subparts A, B, or C. We seek comment on our proposal to move the 218-219 MHz Service rules from Part 95 to Part 27.

2. Rule Streamlining

63. We seek comment on eliminating certain 218-219 MHz Service rules. First, we find that it is unnecessary to retain section 95.813(b), which restricts a licensee that loses its authorization for failure to meet its construction requirements from obtaining any new 218-219 MHz Service authorization for a period of three years.¹⁵⁷ This requirement stems from concerns that an entity that obtained a license through the lottery process may not actually build a 218-219 MHz Service system.¹⁵⁸ The construction requirements for 218-219 MHz Service licenses obtained by lottery were required to be satisfied more than three years ago, and there are no lottery-based licensees subject to the three-year period at this time. The Commission moreover no longer issues 218-219 MHz Service licenses by lottery, and section 95.813(b) thus no longer serves the Commission's intended purpose. Therefore, we propose to eliminate section 95.813(b) and to apply section 27.14(a) to 218-219 MHz Service licensees, which states that failure by any licensee to meet its construction requirement will result in forfeiture of the license and the licensee will be ineligible to regain it.¹⁵⁹ Part 27 services are not subject to the restriction found in section 95.813(b), and we believe that continued application of section 95.813(b) unnecessarily penalizes a licensee that may not meet its construction requirements for a particular license (*e.g.*, in a specific market and for a specific channel block) from being able to obtain a different license for a period of three years. We seek comment on this proposal.

64. We also seek comment on whether to remove the requirements in section 95.815 that 218-219 MHz Service licensees file with the Commission a plan analyzing co- and adjacent channel interference potential when they file their license application forms and when they propose to modify an individually licensed transmitter.¹⁶⁰ While the prevention of interference is important, we question whether this

¹⁵⁴ *218-219 MHz Order*, 15 FCC Rcd 1497, 1499 (1999), *recon. denied* 15 FCC Rcd 25020 (2000).

¹⁵⁵ 47 C.F.R. § 95.807.

¹⁵⁶ *See* 47 C.F.R. §§ 95.805, 95.807, 95.816, 95.823; 2004 Biennial Regulatory Review, WT Docket No. 04-180, *Staff Report*, 20 FCC Rcd 142, 243 (2005); Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503, 17534-35 ¶ 64 (2004).

¹⁵⁷ *See* 47 C.F.R. §§ 95.813(b).

¹⁵⁸ *1992 Allocation Report and Order*, 7 FCC Rcd at 1641 ¶ 77.

¹⁵⁹ *See* 47 C.F.R. § 27.14(a).

¹⁶⁰ *See* 47 C.F.R. § 95.815.

requirement is necessary, effective, and efficient in preventing interference. We note that the 218-219 MHz Service is licensed by geographic area at auction, and we question whether it is reasonable to ask license applicants to specify where all transmitting antennas will be and their interference potential when they file applications for a geographic license. Additionally, the Commission does not require predictive interference avoidance plans for other geographically licensed services and we question the need for disparate treatment of the 218-219 MHz Service. We also seek comment on whether requiring a new licensee to analyze its deployment and interference potential up-front is likely to be a true representation of the potential for interference. For example, many tasks such as obtaining transmitter site leases and local zoning approval would most likely be completed after a geographic licensee obtains its authorization, so any predictive interference analysis of a licensee's tower deployment and interference potential is not likely to be accurate at such an early stage. In view of the foregoing, we seek comment on whether an overall prohibition on causing harmful interference should be sufficient to address any interference that may occur.

65. We also seek comment on how we should amend section 95.861,¹⁶¹ which requires 218-219 MHz licensees to provide a copy of their deployment and interference avoidance plans to any TV Channel 13 station whose Grade B contour overlaps their licensed service area. This section also requires 218-219 MHz licenses to provide (upon request) and install, free of charge, interference reduction devices to households within the Grade B contour that experience interference to over the air reception of TV Channel 13 due to operation of the 218-219 MHz station.¹⁶² We note that full power TV stations (including approximately 20 that will be operating on Channel 13) have recently completed the transition to digital transmissions (DTV). The analog (NTSC) contours Grade A and B are not used for DTV stations; instead DTV service is defined by use of a principal community contour and a noise-limited service contour.¹⁶³ We propose to replace, in the 218-219 MHz service rules, references to the Grade B contour with a metric that is appropriate to DTV technology, such as the noise-limited contour. In this regard, we note that the field strengths associated with the DTV contours are different than the Grade B field strength, and the prescribed propagation prediction methodology is different. Although the Commission calculated DTV station parameters in such a way as to replicate, to the extent possible, the existing NTSC coverage of each station, in some cases the DTV contours may differ somewhat (in the area covered) from the former Grade B coverage. We seek comment on the impact of the transition to digital television, as it relates to rules that address the interference potential of 218-219 MHz Service operations to TV Channel 13 reception. We also seek comment on continuing the existing interference approach (requiring filters to be provided) and welcome suggestions of any approaches that might be more appropriate.

66. Finally, we seek comment on any other steps that can be taken to provide a more efficient and flexible regulatory environment to promote more expansive use of the 218-219 MHz Service. In addressing this issue, commenters are urged to provide specific recommendations, including any technical requirements that the Commission should consider in adopting additional rules and policies.

G. Personal Locator Beacons

67. In 2002, the Commission adopted rules to authorize the use of 406 MHz personal locator beacons (PLBs) to provide a distress and alerting capacity for use by the general public in a life-threatening condition in a remote environment after all other means of notifying search and rescue (SAR) responders have been used.¹⁶⁴ The 406 MHz PLB provides worldwide alerting capability with distress

¹⁶¹ See 47 C.F.R. § 95.861.

¹⁶² *Id.*

¹⁶³ For digital television stations, the signal intensity standards are the values set forth in Section 73.622(e) of the Commission's Rules describing the DTV noise-limited service contour. See 47 C.F.R. § 73.622(e).

¹⁶⁴ See Amendment of Part 95 of the Commission's Rules to authorize the use of 406.025 MHz for Personal Locator Beacons (PLB), PR Docket No. 99-366, *Report and Order*, 17 FCC Rcd 19871 (2002).

alerts automatically routed, through the COSPAS/SARSAT satellite system, to the SAR authorities for a specific geographic region.¹⁶⁵ The system provides a specified level of accuracy and continual updates through an internationally proven system to SAR authorities that are properly trained, staffed and equipped to respond to these alerts. The 406 MHz PLBs are also designed to support widely fielded direction finding gear that is used for terminal SAR team guidance.¹⁶⁶

68. We understand that some devices that do not operate in the 406 MHz frequency band, and that are not supported by the COSPAS/SARSAT satellite system, have been improperly marketed to the public as “PLBs.”¹⁶⁷ This practice has caused confusion among consumers and some may assume that these devices have the same utility as a 406 MHz PLB. We are concerned that erroneous reliance on these devices could have dangerous consequences for a user who is lost or injured in a remote area. We therefore propose to amend Part 95 to clarify that the term PLB refers only to a beacon that meets the requirements set forth in 47 C.F.R. Part 95, Subpart K for 406 MHz PLBs. If adopted, such a rule would make unlawful the marketing of noncompliant devices as PLBs.

69. Finally, in the Report and Order in WT Docket No. 99-366 we amended our rules to require that 406 MHz PLBs be required to comply with the technical standards in the Radio Technical Commission for Maritime (RTCM) Service document entitled RTCM Recommended Standards for 406 MHz Satellite Personal Locator Beacons (PLBs), and to incorporate the RTCM technical standards by reference in Part 95 of our Rules. The RTCM document provides minimum requirements for the functional and technical performance of 406 MHz PLBs. Since then the RTCM has revised these standards to clarify, improve and update the 406 MHz PLB requirements. Consequently, we propose to update our rules to reference the new revised RTCM 406 MHz PLB standards.

H. Other Part 95 Services

70. In addition to the specific Part 95 services discussed in this *NPRM*, we invite comment on the rules governing the other Part 95 services, which are: (1) Low Power Radio Service (LPRS); (2) Wireless Medical Telemetry Service (WMTS);¹⁶⁸ (3) Medical Device Radiocommunications Service (MedRadio)¹⁶⁹; (4) Multi-Use Radio Service (MURS); and (5) Dedicated Short Range Communications

¹⁶⁵ “COSPAS” is an acronym for a Russian phrase meaning “space system for search and distress vessels.” “SARSAT” is an acronym for “search and rescue satellite-aided tracking.” In the United States, the United States Air Force is responsible for distributing 406 MHz PLB distress alerts to the state and local authorities that might be called upon to conduct the SAR response.

¹⁶⁶ 406 MHz PLBs transmit in the frequency band 406.0-406.1 MHz, and must comply with the technical standards in the RTCM Recommended Standards for 406 MHz Satellite Personal Locator Beacons, Version 1.1, RTCM Paper 76-2002/SC110-STD, and be certified by a COSPAS/SARSAT laboratory and an independent laboratory to certify that they comply with electrical and environmental standards associated with the RTCM standard. See 47 C.F.R. §§ 95.1401, 95.1402. Additionally, 406 MHz PLBs must include a 121.5 MHz homing beacon, and transmit a unique identifier (Morse Code “P”) on the 121.5 MHz signal. See 47 C.F.R. § 95.1402(b). The rules also specify labeling requirements and mandatory registration with the National Oceanic and Atmospheric Administration. See 47 C.F.R. §§ 95.1402(e), (f).

¹⁶⁷ For example, TracMe markets a locator device that transmits on FRS frequency 462.5625 MHz, with an advertised range of up to 1 kilometer on the ground and up to 4 kilometers from the air, which is not supported by the COSPAS/SARSAT system. See <http://domsoutdoor.com/product.asp?pn=1-040720>, (last visited May 28, 2010) (“The TracMe Non-Satellite Personal Locator Beacon (PLB) is a small device the size of a small candy bar, providing “peace of mind” through an increased level of safety for the millions of people around the world who participate in outdoor and adventure sport activities”).

¹⁶⁸ We note that certain issues pertaining to WMTS already are pending in another proceeding. See Amendment of Part 90 of the Commission’s Rules, WP Docket No. 07-100, *Notice of Proposed Rulemaking and Order*, 22 FCC Rcd 9595, 10007-08 ¶¶ 27-29 (2007). We do not seek additional comment on those issues.

¹⁶⁹ We note that certain issues pertaining to the Medical Device Radiocommunications Service (MedRadio) are included in another *Notice of Proposed Rulemaking* and that we do not seek comment on those issues in this *NPRM*.

(continued...)

Service On-Board Units (DSRCS-OBUs). In addressing these services, interested parties are urged to provide specific recommendations, including any technical requirements that the Commission should consider in adopting any additional rules and policies.

IV. MEMORANDUM OPINION AND ORDER ON RECONSIDERATION

71. In the *Report and Order* in WT Docket No. 98-182, the Commission reallocated five very high frequency (VHF) Part 90 frequencies known in the PLMR community as the VHF “color dot” frequencies to the newly-created Part 95 Multi-Use Radio Service (MURS), a two-way, short-distance, voice, data or image communication service for the personal or business activities of the general public.¹⁷⁰ In response to petitions for reconsideration, the Commission affirmed its decision to license MURS by rule, but adopted additional technical restrictions designed to address concerns expressed by grandfathered (*i.e.*, pre-MURS) users of the frequencies in a *Memorandum Opinion and Order (MO&O)*.¹⁷¹

72. PRSG filed a petition for reconsideration of certain aspects of the *MO&O*.¹⁷² Specifically, PRSG requests that we (1) revisit the rule prohibiting MURS radios from connecting to the public switched telephone network (PSTN); (2) require all MURS radios to have a feature that prevents the radio from transmitting if the corresponding receivers are using muting protocols; and (3) revisit the grandfathering privileges extended to pre-MURS business and industrial licensees that had licensed facilities operating on the MURS frequencies.¹⁷³ For the reasons stated below, we deny PRSG’s petition.

73. *Interconnection*. The Commission prohibited MURS transmitters from interconnecting with the PSTN.¹⁷⁴ It concluded that interconnection would be inappropriate for MURS because of the limited

(...continued from previous page)

See In the Matter of Amendment of Parts 2 and 95 of the Commission’s Rules to Provide Additional Spectrum for the Medical Device Radiocommunication Service in the 413-457 MHz band, ET Docket No. 09-36, RM-11404, Notice of Proposed Rulemaking, 24 FCC Rcd 3445 (2009).

¹⁷⁰ *See 1998 Biennial Regulatory Review – 47 C.F.R. Part 90 – Private Land Mobile Services, WT Docket No. 98-182, Report and Order and Further Notice of Proposed Rule Making, 15 FCC Rcd 16673, 16688 ¶ 31 (2000).*

¹⁷¹ *MURS MO&O, 17 FCC Rcd at 9837-38 ¶¶ 15-17 (2002).*

¹⁷² We note that the PRSG Petition was not timely filed. Because the *MURS MO&O* was published in the Federal Register on October 11, 2002, 67 Fed. Reg. 63279 (2002), the filing deadline for petitions for reconsideration was November 12, 2002. *See 47 C.F.R. § 1.429(d)*. PRSG states that it attempted to file its reconsideration petition on November 12, 2002, but the Commission’s Electronic Comment Filing System (ECFS) was malfunctioning and would not allow the petition to be filed. *See PRSG Motion to Accept the Filing as Timely Filed (filed Nov. 12, 2002)*. Because ECFS was taken off-line for emergency repairs that day and was unavailable until November 14, 2002, we grant PRSG’s motion. *See Wireless Telecommunications Bureau Announces Limited Extension of Time to File Comments and Reply Comments on Proposal to Revise Multichannel Multipoint Distribution Service and the Instructional Television Fixed Service, RM-10586, Public Notice, 17 FCC Rcd 22960 (WTB 2002).*

¹⁷³ PRSG Petition at 2-5. We note that comments were filed by Dakota Alert, Inc. (Dakota), F.E. Brody (Brody), James Johnston (Johnston), Michael E. Dickerson (Dickerson), PRSG, and Stewart R. Teaze (Teaze). PRSG filed reply comments and a late-filed supplement to its reply comments. It sought leave to file the supplement out of time on the grounds that the Dakota comments were not timely posted to the Commission’s Electronic Comment Filing System (ECFS). *See PRSG Petition for Acceptance of a Late Filed Reply Comment at 1 (filed Aug. 7, 2003)*. Dakota opposed the request on the grounds that PRSG received timely actual notice of Dakota’s comments. *Opposition to Petition for Acceptance of a Late Filed Reply Comment at 1 (filed Aug. 20, 2003)*. PRSG received ample notice of the Dakota comments, both from the Commission and from Dakota. Nonetheless, in the interest of compiling as complete record as possible in this proceeding, we will grant PRSG’s request and accept the late-filed supplement.

¹⁷⁴ *See MURS MO&O, 17 FCC Rcd at 9845-46 ¶ 29; see also 47 C.F.R. § 95.1313.*

number of available channels and the importance of spectrum sharing and re-use of MURS frequencies.¹⁷⁵ PRSG supports the prohibition on interconnection, but asserts that the regulatory language adopted by the Commission¹⁷⁶ is imprecise and antiquated.¹⁷⁷ PRSG argues that the rule should address issues such as MURS radios connecting to networks other than the PSTN.¹⁷⁸ No party supports PRSG's request. We agree with commenters that the interconnection prohibition contained in section 95.1313 of the Commission's Rules is sufficiently clear,¹⁷⁹ and that no changes are needed to address the issues raised by PRSG.¹⁸⁰ We also note Teaze's concern that excessively complicated regulation of MURS could impede usage and stifle innovation.¹⁸¹ We agree with Teaze that changes should not be made when there is no evidence of an existing rule creating a problem.¹⁸²

74. *Monitoring.* Because MURS channels are shared, the Commission requires operators to monitor the transmitting frequency for communications in progress before transmitting.¹⁸³ PRSG argues that the Commission should go further, and require automatic monitoring, so that MURS radios could transmit only after monitoring the channel for a specified minimum period (at least several seconds).¹⁸⁴ PRSG does not explain why automatic monitoring is necessary for MURS.¹⁸⁵ Of the other Part 95 services, only the Medical Device Radiocommunications Service (MedRadio) has an automatic monitoring requirement.¹⁸⁶ There are obvious differences between the two services. MedRadio is used to

¹⁷⁵ See *MURS MO&O*, 17 FCC Rcd at 9845-46 ¶ 29.

¹⁷⁶ Section 95.1313 provides MURS stations are prohibited from interconnection with the public switched network. The rule defines interconnection as follows:

“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 radios. 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.”

¹⁷⁷ See PRSG Petition at 2.

¹⁷⁸ *Id.* PRSG questions whether the rules apply to private networks that are directly interconnected to, or share resources with, the PSTN.

¹⁷⁹ We note that the current regulatory language goes into greater detail than the language that PRSG proposed in its petition for reconsideration of the *Report and Order*. See PRSG Petition for Reconsideration at 8 (filed Nov. 13, 2000) (proposing a rule stating “No MURS station may be interconnected to the public switched telephone network”). PRSG does not set forth any changed circumstances.

¹⁸⁰ See Dakota WT Docket No. 98-182 Comments at 1; Johnston WT Docket No. 98-182 Comments at 1; Teaze WT Docket No. 98-182 Comments at 2. Brody's comments, although supportive of the prohibition on interconnection, do not clearly address PRSG's claim that the current regulatory language is inadequate. See Brody WT Docket No. 98-182 Comments at 1.

¹⁸¹ See Teaze WT Docket No. 98-182 Comments at 2; *accord* Johnston WT Docket No. 98-182 Comments at 1.

¹⁸² See Teaze WT Docket No. 98-182 Comments at 2.

¹⁸³ See *MURS MO&O*, 17 FCC Rcd at 9846 ¶ 30; *see also* 47 C.F.R. § 95.1307(d).

¹⁸⁴ See PRSG Petition at 3.

¹⁸⁵ Moreover, we note that the Commission has recently proposed to permit the operation of certain medical implant devices without automatic monitoring. See Investigation of the Spectrum Requirements for Advanced Medical Technologies, ET Docket No. 06-135, *Notice of Proposed Rulemaking, Notice of Inquiry, and Order*, 21 FCC Rcd 8164, 8173-74 ¶¶ 23-25 (2006) (*MISC NPRM*).

¹⁸⁶ See 47 C.F.R. § 95.628(a).

transmit medical data in support of the diagnostic and/or therapeutic functions associated with implanted or body-worn medical devices such as cardiac pacemakers and defibrillators.¹⁸⁷ The automatic monitoring requirement helps avoid interference to these health-related transmissions.¹⁸⁸ No such need for automatic monitoring has been demonstrated with respect to MURS.¹⁸⁹ We therefore agree with commenters that PRSG's proposal should not be adopted,¹⁹⁰ because imposing an automatic monitoring requirement could stifle innovation and raise equipment costs without any corresponding public interest benefit.¹⁹¹

75. *Grandfathering.* The Commission grandfathered and licensed by rule all previously licensed operations on the MURS frequencies, including operations that employed parameters inconsistent with the technical restrictions of the MURS rules.¹⁹² PRSG requests that we continue to require such stations to have a license, and require renewal of grandfathered licenses that operate at variance with current and future MURS requirements.¹⁹³ It also requests that parties operating under grandfathered privileges identify their stations by FCC call sign and that the operating parameters of these grandfathered licenses be contained in the FCC's publicly accessible license database.¹⁹⁴ PRSG argues that if its request is not granted, MURS operators will have no way of knowing if others are operating permissibly under grandfathered privileges or improperly in violation of the MURS rules.¹⁹⁵

76. Contrary to PRSG's understanding, information on former Part 90 licenses for the MURS frequencies continues to be publicly available on the Commission's Universal Licensing System, including licenses that have expired. The public can search the database by frequency to locate grandfathered Part 90 Industrial/Business Pool users. Consequently, we conclude that PRSG's licensing proposal is unnecessary to enable MURS users to identify grandfathered operations. We also agree with Dakota that requiring grandfathered Part 90 stations to transmit a call sign could confuse MURS users.¹⁹⁶ Accordingly, we deny PRSG's petition.

V. PROCEDURAL MATTERS

A. *Ex Parte* Rules – Permit-But-Disclose Proceeding

77. This is a permit-but-disclose notice and comment rulemaking proceeding. *Ex parte* presentations are permitted, except during the Sunshine Agenda period, provided they are disclosed pursuant to the Commission's Rules.¹⁹⁷

¹⁸⁷ See Amendment of Parts 2 and 95 of the Commission's Rules to Establish a Medical Implant Communications Service in the 402-405 MHz Band, *Report and Order*, WT Docket No. 99-66, 14 FCC Rcd 21040, 21040 ¶ 1 (1999); See *MedRadio R&O*, 24 FCC Rcd at 3475 ¶ 2.

¹⁸⁸ See *MISC NPRM*, 21 FCC Rcd at 8168-69 ¶ 11.

¹⁸⁹ We are aware that increasing use is being made of MURS for data and telemetry applications, some of which have integrated scanning, automatic monitoring, and packet collision avoidance on a voluntary basis.

¹⁹⁰ See Brody WT Docket No. 98-182 Comments at 1; Dakota WT Docket No. 98-182 Comments at 1; Dickerson WT Docket No. 98-182 Comments at 1-2.

¹⁹¹ See Brody WT Docket No. 98-182 Comments at 1-2; Teaze WT Docket No. 98-182 Comments at 3.

¹⁹² See *MURS MO&O*, 17 FCC Rcd at 9850 ¶ 40; see also 47 C.F.R. § 95.1317.

¹⁹³ See PRSG Petition at 4.

¹⁹⁴ See *id.*

¹⁹⁵ See *id.*; accord Brody WT Docket No. 98-182 Comments at 2.

¹⁹⁶ See Dakota WT Docket No. 98-182 Comments at 2.

¹⁹⁷ See generally 47 C.F.R. §§ 1.1202, 1.1203, 1.1206.

B. Comment Period and Procedures

78. Pursuant to sections 1.415 and 1.419 of the Commission's Rules,¹⁹⁸ interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments and reply comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS); (2) the Federal Government's eRulemaking Portal; or, (3) by filing paper copies.¹⁹⁹

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/> or the Federal eRulemaking Portal: <http://www.regulations.gov>.
- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

79. The public may view the documents filed in this proceeding during regular business hours in the FCC Reference Information Center, Federal Communications Commission, 445 12th Street, S.W., Room CY-A257, Washington, DC 20554, and on the Commission's Internet Home Page: <http://www.fcc.gov>. Copies of comments and reply comments are also available through the Commission's duplicating contractor: Best Copy and Printing, Inc. (BCPI), Portals II, 445 12th Street, SW, Room CY-B402, Washington, DC 20554, telephone 1-800-378-3160, or via e-mail at: WWW.BCPIWEB.COM.

80. For further information, contact B. C. "Jay" Jackson, Jr., Mobility Division, Wireless Telecommunications Bureau, (202) 418-1309, or via e-mail at Jay.Jackson@fcc.gov.

C. Regulatory Flexibility Act

81. *Initial Regulatory Flexibility Certification.* We have prepared an Initial Regulatory

¹⁹⁸ 47 C.F.R. §§ 1.415, 1.419.

¹⁹⁹ See Electronic Filing of Documents in Rulemaking Proceedings, GN Docket No. 97-113, *Report and Order*, 13 FCC Red 11322 (1998).

Flexibility Certification concerning the possibility of a significant economic impact of the policies and rules proposed by this *NPRM* on a substantial number of small entities. The Initial Regulatory Flexibility Certification is set forth in Appendix A.

D. Initial Paperwork Reduction Act of 1995 Analysis

82. This document proposes to eliminate an information collection. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we seek specific comment on how we might “further reduce the information collection burden for small business concerns with fewer than 25 employees.”

VI. ORDERING CLAUSES

83. Accordingly, IT IS ORDERED that, pursuant to Sections 4(i), 4(j), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), 303(r), NOTICE IS HEREBY GIVEN of the proposed amendments to Parts 1, 27, and 95 of the Commission's Rules, 47 C.F.R. Parts 1, 27, and 95, as discussed herein, and that COMMENT IS SOUGHT on these proposals.

84. IT IS FURTHER ORDERED that, pursuant to Sections 4(i), 303(f), 303(r), and 332 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(f), 303(r), 332, this *Notice of Proposed Rule Making and Memorandum Opinion and Order on Reconsideration* IS ADOPTED.

85. IT IS FURTHER ORDERED that, pursuant to Sections 4(i), 4(j), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), 303(r), and Section 1.407 of the Commission's Rules, 47 C.F.R. § 1.407, the petition for rulemaking filed by Garmin International, Inc., RM-10762, on July 22, 2003 IS GRANTED to the extent stated herein.

86. IT IS FURTHER ORDERED that, pursuant to Sections 4(i), 4(j), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), 303(r), and Section 1.407 of the Commission's Rules, 47 C.F.R. § 1.407, the petition for rulemaking filed by Omnitronics, L.L.C., RM-10844, on December 17, 2003 IS GRANTED to the extent stated herein.

87. IT IS FURTHER ORDERED that, pursuant to Sections 4(i) and 4(j) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 154(j), and Section 1.106(j) of the Commission's Rules, 47 C.F.R. § 1.106(j), the petition for reconsideration filed by the Personal Radio Steering Group in WT Docket No. 98-182 on November 14, 2002, IS DENIED.

88. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this *Notice of Proposed Rule Making and Memorandum Opinion and Order on Reconsideration*, including the Initial Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

INITIAL REGULATORY FLEXIBILITY CERTIFICATION

1. The Regulatory Flexibility Act (RFA)¹ requires that an agency prepare a regulatory flexibility analysis for notice-and-comment rulemaking proceedings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."² The RFA generally defines "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."³ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁴ A "small business concern" is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁵

2. This *Notice of Proposed Rule Making (NPRM)* proposes to streamline, update and reorganize Part 95 of the Federal Communications Commission (FCC) rules, which governs the Personal Radio Services. The Personal Radio Services are a family of radio services that provide for a variety of wireless devices operated by individual persons, primarily for their own personal use, or to provide benefits to other individual persons. For example, in some of the Personal Radio Services, such as the Family Radio Service and the General Mobile Radio Service, the general public may purchase FCC-certified two-way radios (sometimes called "walkie-talkies") that they can use to communicate with each other directly when they are within range (usually a short distance) of each other. Some other Personal Radio Service applications include radio-controlled aircraft and other hobby vehicles, wireless devices to aid persons with hearing difficulties, medical telemetry and implant devices that provide medical benefits to patients, and personal beacons to help search and rescue teams locate persons in distress in wilderness areas. Unlike commercial mobile radio services such as cellular telephones, the Personal Radio Services are not designed to be used by companies to provide a telecommunications service for hire. Because of the very large number of wireless devices used in most of the Personal Radio services, the FCC has authorized their use by rule, rather than by issuing a separate station license for each device.

3. Part 95 has been amended in a piecemeal fashion numerous times during the past three decades, usually to add a subpart to provide for a new Personal Radio Service. As a result, the structure of Part 95 has become somewhat disorganized. The FCC has not undertaken a comprehensive review of Part 95 in many years and, as a result, it contains many rules that are in effect redundant or inconsistent, or which use outdated technical terminology. The *NPRM* proposes amendments to correct these problems and seeks comment from the public on the proposals. Furthermore, some of the older Personal Radio Services have evolved substantially in technology and usage over the years and the rules for these services also need to be updated. One Part 95 service, the 218-219 MHz service, has evolved so much from its original concept that it no longer shares the personal characteristics of the other Personal Radio

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

² See 5 U.S.C. § 605(b).

³ 5 U.S.C. § 601(6).

⁴ 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

⁵ 15 U.S.C. § 632.

Services; it has become more like a commercial service. Accordingly, the *NPRM* proposes to transfer all of the rules for this service from Part 95 to Part 27 of the FCC rules, because it now has a regulatory framework that is similar to that of the Miscellaneous Wireless Communications Services.

4. The *NPRM* also proposes to reduce burdens on persons who use Personal Radio Services by authorizing the operation some or all General Mobile Radio Service (GMRS) stations by rule, extending GMRS license terms from five to ten years, and by relaxing GMRS eligibility requirements and certain Citizens Band (CB) Radio Service operating rules. Additionally, the *NPRM* proposes to improve spectrum use efficiency by providing for the use of narrower emission bandwidths in the GMRS. The *NPRM* further proposes to enhance Personal Radio equipment operating features by allowing for the transmission of Global Positioning System (GPS) location information and user-generated text messages on certain GMRS channels, and permitting the use of “hands-free” microphones in the CB Radio Service. Finally, the *NPRM* proposes to promote the safety and consumer interests of Personal Radio Service operators by (1) requiring routine evaluation of GMRS portable devices for radio frequency exposure, (2) no longer granting certification of radios that have voice scrambling capability and “combination radios” capable of transmitting in the safety services in addition to the Personal Radio Services, and (3) preventing the marketing of ersatz devices using the term “Personal Locator Beacon” by limiting the use of that term to genuine personal locator beacons that meet the international technical requirements for such devices.

5. The two statutorily-mandated criteria that the FCC must apply when determining whether an Initial Regulatory Flexibility Certification is appropriate are: (1) whether the proposed rules, if adopted, would have a *significant economic effect*, and (2) if so, whether the economic effect would *directly affect a substantial number of small entities*. Upon application of these criteria, summarized in the following paragraphs, the FCC finds it appropriate to certify that the proposals in this *NPRM*, if adopted, would not have a significant economic effect on a substantial number of small entities.

6. With respect to the first criterion, the FCC finds that adoption of the proposals in the *NPRM* would not have a significant economic effect. In reaching this determination, the FCC first notes that most of the proposed changes to Part 95 in the *NPRM* are editorial and organizational in nature rather than substantive, and as such would not have any economic effect at all on any entities, large or small. Of the remaining proposed changes in the *NPRM*, many of them would directly affect only Personal Radio users, who are individual persons not considered to be small entities for the purpose of the RFA by the FCC, the SBA or Congress.

7. In addition to the editorial rule changes and those that affect only individual persons, however, the *NPRM* also proposes rules that would affect Personal Radio Service equipment manufacturers. Some of these rules would allow equipment manufacturers the flexibility to include certain new features in their future Personal Radio Services products, if they so desire. Because such rules are permissive and not mandatory requirements, any economic effects on these manufacturers, such as an increase in sales or manufacturing cost per unit, would be the result of the equipment manufacturer’s decision as to whether to take advantage of the increased options. As stated *supra*, the *NPRM* proposes (1) to require routine evaluation of certain GMRS radios for radio frequency exposure, (2) that the FCC no longer grant certification of certain types of personal radios (those combined with safety service radios and those with voice scrambling capability), and (3) to restrict future marketing use of the term “personal locator beacon”. If adopted, these proposed rules could require some equipment manufacturers to make adjustments to their future product plans (in regard to combination and voice-scrambling radios) or to alter product labeling (in regard to personal locator beacons). The FCC believes however, that the cost to manufacturers of implementing any of these proposals would be small in comparison to the costs of design, manufacturing, distribution and marketing of these products. Therefore, the FCC concludes that adoption of the *NPRM* proposals would not have more than a *de minimis*, if any, economic effect on manufacturers.

8. As for the second criterion, the FCC, while not in any way conceding the preceding point, considers *arguendo* the case that one or more proposals in the *NPRM*, if adopted, turns out to have a

significant economic effect. In such hypothetical case, the FCC considers whether the economic effect would directly affect a substantial number of small entities. Initially, the FCC notes that the substantive proposals in the *NPRM* would directly affect only operators of Personal Radio Services stations and entities who seek FCC certification of equipment for use in the Personal Radio Services. The former are individual persons, and that latter are typically large manufacturing organizations, neither of which is considered to be small entities for purposes of the RFA by the FCC, the SBA or Congress. The Personal Radio Services equipment market is a large, nationwide market and most Personal Radio Services devices are mass-marketed directly to the general public as consumer goods. This necessitates a large-volume manufacturing capability that a small entity typically does not have. Although there are small-entities that make accessory devices for the Personal Radio Services, and there are small-entity retailers, such as truck stops, that sell Personal Radio Services equipment (*e.g.* CB radios), the proposals outlined *supra* would not directly affect any of them. In view of these factors, the FCC concludes that the proposals in the *NPRM* would not directly affect any small entities, and thus obviously by reason would not directly affect a substantial number of small entities.

9. The FCC therefore certifies, pursuant to the RFA, that the proposals in this *NPRM*, if adopted, would not have a significant economic impact on a substantial number of small entities. The FCC will send a copy of the *NPRM*, including a copy of this Initial Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the SBA. In addition, a summary of the *NPRM* and this initial certification will be published in the Federal Register.⁶

⁶ See 5 U.S.C. § 605(b).

APPENDIX B**Proposed Rules**

Part 1 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

Part 1 – Practice and Procedure

1. The authority citation for Part 1 continues to read as follows:

AUTHORITY: 15 U.S.C. 79 *et. seq.*; 47 U.S.C. 151, 154(i), 154(j), 155, 157, 225, 303(r), and 309.

2. Section 1.1307 is amended by revising paragraph (b)(2) as follows:

§ 1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.

* * * * *

(b) * * *

(2) Mobile and portable transmitting devices that operate in the Cellular Radiotelephone Service, the Personal Communications Services (PCS), the Satellite Communications Services, the Wireless Communications Service, the Maritime Services (ship earth stations only), the Specialized Mobile Radio Service, and the 3650 MHz Wireless Broadband Service authorized under Subpart H of Parts 22, 24, 25, 27, 80, and 90 of this chapter are subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§2.1091 and 2.1093 of this chapter. Unlicensed PCS, unlicensed NII and millimeter wave devices are also subject to routine environmental evaluation for RF exposure prior to equipment authorization or use, as specified in §§15.253(f), 15.255(g), 15.319(i), and 15.407(f) of this chapter. Portable devices as defined in §2.1093(b) of this chapter operating in the General Mobile Radio Service (GMRS), the Wireless Medical Telemetry Service (WMTS) and the Medical Device Radiocommunication Service (MedRadio) Subparts C, H and I of Part 95 of this chapter are subject to radio frequency radiation exposure requirements as specified in §§2.1093 and 95.49 of this chapter. Equipment authorized for use in the Medical Device Radiocommunication Service (MedRadio) as a medical implant or body-worn transmitter (as defined in Appendix 1 to Subpart E of Part 95 of this chapter) is subject to routine environmental evaluation for RF exposure prior to equipment authorization, as specified in §2.1093 of this chapter by finite difference time domain computational modeling or laboratory measurement techniques. Where a showing is based on computational modeling, the Commission retains the discretion to request that specific absorption rate measurement data be submitted. All other mobile, portable, and unlicensed transmitting devices are categorically excluded from routine environmental evaluation for RF exposure under §§2.1091, 2.1093 of this chapter except as specified in paragraphs (c) and (d) of this section.

* * * * *

Part 27 of Chapter 1 of Title 47 of the Code of Federal Regulations is amended as follows:

Part 27 – Miscellaneous Wireless Communications Services

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337 unless otherwise noted.

1. Section 27.1 is amended by adding paragraph (b)(10) to read as follows:

§ 27.1 Basis and purpose.

* * * * *

(b) * * *

(10) 218-219 MHz.

* * * * *

2. Section 27.2 is amended by adding paragraph (d) to read as follows:

§ 27.2 Permissible communications.

* * * * *

(d) *218-219 MHz.* 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.

3. Section 27.5 is amended by adding paragraph (j) to read as follows:

§ 27.5 Frequencies.

* * * * *

(j) *218-219 MHz band.* 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.

4. Section 27.10 is amended by revising paragraph (a) and by adding paragraph (e) to read as follows:

§ 27.10 Regulatory status.

* * * * *

(a) *Single authorization.* Authorization will be granted to provide any or a combination of the following services in a single license: common carrier, non-common carrier, private internal communications, and broadcast services. A licensee may render any kind of communications service consistent with the regulatory status in its license and with the Commission's rules applicable to that service. A system in the 218-219 MHz Service may not provide broadcast services. An applicant or licensee may submit a petition at any time requesting clarification of the regulatory status for which authorization is required to provide a specific communications service.

* * * * *

(e) *Pre-existing 218-219 MHz licenses.* Licenses in the 218-219 MHz Service 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 (d) of this section.

5. Section 27.11 is amended by adding paragraph (j) to read as follows:

§ 27.11 Initial authorization.

* * * * *

(j) *218-219 MHz band.* 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.

6. Section 27.13 is amended by adding paragraph (i) to read as follows:

§ 27.13 License period.

* * * * *

(i) *218-219 MHz.* (1) Authorizations for the 218–219 MHz band will have a term not to exceed ten years from the date of initial issuance or renewal.

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

7. Section 27.14 is amended by redesignating paragraphs (g) through (o) as (h) through (p), and adding paragraphs (g) and (q), to read as follows:

§ 27.14 Construction requirements; criteria for renewal.

* * * * *

(g) Comparative renewal proceedings do not apply to licensees holding authorizations for the 218-219 MHz band. These licensees must file a renewal application in accordance with the provisions set forth in §1.949 of this chapter.

* * * * *

(q) Each licensee holding authorizations in the 218–219 MHz band must make a showing of “substantial service” within ten years of the license grant. A “substantial service” assessment will be made at renewal pursuant to the provisions and procedures contained in §1.949 of this chapter.

(1) Each licensee holding authorizations in the 218–219 MHz band must file a report informing 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:

- (i) A description of its current service in terms of geographic coverage and population served;
- (ii) An explanation of its record of expansion, including a timetable of new construction to meet changes in demand for service;
- (iii) A description of its investments in its 218–219 MHz Service systems;
- (iv) A list, including addresses, of all component cellular transmission stations constructed; and
- (v) 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.

8. Section 27.50 is amended by adding paragraph (j) to read as follows:

§ 27.50 Power and antenna height limits.

* * * * *

(j) The following power and antenna height requirements apply to stations transmitting in the 218-219 MHz band:

(1) The effective radiated power (ERP) of each cellular transmitter station (CTS) and response transmitter unit (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.

(2) The overall height from ground to topmost tip of a 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* §27.1403(b) of this part) and the antenna structures of which they are a part must be registered with the Commission (*see* part 17 of this chapter).

(3) 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.”

9. Section 27.53 is amended by adding paragraph (o) to read as follows:

§ 27.53 Emission limits.

* * * * *

(o) For operations in the 218-219 MHz band, all transmissions by each cellular transmitter station and by each response transmitter unit shall use an emission type that complies with the following standard for unnecessary radiation.

- (1) All spurious and out-of-band emissions shall be attenuated:
- (i) Zero dB on any frequency within the authorized frequency segment;
 - (ii) 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;
 - (iii) 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;
 - (iv) At least $43 + 10 \log (P)$ dB on any frequency removed from the midpoint of the assigned frequency segment by more than 1250 kHz.
- (2) 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.
- (3) The resolution 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 resolution 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 resolution bandwidth.

10. Part 27 is amended by adding subpart O to read as follows:

Subpart O – 218-219 MHz Band

Sec.

- 27.1401 Scope.
- 27.1402 218–219MHz Service description.
- 27.1403 License requirements.
- 27.1404 License application.
- 27.1405 Competitive bidding proceedings.
- 27.1406 License transferability.
- 27.1407 Station identification.
- 27.1408 Station inspection.
- 27.1409 Certification.
- 27.1410 Interference.

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337 unless otherwise noted.

§ 27.1401 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.

§ 27.1402 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* §27.1403.
- (c) Each 218–219 MHz Service system service area is one of the cellular markets as defined in § 22.909

of this chapter, unless modified pursuant to §27.15.

§ 27.1403 License requirements.

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

(b) Each cellular transmitter station (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 CTS 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 response transmitter unit (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).

§ 27.1404 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 § 27.14 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 cellular transmitter station (CTS) (*see* § 27.1403(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 §27.14 of this part.

§ 27.1405 Competitive bidding proceedings.

(a) 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) Installment payment provisions for partitioning and disaggregation--(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(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 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.

(d) 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.

(e) 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.

(f) 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).

§ 27.1406 License transferability.

(a) A 218–219 MHz Service system license, together with all of its component cellular transmitter stations (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 § 27.14.

§ 27.1407 Station identification.

No response transmitter unit or cellular transmitter station is required to transmit a station identification announcement.

§ 27.1408 Station inspection.

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

§ 27.1409 Certification.

Each cellular transmitter station and response transmitter unit must be certificated for use in the 218–219 MHz Service in accordance with subpart J of part 2 of this chapter.

§ 27.1410 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 § 27.1404 (a) of this part to every TV Channel 13 station whose Noise Limited Contour, as determined in § 73.622(e), 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 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 § 95.815.

(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 Noise Limited Contour that experiences interference due to a component cellular transmitter station or response transmitter unit (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 RTUs, 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.

Part 95 of Chapter 1 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

Part 95 – Personal Radio Services

1. The authority citation for Part 95 is amended to read as follows:

Authority: 47 U.S.C. §§ 154, 303, 307.

2. Part 95 is deleted in its entirety and a new Part 95 is added to read as follows:

Part 95 – PERSONAL RADIO SERVICES

Subpart A – General Information

Sec.

95.1 Basis and Purpose.

95.3 Definitions.

95.5 License requirement and eligibility.

95.7 Authorized locations.

95.9 Licensee responsibility.

95.11 Station inspection.

95.13 Correspondence from the FCC.

95.15 Penalties for violating the rules.

95.17 Contact the FCC

Subpart B – Technical Information

95.31 Scope.

95.33 Equipment certification requirements.

95.35 Power.

95.37 Frequency tolerance.

95.39 Bandwidth limitations.

95.41 Emission limitations.

95.43 Modulation standards.

95.45 Antenna limits.

95.47 Telephone interconnection.

95.49 RF safety.

95.51 Operation by remote control.

Subpart C – General Mobile Radio Service (GMRS)

95.101 Scope.

95.103 Channels available.

95.105 Permissible communications.

95.107 Station identification.

Subpart D – Radio Control (R/C) Radio Service

95.201 Scope.

95.203 Eligibility.

95.205 Channels available.

95.207 Permissible communications.

95.209 Special restrictions on the location of R/C stations.

95.211 Operation by remote control.

Subpart E – Citizens Band (CB) Radio Service

95.301 Scope.

95.303 Am I eligible to operate a CB station?

95.305 Are there any special restrictions on the location of my CB station?

95.307 On what channels may I operate?

95.309 Antenna Limits.

95.311 What equipment may I use at my CB station?

95.313 May I use power amplifiers?

95.315 What communications may be transmitted?

95.317 What communications are prohibited?

95.319 May I be paid to use my CB station?

95.321 Do I have to limit the length of my communications?

95.323 How do I use my CB station in an emergency or to assist a traveler?

95.325 May I operate my CB station transmitter by remote control?

95.327 May I connect my CB station transmitter to a telephone?

Subpart F – Family Radio Service (FRS)

95.401 Scope.

95.403 Channels available.

95.405 Permissible communications.

Subpart G – Low Power Radio Service (LPRS)

95.501 Scope.

95.503 Channels available.

95.505 Permissible communications.

95.507 Notification requirement

95.509 Marketing limitations.

Subpart H – Wireless Medical Telemetry Service (WMTS)

95.601 Scope.

95.603 Channels available.

95.605 Permissible communications.

95.607 Frequency coordination.

95.609 Frequency coordinator.

95.611 Special requirements for operating in the 608-614 MHz band.

95.613 Special requirements for operating in the 1395-1400 and 1427-1429.5 MHz bands.

95.615 Protection of medical equipment.

Subpart I – Medical Device Radiocommunications Service (MedRadio)

95.701 Scope.

95.703 Permissible communications.

95.705 Channel use policy.

95.707 Disclosure policies.

95.709 Labeling requirements.

95.711 Marketing limitations.

95.713 Certification procedures.

- 95.715 MedRadio transmitters.
- 95.717 Maximum transmitter power.
- 95.719 Emission types.
- 95.721 Emission bandwidth.
- 95.723 Unwanted radiation.
- 95.725 Antennas.
- 95.727 RF exposure.

Subpart J – Multi-Use Radio Service (MURS)

- 95.801 Scope.
- 95.803 Channels available.
- 95.805 Permissible communications.
- 95.807 Repeater operations and signal boosters prohibited.
- 95.809 Grandfathered MURS Stations.

Subpart K – Personal Locator Beacons (PLB)

- 95.901 Scope.
- 95.903 Channels available.
- 95.905 Permissible communications.
- 95.907 Special requirements for 406 MHz PLBs.
- 95.909 Marketing limitations.

Subpart L – Dedicated Short-range Communications Service On-Board Units (DSRCS-OBUs)

- 95.1001 Scope.
- 95.1003 ASTM E2213-03 DSRC Standard.
- 95.1005 Channels available.

Subpart A – General Information

§ 95.1 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 radio stations may be licensed and used in the Personal Radio Services.

§ 95.3 Definitions.

Antenna. The radiating system (for transmitting, receiving or both) and the structure holding it up (tower, pole or mast).

Authorized bandwidth. Maximum permissible bandwidth of a transmission.

Automated maritime telecommunications system (AMTS). An automatic maritime communications system administered under Part 80 of the Commission's Rules.

Base station. A fixed station that communicates with mobile stations.

Carrier power. Average transmitter output power during one RF cycle under condition of no modulation.

Channel center frequencies. Reference frequencies from which the carrier frequency, suppressed or otherwise, may not deviate by more than the specified frequency tolerance.

Citizens Band (CB) Radio Service. The CB Radio Service is a private, two-way, short-distance voice communications service intended primarily for personal activities of the general public. The CB Radio Service may also be used for voice paging.

Citizens Band Radio Services. The Citizens Band Radio Services are the Citizens Band, Family Radio Service, Personal Locator Beacon, Low Power Radio Service, Medical Implant Communications Service, Multi-Use Radio Service, Wireless Medical Telemetry Service, and Dedicated Short-range Communications Service On-Board Units.

CB transmitter. A transmitter that operates or is intended to operate at a station authorized in the CB Radio Service.

Dedicated Short-range Communications Service On-Board Units (DSRCS-OBUs). DSRCS-OBUs may communicate with DSRCS Roadside Units (RSUs), which are authorized under part 90 of this chapter.

Family Radio Service (FRS). The FRS is a private, two-way, very short-distance voice and data communications service for facilitating family and group activities.

General Mobile Radio Service (GMRS). GMRS is a land mobile radio service available to persons for short-distance two-way communications intended primarily to facilitate personal communications.

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.

Low Power Radio Service (LPRS). The LPRS is a private, short-distance communications service providing auditory assistance to persons with disabilities, persons who require language translations, and persons in educational settings, health care assistance to the ill, law enforcement tracking services in cooperation with law enforcement, and point-to-point network control communications for Automated Marine Telecommunications System (AMTS) coast stations licensed under part 80 of this chapter.

Mean power. Average transmitter output power over a time interval of at least 0.1 seconds.

Medical Device Radiocommunications Service (MedRadio). 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.

With regard to MedRadio, the following definitions apply:

(i) *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.

(ii) *Emission bandwidth.* Measured as the width of the signal between the points on either side of carrier center frequency that are 20 dB down relative to the maximum level of the modulated carrier. Compliance will be determined using instrumentation employing a peak detector function and a resolution bandwidth approximately equal to 1% of the emission bandwidth of the device under test. (iii) *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.

(iii) *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.

(iv) *Medical implant device*. Apparatus that is placed inside the human body for the purpose of performing diagnostic and/or therapeutic functions.

(v) *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.

(vi) *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.

(vii) *MedRadio channel*. Any continuous segment of spectrum that is equal to the emission bandwidth of the device with the largest bandwidth that is to participate in a MedRadio communications session. (Note: The rules do not specify a channeling scheme for use by MedRadio systems.)

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

(ix) *Medical implant transmitter*. A transmitter authorized to operate in the MedRadio service.

(x) *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.

(xi) *MedRadio Service*. Medical Device Radiocommunication Service.

Multi-Use Radio Service (MURS). MURS is a private, two-way, short-distance voice, data or image communications service for personal or business activities of the general public.

Personal Locator Beacon (PLB). PLBs are 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.

Radio Control (R/C) Radio Service. The R/C Service is a private, one-way, short-distance non-voice communications service for the operation of devices at remote locations.

R/C transmitter. A transmitter that operates or is intended to operate at a station authorized in the R/C.

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 1427-1429.5 MHz frequency bands.

Wireless Medical Telemetry Service (WMTS). The WMTS is a private, short-distance data communication service for the transmission of patient medical information to a central monitoring location in a hospital or other hospital care facility.

§ 95.5 License requirement and eligibility.

(a) Except as set forth below, you are authorized by rule (no individual FCC license is required) to operate Personal Radio Service transmitters that have been approved as required in § 95.33 of this subpart.

(1) Stations belonging to and operated by the United States Government, and stations operated by foreign governments or their representatives are not authorized.

(2) Each entity operating a LPRS transmitter for AMTS purposes must hold an AMTS license under Part 80 of this chapter.

(3) Authorized health care providers are authorized by rule to operate transmitters in the Wireless Medical Telemetry Service without an individual license issued by the Commission provided the

coordination requirements in § 95.607 have been met. Manufacturers of wireless medical telemetry devices and their representatives are authorized to operate wireless medical telemetry transmitters in this service solely for the purpose of demonstrating such equipment to, or installing and maintaining such equipment for, duly authorized health care providers. No entity that is a foreign government or which is active in the capacity as a representative of a foreign government is eligible to operate a WMTS transmitter.

(4) Operation in the MedRadio service is permitted by rule and without an individual license issued by the FCC. Duly authorized health care professionals are permitted to operate MedRadio transmitters. Persons may also operate MedRadio transmitters to the extent the transmitters are incorporated into implanted or body-worn medical devices that are used by the person at the direction of a duly authorized health care professional; this includes medical devices that have been implanted in that person or placed on the body of that person by or under the direction of a duly authorized health care professional. Manufacturers of medical devices that include MedRadio transmitters, and their representatives, are authorized to operate transmitters in this service for the purpose of demonstrating such equipment to duly authorized health care professionals. No entity that is a foreign government or which is acting in its capacity as a representative of a foreign government is eligible to operate a MedRadio transmitter. The term “duly authorized health care professional” means a physician or other individual authorized under state or federal law to provide health care services. Operations that comply with the requirements of this part may be conducted under manual or automatic control.

§ 95.7 Authorized locations.

(a) Provided that you comply with the rules of this chapter, you are authorized to operate a Personal Radio Services transmitter from:

(1) Within the United States and its territories. Those areas include the fifty United States and the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands (50 islets and cays), American Samoa (seven islands), the Commonwealth of Northern Mariana Islands, and Guam Island;

(2) Aboard any vessel or aircraft registered in the United States, with the permission of the captain, that is within or over the United States or its territories, U.S. territorial waters, or upon or over international waters; or

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

(b) You may be subject to additional restrictions if you operate your Personal Radio Services transmitter:

(1) Near an FCC field office or in a quiet zone. *See* § 1.924 of this chapter.

(2) In an area subject to an international treaty or agreement.

(3) At an environmentally sensitive site, or in such a manner as to raise environmental problems. *See* §§ 1.1307, 1.1311 and 1.1312 of this chapter.

(4) In an area administered by the United States Government. For example, the Department of Defense may impose restrictions on a station transmitting on its land. Before placing a station at such a point, a licensee should consult with the commanding officer in charge of the land. Anyone intending to operate a Personal Radio Services transmitter on the islands of Puerto Rico, Desecheo, Mona, Vieques, and Culebra in a manner that could pose an interference threat to the Arecibo Observatory shall notify the Interference Office, Arecibo Observatory, HC3 Box 53995, Arecibo, Puerto Rico 00612, in writing or electronically, of the location of the unit. Operators may wish to consult interference guidelines, which will be provided by Cornell University. Operators who choose to transmit information electronically should send an e-mail to: prcz@naic.edu.

(i) The notification to the Interference Office, Arecibo Observatory shall be made 45 days prior to commencing operation of the unit. The notification shall state the geographical coordinates of the unit.

(ii) After receipt of such notifications, the Commission will allow the Arecibo Observatory a period of 20 days for comments or objections. The operator will be required to make reasonable efforts in order to resolve or mitigate any potential interference problem with the Arecibo Observatory. If the Commission determines that an operator has satisfied its responsibility to make reasonable efforts to protect the Observatory from interference, the unit may be allowed to operate.

(c) Wireless Medical Telemetry Service devices shall not operate in mobile vehicles, such as ambulances, even if those vehicles are associated with a health care facility.

§ 95.9 Licensee responsibility.

(a) A licensee (including entities licensed by rule) of a Personal Radio Services transmitter is responsible at all times for the proper operation of the transmitter. Licensees must at all times and on all channels give priority to emergency communications.

(b) You must not use a Personal Radio Service station:

- (1) In connection with any activity which is against federal, state or local law;
- (2) For the transmission of advertisements or program material associated with television or radio broadcasting;
- (3) To intentionally interfere with another stations transmissions;
- (4) To transmit sound effects (music, whistling, etc.) or obscene, profane or indecent words, language or meaning; or
- (5) To transmit messages for hire or provide a common carrier service.
- (6) Additional service-specific prohibitions are set forth in the relevant subparts of this chapter.

§ 95.11 Station inspection.

(a) If an authorized FCC representative requests to inspect your Personal Radio Services station, you must make your station and records available for inspection.

(b) A Personal Radio Service station includes all of the radio equipment you use in connection with that station.

(c) Your 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.

§ 95.13 Correspondence and notices from the FCC.

(a) If the FCC sends you a letter asking you questions about your Personal Radio Service radio station or its operation:

- (1) You must answer each of the questions with a complete written statement within the time period stated in the letter;
- (2) You must not shorten your answer by references to other communications or notices;
- (3) You must send your answer to the FCC office which sent you the notice; and
- (4) You must keep a copy of your answer in your station records.

(b) If it appears to the FCC that you have violated the Communications Act or these rules, the FCC may send you an official notice concerning the violation.

- (1) Within the time period stated in the notice, you must send your answer to the FCC office which sent

you the notice and you must answer with:

- (A) A complete written statement which fully explains each violation;
 - (B) A complete written statement about any action you have taken to correct the violation and to prevent it from happening again; and
 - (C) The name of the person operating the station at the time of the violation.
- (2) If the FCC informs you that your Personal Radio Service station is causing interference for technical reasons, you must follow all instructions in the official notice. (This notice may require you to have technical adjustments made to your equipment.)
- (3) You must comply with any restricted hours of station operation which may be included in the official notice.
- (4) You must keep a copy of your answer in your station records.

§ 95.15 Penalties for violating the rules.

- (a) If the FCC finds that you have willfully or repeatedly violated the Communications Act or the FCC Rules, you may have to pay as much as \$16,000 for each violation, up to a total of \$112,500. (*See* section 1.80 of this chapter.)
- (b) If the FCC finds that you have violated any section of the Communications Act or the FCC Rules, you may be ordered to stop whatever action caused the violation. (*See* section 312(b) of the Communications Act.)
- (c) If a federal court finds that you have willfully and knowingly violated any FCC Rule, you may be fined up to \$500 for each day you committed the violation. (*See* section 502 of the Communications Act.)
- (d) If a federal court finds that you have willfully and knowingly violated any provision of the Communications Act, you may be fined up to \$10,000 or you may be imprisoned for one year, or both. (*See* section 501 of the Communications Act.)

§ 95.17 Contact the FCC.

You may contact the FCC in any of the following ways:

- (a) FCC National Call Center at 1-888-225-5322, TTY 1-888-835-5322;
- (b) FCC World Wide Web homepage: www.fcc.gov; or
- (c) In writing, to FCC, 1270 Fairfield Road, Gettysburg, PA 17325-7245, Attention: Personal Radio Services.

Subpart B – Technical Information

§ 95.31 Scope.

This subpart covers technical standards pertaining to transmitters used or intended to be used in all the Part 95 Personal Radio Services.

§ 95.33 Equipment certification requirements.

(a) *General equipment certification requirement.* Except as provided below a Personal Radio Services transmitter must be certified to operate in the radio service in which it is intended to be used. Any entity may request certification for its transmitter when the transmitter is used in the Personal Radio Services following the procedures in part 2 of this chapter.

(b) *Non-certified transmitters.*

(1) Non-certified R/C transmitters may be used in the R/C Service if they only operate in the 26.995-27.255 MHz band and comply with the Part 95 technical standards.

(2) 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 MedRadio technical requirements, may be used by individuals who have traveled to the United States.

(c) *Modification of certified equipment.* Only the holder of the equipment certification may make modifications to the design of a certificated Personal Radio Services transmitter, and then only pursuant to and in full compliance with the requirements and procedures in Part 2 of this chapter. See §§ 2.932 and 2.1043 of this chapter.

(1) No person shall make any modification to any certificated Personal Radio Services transmitter that changes or affects the technical operation of that transmitter, including any modification to provide for additional transmitting 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 would void the certified status of that transmitter and render it unacceptable for use in the Personal Radio Services, pursuant to paragraph (a) of this section.

(2) No person shall willfully and knowingly use any Personal Radio transmitter which has been modified in violation of paragraph (c)(1) of this section.

(d) *Limitations.* No external device or accessory may be added on to a personal radio transmitter that can result in a violation of the rules.

(1) No control, switch or other type of adjustment which, when manipulated, can result in a violation of the rules shall be accessible to the user.

(2) No Personal Radio Services transmitter shall incorporate provisions for increasing its transmitter power to any level in excess of the maximum power permitted under the rules.

(3) No transmitter will be certified for use in a Personal Radio Service if the radio has the capability to operate on frequencies in a licensed or safety service (frequencies externally accessible). Safety service refers to communications involving the safety of life, property or health.

(e) *Specific equipment certification requirements.*

(1) GMRS, CB, FRS and MURS transmitters may transmit tones to make contact or to continue communications with a particular transmitter. If the tone is audible (more than 300 Hertz), it must last no longer than 15 seconds at one time. If the tone is subaudible (300 Hertz or less), it may be transmitted continuously only while you are talking.

(2) FRS and GMRS units may transmit digital data containing location information, or requesting location information from one or more other units within that service, or containing a brief text message to another specific unit or units. Digital data transmissions must be initiated by a manual action or command of a user, except that an FRS or GMRS unit receiving an interrogation request may automatically respond with its location. Digital data transmissions shall not exceed one second, and shall be limited to no more than one digital transmission within a thirty-second period, except that a unit may automatically respond to more than one interrogation request received within a thirty-second period.

(3) Applications for certification of GMRS transmitters received on or after [the effective date of these rules] will be granted only for equipment with a 12.5 kHz bandwidth.

(4) GMRS transmitters that are designed with a maximum channel bandwidth greater than 12.5 kHz shall not be manufactured in, imported into or marketed in the United States after [a specified date].

(5) FRS units are prohibited from transmitting data in store-and-forward packet operation mode.

(6) An R/C transmitter which incorporates plug-in frequency determining modules which are changed by the user must be certificated with the modules. 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.

(7) No transmitter will be certificated for use in the CB service if it is equipped with a frequency capability not listed in section 95.307 of this part, unless such transmitter is also certificated for use in another radio service for which the frequency capability is authorized and for which certification is also required (transmitters with frequency capability for the Amateur Radio Services and Military Affiliate Radio System will not be certificated).

(8) No transmitter will be certificated for use in the GMRS if it is equipped with a frequency capability not listed in section 95.103 of this part, unless such transmitter is also certificated for use in another radio service for which the frequency capability is authorized and for which certification is also required (transmitters with frequency capability for the Amateur Radio Services and Military Affiliate Radio System will not be certificated).

(9) All frequency determining circuitry (including crystals) and programming controls in each CB transmitter and 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.

(10) No add-on device, whether internal or external, the function of which is to extend the transmitting frequency capability of a CB transmitter beyond its original capability, shall be manufactured, sold or attached to any CB station transmitter.

(11) No transmitter will be certificated for use in MURS if it is equipped with a frequency capability not listed in section 95.803.

(f) Enclosures, Instruction Manuals, Disclosures.

(1) A user's instruction manual must be supplied with each Personal Radio Service transmitter marketed. *See* § 2.1033 of this chapter.

(2) The instruction manual must contain all information necessary for the proper installation and operation of the transmitter including:

(i) Instructions concerning all controls, adjustments and switches that may be operated or adjusted without resulting in a violation of the rule and;

(ii) Warnings concerning any adjustment that could result in a violation of the rules or that is recommended to be performed by or under the immediate supervision and responsibility of a person certified as technically qualified to perform transmitter maintenance and repair duties in the private land mobile services and fixed services by an organization or committee representative of users of those services.

(iii) 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 C.F.R. 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. 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 automated maritime telecommunications system (AMTS) network control communications. Two-way voice communications and all other types of uses not mentioned above are expressly prohibited."

(iv) Prior to operating a LPRS transmitter for AMTS purposes, an 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 is sufficient to satisfy this requirement if no new television stations would be affected.

(g) Labeling requirements.

(1) Each LPRS transmitting device shall bear the following statement in a conspicuous location on the

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

(i) Where 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.

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

(2) Additional information regarding certification and labeling of PLBs is set forth in § 95.907 of this chapter.

(3) WMTS. Each device shall 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.”

§ 95.35 Power.

(a) Use of a transmitter which has power (power output, EIRP, field strength, carrier or peak envelope power) in excess of that specified below voids your authority to operate the station.

(b) *GMRS*. (1) Except as provided for in paragraph (2), the maximum power permitted is as follows:

(i) GMRS base stations – 50 watts output power;

(ii) GMRS small base stations (operating on even numbered GMRS channels) – 5 watts output power;

(iii) GMRS fixed stations – 15 watts output power;

(iv) GMRS mobile stations (except portable/handheld units) – 50 watts output power; and

(v) GMRS portable/handheld units – 2 watts ERP.

(2) Any GMRS station located at a point north of Line A or east of Line C must transmit with no more than 5 watts ERP.

(c) *R/C*. Your R/C station transmitter power output must not exceed the following value under any conditions:

| Channel (MHz) | Transmitter power (carrier power) Watts |
|---------------|--|
| 27.255 | 25 |
| 26.995-27.195 | 4 |
| 72-76 | 0.75 |

(d) *CB*. Your CB station transmitter power output must not exceed the following values under any conditions: AM (A3)--4 watts (carrier power) SSB--12 watts (peak envelope power).

(e) *FRS*. Regardless of modulation, the power shall not exceed 0.5 watts ERP.

(f) *LPRS*. The maximum allowable ERP for a station in the LPRS other than an AMTS station is 100 mW. The maximum allowable ERP for an AMTS station in the LPRS is 1 W, so long as emissions are attenuated, in accordance with section 80.211 of this chapter, at the band edges.

(g) *WMTS*. The maximum field strength authorized for WMTS stations in the 608-614 MHz band is 200 mV/m, measured at 3 meters using measuring instrumentation with a CISPR quasi-peak detector. For stations in the 1395-1400 MHz and 1427-1429.5 MHz bands, the maximum field strength is 740 mV/m, measured at 3 meters using measuring equipment with an averaging detection and a 1 MHz measurement bandwidth.

(h) *MURS*. Regardless of modulation, the power shall not exceed 2 watts ERP.

(i) *PLB*. See § 95.907 of this chapter.

(j) *DSRCS-OBU*. DSRCS-OBUs are governed under subpart L of this part, except the maximum output power for portable DSRCS-OBUs is 1.0 mW. For purposes of this paragraph, a portable 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.

§ 95.37 Frequency tolerance.

(a) *GMRS*. Each GMRS transmitter for mobile station, small base station and control station operation must be maintained within a frequency tolerance of 5 parts-per-million. Each GMRS transmitter for base station (except small base), mobile relay station or fixed station operation must be maintained within a frequency tolerance of 2.5 parts-per-million.

(b) *R/C*. (1) Each R/C transmitter that transmits in the 26-27 MHz frequency band with a mean transmitter power of 2.5 W or less and that 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 maintained within a frequency tolerance of 100 parts-per-million.

(2) All other R/C transmitters that transmit in the 26-27 MHz frequency band must be maintained within a frequency tolerance of 5 parts-per-million.

(3) Except as noted in paragraph (b)(4) of this section, R/C transmitters capable of operation in the 72-76 MHz band must be maintained within a frequency tolerance of 50 parts-per-million.

(4) All R/C transmitters capable of operation in the 72-76 MHz band that are manufactured in or imported into the United States, on or after March 1, 1992, or are marketed on or after March 1, 1993, must be maintained within a frequency tolerance of 20 parts-per-million.

(c) *CB*. Each CB transmitter must be maintained within a frequency tolerance of 50 parts-per-million.

(d) *FRS*. Each FRS transmitter must be maintained within a frequency tolerance of 2.5 parts-per-million.

(e) *LPRS*. LPRS transmitters operating on standard band (25 kHz) channels or extra band (50 kHz) channels must be maintained within a frequency stability of 50 parts-per-million. LPRS transmitters operating on narrowband (5 kHz) channels must be maintained within a frequency stability of 1.5 parts-per-million.

(f) *WMTS* Manufacturers of wireless medical telemetry devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all of the manufacturer's specified conditions.

(g) *MURS*. Each MURS transmitter must maintain a frequency tolerance of 5 parts-per-million, or 2 parts-per-million if designed to operate with a 6.25 kHz bandwidth.

(h) *PLB*. See § 95.907 of this chapter.

§ 95.39 Bandwidth limitations.

(a) *Authorized bandwidths (except as noted below)*. The authorized bandwidth (maximum permissible bandwidth of a transmission) for emission type H1D, J1D, R1D, H3E, J3E or R3E is 4 kHz. The authorized bandwidth for emission type A1D or A3E is 8 kHz. The authorized bandwidth for emission type F1D, G1D, F3E or G3E is 20 kHz.

(b) *R/C bandwidths*. The authorized bandwidth for any emission type transmitted by an R/C transmitter is 8 kHz.

(c) *FRS bandwidths*. The authorized bandwidth for emission type F3E or F2D transmitted by a FRS unit is 12.25 kHz. Additional bandwidths for FRS are listed in (a) above.

(d) LPRS bandwidths:

(1) The authorized bandwidth for narrowband frequencies is 4 kHz and the channel bandwidth is 5 kHz.

(2) The channel bandwidth for standard band frequencies is 25 kHz.

(3) The channel bandwidth for extra band frequencies is 50 kHz.

(4) AMTS stations may use the 216.750-217.000 MHz band as a single 250 kHz channel so long as the signal is attenuated as specified in Sec. 95.41.

(e) MURS bandwidths.

(1) Emissions on frequencies 151.820 MHz, 151.880 MHz, and 151.940 MHz are limited to 11.25 kHz.

(2) Emissions on frequencies 154.570 and 154.600 MHz are limited to 20.0 kHz.

(3) Provided, however, that all A3E emissions are limited to 8 kHz.

(f) DSRCS-OBUs are governed under subpart L of this part.

§ 95.41 Unwanted emissions.

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

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

| Radio Service (conditions) | Emission Types Filter | Attenuation Requirements |
|--|--|--------------------------|
| GMRS | A1D, A3E, F1D, G1D, F3E, G3E With audio filter | (1), (3), (7) |
| GMRS | A1D, A3E, F1D, G1D, F3E, G3E without audio filter | (5), (6), (7) |
| GMRS | H1D, J1D, R1D, H3E, J3E, R3E | (2), (4), (7) |
| FRS | F2D, F3E with filter | (1), (3), (7) |
| R/C (27 MHz) | Any permitted emission | (1), (3), (7) |
| R/C (72-76 MHz) | Any permitted emission | (1), (10), (11), (12) |
| CB | A1D, A3E | (1), (3), (8), (9) |
| CB | H1D, J1D, R1D, H3E, J3E, R3E | (2), (4), (8), (9) |
| MURS (151.820, 151.880, 151.940 MHz) | Any permitted emission type | (21), (22) |
| MURS (154.570 & 154.600 MHz) | Any permitted emission type, with filter | (1), (3), (7) |
| MURS (154.570 & 154.600 MHz) | Any permitted emission type, without filter | (5), (23), (7) |
| LPRS (narrow 5 kHz) | Any permitted emission type | (13), (14) |
| LPRS (standard 25 kHz) | Any permitted emission type | (15), (16) |
| LPRS (extra 50 kHz) | Any permitted emission type | (17), (18) |
| LPRS (AMTS 250 kHz) | Any permitted emission type | (19), (20) |
| MedRadio (402-405 MHz) | Any permitted emission type | (24), (25) |
| MedRadio (401-402 MHz and 405-406 MHz) | Any permitted emission type | (26), (27) |

Note 1 -- Filtering noted for GMRS and FRS transmitters refers to the requirement in § 95.43.

Note 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.

Note 3 -- Compliance with the attenuation requirements in paragraphs (b)(24) through (b)(27) of this section is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

(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) 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.

(3) 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.

(4) 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.

(5) $83 \log (f_d/5)$ 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.

(6) $116 \log (f_d/6.1)$ dB, or if less, $50 + 10 \log (P)$ dB, 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.

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

(8) $53 + 10 \log (P)$ dB on any frequency removed from the center of the authorized bandwidth by more than 250 %.

(9) 60 dB on any frequency twice or greater than twice the fundamental frequency.

(10) 45 dB on any frequency removed from the center of the authorized bandwidth by more than 100 % up to and including 125 % of the authorized bandwidth.

(11) 55 dB on any frequency removed from the center of the authorized bandwidth by more than 125 % up to and including 250 % of the authorized bandwidth.

(12) $56 + 10 \log (P)$ dB on any frequency removed from the center of the authorized bandwidth by more than 250 %.

(13) $30 + 20(f_d - 2)$ dB, or $55 + 10 \log (P)$ dB, or 65 dB, whichever is least, 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.

(14) $55 + 10 \log (P)$ dB on any frequency removed from the center of the authorized bandwidth by more than 3.75 kHz.

(15) 30 dB on any frequency removed from the channel center frequency by 12.5 kHz to 22.5 kHz.

(16) $43 + 10 \log (P)$ dB on any frequency removed from the channel center frequency by more than 22.5 kHz.

(17) 30 dB on any frequency removed from the channel center frequency by 25 kHz to 35 kHz.

(18) $43 + 10 \log (P)$ dB on any frequency removed from the channel center frequency by more than 35 kHz.

(19) 30 dB on any frequency removed from the channel center frequency by 125 kHz to 135 kHz.

(20) $43 + 10 \log(P)$ dB on any frequency removed from the channel center frequency by more than 135 kHz.

(21) $7.27(f_d - 2.88 \text{ kHz})$ dB on any frequency removed from the center of the authorized bandwidth by a displacement frequency (f_d in kHz) of more than 5.625 kHz but no more than 12.5 kHz.

(22) 50 + 10 log (P) dB or 70 dB, whichever is the lesser attenuation, on any frequency removed from the center of the authorized bandwidth by more than 12.5 kHz.

(23) $29 \log(f_d^2 \div 11)$ dB or 50 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, but not more than 250 percent of the authorized bandwidth.

(24) 20 dB, on any frequency within the 402–405 MHz MedRadio band that is more than 150 kHz away from the center frequency of the spectrum the transmission is intended to occupy.

(25) 20 dB, on any frequency between 401.750 MHz and 402.000 MHz, and on any frequency between 405 MHz and 405.250 MHz.

(26) 20 dB, on any frequency within the 401-402 MHz or 405-406 MHz MedRadio bands that is more than 50 kHz away from the center frequency of the spectrum the transmission is intended to occupy.

(27) 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.

(c) *Field strength limits for the WMTS.* The following field strength limits apply to WMTS transmitters.

(1) For WMTS transmitters, unwanted emissions on frequencies below 960 MHz are limited to 200 $\mu\text{V/m}$, measured at a distance of 3 meters using measuring instrumentation with a CISPR quasi-peak detector.

(2) For WMTS transmitters, unwanted emissions on frequencies above 960 MHz are limited to 500 $\mu\text{V/m}$, measured at a distance of 3 meters using measuring equipment with an averaging detector and a 1 MHz measurement bandwidth.

(d) *Field strength limits for the MedRadio service.* The field strength limits in the table in this paragraph apply to medical device transmitters, subject to the provisions in paragraphs (d)(1) through (d)(4) of this section.

| Frequency (MHz) | Field strength ($\mu\text{V/m}$) | Measurement distance (m) |
|-----------------|------------------------------------|--------------------------|
| 30-88 | 100 | 3 |
| 88-216 | 150 | 3 |
| 216-960 | 200 | 3 |
| 960 and above | 500 | 3 |

Note—At band edges, the tighter limit applies.

(1) For medical device transmitters operating in the 402-405 MHz MedRadio band, emissions on frequencies below 401.750 MHz or above 405.250 MHz must not exceed the field strength limits in the table in paragraph (d) of this section.

(2) For medical device transmitters operating in the 401-402 MHz or 405-406 MHz MedRadio bands, emissions on frequencies below 400.900 MHz or above 406.000 MHz must not exceed the field strength limits in the table in paragraph (d) of this section.

(3) Compliance with the field strength limits shown in the table in paragraph (d) of this section is based on the use of measurement instrumentation employing a CISPR quasi-peak detector, except that, for emissions on frequencies above 1 GHz, compliance is based on the use of measurement instrumentation employing an average detector. For measurements of emissions on frequencies above 1 GHz, a minimum resolution bandwidth of 1 MHz must be used.

(4) The emissions from a medical device transmitter must be measured to at least the tenth harmonic of

the highest fundamental frequency designed to be emitted by the transmitter.

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

§ 95.43 Modulation standards.

(a) A GMRS transmitter that transmits emission types F1D, G1D, or G3E must not exceed a peak frequency deviation of plus or minus 5 kHz. A GMRS transmitter that transmits emission type F3E must not exceed a peak frequency deviation of plus or minus 5 kHz. A FRS unit that transmits emission type F3E must not exceed a peak frequency deviation of plus or minus 2.5 kHz, and the audio frequency response must not exceed 3.125 kHz.

(b) Each GMRS transmitter, except a mobile station transmitter with a power output of 2.5 W or less, must automatically prevent a greater than normal audio level from causing overmodulation. The transmitter also must include audio frequency low pass filtering, unless it complies with the applicable paragraphs of Sec. 95.41 (without filtering). The filter must be between the modulation limiter and the modulated stage of the transmitter. At any frequency (f in kHz) between 3 and 20 kHz, the filter must have an attenuation of at least $60 \log_{10}(f/3)$ dB greater than the attenuation at 1 kHz. Above 20 kHz, it must have an attenuation of at least 50 dB greater than the attenuation at 1 kHz.

(c) When emission type A3E is transmitted, the modulation must be greater than 85 % but must not exceed 100 %. Simultaneous amplitude modulation and frequency or phase modulation of a transmitter are not permitted.

(d) When emission type A3E is transmitted by a CB transmitter having a transmitter output power of greater than 2.5 W, the CB transmitter must automatically prevent the modulation from exceeding 100 %.

(e) Each CB transmitter that transmits emission type H3E, J3E or R3E must be capable of transmitting the upper sideband. The capability of also transmitting the lower sideband is permitted.

(f) DSRCS-OBUs are governed under subpart L of this part.

§ 95.45 Antenna limits.

(a) GMRS

(1) Certain antenna structures used in a GMRS system and that are more than 60.96 m (200 ft) in height, or are located near or at a public-use airport, must be notified to the FAA and registered with the Commission as required by part 17 of this chapter.

(2) The antenna for a small base or control station must not be more than 6.1 meters (20 feet) above the ground or above the building or tree on which it is mounted. Each base station and each control station with an antenna height greater than 6.1 meters (20 feet) must be separately identified on Form 605.

(3) Any GMRS station licensed after [effective date of rules] and located north of Line A or east of Line C must have an antenna no more than 20 feet above ground or above the building or tree on which it is mounted.

(4) The antenna of handheld portable GRMS units must be an integral part of the transmitter. The antenna must have no gain (as compared to a half-wave dipole) and must be vertically polarized.

(b) R/C

(1) The antenna of each R/C station transmitting in the 72-76 MHz band must be an integral part of the transmitter. The antenna must have no gain (as compared to a half-wave dipole) and must be vertically polarized.

(2) For 27 MHz operation, if your antenna is mounted on a hand-held portable unit, none of the following limitations in (3) apply.

(3) For 27 MHz operation, if your antenna is installed at a fixed location, it (whether receiving, transmitting or both) then the highest point 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.

(4) If your R/C station is located near an airport, and if your antenna structure is more than 6.10 meters (20 feet) high, you may have to obey additional restrictions. The highest point of your 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 your antenna and the airport runway may complicate this formula. If your R/C station is near an airport, you may contact the nearest FCC field office for a worksheet to help you figure the maximum allowable height of your antenna. Consult Part 17 of the FCC's Rules for more information.

(c) CB.

(1) If your antenna is mounted on a hand-held portable unit, none of the limitations in paragraph (c)(2) apply.

(2) If your antenna is installed at a fixed location, it (whether receiving, transmitting or both), then the highest point 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.

(3) If your CB station is located near an airport, and if your antenna structure is more than 6.1 meters (20 feet) high, you may have to obey additional restrictions. The highest point of your 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 your antenna and the airport runway may complicate this formula. If your CB station is near an airport, you may contact the nearest FCC field office for a worksheet to help you figure the maximum allowable height of your antenna. Consult Part 17 of the FCC's Rules for more information.

(d) *FRS* The antenna of each FRS transmitter band must be an integral part of the transmitter. The antenna must have no gain (as compared to a half-wave dipole) and must be vertically polarized.

(e) *LPRS*

(1) AMTS stations must employ directional antennas.

(2) Antennas used with LPRS units must comply with the following:

(i) For LPRS units operating entirely within an enclosed structure, *e.g.*, a building, there is no limit on antenna height;

(ii) For LPRS units not operating entirely within an enclosed structure, the tip of the antenna shall not exceed 30.5 meters (100 feet) above ground. In cases where harmful interference occurs the FCC may require that the antenna height be reduced; and

(iii) The height limitation in paragraph (e)(2) of this section does not apply to LPRS units in which the antenna is an integral part of the unit.

(f) *MURS* The highest point of any MURS 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.

§ 95.47 Telephone interconnection.

(a) Excepted as noted in (b), no station in the Personal Radio Services may be interconnected with the public switched network.

(b) *Interconnection Defined.* Connection through automatic or manual means of 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 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 radio station are not considered to be interconnection for purposes of this rule part.

§ 95.49 RF safety.

Portable devices as defined in §2.1093(b) of this chapter operating in the General Mobile Radio Service (GMRS), the Wireless Medical Telemetry Service (WMTS) and the Medical Device Radiocommunication Service (MedRadio) Subparts C, H and I of Part 95 of this chapter are subject to radio frequency radiation exposure requirements as specified in §§1.1307(b) and 2.1093 of this chapter. Applications for equipment authorization for these 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.

Subpart C – General Mobile Radio Service

§ 95.101 Scope.

This subpart contains the operating requirements for GMRS. General and technical information pertaining to this service is contained in Subparts A and B.

§ 95.103 Channels available.

(a) GMRS channels listed below in this section are available to GMRS licensees only on a shared basis and will not be assigned for the exclusive use of any licensee. All GMRS licensees must cooperate in the selection and use of channels, including limiting communications to the minimum practical time, to reduce interference and to make the most effective use of the facilities.

| Channel No. | Center frequency (MHz) | Station class | Channel No. | Center frequency (MHz) | Station class |
|-------------|------------------------|--------------------------------|-------------|------------------------|---------------------|
| 1 | 462.5500 | Base or mobile | 16 | 467.5500 | Mobile ¹ |
| 2 | 462.5625 | Sm Base or mobile ² | 17 | | |
| 3 | 462.5750 | Base or mobile | 18 | 467.5750 | Mobile ¹ |
| 4 | 462.5875 | Sm Base or mobile ² | 19 | | |
| 5 | 462.6000 | Base or mobile | 20 | 467.6000 | Mobile ¹ |
| 6 | 462.6125 | Sm Base or mobile ² | 21 | | |
| 7 | 462.6250 | Base or mobile | 22 | 467.6250 | Mobile ¹ |
| 8 | 462.6375 | Sm Base or mobile ² | 23 | | |
| 9 | 462.6500 | Base or mobile | 24 | 467.6500 | Mobile ¹ |
| 10 | 462.6625 | Sm Base or mobile ² | 25 | | |
| 11 | 462.6750 | Base or mobile | 26 | 467.6750 | Mobile ¹ |
| 12 | 462.6875 | Sm Base or mobile ² | 27 | | |
| 13 | 462.7000 | Base or mobile | 28 | 467.7000 | Mobile ¹ |
| 14 | 462.7125 | Sm Base or mobile ² | 29 | | |
| 15 | 462.7250 | Base or mobile | 30 | 467.7250 | Mobile ¹ |

¹ These channels may be used for fixed stations for controlling a repeater station.

² Except for a GMRS system licensed to a non-individual, a mobile station or a small base station operating in the simplex mode may transmit on these channels only under the following conditions: (a) Only voice type emissions may be transmitted; (b) The station does not transmit one-way pages; and (c) The station transmits with no more than 5 watts output power.

(b) Operators of GMRS systems suffering or causing harmful interference are expected to cooperate and resolve this problem by mutually satisfactory arrangements. If the operators are unable to do so, the FCC may impose restrictions including specifying the transmitter power, antenna height, or area or hours of operation of the stations concerned. Further, the use of any frequency at a given geographical location may be denied when, in the judgment of the FCC, its use in that location is not in the public interest; the

use of any channel or channel pair may be restricted as to specified geographical areas, maximum power, or other operating conditions.

§ 95.105 Permissible communications.

(a) You may use your GMRS station only to transmit two-way plain language voice communications concerning personal or business activities. Two-way plain language communications are communications without codes or coded messages. Operating signals such as “ten codes” are not considered codes or coded messages.

(b) One way paging is not permitted.

(c) Continuous or uninterrupted transmissions, except for communications involving the immediate safety of life or property, are prohibited.

(d) GMRS units may transmit digital data containing location information, or requesting location information from one or more other units within that service, or containing a brief text message to another specific unit. Digital data transmissions must be initiated by a manual action or command of a user, except that a GMRS unit receiving an interrogation request may automatically respond with its location. Digital data transmissions shall not exceed one second, and shall be limited to no more than one digital transmission within a thirty-second period, except that a unit may automatically respond to more than one interrogation request received within a thirty-second period.

Subpart D – Radio Control (R/C) Radio Service

§ 95.201 Scope.

This subpart contains the operating requirements for the R/C Service. General and technical information pertaining to this service is contained in subparts A and B of this part.

§ 95.203 Channels available.

(a) Your R/C station may transmit only on the following channels (frequencies):

(1) The following channels may be used to operate any kind of device (any object or apparatus, except an R/C transmitter), including a model aircraft device (any small imitation of an aircraft) or a model surface craft device (any small imitation of a boat, car or vehicle for carrying people or objects, except aircraft): 26.995, 27.045, 27.095, 27.145, 27.195 and 27.255 MHz.

(2) The following channels may only be used to operate a model aircraft device:

| Ch No. | Frequency (MHz) | Ch No. | Frequency (MHz) | Ch No. | Frequency (MHz) | Ch No. | Frequency (MHz) | Ch No. | Frequency (MHz) |
|--------|-----------------|--------|-----------------|--------|-----------------|--------|-----------------|--------|-----------------|
| 1 | 72.01 | 11 | 72.21 | 21 | 72.41 | 31 | 72.61 | 41 | 72.81 |
| 2 | 72.03 | 12 | 72.23 | 22 | 72.43 | 32 | 72.63 | 42 | 72.83 |
| 3 | 72.05 | 13 | 72.25 | 23 | 72.45 | 33 | 72.65 | 43 | 72.85 |
| 4 | 72.07 | 14 | 72.27 | 24 | 72.47 | 34 | 72.67 | 44 | 72.87 |
| 5 | 72.09 | 15 | 72.29 | 25 | 72.49 | 35 | 72.69 | 45 | 72.89 |
| 6 | 72.11 | 16 | 72.31 | 26 | 72.51 | 36 | 72.71 | 46 | 72.91 |
| 7 | 72.13 | 17 | 72.33 | 27 | 72.53 | 37 | 72.73 | 47 | 72.93 |
| 8 | 72.15 | 18 | 72.35 | 28 | 72.55 | 38 | 72.75 | 48 | 72.95 |
| 9 | 72.17 | 19 | 72.37 | 29 | 72.57 | 39 | 72.77 | 49 | 72.97 |
| 10 | 72.19 | 20 | 72.39 | 30 | 72.59 | 40 | 72.79 | 50 | 72.99 |

(3) The following channels may only be used to operate model surface craft devices:

| Ch No. | Frequency (MHz) | Ch No. | Frequency (MHz) | Ch No. | Frequency (MHz) | Ch No. | Frequency (MHz) | Ch No. | Frequency (MHz) |
|--------|-----------------|--------|-----------------|--------|-----------------|--------|-----------------|--------|-----------------|
| 51 | 75.41 | 57 | 75.53 | 63 | 75.65 | 69 | 75.77 | 75 | 75.89 |

| | | | | | | | | | |
|----|-------|----|-------|----|-------|----|-------|----|-------|
| 52 | 75.43 | 58 | 75.55 | 64 | 75.67 | 70 | 75.79 | 76 | 75.91 |
| 53 | 75.45 | 59 | 75.57 | 65 | 75.69 | 71 | 75.81 | 77 | 75.93 |
| 54 | 75.47 | 60 | 75.59 | 66 | 75.71 | 72 | 75.83 | 78 | 75.95 |
| 55 | 75.49 | 61 | 75.61 | 67 | 75.73 | 73 | 75.85 | 79 | 75.97 |
| 56 | 75.51 | 62 | 75.63 | 68 | 75.75 | 74 | 75.87 | 80 | 75.99 |

(b) R/C channels are available only on a shared basis and will not be assigned for the exclusive use of any user. All R/C users must cooperate in the selection and use of channels, including limiting communications to the minimum practical time, to reduce interference and to make the most effective use of the facilities.

(c) Your R/C station may not transmit simultaneously on more than one channel in the 72-76 MHz band when your operation would cause harmful interference to the operation of other R/C stations.

(d) Your R/C station must stop transmitting if it interferes with:

- (1) Authorized radio operations in the 72-76 MHz band; or
- (2) Television reception on TV Channels 4 or 5.

(e) Stations in the 26-27 MHz range are not afforded any protection from interference caused by the operation of industrial, scientific or medical devices. Such stations also operate on a shared basis with other stations in the Personal Radio Services.

(f) Stations in the 72-76 MHz range are subject to the condition that interference will not be caused to the remote control of industrial equipment operating on the same or adjacent frequencies. These frequencies are not afforded any protection from interference due to the operation of fixed and mobile stations in other services assigned to the same or adjacent frequencies.

§ 95.207 Permissible communications.

(a) You may only use your R/C station to transmit one-way communications. (One-way communications are transmissions which are not intended to establish communications with another station.)

(b) You may only use your R/C station for the following purposes:

- (1) The operator turns on and/or off a device at a remote location; or
- (2) A sensor at a remote location turns on and/off an indicating device for the operator. Only frequencies 26.995 to 27.255 MHz may be used for this purpose. (A remote location means a place distant from the operator).

(c) You must not use a R/C station to transmit data. Tone or other signal encoding, however, is not considered to be data when only used either 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.

§ 95.209 Special restrictions on the location of R/C stations.

(a) If your R/C station is located on premises controlled by the Department of Defense, you may be required to comply with additional regulations imposed by the commanding officer of the installation.

(b) If your R/C station will be constructed on an environmental sensitive site, or will be operated in such a manner as to raise environmental problems, under Sec. 1.1307 of this chapter, you must provide an environmental assessment, as set forth in Sec. 1.1311 of this chapter, and undergo environmental review Sec. 1.1312 of this chapter, before commencement of construction.

(c) Anyone intending to operate an R/C station on the islands of Puerto Rico, Desecheo, Mona, Vieques, and Culebra in a manner that could pose an interference threat to the Arecibo Observatory shall notify the Interference Office, Arecibo Observatory, HC3 Box 53995, Arecibo, Puerto Rico 00612, in writing or

electronically, of the location of the unit. Operators may wish to consult interference guidelines, which will be provided by Cornell University. Operators who choose to transmit information electronically should e-mail to: prcz@naic.edu.

(1) The notification to the Interference Office, Arecibo Observatory shall be made 45 days prior to commencing operation of the unit. The notification shall state the geographical coordinates of the unit.

(2) After receipt of such notifications, the Commission will allow the Arecibo Observatory a period of 20 days for comments or objections. The operator will be required to make reasonable efforts in order to resolve or mitigate any potential interference problem with the Arecibo Observatory. If the Commission determines that an operator has satisfied its responsibility to make reasonable efforts to protect the Observatory from interference, the unit may be allowed to operate.

§ 95.211 Operation by remote control.

(a) You may not operate an R/C transmitter by radio remote control.

(b) You may operate an R/C transmitter by wireline remote control if you obtain specific approval in writing from the FCC. To obtain FCC approval, you must show why you need to operate your station by wireline remote control. If you receive FCC approval, you must keep the approval as part of your station records. See R/C Rule 24, Sec. 95.224.

(c) Remote control means operation of an R/C transmitter from any place other than the location of the R/C transmitter. Direct mechanical control or direct electrical control by wire from some point on the same premises, craft or vehicles as the R/C transmitter is not considered remote control.

Subpart E – Citizens Band (CB) Radio Service

§ 95.301 Scope.

This subpart contains the operating requirements for the CB Radio Service. Other general and technical information and requirements pertaining to this service are also contained in Subparts A and B under this Part.

§ 95.303 Am I eligible to operate a CB station?

You are authorized to operate a CB station unless:

(a) You are a foreign government, a representative of a foreign government, or a federal government agency; or

(b) The FCC has issued a cease and desist order to you, and the order is still in effect.

§ 95.305 Are there any special restrictions on the location of my CB station?

(a) If your CB station is located on premises controlled by the Department of Defense you may be required to comply with additional regulations imposed by the commanding officer of the installation.

(b) If your C/B station will be constructed on an environmentally sensitive site, or will be operated in such a manner as to raise environmental problems, under Sec. 1.1307 of this chapter, you must provide an environmental assessment, as set forth in Sec. 1.1311 of this chapter, and undergo the environmental review, Sec. 1.1312 of this chapter, before commencement of construction.

§ 95.307 On what channels may I operate?

(a) Your CB station may transmit only on the following channels (frequencies):

| Channel No. | 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 ¹ |
| 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 |

¹ See paragraph (c) of this section.

(b) CB channels are available only on a shared basis and will not be assigned for the exclusive use of any user. All CB users must cooperate in the selection and use of channels, including limiting communications to the minimum practical time, to reduce interference and to make the most effective use of the facilities.

(c) Channel 9 may be used only for emergency communications or for traveler assistance.

(d) You may use any channel for emergency communications or for traveler assistance.

§ 95.309 Do I have any antenna limitations?

(1) If your antenna is mounted on a hand-held portable unit, none of the following limitations apply.

(2) If your antenna (whether receiving, transmitting or both) is installed at a fixed location, at its highest

point, it 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 at its highest point, it must not be higher than 18.3 meters (60 feet) above the ground.

(3) If your CB station is located near an airport, and if your antenna structure is more than 6.1 meters (20 feet) high, you may have to obey additional restrictions. The highest point of your 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 your antenna and the airport runway may complicate this formula. If your CB station is near an airport, you may contact the nearest FCC field office for a worksheet to help you figure the maximum allowable height of your antenna. Consult Part 17 of the FCC's Rules for more information.

§ 95.311 What equipment may I use at my CB station?

(a) You must use an FCC certificated CB transmitter at your CB station. You can identify an FCC certificated transmitter by the certification label placed on it by the manufacturer. You may examine a list of certificated equipment at any FCC Field Office or at FCC Headquarters. Use of a transmitter which is not FCC certificated voids your authority to operate the station.

(b) You must not make, or have made, any modifications to a certificated CB transmitter that changes or affects the technical operation of that transmitter, including any modification to provide for additional transmitting frequencies, increased modulation level, a different form of modulation, or increased transmitter output power (either mean power or peak envelope power or both). . Any internal modification to a certificated CB transmitter cancels the certification, and use of such a transmitter voids your authority to operate the station.

§ 95.313 May I use power amplifiers?

(a) You may not attach the following items (power amplifiers) to your certificated CB transmitter in any way:

- (1) External radio frequency (RF) power amplifiers (sometimes called linears or linear amplifiers); or
- (2) Any other devices which, when used with a radio transmitter as a signal source, are capable of amplifying the signal.

(b) There are no exceptions to this rule and use of a power amplifier voids your authority to operate the station.

(c) The FCC will presume you have used a linear or other external RF power amplifier if--

- (1) It is in your possession or on your premises; and
- (2) There is other evidence that you have operated your CB station with more power than allowed..

(d) Paragraph (c) of this section does not apply if you hold a license in another radio service which allows you to operate an external RF power amplifier.

§ 95.315 What communications may be transmitted?

(a) You may use your CB station to transmit two-way plain language communications. Two-way plain language communications are communications without codes or coded messages. Operating signals such as "ten codes" are not considered codes or coded messages. You may transmit two-way plain language communications only to other CB stations, to units of your own CB station or to authorized government stations on CB frequencies.

(b) You must not use a CB station to communicate with stations in other countries, except General Radio Service stations in Canada.

(c) You may use your CB station to transmit one-way communications (messages which are not intended to establish communications between two or more particular CB stations) only for emergency communications, traveler assistance, brief tests (radio checks) or voice paging.

(d) You may use your CB station to transmit a tone signal only when the signal is used to make contact or to continue communications. (Examples of circuits using these signals are tone operated squelch and selective calling circuits.) If the signal is an audible tone, it must last no longer than 15 seconds at one time. If the signal is a subaudible tone, it may be transmitted continuously only as long as you are talking.

§ 95.317 What communications are prohibited?

- (a) You must not use a CB station--
- (1) In connection with any activity which is against federal, state or local law;
 - (2) To transmit obscene, indecent or profane words, language or meaning;
 - (3) To interfere intentionally with the communications of another CB station;
 - (4) To transmit one-way communications, except for emergency communications, traveler assistance, brief tests (radio checks), or voice paging;
 - (5) To advertise or solicit the sale of any goods or services;
 - (6) To transmit music, whistling, sound effects or any material to amuse or entertain;
 - (7) To transmit any sound effect solely to attract attention;
 - (8) To transmit the word "MAYDAY" or any other international distress signal, except when your station is located in a ship, aircraft or other vehicle which is threatened by grave and imminent danger and you are requesting immediate assistance;
 - (9) To communicate with, or attempt to communicate with, any CB station more than 250 kilometers (155.3 miles) away;
 - (10) To advertise a political candidate or political campaign; (you may use your CB radio for the business or organizational aspects of a campaign, if you follow all other applicable rules);
 - (11) To communicate with stations in other countries, except General Radio Service stations in Canada; or
 - (12) To transmit a false or deceptive communication.

(b) You must not use a CB station to transmit communications for live or delayed rebroadcast on a radio or television broadcast station. You may use your CB station to gather news items or to prepare programs.

§ 95.319 May I be paid to use my CB station?

- (a) You may not accept direct or indirect payment for transmitting with a CB station.
- (b) You may use a CB station to help you provide a service, and be paid for that service, as long as you are paid only for the service and not for the actual use of the CB station.

§ 95.321 Do I have to limit the length of my communications?

- (a) You must limit your CB communications to the minimum practical time.
- (b) If you are communicating with another CB station or stations, you, and the stations communicating with you, must limit each of your conversations to no more than five continuous minutes.
- (c) At the end of your conversation, you, and the stations communicating with you, must not transmit again for at least one minute.

§ 95.323 How do I use my CB station in an emergency or to assist a traveler?

- (a) You must at all times and on all channels, give priority to emergency communications.
- (b) You may use your CB station for communications necessary to assist a traveler to reach a destination or to receive necessary services.

(c) You may use your CB station to transmit one-way communications concerning highway conditions to assist travelers.

§ 95.325 May I operate my CB station transmitter by remote control?

(a) You may not operate a CB station transmitter by radio remote control. The use of a hands-free wireless microphone authorized under Part 15 to operate a Part 95 transmitter in the immediate vicinity is not considered operation by radio remote control for the purposes of this section.

(b) You may operate a CB transmitter by wireline remote control if you obtain specific approval in writing from the FCC. To obtain FCC approval, you must show why you need to operate your station by wireline remote control. If you receive FCC approval, you must keep the approval as part of your station records.

(c) Remote control means operation of a transmitter from any place other than the location of the transmitter. Direct mechanical control or direct electrical control by wire from some point on the same premises, craft or vehicle as the transmitter is not considered remote control.

§ 95.327 May I connect my CB station transmitter to a telephone?

(a) You may connect your CB station transmitter to a telephone if you comply with all of the following:

(1) You or someone else must be present at your CB station and must--

(i) Manually make the connection (the connection must not be made by remote control);

(ii) Supervise the operation of the transmitter during the connection;

(iii) Listen to each communication during the connection; and

(iv) Stop all communications if there are operations in violation of these rules.

(2) Each communication during the telephone connection must comply with all of these rules.

(3) You must obey any restriction that the telephone company places on the connection of a CB transmitter to a telephone.

(b) The CB transmitter you connect to a telephone must not be shared with any other CB station.

(c) If you connect your CB transmitter to a telephone, you must use a phone patch device with has been registered with the FCC.

Subpart F – Family Radio Service (FRS)

§ 95.401 Scope.

This subpart contains the operating requirements for the FRS. General and technical information pertaining to this service is contained in subparts A and B.

§ 95.403 Channels available.

(a) The FRS unit channel frequencies are:

| Channel No. | 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 |

(b) FRS channels are available only on a shared basis and will not be assigned for the exclusive use of any user. All FRS users must cooperate in the selection and use of channels, including limiting communications to the minimum practical time, to reduce interference and to make the most effective use of the facilities.

§ 95.405 Permissible communications.

You may use an FRS unit to conduct two-way voice communications with another person. You may use the FRS unit to transmit one-way communications only to establish communications with another person, send an emergency message, provide traveler assistance, provide location information, transmit a brief text message, make a voice page, or to conduct a brief test.

Subpart G – Low Power Radio Service (LPRS)

§ 95.501 Scope.

This subpart contains the operating requirements for the LPRS. General and technical information pertaining to this service is contained in subparts A and B.

§ 95.503 Channels available.

(a) LPRS transmitters may operate on any frequency listed in paragraphs (b), (c), and (d) 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 band for low power point-to-point network control communications by AMTS coast stations. Other AMTS transmissions in the 216-217 MHz band are prohibited.

(b) The following table indicates standard band frequencies (the channel bandwidth is 25 kHz).

| 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 |

(c) The following table indicates extra band frequencies (the channel bandwidth is 50 kHz).

| 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 |

(d) The following table indicates narrowband frequencies (the channel bandwidth is 5 kHz and the authorized bandwidth is 4 kHz).

| 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 |
| 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 |
| 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 |

(e) LPRS channels are available only on a shared basis and will not be assigned for the exclusive use of any user. All LPRS users must cooperate in the selection and use of channels, including limiting communications to the minimum practical time, to reduce interference and to make the most effective use of the facilities.

(f) Operation is subject to the conditions that no harmful interference is caused to the United States Air Force Space Surveillance system (operating in the band 216.88-217.08 MHz) or to TV reception within the Grade B contour of any TV Channel 13 station or within the 68 dB μ V/m predicted contour of any low power TV or TV translator station operating on Channel 13.

§ 95.505 Permissible communications.

(a) LPRS stations may transmit voice, data, or tracking signals as permitted in this section. Two-way voice communications are prohibited.

(b) 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) Persons with disabilities. In the context of the LPRS, the term “disability” has the meaning given to it by section 3(2)(A) of the Americans with Disabilities Act of 1990 (42 U.S.C. §12102(2)(A)), *i.e.*, persons with a physical or mental impairment that substantially limits one or more of the major life activities of such individuals;

(2) Persons who require language translation; or

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

(c) Health care related communications for the ill.

(d) 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.

(e) AMTS point-to-point network control communications.

§ 95.507 Notification requirement.

Prior to operating a LPRS transmitter for AMTS purposes, an 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 is sufficient to satisfy this requirement if no new television stations would be affected.

§ 95.509 Marketing limitations.

Transmitters intended for operation in the LPRS may be marketed and sold only for those uses described in § 95.505(a)-(d) of this chapter.

Subpart H – Wireless Medical Telemetry Service (WMTS)

§ 95.601 Scope.

This subpart sets out the regulations governing the operation of Wireless Medical Telemetry Devices in the 608-614 MHz, 1395-1400 MHz and 1427-1429.5 MHz frequency bands.

§ 95.603 Channels available.

(a) WMTS transmitters may operate on any channel within the frequency bands specified as below:

608-614 MHz

1395-1400 MHz

1427-1432 MHz

(b) In the 608-614 MHz band, wireless medical telemetry devices utilizing broadband technologies such as spread spectrum shall be capable of operating within one or more of the following channels of 1.5 MHz each, up to a maximum of 6 MHz, and shall operate on the minimum number of channels necessary to avoid harmful interference to any other wireless medical telemetry devices.

| Channel Number | Channel bandwidth |
|----------------|-------------------|
| 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) WMTS channels are available only on a shared basis and will not be assigned for the exclusive use of any user. All WMTS users must cooperate in the selection and use of channels, including limiting communications to the minimum practical time, to reduce interference and to make the most effective use of the facilities.

(d) Operations in the 608-614 MHz band (television Channel 37) are not protected from adjacent band interference from broadcast television operating on Channels 36 and 38.

§ 95.605 Permissible communications.

(a) All types of communications except voice and video are permitted, on both a unidirectional and bidirectional basis, provided that all such communications are related to the provision of medical care. Waveforms such as electrocardiograms (ECGs) are not considered video.

(b) Operations that comply with the requirements of this part may be conducted under manual or automatic control, and on a continuous basis.

§ 95.607 Frequency coordination.

(a) Prior to operation, authorized health care providers who desire to use wireless medical telemetry devices must register all devices with a designated frequency coordinator. The registration must include the following information:

- (1) Specific frequencies or frequency range(s) used;
- (2) Modulation scheme used (including occupied bandwidth);
- (3) Effective radiated power;
- (4) Number of transmitters in use at the health care facility as of the date of registration including manufacturer name(s) and model numbers;
- (5) Legal name of the authorized health care provider;
- (6) Location of transmitter (coordinates, street address, building); and
- (7) Point of contact for the authorized health care provider (name, title, office, phone number, fax number, e-mail address).

(b) An 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. An 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 change is made in the location or operating parameters previously reported which is material.

§ 95.609 Frequency coordinator.

(a) The Commission's frequency coordinator(s) to manage the usage of the frequency bands for the operation of medical telemetry devices is(are):

John T. Collins
 Director of Engineering and Compliance
 American Hospital Association
 One North Franklin

Chicago, IL 60606
 P: 312-422-3805
 F: 312-422-4571
 E: jcollins@aha.org

Updated information on the Commission's frequency coordinator can be found at:
http://wireless.fcc.gov/services/index.htm?job=licensing_1&id=wireless_medical_telemetry

(b) The frequency coordinator shall:

(1) Review and process coordination requests submitted by authorized health care providers as required in § 95.609;

(2) Maintain a database of WMTS use;

(3) Notify users of potential conflicts;

(4) Coordinate WMTS operation with radio astronomy observatories and Federal Government radar systems as specified in §§ 95.613 and 95.615 of this chapter.

(5) Notify licensees--who are operating in accordance with § 90.259(b)--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.

(6) Notify licensees--who are operating in 1392-1395 MHz band in accordance with subpart I of part 27--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.

§ 95.611 Specific requirements for wireless medical telemetry devices operating in the 608-614 MHz band.

For a wireless medical telemetry device operating within the frequency range 608-614 MHz and that will be located near the radio astronomy observatories listed below, operation is not permitted until a WMTS frequency coordinator specified in § 95.609 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.

(a) Within 80 kilometers of:

(1) National Astronomy and Ionosphere Center, Arecibo, Puerto Rico: 18°-20'-38.28" North Latitude, 66°-45'-09.42" West Longitude;

(2) National Radio Astronomy Observatory, Socorro, New Mexico: 34°-04'-43" North Latitude, 107°-37'-04" West Longitude; or

(3) National Radio Astronomy Observatory, Green Bank, West Virginia: 38°-26'-08" North Latitude, 79°-49'-42" West Longitude.

(b) Within 32 kilometers of the National Radio Astronomy Observatory centered on:

| Very long baseline array stations | Latitude (north) | Longitude (west) |
|-----------------------------------|------------------|------------------|
| 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' |

The National Science Foundation point of contact for coordination is: Spectrum Manager, Division of Astronomical Sciences, NSF Room 1045, 4201 Wilson Blvd., Arlington, VA 22230, telephone: 703-306-1823.

§ 95.613 Specific requirements for wireless medical telemetry devices operating in the 1395-1400 and 1427-1429.5 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 shall determine whether there are any Federal Government systems whose operations could affect, or could be affected by, proposed wireless medical telemetry operations in the 1395-1400 MHz and 1427-1429.5 MHz bands. The locations of government systems in these bands are specified in footnotes US351 and US352 of § 2.106 of this chapter.

§ 95.615 Protection of medical equipment.

The 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.

Subpart I – Medical Device Radio Communications Service (MedRadio)

§ 95.701 Scope.

This subpart contains the operating requirements for the MedRadio. General information pertaining to this service is contained in subpart A.

§ 95.703 Permissible communications.

(a) Except for the purposes of testing and for demonstrations to health care professionals, 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) Except in response to a medical implant event, or except as provided in § 95.715(b)(3), in the 402-405 MHz band no medical implant transmitter shall transmit except in response to a transmission from a medical implant programmer/control transmitter or in response to a non-radio frequency actuation signal generated by a device external to the body in which the medical implant transmitter is implanted or is to be implanted.

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

(d) For the purpose of facilitating MedRadio system operation during a MedRadio communications session, as defined in § 95.3, MedRadio transmitters may transmit in accordance with the provisions of § 95.715(a) for no more than 5 seconds without the communications of data.; MedRadio transmitters may transmit in accordance with the provisions of § 95.715(b)(3) for no more than 3.6 seconds in total within a one hour time period without the communications of data; MedRadio transmitters may transmit in accordance with the provisions of § 95.715(b)(2) for no more than 360 milliseconds in total within a one hour time period without the communications of data.

(e) MedRadio programmer/control transmitters may not be used to relay information 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 MedRadio band.

§ 95.705 Channel use policy.

(a) The channels authorized for MedRadio operation by this part of the FCC Rules are available on a shared basis only and will not be assigned for the exclusive use of any entity.

(b) To reduce interference and make the most effective use of the authorized facilities, MedRadio transmitters must share the spectrum in accordance with § 95.715.

(c) MedRadio operation is subject to the condition that no harmful interference is caused to stations operating in the 400.150-406.000 MHz band in the Meteorological Aids, Meteorological Satellite, or Earth Exploration Satellite Services. MedRadio stations 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. MedRadio devices should take the necessary steps to prevent the disruption of time sensitive medical communication sessions that could result from interference caused by the federal systems operating in the band.

§ 95.707 Disclosure polices.

Manufacturers of MedRadio transmitters must include with each transmitting device the following statement:

“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.”

§ 95.709 Labeling requirements.

(a) MedRadio programmer/control transmitters 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.”

The statement may be placed in the instruction manual for the transmitter where it is not feasible to place the statement on the device.

(b) Where 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.

(c) MedRadio transmitters shall be identified with a serial number. The FCC ID number associated with a medical implant transmitter and the information required by § 2.925 of the FCC Rules 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.

§ 95.711 Marketing limitations.

Transmitters intended for operation in the MedRadio Service may be marketed and sold only for the permissible communications described in § 95.703 of this part.

§ 95.713 Certification procedures.

Any entity may request certification for its transmitter when the transmitter is used in the GMRS, FRS, R/C, CB, 218-219 MHz Service, LPRS, MURS, or MedRadio Service following the procedures in Part 2 of this chapter. Dedicated Short-Range Communications Service On-Board Units (DSRCS-OBUs) must be certified in accordance with Subpart L of this Part and Subpart J of Part 2 of this chapter.

§ 95.715 MedRadio transmitters.

(a) *Frequency monitoring.* Except as provided in (b) below, 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 communications session. Before the monitoring system of a MedRadio 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 emission bandwidth of the intended transmission.

(2) Within 5 seconds prior to initiating a 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) Based on use of an isotropic monitoring system antenna, the monitoring threshold power level must not be more than $10\log B(\text{Hz}) - 150 (\text{dBm/Hz}) + G(\text{dBi})$, where B is the emission bandwidth of the MedRadio communications session transmitter having the widest emission and G is the MedRadio programmer/control transmitter monitoring system antenna gain relative to an isotropic antenna. For purposes of showing compliance with the above provision, 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.

(4) If no signal in a MedRadio channel above the monitoring threshold power level is detected, the MedRadio programmer/control transmitter may initiate a MedRadio communications session involving transmissions to and from a medical implant or medical body-worn device on that channel. The MedRadio communications session may continue as long as any silent period between consecutive data transmission bursts does not exceed 5 seconds. If a channel meeting the criteria in paragraph (a)(3) of this section is unavailable, the channel with the lowest ambient power level may be accessed.

(5) 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 above criteria. 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 (i) and (ii) above are not met, a channel must be selected using the access criteria specified in paragraphs (a)(1) through (a)(4) of this section.

(6) As used in this section, the following definitions apply:

(i) *Emission bandwidth*--Measured as the width of the signal between the points on either side of carrier center frequency that are 20 dB down relative to the maximum level of the modulated carrier. Compliance will be determined using instrumentation employing a peak detector function and a resolution bandwidth approximately equal to 1% of the emission bandwidth of the device under test.

(ii) *MedRadio channel*—Any continuous segment of spectrum in the MedRadio band that is equal to the emission bandwidth of the device with the largest bandwidth that is to participate in a MedRadio communications session. (Note: The rules do not specify a channeling scheme for use by MedRadio systems.)

(iii) *MedRadio communications session*—A collection of transmissions, that may or may not be continuous, between MedRadio system devices.

(b) *Exceptions to frequency monitoring criteria.* MedRadio devices or communications sessions that meet any one of the following criteria are not required to use the access criteria set forth in paragraph (a) of this section:

(1) MedRadio communications sessions 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.

(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.

(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.

(c) *Operating frequency.* MedRadio stations authorized under this Part may operate on frequencies in the 401-406 MHz band as follows provided that the out-of-band emissions are attenuated in accordance with §95.723:

(1) MedRadio stations associated with medical implant devices, which incorporate a frequency monitoring system as set forth in paragraph (a) of this section, may operate on any of the frequencies in the 401-406 MHz band,

(2) MedRadio stations associated with medical implant devices, which do not incorporate a frequency monitoring system as set forth in paragraph (a) of this section, may operate on any frequency in 401-402 MHz or 405-406 MHz bands, or at 403.65 MHz in the 402-405 MHz band.

(3) MedRadio stations associated with medical body-worn devices, regardless of whether a frequency monitoring system as set forth in paragraph (a) this section is employed, may operate on any of the frequencies in the 401-402 MHz or 405-406 MHz bands.

(4) MedRadio stations 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 paragraph (a) of this section is employed, may operate on any of the frequencies in the 402-405 MHz band, provided that:

(i) 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;

(ii) 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;

(iii) The maximum output power of the temporary body-worn device shall not exceed 200 nW EIRP; and

(iv) 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.

(d) *Authorized bandwidth.* The authorized bandwidth of the emission from a MedRadio station

operating between 402-405 MHz shall not exceed 300 kHz, and no communications session involving MedRadio stations shall use more than a total of 300 kHz of bandwidth during such a session. The authorized bandwidth of the emission from a MedRadio station operating between 401-401.85 MHz or 405-406 MHz shall not exceed 100 kHz, and no communications session involving MedRadio stations shall use more than a total of 100 kHz of bandwidth during such a session. The authorized bandwidth of the emission from a MedRadio station operating between 401.85-402 MHz shall not exceed 150 kHz, and no communications session involving MedRadio stations shall use more than a total of 150 kHz of bandwidth during such a session. Note: This provision does not preclude full duplex or half duplex communications provided that the total amount of bandwidth utilized by all of the MedRadio channels employed in such a MedRadio communications session does not exceed 300 kHz in the 402-405 MHz band, or 100 kHz in the 401-402 MHz and 405-406 MHz bands.

(e) *Frequency stability.* Each transmitter in the MedRadio service must maintain a frequency stability of ± 100 ppm of the operating frequency over the range:

(1) 25[deg]C to 45[deg]C in the case of medical implant transmitters; and

(2) 0°C to 55°C in the case of MedRadio programmer/control transmitters and MedRadio body-worn transmitters.

(f) *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.

(g) Measurement procedures.

(1) MedRadio transmitters shall be tested for frequency stability, radiated emissions and EIRP limit compliance in accordance with paragraphs (g)(2) and (g)(3) below.

(2) Frequency stability testing shall be performed over the temperature range set forth in (e) above.

(3) Radiated emissions and EIRP limit measurements limit may be determined by measuring the radiated field from the equipment under test at 3 meters and calculating the EIRP. The equivalent radiated field strength at 3 meters for 25 microwatts, 250 nanowatts, and 100 nanowatts EIRP is 18.2, 1.8, or 1.2 mV/meter, respectively, when measured on an open area test site; or 9.1, 0.9, or 0.6 mV/meter, respectively, when measured on a test site equivalent to free space such as a fully anechoic test chamber. Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved peak power technique, or the following. Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

(i) For a transmitter intended to be implanted in a human body, radiated emissions and EIRP measurements for transmissions by stations authorized under this section may be made in accordance with a Commission-approved human body simulator and test technique. A formula for a suitable tissue substitute material is defined in OET Bulletin 65 Supplement C (01-01).

(ii) For a transmitter intended to be body-worn, and for programmer/control transmitters, use standard ANSI C63.4 test setup and test method.

§ 95.717 Maximum transmitter power.

In the MedRadio Service for transmitters that are not excepted under § 95.715(b) from the frequency monitoring requirements of § 95.715(a), the maximum radiated power in any 300 kHz bandwidth by MedRadio transmitters operating at 402-405 MHz, or in any 100 kHz bandwidth by MedRadio transmitters operating at 401-402 MHz or 405-406 MHz shall not exceed 25 microwatts EIRP. For transmitters that are excepted under § 95.715(b) from the frequency monitoring requirements of §

95.715(a), the power radiated by any station operating in 402-405 MHz shall not exceed 100 nanowatts EIRP confined to a maximum total emission bandwidth of 300 kHz centered at 403.65 MHz. For transmitters that are excepted under § 95.715(b) from the frequency monitoring requirements of § 95.715(a), the power radiated by any station operating in 401-401.85 MHz or 405-406 MHz shall not exceed 250 nanowatts EIRP in any 100 kHz bandwidth and in 401.85-402 MHz shall not exceed 25 microwatts in the 150 kHz bandwidth. See §95.721(e). The antenna associated with any MedRadio transmitter must be supplied with the transmitter and shall be considered part of the transmitter subject to equipment authorization. Compliance with these EIRP limits may be determined as set forth in § 95.715(g).

§ 95.719 Emission types.

A MedRadio station may transmit any emission type appropriate for communications in this service. Voice communications, however, are prohibited.

§ 95.721 Emission bandwidth.

(a) MedRadio Service stations operating in 402-405 MHz, the maximum authorized emission bandwidth is 300 kHz. For stations operating in 401-401.85 MHz or 405-406 MHz, the maximum authorized emission bandwidth is 100 kHz, and stations operating in 401.85-402 MHz, the maximum authorized emission bandwidth is 150 kHz.

(b) Lesser emission bandwidths may be employed, provided that the unwanted emissions are attenuated as provided in § 95.723. See §§ 95.715(g) and 95.717(f) regarding maximum transmitter power and measurement procedures.

§ 95.723 Unwanted radiation.

(a) In addition to the procedures in Part 2, the following requirements apply to each transmitter both with and without the connection of all attachments acceptable for use with the transmitter, such as an external speaker, power cord, antenna, etc.

(b) For transmitters designed to operate in the MedRadio service, emissions shall be attenuated in accordance with the following: (Subparagraphs 1 through 5 pertain to MedRadio transmitters operating in the 402-405 MHz band; subparagraphs 6 through 10 pertain to MedRadio transmitters operating in the 401-402 MHz or 405-406 MHz bands)

(1) Emissions from a MedRadio transmitter more than 250 kHz outside of the 402-405 MHz band shall be attenuated to a level no greater than the following field strength limits:

| Frequency (MHz) | Field strength ($\mu\text{V/m}$) | Measurement distance (m) |
|--|------------------------------------|--------------------------|
| 30-88 | 100 | 3 |
| 88-216 | 150 | 3 |
| 216-960 | 200 | 3 |
| 960 and above | 500 | 3 |
| NOTE - At band edges, the tighter limit applies. | | |

(2) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except that above 1 GHz, the limit is based on measurements employing an average detector. Measurements above 1 GHz shall be performed using a minimum resolution bandwidth of 1 MHz. See also Sec. 95.713.

(3) The emissions from a MedRadio transmitter must be measured to at least the tenth harmonic of the highest fundamental frequency designed to be emitted by the transmitter.

(4) Emissions within the 402-405 MHz band more than 150 kHz away from the center frequency of the spectrum the transmission is intended to occupy will be attenuated below the transmitter output power by at least 20 dB. Compliance with this limit is based on the use of measurement instrumentation employing

a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

(5) Emissions 250 kHz or less that are above and below the 402–405 MHz band will be attenuated below the maximum permitted output power by at least 20 dB. Compliance with this limit is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

(6) Emissions from medical device transmitters operating in the 401-402 MHz or 405-406 MHz bands at more than 100 kHz outside of the MedRadio bands (401-406 MHz) and all emissions in the band 406.000-406.100 MHz shall be attenuated to a level no greater than the following field strength limits:

| Frequency (MHz) | Field strength ($\mu\text{V/m}$) | Measurement distance (m) |
|--|------------------------------------|--------------------------|
| 30-88 | 100 | 3 |
| 88-216 | 150 | 3 |
| 216-960 | 200 | 3 |
| 960 and above | 500 | 3 |
| NOTE - At band edges, the tighter limit applies. | | |

(7) The emission limits shown in (6) above are based on measurements employing a CISPR quasi-peak detector except that above 1 GHz, the limit is based on measurements employing an average detector. Measurements above 1 GHz shall be performed using a minimum resolution bandwidth of 1 MHz. *See also* § 95.713.

(8) The emissions from a medical device transmitter operating in the MedRadio bands (between 401-402 MHz or 405-406 MHz) must be measured to at least the tenth harmonic of the highest fundamental frequency designed to be emitted by the transmitter.

(9) Emissions within the MedRadio bands more than 50 kHz away from the center frequency of the spectrum the transmission is intended to occupy, shall be attenuated below the transmitter output power by at least 20 dB except as noted in (7) above. Compliance with this limit is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

(10) Emissions 100 kHz or less below 401 MHz shall be attenuated below the maximum permitted output power by at least 20 dB. Compliance with this limit is based on the use of measurement instrumentation employing a peak detector function with an instrument resolution bandwidth approximately equal to 1.0 percent of the emission bandwidth of the device under measurement.

§ 95.725 Antennas.

No antenna for a MedRadio transmitter shall be configured for permanent outdoor use. In addition, any MedRadio antenna used outdoors shall not be affixed to any structure for which the height to the tip of the antenna will exceed three (3) meters (9.8 feet) above ground.

§ 95.727 RF exposure.

MedRadio medical implant or medical body-worn transmitters (as defined in § 95.3 of this chapter) are subject to the radiofrequency radiation exposure requirements specified in §§ 1.1307 and 2.1093 of this chapter, as appropriate. Applications for equipment authorization of implant devices operating under this section must contain a finite difference time domain (FDTD) computational modeling report showing compliance with these provisions for fundamental emissions. The Commission retains the discretion to request the submission of specific absorption rate measurement data.

Subpart J – Multi-Use Radio Service (MURS)

§ 95.801 Scope.

This subpart contains the operating requirements for the MURS. General and technical information pertaining to this service is contained in subparts A and B.

§ 95.803 Channels available.

(a) Channels available

| Channel No. | Frequency (MHz) |
|-------------|-----------------|
| 1 | 151.820 |
| 2 | 151.880 |
| 3 | 151.940 |
| 4 | 154.570 |
| 5 | 154.600 |

(b) MURS channels are available only on a shared basis and will not be assigned for the exclusive use of any user. All MURS users must cooperate in the selection and use of channels, including limiting communications to the minimum practical time, to reduce interference and to make the most effective use of the facilities.

§ 95.805 Permissible communications.

(a) MURS stations may transmit voice, data or image signals as permitted in this subpart.

(b) MURS frequencies may be used for remote control and telemetering functions. Stations used to control remote objects or devices may be operated on the continuous carrier transmit mode, except on frequency 154.600 MHz.

(c) MURS users shall take reasonable precautions to avoid causing harmful interference. This includes monitoring the transmitting frequency for communications in progress and such other measures as may be necessary to minimize the potential for causing interference.

§ 95.807 Repeater operations and signal boosters prohibited.

MURS stations are prohibited from operating as a repeater station or as a signal booster. This prohibition includes store-and-forward packet operation.

§ 95.809 Grandfathered MURS Stations.

Stations that were licensed under Part 90 of the Commission's Rules to operate on MURS frequencies as of November 13, 2000, are granted a license by rule that authorizes continued operations under the terms of such nullified Part 90 authorizations, including any rule waivers.

Subpart K – Personal Locator Beacon (PLB)**§ 95.901 Scope.**

This subpart sets out the regulations governing PLBs. PLBs are 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. General and technical information pertaining to this service is contained in subparts A and B.

§ 95.903 Channels available.

PLB transmitters must operate in the 406.0-406.1 MHz band.

§ 95.905 Permissible communications.

Use of PLB frequencies under this part is limited to the transmission of distress and safety communications.

§ 95.907 Special requirements for 406 MHz PLBs.

(a) All 406 MHz PLBs must meet all the technical and performance standards contained in the Radio Technical Commission for Maritime (RTCM) Service document ``RTCM Standard 11010.2 for 406 MHz Satellite Personal Locator Beacons (PLBs)," Version 1.1, RTCM Paper 114-2008-SC110-STD, dated July 10, 2008. This RTCM document is incorporated by reference in accordance with 5 U.S.C. 552(a), and 1 CFR part 51. Copies of the document are available and may be obtained from the Radio Technical Commission For Maritime Services 1800 N. Kent St., Suite 1060, Arlington, Virginia 22209-2901. The document is available for inspection at Commission headquarters at 445 12th Street SW., Washington, DC 20554. Copies may also be inspected 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>.

(b) The 406 MHz PLB must contain, as an integral part, a homing beacon operating only on 121.500 MHz and meeting all requirements described in the RTCM Recommended Standards document described in paragraph (a) of this section. The 121.500 MHz homing beacon must have a continuous duty cycle that can be interrupted only during the transmission of the 406 MHz signal. The 406 MHz PLB shall transmit a unique identifier (Morse code "P") on the 121.500 MHz signals.

(c) Before a 406 MHz PLB certification application is submitted to the Commission, the applicant must have obtained certification from a test facility, recognized by one of the COSPAS/SARSAT Partners, that the PLB satisfies the standards contained in the COSPAS/SARSAT document COSPAS/SARSAT 406 MHz Distress Beacon Type Approval Standard (C/S T.007). Additionally, an independent test facility must certify that the PLB complies with the electrical and environmental standards associated with the RTCM Recommended Standards.

(d) The procedures of Notification by the equipment manufacturer and Certification from either the Commission or designated Telecommunications Certification Body are contained in Subpart J of Part 2 of this chapter.

(e) An identification code, issued by the National Oceanic and Atmospheric Administration (NOAA), the United States Program Manager for the 406 MHz COSPAS/SARSAT satellite system, must be programmed in each PLB unit to establish a unique identification for each PLB station. With each marketable PLB unit, the manufacturer or grantee must include a postage pre-paid registration card printed with the PLB identification code addressed to: SARSAT Beacon Registration, NOAA, NESDIS, E/SP3, Room 3320, FB-4, 5200 Auth Road, Suitland, Maryland 20746-4303. The registration card must request the owner's name, address, telephone number, alternate emergency contact and include the following statement: "WARNING—failure to register this PLB with NOAA could result in a monetary forfeiture order being issued to the owner."

(f) 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. 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 containing the following statement: "The owner of this 406 MHz PLB must register the NOAA identification code contained on this label with the National Oceanic and Atmospheric Administration (NOAA) whose address is: SARSAT Beacon Registration, NOAA, NESDIS, E/SP3, Room 3320, FB-4, 5200 Auth Road, Suitland, Maryland 20746-4303." Owners shall advise NOAA in writing upon change of PLB ownership, or any other change in registration information. NOAA will provide registrants with proof of registration and change of registration postcards.

(g) For 406 MHz 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.

§ 95.909 Marketing limitations.

No device may be marketed or sold in the United States as a PLB or Personal Locator Beacon unless it complies with the requirements of this subpart.

Subpart L – Dedicated Short-range Communications Service On-Board Units (DSRCS-OBUs)

§ 95.1001 Scope.

This subpart sets out the regulations governing Dedicated Short-Range Communications Service On-Board Units (DSRCS-OBUs) in the 5850-5925 MHz band. DSRCS Roadside Units (RSUs) are authorized under part 90 of this chapter and DSRCS, RSU, and OBU are defined in § 90.7 of this chapter. General information pertaining to this service is also contained in subparts A and B.

§ 95.1003 ASTM E2213-03 DSRC Standard.

On-Board Units operating in the 5850-5925 MHz band shall comply with the following technical standards, which are incorporated by reference: American Society for Testing and Materials (ASTM) E2213-03, Standard Specification for Telecommunications and Information Exchange Between Roadside and Vehicle Systems--5 GHz Band Dedicated Short-range Communications (DSRC) Medium Access Control (MAC) and Physical Layer (PHY) Specifications published September 2003 (ASTM E2213-03 DSRC Standard). The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 C.F.R. Part 51. Copies may be inspected at the Federal Communications Commission, 445 12th Street, S.W., Washington, DC 20554 or at the Office of the Federal Register, 800 North Capital Street, N.W., Suite 700, Washington, D.C. 20001. For information on the availability of this material at the Office of the Federal Register, call 202 741-6000 or send an e-mail to fedreg.info@nara.gov. Copies of the ASTM E2213-03 DSRC Standard can be obtained from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. Copies may also be obtained from ASTM via the Internet at <http://www.astm.org>.

§ 95.1005 Frequencies available.

(a) The following table indicates the channel designations of frequencies available for assignment to eligible applicants within the 5850-5925 MHz band for On-Board Units (OBUs):

| Channel no. | Channel use | Frequency range (MHz) |
|-------------|-----------------------|-----------------------|
| 170 | Reserved | 5850-5855 |
| 172 | Service Channel | 5855-5865 |
| 174 | Service Channel | 5865-5875 |
| 175 | Service Channel [FN1] | 5865-5885 |
| 176 | Service Channel | 5875-5885 |
| 178 | Control Channel | 5885-5895 |
| 180 | Service Channel | 5895-5905 |
| 181 | Service Channel [FN1] | 5895-5915 |
| 182 | Service Channel | 5905-5915 |
| 184 | Service Channel | 5915-5925 |

FN1 Channel Nos. 174/176 may be combined to create a twenty megahertz channel, designated Channel No. 175. Channels 180/182 may be combined to create a twenty megahertz channel designated Channel No. 181.

(b) Except as provided in paragraph (c) of this section, non-reserve DSRCS channels are available on a shared basis only for use in accordance with the Commission's Rules. All licensees shall cooperate in the selection and use of channels in order to reduce interference. This includes monitoring for

communications in progress and any other measures as may be necessary to minimize interference. Licensees suffering or causing harmful interference within a communications zone are expected to cooperate and resolve this problem by mutually satisfactory arrangements. If the licensees are unable to do so, the Commission may impose restrictions including specifying the transmitter power, antenna height and direction, additional filtering, or area or hours of operation of the stations concerned. Further the use of any channel at a given geographical location may be denied when, in the judgment of the Commission, its use at that location is not in the public interest; the use of any channel may be restricted as to specified geographical areas, maximum power, or such other operating conditions, contained in this part or in the station authorization.

(c) *Safety/public safety priority.* The following access priority governs all DSRCS operations:

(1) Communications involving the safety of life have access priority over all other DSRCS communications; and

(2) Subject to a Control Channel priority system management strategy (*see* ASTM E2213-03 DSRC Standard at § 4.1.1.2(4)) DSRCS communications involving public safety have access priority over all other DSRC communications not listed in paragraph (c)(1) of this section. On-Board Units (OBUs) operated by state or local governmental entities are presumptively engaged in public safety priority communications.

(d) *Non-priority communications.* DSRCS communications not listed in paragraph (c) of this section are non-priority communications. If a dispute arises concerning non-priority DSRCS-OBU communications with Roadside Units (RSUs), the provisions of § 90.377(e) and (f) of this chapter will apply. Disputes concerning non-priority DSRCS-OBU communications not associated with RSUs are governed by paragraph (b) of this section.

APPENDIX C

Cross-Reference Tables for Existing and Proposed Rules

Ordered by Existing Section Number

| Existing | Proposed | Topic |
|----------|------------|---|
| 95.1 | 95.3 | GMRS, 218-219 MHz service descriptions |
| 95.3 | 95.5 | License required (GMRS) |
| 95.5 | 95.5 | Eligibility (GMRS) |
| 95.7 | 95.103 | Channel sharing (GMRS) |
| 95.21 | Removed | System description (GMRS) |
| 95.23 | Removed | Mobile description |
| 95.25 | Removed | Land station description |
| 95.27 | Removed | Paging receiver |
| 95.29 | 95.103 | GMRS channels |
| 95.33 | Removed | Cooperative use (GMRS) |
| 95.45 | 95.7 | Use on federal land (GMRS) |
| 95.51 | 95.45 | Antenna height (GMRS) |
| 95.101 | 95.7 | What GMRS license authorizes |
| 95.103 | 95.9 | Licensee duties (GMRS) |
| 95.105 | Removed | License term (GMRS) |
| 95.115 | 95.11 | Station inspection (GMRS) |
| 95.117 | 95.17 | Contacting FCC (GMRS) |
| 95.119 | Removed | Station identification (GMRS) |
| 95.129 | 95.33 | Equipment certification (GMRS) |
| 95.135 | 95.35 | Transmitting power (GMRS) |
| 95.139 | Removed | Adding a small base or control station (GMRS) |
| 95.141 | 95.47 | Interconnection prohibited (GMRS) |
| 95.143 | Removed | Emergency use (GMRS) |
| 95.171 | Removed | GMRS operator duties |
| 95.179 | Removed | Individuals who may operate station (GMRS) |
| 95.181 | 95.105 | Permissible communications (GMRS) |
| 95.183 | 95.9 | Prohibited communications (GMRS) |
| 95.191 | 95.5, 95.9 | Eligibility, responsibility (FRS) |
| 95.192 | 95.7 | Authorized locations (FRS) |
| 95.193 | 95.405 | Types of communications (FRS) |
| 95.194 | 95.33 | FRS units |
| 95.201 | 95.3 | What is R/C service? |

| Existing | Proposed | Topic |
|----------|----------|--------------------------------------|
| 95.202 | Removed | Use of rules (R/C) |
| 95.203 | 95.203 | Eligibility (R/C) |
| 95.204 | 95.5 | License required? (R/C) |
| 95.205 | 95.7 | Authorized locations (R/C) |
| 95.206 | 95.209 | Special location restrictions (R/C) |
| 95.207 | 95.205 | R/C channels |
| 95.208 | 95.45 | Antenna height (R/C) |
| 95.209 | 95.33 | R/C equipment |
| 95.210 | 95.35 | Transmitting power (R/C) |
| 95.211 | 95.207 | Permissible communications (R/C) |
| 95.212 | 95.207 | Prohibited communications (R/C) |
| 95.213 | Removed | Pay for use? (R/C) |
| 95.214 | 95.9 | Licensee responsibility (R/C) |
| 95.215 | Removed | Length of Communications (R/C) |
| 95.216 | Removed | Station identification (R/C) |
| 95.217 | 95.211 | Remote control (R/C) |
| 95.218 | 95.15 | Penalties (R/C) |
| 95.219 | 95.13 | FCC notices and correspondence (R/C) |
| 95.220 | 95.9 | Interference (R/C) |
| 95.221 | Removed | Transmitter servicing (R/C) |
| 95.222 | 95.33 | Transmitter changes (R/C) |
| 95.223 | 95.11 | Station inspection (R/C) |
| 95.224 | 95.11 | Station records (R/C) |
| 95.225 | 95.21 | Contacting FCC (R/C) |
| 95.401 | 95.3 | What is CB service? |
| 95.402 | Removed | Use of rules (CB) |
| 95.403 | 95.303 | Eligibility (CB) |
| 95.404 | 95.5 | License required? (CB) |
| 95.405 | 95.7 | Authorized locations (CB) |
| 95.406 | 95.305 | Special location restrictions (CB) |
| 95.407 | 95.307 | CB channels |
| 95.408 | 95.45 | Antenna height (CB) |
| 95.409 | 95.311 | CB equipment |
| 95.410 | 95.35 | Transmitting power (CB) |
| 95.411 | 95.313 | Power amplifiers prohibited (CB) |
| 95.412 | 95.315 | Permissible communications (CB) |

| Existing | Proposed | Topic |
|----------|---------------|------------------------------------|
| 95.413 | 95.317 | Prohibited communications (CB) |
| 95.414 | 95.319 | Pay for use? (CB) |
| 95.415 | 95.9 | Licensee responsibility (CB) |
| 95.416 | 95.321 | Length of communications (CB) |
| 95.417 | Removed | Station identification (CB) |
| 95.418 | 95.323 | Emergency use (CB) |
| 95.419 | 95.325 | Remote control (CB) |
| 95.420 | 95.327 | Telephone interconnect (CB) |
| 95.421 | 95.15 | Penalties (CB) |
| 95.422 | 95.13 | Response to FCC (CB) |
| 95.423 | Removed | Interference (CB) |
| 95.424 | Removed | Servicing CB equipment |
| 95.425 | 95.33 | Changes to CB transmitter |
| 95.426 | 95.11 | Station inspection (CB) |
| 95.427 | 95.11 | Station records (CB) |
| 95.428 | 95.17 | Contacting FCC (CB) |
| 95.601 | 95.1 | Basis and Purpose |
| 95.603 | 95.33 | Equipment certification required |
| 95.605 | 95.33 | Equipment certification procedures |
| 95.607 | 95.33 | CB transmitter modification |
| 95.621 | 95.37, 95.103 | GMRS channel frequencies |
| 95.623 | 95.205 | R/C channel frequencies |
| 95.625 | 95.307 | CB channel frequencies |
| 95.627 | 95.403 | FRS channel frequencies |
| 95.628 | 95.715 | Medradio transmitters |
| 95.629 | 95.503 | LPRS channel frequencies |
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| 95.631 | 95.41 | Emission types |
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| 95.643 | 95.33 | DSRCS-OBU equipment certification |
| 95.645 | 95.33 | Control accessibility |
| 95.647 | 95.45 | FRS & R/C antennas |
| 95.649 | 95.35 | Power capability |
| 95.651 | Removed | Crystal control |
| 95.653 | 95.33 | Instructions & warnings |
| 95.655 | 95.33 | Frequency capability |
| 95.667 | Removed | CB transmitter power |
| 95.669 | 95.33 | External controls (CB) |
| 95.671 | Removed | Serial number (CB) |
| 95.673 | Removed | Copy of rules (CB) |

| Existing | Proposed | Topic |
|----------|----------|--|
| 95.801 | 27.1401 | Scope (218-219 MHz) |
| 95.803 | 27.1403 | Service description (218-219 MHz) |
| 95.805 | 27.2 | Permissible communications (218-219 MHz) |
| 95.807 | 27.10 | Regulatory status (218-219 MHz) |
| 95.811 | 27.1411 | License requirements (218-219 MHz) |
| 95.812 | 27.13 | License term (218-219 MHz) |
| 95.813 | 27.12 | Eligibility (218-219 MHz) |
| 95.815 | 27.1415 | License application (218-219 MHz) |
| 95.816 | 27.1416 | Competitive bidding (218-219 MHz) |
| 95.819 | 27.1419 | License transferability (218-219 MHz) |
| 95.823 | 27.15 | Partitioning, disaggregation (218-219 MHz) |
| 95.831 | Removed | Service requirements (218-219 MHz) |
| 95.833 | 27.14 | Construction requirements (218-219 MHz) |
| 95.835 | Removed | Station identification (218-219 MHz) |
| 95.837 | Removed | Station inspection (218-219 MHz) |
| 95.851 | 27.51 | Equipment certification (218-219 MHz) |
| 95.853 | 27.5 | Frequency segments (218-219 MHz) |
| 95.855 | 27.50 | Transmitting ERP (218-219 MHz) |
| 95.857 | 27.53 | Emission standards (218-219 MHz) |
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| 95.861 | 27.1410 | Interference (218-219 MHz) |
| 95.1001 | 95.5 | Eligibility (LPRS) |
| 95.1003 | 95.7 | Authorized locations (LPRS) |
| 95.1005 | Removed | Station identification (LPRS) |
| 95.1007 | 95.11 | Station inspection (LPRS) |
| 95.1009 | 95.505 | Permissible communications (LPRS) |
| 95.1011 | Removed | Channel use policy (LPRS) |
| 95.1013 | 95.45 | Antennas (LPRS) |
| 95.1015 | 95.507 | Disclosure policies (LPRS) |

| Existing | Proposed | Topic |
|----------|--------------|--|
| 95.1017 | 95.33 | Labeling requirements (LPRS) |
| 95.1019 | 95.509 | Marketing limitations (LPRS) |
| 95.1101 | 95.601 | Scope (WMTS) |
| 95.1103 | 95.3 | Definitions (WMTS) |
| 95.1105 | 95.5 | Eligibility (WMTS) |
| 95.1107 | 95.7 | Authorized locations (WMTS) |
| 95.1109 | 95.713 | Equipment authorization (WMTS) |
| 95.1111 | 95.607 | Frequency coordination (WMTS) |
| 95.1113 | 95.609 | Frequency coordinator (WMTS) |
| 95.1115 | 95.35, 95.41 | Technical requirements (WMTS) |
| 95.1117 | 95.41 | Types of communications (WMTS) |
| 95.1119 | 95.611 | 608-614 MHz band requirements (WMTS) |
| 95.1121 | 95.613 | 1395-1400 MHz band requirements (WMTS) |
| 95.1123 | 95.615 | Protection of medical equipment (WMTS) |
| 95.1125 | 95.727 | RF safety (WMTS) |
| 95.1127 | Removed | Station identification (WMTS) |
| 95.1129 | 95.11 | Station inspection (WMTS) |
| 95.1201 | 95.5 | Eligibility (MedRadio) |
| 95.1203 | 95.7 | Authorized locations (MedRadio) |
| 95.1205 | Removed | Station identification (MedRadio) |
| 95.1207 | 95.11 | Station inspection (MedRadio) |
| 95.1209 | 95.703 | Permissible communications (MedRadio) |

| Existing | Proposed | Topic |
|----------|----------|---------------------------------------|
| 95.1211 | 95.705 | Channel use policy (MedRadio) |
| 95.1213 | 95.725 | Antennas (MedRadio) |
| 95.1215 | 95.707 | Disclosure policies (MedRadio) |
| 95.1217 | 95.709 | Labeling requirements (MedRadio) |
| 95.1219 | 95.711 | Marketing limitations (MedRadio) |
| 95.1301 | 95.5 | Eligibility (MURS) |
| 95.1303 | 95.7 | Authorized locations (MURS) |
| 95.1305 | Removed | Station identification (MURS) |
| 95.1307 | 95.807 | Permissible communications (MURS) |
| 95.1309 | 95.805 | Channel use policy (MURS) |
| 95.1311 | 95.807 | Repeaters, boosters prohibited (MURS) |
| 95.1313 | 95.47 | Interconnection prohibited (MURS) |
| 95.1315 | 95.45 | Antenna height (MURS) |
| 95.1317 | 95.809 | Grandfathered stations (MURS) |
| 95.1400 | 95.1 | Basis and purpose (PLB) |
| 95.1401 | 95.903 | Frequency (PLB) |
| 95.1402 | 95.907 | Special requirements (PLB) |
| 95.1501 | 95.1001 | Scope (DSRCS-OBU) |
| 95.1503 | 95.5 | Eligibility (DSRCS-OBU) |
| 95.1505 | 95.7 | Authorized locations (DSRCS-OBU) |
| 95.1507 | Removed | Station identification (DSRCS-OBU) |
| 95.1509 | 95.1003 | ASTM E2213-03 standard (DSRCS-OBU) |
| 95.1511 | 95.1005 | Frequencies (DSRCS-OBU) |

Ordered by Proposed Section Number

| Proposed | Existing | Topic |
|----------|----------|---|
| 27.1 | 27.1 | Basis and purpose (add 218-219 MHz) |
| 27.2 | 95.805 | Permissible communications (218-219 MHz) |
| 27.5 | 95.853 | Frequencies (add 218-219 MHz) |
| 27.10 | 95.807 | Regulatory status (add 218-219 MHz) |
| 27.11 | 95.853 | Initial authorization (frequency blocks -- add 218-219 MHz) |

| Proposed | Existing | Topic |
|----------|----------------|--|
| 27.13 | 95.812 | License period (add 218-219 MHz) |
| 27.14 | 95.833 | Construction requirements; renewal (add 218-219 MHz) |
| 27.50 | 95.855, 95.859 | Power and antenna height limits (add 218-219 MHz) |
| 27.51 | 95.851 | Equipment certification (218-219 MHz) |
| 27.53 | 95.857 | Emission limits (add 218-219 MHz) |

| Proposed | Existing | Topic |
|----------|---|--|
| 27.1401 | 95.801 | Scope (218-219 MHz) |
| 27.1403 | 95.803 | Service description (218-219 MHz) |
| 27.1410 | 95.861 | Interference (218-219 MHz) |
| 27.1411 | 95.811 | License requirements (218-219 MHz) |
| 27.1415 | 95.815 | License application (218-219 MHz) |
| 27.1416 | 95.816 | Competitive bidding procedures (218-219 MHz) |
| 27.1419 | 95.819 | License transferability (218-219 MHz) |
| 95.1 | 95.601, 95.1400 | Basis and Purpose |
| 95.3 | 95.1, 95.1103 | Definitions |
| 95.5 | 95.3, 95.191, 95.204 | License requirement, eligibility |
| 95.7 | 95.45, 95.101, 95.192, 95.205, 95.405, 95.1107, 95.1203, 95.1303, 95.1505 | Authorized locations |
| 95.9 | 95.103, 95.183, 95.191, 95.214, 95.415 | Licensee responsibility |
| 95.11 | 95.119, 95.216, 95.417, 95.1005, 95.1127, 95.1205, 95.1305 | Station Inspection |
| 95.13 | 95.115, 95.223, 95.426, 95.1007, 95.1129, 95.1207 | FCC notices, correspondence |
| 95.15 | 95.224, 95.427 | Penalties |
| 95.17 | 95.219, 95.220, 95.422, 95.423 | Contacting FCC |
| 95.31 | 95.601 | Scope |

| Proposed | Existing | Topic |
|----------|---|--------------------------------------|
| 95.33 | 95.129, 95.194, 95.209, 95.222, 95.409, 95.425, 95.603, 95.605, 95.607, 95.643, 95.645, 95.653, 95.655, 95.669, 95.1015, 95.1017, 95.1109 | Equipment Certification requirements |
| 95.35 | 95.25, 95.135, 95.210, 95.410, 95.411, 95.639, 95.649, 95.1115 | Transmitting power |
| 95.37 | 95.621 | Frequency tolerance and stability |
| 95.39 | 95.633 | Bandwidth limitations |
| 95.41 | 95.631, 95.635, 95.1115, 95.1117 | Unwanted emissions |
| 95.43 | 95.637 | Modulation standards |
| 95.45 | 95.25, 95.51, 95.208, 95.408, 95.647, 95.1013, 95.1213, 95.1315 | Antenna limits |
| 95.47 | 95.141, 95.420, 95.1313 | Telephone interconnection prohibited |
| 95.49 | 95.1125 | RF safety |
| 95.101 | new | Scope (GMRS) |
| 95.103 | 95.7, 95.29, 95.621 | GMRS Channels |
| 95.105 | 95.181 | Permissible communications |
| 95.201 | 95.201 | Scope (R/C) |
| 95.203 | 95.203 | R/C Channels |

| Proposed | Existing | Topic |
|----------|------------------------------|--|
| 95.207 | 95.211, 95.212, 95.213 | Permissible communications (R/C) |
| 95.209 | 95.206 | Special location restrictions (R/C) |
| 95.211 | 95.217 | Remote control (R/C) |
| 95.301 | New | Scope (CB) |
| 95.303 | 95.403 | Eligibility to use CB radios |
| 95.305 | 95.406 | Special location restrictions CB |
| 95.307 | 95.407 | CB channels |
| 95.309 | 95.419 | CB antenna limitations |
| 95.311 | 95.409 | CB equipment |
| 95.313 | 95.411 | RF power amplifiers prohibited (CB) |
| 95.315 | 95.412 | Permitted communications (CB) |
| 95.317 | 95.413 | Prohibited communications (CB) |
| 95.319 | 95.414 | Pay for use of CB |
| 95.321 | 95.416 | Length of communications (CB) |
| 95.323 | 95.418 | Travelers assistance (CB) |
| 95.325 | 95.419 | Remote control (CB) |
| 95.327 | 95.420 | Telephone interconnection (CB) |
| 95.401 | 95.191 | Scope (FRS) |
| 95.403 | 95.627 | FRS channels |
| 95.405 | 95.193 | Permissible communications (FRS) |
| 95.501 | New | Scope (LPRS) |
| 95.503 | 95.629 | LPRS channels |
| 95.505 | 95.1009 | Permissible communications (LPRS) |
| 95.507 | 95.1015 | LPRS notification requirement |
| 95.509 | 95.1019 | LPRS marketing limitation |
| 95.601 | 95.1101 | Scope (WMTS) |
| 95.603 | 95.1105 | WMTS channels |
| 95.605 | 95.630, 95.1115 | Permissible communications (WMTS) |
| 95.607 | 95.1111 | Frequency coordination (WMTS) |
| 95.609 | 95.1113 | Frequency coordinator (WMTS) |
| 95.611 | 95.1119 | Coordination with radio astronomy (WMTS) |

| Proposed | Existing | Topic |
|----------|---------------------|--|
| 95.613 | 95.1119 | Coordination with federal government facilities (WMTS) |
| 95.615 | 95.1123 | Advisory w/re to interference to medical equipment |
| 95.701 | None | Scope (MedRadio) |
| 95.703 | 95.1209 | Permissible communications (Medradio) |
| 95.705 | 95.1211 | Medradio channel use policy |
| 95.707 | 95.1215 | Medradio disclosure policies |
| 95.709 | 95.1217 | Medradio Labeling requirements |
| 95.711 | 95.1219 | Marketing limitations (Medradio) |
| 95.713 | 95.1109 | Equipment certification procedures |
| 95.715 | 95.628 | Medradio transmitters |
| 95.717 | 95.639 | Transmitting power (Medradio) |
| 95.719 | 95.631 | Emission types (Medradio) |
| 95.721 | 95.633 | Emission bandwidth (Medradio) |
| 95.723 | 95.635 | Unwanted radiation (Medradio) |
| 95.725 | 95.1213 | Antennas (Medradio) |
| 95.727 | 95.1125 | RF exposure (Medradio) |
| 95.801 | new | Scope (MURS) |
| 95.803 | 95.1301 | MURS channels |
| 95.805 | 95.632, 95.1309 | Permissible communications (MURS) |
| 95.807 | 95.1307, 95.1311 | Repeaters, boosters prohibited (MURS) |
| 95.809 | 95.1317 | Grandfathered stations (MURS) |
| 95.901 | 95.1400 | Scope (PLB) |
| 95.903 | 95.1401 | PLB channels |
| 95.905 | 95.1401 | Permissible communications (PLB) |
| 95.907 | 95.1402 | Technical and performance standards (PLB) |
| 95.909 | new | Marketing limitations (PLB) |
| 95.1001 | 95.1501 | Scope (DSRCS-OBUs) |
| 95.1003 | 95.1509 | Technical standard (DSRCS) |
| 95.1005 | 95.1511 | DSRCS channels |