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

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In the Matter of)	
)	
GARMIN INTERNATIONAL, INC.)	WT Docket No. 01-339
)	
Amendment of Sections 95.193(a) and 95.631(d) to)	RM - 10070
Authorize Manufacture, Sale and Use of GPS)	
Transmission Enhanced Family Radio Service)	
Units)	
)	
Amendment of Sections 95.193(a), 95.193(b), and)	
95.631(d) of the Commission's Rules Governing)	
Permissible Communications in the Family Radio)	
Service)	

NOTICE OF PROPOSED RULEMAKING

Adopted: December 12, 2001

Released: December 20, 2001

Comment Date: [Thirty days after publication in the Federal Register]
Reply Comment Date: [Forty-five days after publication in the Federal Register]

By the Commission:

I. INTRODUCTION

1. This *Notice of Proposed Rulemaking (Notice)* seeks comment on a proposal to amend Sections 95.193(a), 95.193(b), and 95.631(d) of the Commission's Rules¹ to authorize Family Radio Service (FRS) units to transmit an additional emission type and to revise the permissible communications rule that applies to FRS units. In its Petition, Garmin International, Inc. (Garmin) proposes to allow FRS units to transmit Global Positioning System (GPS) location information using emission type F2D² in a digital data burst of not more than one second.³ Prior to the submission of the Petition, Garmin sought a waiver (Waiver Request) of Sections 95.193(a), 95.193(b), and 95.631(d) of the Commission's Rules to allow it to manufacture and market inexpensive handheld FRS transceivers capable of transmitting GPS location information on FRS channels.⁴ The Public Safety and Private

¹ See 47 C.F.R. §§ 95.193(a), 95.193(b), 95.631(d).

² 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.

³ See Garmin International, Inc., Petition for Rulemaking, RM-10070 (filed Dec. 26, 2000) (Petition).

⁴ Letter from Garmin International, Inc. to Federal Communications Commission (dated June 22, 2000) (June 2000 Waiver Request). See also Letter, dated August 28, 2000, from Garmin International, Inc. to D'wana Terry, (continued....)

used to transmit tones to make contact or to continue communications with a particular FRS unit.¹⁵

4. Garmin is a designer and manufacturer of consumer electronic devices for the marine, aviation, automotive, and recreational markets.¹⁶ Garmin would like to manufacture and market inexpensive, handheld FRS transceivers capable of both transmitting GPS location information on FRS frequencies and graphically displaying the GPS location information on a radio receiving the GPS location information.¹⁷ Garmin states that these enhancements would allow a FRS user to press a button on his or her FRS transceiver to transmit his or her location to other FRS users.¹⁸ Under its waiver grant, the Division permitted Garmin -- contingent on the outcome of this rulemaking proceeding -- to receive FCC certification of a FRS unit that would also permit users to transmit GPS location information using emission type F2D in a digital data burst of not more than one second.¹⁹ Additionally, Garmin indicated that the unit was designed to limit transmission of GPS information to only one second out of every ten second period in the event that a user were to repeatedly press the button.²⁰

III. DISCUSSION

5. Petition for Rulemaking. Garmin seeks amendment of our FRS Rules in order to codify the conditions of the waiver the Division granted.²¹ Section 95.193 specifies the types of communications FRS units may transmit. Garmin requests that we amend Section 95.193 to authorize a FRS unit to transmit, in addition to voice communications, non-voice communications to provide location information²² and to allow a FRS unit to transmit digital data containing location information, provided that the digital data transmission does not exceed one second out of a ten second period and that the transmission must be initiated by a manual key press.²³ To allow a FRS unit to transmit digital data

¹⁵ 47 C.F.R. § 95.193(b).

¹⁶ Petition at 2.

¹⁷ *Id.* Garmin presently markets handheld Marine Radio Service transceivers and receivers that graphically display GPS location information on the radio receiving the GPS location information. See, e.g., West Marine catalog.

¹⁸ *Id.* at 3.

¹⁹ Garmin *Reconsideration Order*, 16 FCC Rcd at 7753 ¶ 3.

²⁰ *Id.*

²¹ The public was invited to comment on the Petition. See *Public Notice*, Report No. 2467 (Feb. 20, 2001). Mr. William C. Houlne (Houlne), opposes the petition on the basis that Garmin's proposal fails to provide any meaningful enhancement to FRS. Houlne Comment at 1. Mr. Houlne's filing was originally submitted as an informal request to rescind Garmin's waiver. The Wireless Telecommunications Bureau determined that Houlne's Petition should be treated as a comment in response to Garmin's Petition for Rulemaking. See Letter from John J. Schauble, Chief, Policy and Rules Branch, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, to William C. Houlne (dated July 25, 2001).

²² Petition at 8.

²³ *Id.* at 9.

Wireless Division (Division) of the Wireless Telecommunications Bureau granted a one-year waiver of the FRS Rules⁵ on September 29, 2000. On reconsideration, the Division extended the term of the waiver grant to two years, subject to the resolution of the Petition.⁶ We believe that these rule changes could allow a new and incidental use of the FRS. Therefore, we are initiating this rulemaking proceeding to propose a modification of the authorized emission types and permissible communications rules.

II. BACKGROUND

2. In 1996, the Commission established the FRS as a very short range, two-way voice personal radio service.⁷ The *Report and Order* established the FRS primarily on the basis that it would fill a market niche in short distance, personal communications needs.⁸ It was envisioned that the FRS would provide an affordable and convenient means of direct, short-range two-way voice communications among small groups of persons, with minimal regulation.⁹ Because the FRS is intended to meet the needs of families and other small groups to communicate with each other while they are out of speaking distance or sight, but still within close range, non-voice emission types, except tones transmitted to establish or continue voice communications, were not authorized.¹⁰ FRS units were authorized to transmit one-way communications to send an emergency message because the communication needs of families and other small groups could reasonably be expected to include location and other safety- or emergency-type messages, especially when members of the group find themselves inadvertently out of speaking distance or sight of other group members.¹¹

3. FRS units may be used in one of three ways. First, an FRS unit may be used to conduct voice communications¹² with another person.¹³ Second, an FRS unit may be used to transmit one-way communications only to establish communications with another person, send an emergency message, provide traveler assistance, make a voice page, or to conduct a brief test.¹⁴ Finally, an FRS unit may be

(Continued from previous page)

Chief, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, Federal Communications Commission (August 2000 Letter).

⁵ Garmin International, Inc., *Order*, 15 FCC Rcd 19143 (WTB PSPWD 2000) (*Garmin Order*).

⁶ See Garmin International, Inc., *Order on Reconsideration*, 16 FCC Rcd 7753, 7756 ¶ 8 (WTB PSPWD 2001) (*Garmin Reconsideration Order*).

⁷ See Amendment of Part 95 of the Commission's Rules to Establish a Very Short Distance Two-way Radio Service, *Report and Order*, WT Docket No. 95-102, 11 FCC Rcd 12977, 12983 ¶ 17 (1996) (*Report and Order*).

⁸ *Id.* at 12977 ¶ 2, 12979 ¶ 5.

⁹ *Id.* at 12977 ¶ 2, 12983 ¶ 17.

¹⁰ See 47 C.F.R. §§ 95.193(a), 95.629(d).

¹¹ See *Report and Order*, 11 FCC Rcd at 12979 ¶ 5.

¹² 47 C.F.R. § 95.631(d). F3E is a type of voice emission.

¹³ 47 C.F.R. § 95.193(a).

¹⁴ *Id.*

ability to integrate different communication service and capabilities into FRS equipment³² thereby enhancing FRS' usefulness to the public.

8. It is our recognition that FRS has been used by families and other small groups for, among other things, communicating location and safety- or emergency-type messages, especially when members of the group find themselves lost or injured, that causes us to conclude that allowing FRS units to transmit location information may be of use to the public.³³ We expect that FRS will continue to be used by families and other small groups for these types of messages. Under the current rules, however, because FRS units can not transmit location information automatically, locating a lost or injured family or group member depends on the lost or injured person being able to verbally describe his or her location to others. In light of the Commission's prior recognition of the public interest benefits of automatically locating individuals in distress, especially when they are injured or in an unfamiliar environment,³⁴ we agree with Garmin that allowing FRS units to transmit location information may provide a significant enhancement to locating a lost or injured family or group member. Therefore, we believe that the FRS rules should not prohibit FRS units from transmitting location information. We also note that expediting the location of a lost individual by using an objective location system rather than one that depends on the lost person being able to accurately describe the location to others, greatly increases the chance of successfully reuniting the individual with the group. In this regard, we note that Mr. Houlne agrees with Garmin that incorporation of the GPS into the FRS "is a very desirable utility."³⁵ We invite comment on the merits of the proposal, specifically the public interest and personal safety benefits associated with allowing FRS units to transmit location information.

9. Based upon our review of Garmin's rulemaking petition, we agree with Garmin that limiting FRS units to transmitting a digital data emission for no more than one second out of a ten second period and requiring that the digital data transmission be initiated manually by the FRS user appear to be, in combination, a reasonable method of minimizing interference between data communications and voice communications on FRS channels. In practice, it would appear that these restrictions will result in digital data emissions being a secondary use of the FRS and that voice communications will remain the primary use of FRS. Therefore, we tentatively conclude that the proposal will not likely result in harmful interference to FRS voice communications. Nevertheless, we invite commenters to address any concerns regarding interference to voice emissions on FRS channels. We note that Mr. Houlne expresses concerns that these limitations will render GPS-enhanced units "a gadget to play with"³⁶ or that the safety aspect of these units "go out the window"³⁷ when an operator is required to manually initiate the digital data transmission. We seek comment on what impact, if any, the proposed limitations would have on the

³² Petition at 6.

³³ Petition at Exhibit A.

³⁴ Revision of the Commission's Rules To Ensure Compatibility with Enhanced 911 Emergency Calling Systems, *Report and Order and Further Notice of Proposed Rulemaking*, CC Docket No. 94-102, 11 FCC Rcd 18676, 18679 (1996). See also, Comment of William C. Houlne at 2.

³⁵ Comment of William C. Houlne at 3.

³⁶ *Id.*

³⁷ *Id.*

containing location information, Garmin also requests we amend Section 95.631(d) to authorize FRS units to transmit emission type F2D.²⁴

6. Garmin indicates that these amendments are needed because the current rules do not allow the transmission of location information using a data emission on FRS channels.²⁵ Garmin's arguments supporting these amendments stem from the changes that have occurred since the adoption of the FRS. Specifically, Garmin notes that the emission type specified for FRS was adopted more than five years ago. Additionally, Garmin asserts that technological developments in equipment and service that have occurred since the authorization of the FRS, the availability of equipment at reasonable prices, and the removal of Selective Availability²⁶ from the GPS signal now make it possible to provide a low cost handheld device to the public capable of transmitting and graphically displaying critical location information within an accuracy of ten meters.²⁷ Garmin also states that adding the GPS capability to FRS units would provide a significant enhancement to a service that can be used, for example, to locate lost family members or members of groups in the woods, or in an amusement park.²⁸ With regard to the use of FRS channels for digital data transmissions and voice transmissions, Garmin states that the enhancements to FRS units it requests are not likely to cause interference to any other FRS unit transmitting in the FRS band.²⁹ Mr. Houlne states that incorporation of the GPS with the FRS is a very desirable utility and that such a marriage would make the FRS an extremely viable tool regarding public safety.³⁰ He also states, however, that Garmin's proposal does not serve the public interest because it fails to provide any meaningful enhancement to the FRS.³¹

7. Discussion. We believe the record in this proceeding warrants proposing amendment of Sections 95.193(a), 95.193(b), and 95.631(d) of our Rules because we believe that the proposed amendments will benefit FRS users. Until recently, frequency modulated voice, emission type F3E, specified in Section 95.631(d) appears to have adequately met the needs of FRS users. In this regard, we note that since FRS was authorized many manufactures have chosen to manufacture FRS units and that FRS units are readily available to the public at reasonable prices. It appears, however, that specifying only one emission type in Section 95.631(d) may have unintentionally limited some manufacturer's capability to develop FRS units that could be even more useful to the public. Additionally, the current limitation on the emission type that an FRS unit may transmit appears to be incompatible with technological developments in equipment and service that have occurred since FRS was authorized. According to Garmin, revising Sections 95.193(a), 95.193(b), and 95.631(d) will give manufactures the

²⁴ *Id.*

²⁵ *Id.* at 7.

²⁶ *Id.* at 2 fn. 2. Selective Availability (SA) was the intentional degradation of the GPS signal. SA variability degraded GPS position accuracy to a radius of 100M. SA was turned off May 2, 2000.

²⁷ *Id.* at 6.

²⁸ *Id.* at 5.

²⁹ *Id.* at 6.

³⁰ Comment of William C. Houlne at 3.

³¹ *Id.* at 1.

same meaning as the term "small business concern" under the Small Business Act.⁴² 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).⁴³

13. In this *Notice*, we propose to authorize an individual to use a FRS unit to satisfy his or her need for non-voice communications for the purpose of providing information about the location of the FRS unit to other FRS units. The proposed rules apply exclusively to individuals who use FRS units. Such modification would be in the public interest because it would allow the public to take advantage of technological developments in equipment and service that have occurred since the authorization of the FRS, availability of equipment at reasonable prices, and the removal of Selective Availability from the GPS signal.

14. In addition, the rules proposed in this *Notice*, potentially could affect manufactures of FRS units. Based on requests from manufactures for certification of FRS units, we believe that there are between 5 and 10 manufactures of FRS units and that none of these manufactures are small entities. The proposed rule change, if adopted, applies to individuals who use FRS units and does not result in a mandatory change in manufactured FRS units. Rather, the proposed rule change is permissive and would allow a manufacture, if it so chose, to include additional features in the FRS units it manufactured. Therefore, we certify that the proposals in this *Notice*, if adopted, will not have a significant economic impact on a substantial number of small entities. The Commission will send a copy of the *Notice*, including a copy of this Initial Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the SBA.⁴⁴ This initial certification will also be published in the Federal Register.⁴⁵

15. *Paperwork Reduction Analysis.* This *Notice* does not contain either a proposed or modified information collection requirement.

16. *Ex Parte Rules Presentations.* 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 as provided in the Commission's Rules. *See generally* 47 C.F.R. §§ 1.1202, 1.1203, 1.1206(a).

17. *Alternative formats.* Alternative formats (computer diskette, large print, audiocassette, and Braille) are available from Brian Millin at (202) 418-7426, TTY (202) 418-7365, or at <bmillin@fcc.gov>. This *Notice* can also be downloaded at <<http://www.fcc.gov/dtf>>.

18. *Comment Dates.* Pursuant to Sections 1.415 and 1.419 of the Commission's Rules, 47

⁴² 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in the 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."

⁴³ 15 U.S.C. § 632.

⁴⁴ 5 U.S.C. § 605(b).

⁴⁵ 5 U.S.C. § 605(b).

benefits of incorporating GPS into FRS units.

10. With regard to Garmin's proposal to graphically display the GPS location information transmitted by another FRS unit, we note that the FRS rules do not specify or limit how the information in the signal received by an FRS unit is made available to an FRS user. For this reason, we do not believe a rule change is necessary to permit FRS transceivers to graphically display received GPS location information. Further, we disagree with Mr. Houlne and tentatively conclude that it is unnecessary to amend the rules to specify methods and standards, such as the AX.25 standard and the Automatic Position Reporting System used by amateur radio operators, with respect to the data transmission itself.³⁸ We believe that specifying exact methods and standards would limit the flexibility of manufactures to incorporate new technologies as they are developed. We invite comment on whether there are any other changes to our Rules that would allow manufacturers to develop additional means of incorporating GPS information into FRS radios. In addition, we seek comment on whether any other technical or service rules regarding the FRS should be modified in light of events since the original promulgation of those rules five years ago.

11. In summary, we believe that the public interest will be served by permitting FRS units to transmit location information. Therefore, in this *Notice*, we propose to amend Sections 95.193(a), 95.193(b), and 95.631(d) of our Rules to allow a FRS unit to transmit a digital data emission and communications containing location information. These proposed rule changes could enhance the usefulness of the FRS as a service that provides an affordable and convenient means of direct, short-range two-way voice communications among small groups of persons, with minimal regulation. In this rulemaking proceeding, we also invite comment on whether the proposal will result in harmful interference to FRS voice communications and whether the merits of the proposal would serve the public interest.

V. PROCEDURAL MATTERS

12. *Initial Regulatory Flexibility Certification.* The Regulatory Flexibility Act of 1980, as amended (RFA),³⁹ requires that an initial regulatory flexibility analysis be prepared for notice and comment rule making proceedings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."⁴⁰ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁴¹ In addition, the term "small business" has the

³⁸ *Id.* at 2, 4-7.

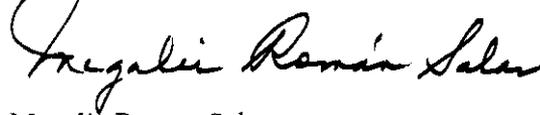
³⁹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601- 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

⁴⁰ 5 U.S.C. § 605(b).

⁴¹ 5 U.S.C. § 601(6).

24. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this *Notice of Proposed Rulemaking*, including the Initial Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION



Magalie Roman Salas
Secretary

C.F.R. §§ 1.415, 1.419, interested parties may file comments on or before [30 days after publication in the Federal Register], and reply comments on or before [45 days after publication in the Federal Register]. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies.⁴⁶

19. Comments filed through the ECFS can be sent as an electronic file via the Internet to <<http://www.fcc.gov/e-file/ecfs.html>>. Generally, one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to <ecfs@fcc.gov>, and should include the following words in the body of the message, "get form <your e-mail address>." A sample form and directions will be sent in reply.

20. Parties who chose to file by paper must file an original and four copies of each filing. The docket number appearing in the caption of this proceeding must appear in each comment or filing. All filings must be sent to the Commission's Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, 445 12th Street, S.W., Room TW-A325, Washington, D.C. 20554.

21. For further information, contact the Policy and Rules Branch, Public Safety and Private Wireless Division, Wireless Telecommunications Bureau, (202) 418-0680, TTY (202) 418-7233, or via e-mail at <fccinfo@fcc.gov>.

VI. ORDERING CLAUSES

22. 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), and 303(r), NOTICE IS HEREBY GIVEN of proposed amendment to Sections 95.193(a), 95.193(b), and 95.631(d) of the Commission's Rules, 47 C.F.R. §§ 95.193(a), 95.193(b), and 95.631(d), as described above.

23. IT IS FURTHER ORDERED that the Petition for Rulemaking, RM-10070, submitted by Garmin International, Inc., on December 26, 2000, IS GRANTED to the extent indicated herein.

⁴⁶ See Electronic Filing of Documents in Rulemaking Proceedings, *Memorandum Opinion and Order*, 13 FCC Rcd 11322 (1998).

APPENDIX

PROPOSED RULES

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

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

Authority: Sections 4, 303, 48 Stat. 1066, 1082 as amended; 47 U.S.C. 154, 303.

2. Section 95.193 is proposed to be amended by revising paragraphs (a) and (b) to read as follows:

§ 95.193 (FRS Rule 3) Types of communications.

- (a) You may use an FRS unit to conduct two-way voice communications with another person.

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

- (b) The FRS unit may transmit tones to make contact or to continue communications with a particular FRS unit. If the tone is audible (more than 300 Hertz), it must be transmitted continuously 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. The FRS unit may transmit digital data containing location information. Digital data transmissions shall not exceed one second, must be initiated by a manual key press, and shall be limited to no more than one digital transmission within a ten-second period.

* * * * *

3. Section 95.631 is proposed to be amended by revising paragraph (d) to read as follows:

§ 95.631 Emission bandwidth.

* * *

- (d) An FRS unit may transmit only emission type F3E or F2D. A non-voice emission is limited to selective calling or tone-operated squelch tones to establish or continue voice communications or digital data transmission of location information.

* * * * *