

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
GARMIN INTERNATIONAL, INC.)
) RM - 10762
Amendment of Sections 95.29(f)(1),)
95.119 (a)(1), 95.183(a)(4), 95.631(a), (e),)
and (f), 95.633(a) and 95.181 To Authorize)
Manufacture, Sale and Use Of GPS)
Transmission Enhanced General Mobile)
Radio Service (GMRS) Units)

To The Commission:

REPLY COMMENTS
OF
GARMIN INTERNATIONAL, INC.

Garmin International, Inc. (“Garmin”), pursuant to Section 1.401 of the Commission’s rules, by its attorneys, hereby submits these Reply Comments to the Comments of Northern California GMRS Users Group (“NCGUG”), Personal Radio Steering Group, Inc. (“PRSG”), and Popular Wireless Magazines by Douglas M. Smith (“PWM”) filed in response to the August 6, 2003 Public Notice of Garmin’s Petition for Rule Making in the above-referenced matter.¹

I. INTRODUCTION

1. Garmin filed a Petition for Rule Making to amend certain provisions of the Part 95 Personal Radio Service rules relating to the General Mobile Radio Service (“GMRS”) to authorize the manufacture, sale and use of enhanced GMRS mobile devices capable of transmitting and receiving a brief data burst containing Global Positioning System (“GPS”) location information, and user generated text messages on GMRS, non-repeater channels.

¹ Very brief Comments were also filed by four other parties. Because those Comments merely opposed the Garmin proposal and provided no substantial argument, they are not addressed herein.

Garmin proposed that the digital data transmissions should have the same limitations as those applicable to the transmission of GPS data and text messaging recently adopted in another Part 95 radio service, the Family Radio Service (“FRS”), which were found by the Commission to be in the public interest.²

2. While there were certain common concerns raised in relation to specific proposals of Garmin, there was no indication in the Comments filed that the Commission should not proceed with the issuance of a Notice of Proposed Rule Making in this proceeding. At the outset, it must be noted that, as discussed more fully below, the Commission should not consider issues raised in the Comments to be significant. The interference concerns expressed in the Comments are actually concerns relating to alleged interference from *existing* GMRS rules and operations. There has been no demonstration that a data communication will cause any more or different interference than a voice or tone transmission. Accordingly, whenever voice communications are permitted, the data transmission proposed will certainly not cause any additional interference. In fact, Garmin’s proposal should serve to alleviate some GMRS congestion and interference operations because users will not have to describe, discuss, question and give detailed directions to their locations. Rather than a lengthy verbal inquiry and a verbal response, accurate location information can be sent in a data burst lasting less than one second. Such a burst will hardly be perceptible to another GMRS user, and should assist in actually reducing traffic. Obviously, a quick digital transmission is much less intrusive from an interference perspective.

² Garmin International, Inc., Amendment of Sections 95.193(a) and 95.631(d) to Authorize Manufacture, Sale and Use of GPS Transmission Enhanced Family Radio Service Units, and Amendment of Sections 95.193(a), 95.193(b), and 95.631(d) of the Commission’s Rules in the Family Radio Service, *Report and Order*, WT Docket No. 01-339, 18 FCC Rcd 2349 (2003) (“*Report and Order*”).

3. The instant Rule Making proposal is not a proposal to rewrite the GMRS rules to attempt to alleviate interference – it is only a proposal to allow less than one second data bursts, no more than once every thirty seconds, for location information and text messaging. Many of the comments appear to be directed toward proposals to modify existing rules to alleviate some alleged existing interference. The Comments filed fail to demonstrate that the proposal for digital transmissions will cause any additional harmful interference problems – or, that there is any difference between the currently authorized analog (voice and tone) and the proposed digital modulations in terms of potential interference. In other words, if a user is going to transmit and that transmission is likely to cause interference, it makes no difference whether the transmission is digital for data or analog for voice and tones as long as the occupied bandwidth is the same. Therefore, there is no justification for treating data transmissions any differently than voice and tone transmissions.³

II. COMMENTS FILED

Northern California GMRS Users Group (“NCGUG”)

4. NCGUG believes that location information transmission over GMRS channels would be a benefit to the public, and it generally supports the concept suggested by Garmin.⁴ NCGUG expresses some concerns, however, concerning the proposal, namely: NCGUG believes that some type of automatic polling – which would cause significant interference --may be allowed because Garmin’s proposal does not specifically require that “EVERY” data transmission be manually initiated⁵; harmful effects resulting from the attachment of external

³ This is especially true under current rules where so-called “roger tones” – the transmission of an audible analog tone *lasting up to 15 seconds* – are permitted. 47 C.F.R. §95.181(g).

⁴ NCGUG Comments ¶ 4.

⁵ NCGUG Comments ¶¶7-8.

devices⁶; product labeling issues (¶12); pretransmission monitoring requirements (¶¶13, 15-17); “high power” mobile operations (¶14); call sign identification (¶¶19-20); and, interference due to F2D transmission bandwidth (¶22-25).

Personal Radio Steering Group, Inc. (“PRSG”)

5. While acknowledging that “there is a role” for the transmission of location data on the seven GMRS frequencies shared with FRS, it believes that these transmissions on the frequencies identified at 95.29(a) should be prohibited due to interference potential (¶5-6).

PRSG also raises concerns about pretransmission monitoring, automatic polling, attachment of external devices, station identification, transmissions between GMRS radios only, and the manual response for location data.

Popular Wireless Magazines by Douglas M. Smith (“PWM”) Comments

6. These Comments oppose location transmissions in GMRS because such transmissions will allegedly cause increased interference in the service. The Comments question the need for the transmission of location data while indicating that there may not be any need for such transmissions (p.9 of 13). Moreover, because of alleged substantial interference, there may be no public benefit in allowing the transmission of location data. The Comments are concerned with product integrity, authorized bandwidth, station identification (by Morse Code), automatic polling and pretransmission monitoring.

⁶ NCGUG Comments ¶9

III. SPECIFIC RESPONSES

7. As is evidenced from the brief summary of the Comments above, the concerns expressed fall into seven general categories,⁷ and four additional issues are raised⁸. Garmin will respond to each of these issues.

8. **Automatic Polling**. Garmin has not requested, nor does it desire, that the rules authorize automatic polling. As proposed, and as a similar provision was adopted in the FRS service, the rule states, “Digital data transmissions must be initiated by a manual action or command of a user, except that a GMRS mobile unit receiving an interrogation request may automatically respond with its location.” While the provision does not state that “every” data transmission must be initiated by the manual action or command of a user as NCGUG points out, Garmin believes that the provision is clear that data transmissions must be initiated by some action of the user, and this requirement applies whenever there is a data transmission. If the Commission deems it appropriate to insert the word “every” into the rule provision, Garmin would not object. Similarly, Garmin has not requested, nor does it desire, that the response to the interrogation be anything other than a one-time response. The “automatic response” as proposed in the modified rule merely indicates that the response to an interrogation may be made without the manual action of a user. This is a critical safety of life function – it allows the transmission of location data in the event a user is unconscious or otherwise incapacitated and unable to respond.

⁷ Automatic polling; attachment of external devices; product labeling and performance; pretransmission monitoring; interference with repeater operations; call sign identification; authorized bandwidth.

⁸ Transmission between FRS and GMRS; manual responses only for data; need for the service.

9. PRSG questions whether automatic polling will create substantial interference without a method for uniquely identifying the specific individual unit being interrogated.⁹ Garmin submits that this unique identification does, in fact, already exist. This is based on one of the fundamental operations of the polling function. If several units responded to a poll, the responses would “collide” and it would not be possible for the interrogating unit to receive a clear response. Therefore, when there is an interrogation, there must be a specific target or no useful information will be returned. In the Garmin radio, for example, the interrogated unit must be on the same channel, have the same code, have the same ID code, and have the same icon.

10. **Attachment of External Devices.** Garmin made no proposal to change the GMRS provisions with relation to attachment of external devices as these provisions have the same affect on analog transmissions as they would on digital transmissions. Because there is no difference as far as interference potential is concerned, Garmin does not believe there should be different provisions for analog and data transmissions.

11. **Product Labeling and Equipment Performance.** This is another area where Garmin believes that there is no difference between voice and data transmissions and, therefore, there is no need for a special requirement. As far as labeling, Garmin would like to point out that it’s products have labeling on the box, and in the manual, indicating that a license is necessary for GMRS operations. In addition, the GMRS frequencies must be specifically enabled before they can operate in Garmin’s radio. When a user attempts to enable the GMRS frequencies, a notice is displayed that reminds the user that a license must be obtained if GMRS frequencies are to be used. As far as product performance characteristics are concerned, the Commission’s equipment certification program assures compliance with applicable rules.

⁹ PRSG Comments ¶14.

12. **Pretransmission Monitoring.** Once again, Garmin believes that there is no difference between analog and digital transmissions (of the same bandwidth) as far as pretransmission monitoring is concerned. The current rules require the user to manually monitor the channel before transmission. Therefore, the user is charged with the monitoring obligation whether a voice or data transmission is to be initiated. There is currently no requirement for equipment to automatically monitor before transmitting, so there is no reason to impose such a requirement just because digital transmissions will be involved. The user is still required to do the monitoring. Admittedly, in the instance where there is an automatic response to a request for location information, the responding radio will not monitor before transmitting. However, the responding radio's transmission will occur immediately following the interrogation, so the probability of other radios using the channel in this time period is highly unlikely.

13. **Interference with repeater operations.** Once again, there is no difference between the transmission of analog communications and digital communications with respect to repeater operations. Therefore, there is no likelihood that digital transmissions will interfere any more with repeater operations than currently authorized voice transmissions would, and there is no need for any separate rules. Garmin has requested that the rules provide for data transmissions on *all* 462 MHz GMRS frequencies. While Garmin is aware that GMRS repeaters transmit on certain 462 MHz frequencies, it refers to these frequencies as “nonrepeater frequencies” because the 462 MHz frequencies are not retransmitted through the repeaters. The repeaters receive on 467MHz GMRS frequencies and then retransmit (*i.e.*, repeat) those signals on 462 MHz. By limiting the data transmissions to 462 MHz, there is assurance that these transmissions will not be retransmitted by high-powered repeater transmitters.

14. **Station Identification.** Section 95.119 provides for station identification “following the transmission of communications or a series of communications.” After reviewing the Comments filed and the arguments raised on this issue, Garmin is convinced that its proposal for the rules to exempt station identification requirements for digital data transmissions may have been somewhat over broad. Consistent with its position that there should be no special rules for digital transmissions when there is no difference between analog and digital transmissions, because the burden is on anyone who transmits a voice or tone communication, that same duty should be applicable to a user transmitting digital data. Therefore, when a user transmits location data or text messaging, the requirement for station identification should be the same as if a voice transmission were sent. The one exception to this requirement should be an automatic response to an interrogation for location information. An exception is warranted here because of the safety of life factor involved where an automatic response is generated without the manual action or command of a user when an incapacitated user may not be capable of responding. Accordingly, Garmin proposes that Section 95.119 be amended as follows:

§ 95.119 Station identification.

(a) Except as provided in paragraph (e), every GMRS station must transmit a station identification:

(1) Following the transmission of communications or a series of communications **except that a GMRS mobile unit receiving an interrogation request may automatically respond with its location and not be required to transmit station identification;** and

15. **Authorized bandwidth.** Garmin has requested that the rules provide for an authorized bandwidth of 12.5 kHz for F2D emissions for GMRS operations. This bandwidth was recently approved by the Commission in the FRS *Report and Order* for FRS operations, *see* §95.633(c). There are several frequencies shared between FRS and GMRS so that the 12.5 kHz

bandwidth is already being used on those frequencies, and there is no evidence of increased interference from those operations. The position that GMRS F2D emissions should be limited to 8 kHz is merely an attempt to gain interference protection that is not currently available. GMRS must tolerate the consequences of existing rules. There is no reason to limit F2D emissions to 8 kHz because digital transmissions will cause no greater interference than voice or tone emissions.

16. **Additional issues.** Other issues were raised in Comments asserting that no transmissions should be permitted between FRS and GMRS¹⁰, and that only manual responses should be allowed to requests for location information.¹¹ Such positions fly in the face of logic and defeat the purpose of serving the public interest by helping to locate lost or incapacitated people. If the purpose of transmitting location data is to render assistance, why not permit communications between FRS and GMRS, especially since the services share frequencies. Furthermore, if someone were incapacitated or unconscious, why would you not want to be able to obtain the individual's location from an automatic response? There is absolutely no reason in the public interest to deny the benefits received from encouraging innovation by manufacturers and taking advantage of the latest technological advancements when there is no proven harm to an existing service.

¹⁰ PRSG Comments ¶21. It should be noted that PWM has supported communications between FRS and GMRS: "It's obvious that people who already own FRS radios, and want the increased range offered by the extra power and external antennas of GMRS, also want radios that will still be able to communicate with their existing investment." <http://216.239.39.104/search?q=cache:tsxBDBuwS-QJ:www.gmrswb.com/gmrspr1000.html+fcc+roger+tone+length&hl=en&ie=UTF->

¹¹ *Id.* ¶23.

17. Another issue was raised by PWM questioning the need for the service proposed by Garmin.¹² First of all, the service already has been found to be in the public interest by the Commission. Secondly, the service has met with great success. Since Garmin started shipping RINO units in October 2002, it has sold well over 100,000 units.¹³ A search for “Garmin Rino” on *www.google.com* yields over 25,000 hits; a search for Garmin Rino on Google's Internet discussion group search engine yields 665 hits.¹⁴ In addition, Rino units were used extensively by U.S. military personnel in the recent war in Iraq.¹⁵ Finally, Garmin has received many testimonials attesting to the benefits of its RINO radios. Some of these testimonials can be viewed at <http://www.garmin.com/products/rino/testimonial.html>.

IV. CONCLUSION

For the reasons set forth above, Garmin respectfully requests that the Commission issue a Notice of Proposed Rule Making to modify the GMRS rules to provide for the transmission of technologically advanced communications critical to the safety of life and property in the General Mobile Radio Service in accordance with the Petition filed by Garmin.

¹² PWM Comments (contain no page numbers) pp. 9-10 (of 13 total pages filed), 5th ¶ of #4. It is curious that PWM would raise this issue because the FAQ's on its own website explain precisely why it should be desirable to allow transmission of digital location information and to permit polling of location information in both the GMRS and the FRS, and that these radios can be used to protect life and property. See www.gmrsweb.com/gmrswfaq.html.

¹³ It is interesting to note that a search of the FCC's ULS data base indicated that there are 35,519 GMRS licenses currently effective, see <http://wireless2.fcc.gov/UlsApp/UlsSearch/results.jsp>

¹⁴ See <http://groups.google.com/groups?hl=en&lr=&ie=ISO-8859-1&q=garmin+rino&sa=N&tab=wg>.

¹⁵ See <http://groups.google.com/groups?q=garmin+rino&hl=en&lr=&ie=UTF-8&selm=4185f655.0307022037.15400173%40posting.google.com&num=1>.

Respectfully submitted,
GARMIN INTERNATIONAL, INC.

By: /s/ Larry S. Solomon
Larry S. Solomon
SHOOK, HARDY & BACON, LLP
600 14th Street, N.W.
Suite 800
Washington, D.C. 20005
(202) 783-8400
ITS ATTORNEYS

Andrew R. Etkind, Esquire
General Counsel
Garmin International, Inc.
1200 E. 151st Street
Olathe, KS 66062
(913) 397-8200

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