

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

In the Matter of:	)	
	)	
The Amendment of Part 97 of the	)	
Commission's Amateur Radio	)	
Service Rules to Permit Greater	)	
Flexibility in Digital Data	)	
Communications	)	RM-11708
	)	
By: W. Lee McVey	)	
W6EM	)	
PG-12-19879	)	
	)	
To: The Chief, Wireless	)	
Telecommunications Bureau	)	
	)	
_____	)	

**ERRATA and ADDITION to COMMENTS**

Pursuant to 47 CFR §1.41 and §1.405, I respectfully offer my Errata and Addition to my earlier Comments in the above captioned Proceeding. The purpose of this filing is to correct both a typographical error and to include a minor revision to my original Appendix.

1. The American Radio Relay League (ARRL) filed an Erratum to its Petition on November 26, 2013. It wished to revise what it termed an accidental inclusion in its recommended revision of 47 CFR § 307(f) (3). The revision would have, if adopted, permitted the use of unspecified digital codes on the high frequency (HF) Amateur Service digital sub-bands. Perhaps fortunately, as in doing so it introduced the subject of what *are* and what *are not* specified codes in the context of 47 § 309(a)(4). Section

309(a)(4) requires that, in order to be considered a *specified* code, the code must be released to the public domain.<sup>1</sup> The HF use of certain versions of PacTOR are at issue. While the first version of the PacTOR digital code met and still meets the provisions of § 309(a)(4), its subsequent versions do not.<sup>2</sup> The creator and owner of the subsequent codes, Specialized Communications Systems GmbH of Germany, (SCS) has not released codes for PacTOR versions two (II), three (III) and four (IV) to the public domain. Thus, the only way that these codes can be used in the Amateur Service is through purchase of modem devices from SCS.<sup>3</sup> As of this writing, SCS is unwilling to release the codes to the public domain. Therefore, by the definition contained in § 309(a)(4), the codes for PacTOR versions II, III and IV are *unspecified* digital codes and their use on the HF amateur bands, according to § 309(a)(4), is prohibited.<sup>4</sup>

2. In the Appendix to my earlier Comments in this Proceeding, I offered a suggested revision to 309(a)(4) to reflect current and popular specified digital codes in use by amateurs. My revision should have further clarified the meaning to include only PacTOR version one. This change is now included in the revised Appendix in this filing.

3. While it is important that the Amateur Service be allowed to experiment and develop digital codes and modes that will utilize spectrum more efficiently, it is not within its intent and spirit to permit use of proprietary codes and ciphers to restrict the reception of amateur telecommunication content.<sup>5</sup> The ARRL Petition filing, which seeks clarification and specification of limiting bandwidth is both important and timely. Advances in circuit design make it now possible to select virtually *any* bandwidth in transmitting equipment when that equipment contains filter circuitry controlled only by

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<sup>1</sup> 47CFR 309(a)(4) “An amateur station transmitting a RTTY or data emission using a digital code specified in this paragraph may use any technique whose technical characteristics have been documented publicly..”

<sup>2</sup> Known now as Pactor I. Subsequent versions are known as Pactor II, Pactor III and Pactor IV.

<sup>3</sup> This would also mean that the FCC Amateur Auxiliary, called “Official Observers” and FCC Monitoring Stations would all have to purchase SCS modems in order to discern the content of Pactor II, III, and IV transmissions.

<sup>4</sup> See ARRL RM-11708 Petition *Erratum*, p.1. Perhaps ARRL recognized this, and was the real reason for its Petition language suggesting a revision to 307(f)(3) that would have allowed unspecified codes to be used on HF. Although, it now says it was inadvertent and erroneous.

<sup>5</sup> 47USC § 605(a) makes it quite clear that Amateur Service content is considered not to be proprietary or privileged in any way.

software.<sup>6</sup> It is critically important that a well-understood and well-defined bandwidth limit that controls not only the width, but the shape of filter passbands be included in Amateur Service digital mode regulations. The incorporation of the definition of Occupied Bandwidth at 47 CFR § 2.202(a) into any limiting bandwidth selected by the Commission would address that important concern.

Respectfully Submitted this 16<sup>th</sup> Day of December, 2013,

/s/

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Attachments: Appendix A (Revised)

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<sup>6</sup> Known as Software Defined Radio. Several models are manufactured by FlexRadio Systems, Inc.

## Appendix A (Revised)

The following revisions incorporate changes that reflect my Comments and Addendum to same:

47 CFR § 97.307(f) The following standards and limitations apply to transmissions on the frequencies specified in § 97.305(c) of this part.

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(3) ~~Only a A RTTY or data emission using a specified digital code listed in § 97.309(a) of this part may be transmitted. The symbol rate must not exceed 300 bauds, or for frequency shift keying, the frequency shift between mark and space must not exceed 1kHz. The authorized Occupied Bandwidth, as defined by § 2.202(a), is 3.1 kHz.~~

(4) ~~Only a RTTY or data emission using a specified digital code listed in § 97.309(a) of this part may be transmitted. The symbol rate must not exceed 1200 bauds, or for frequency shift keying, the frequency shift between mark and space must not exceed 1kHz. The authorized Occupied Bandwidth, as defined by § 2.202(a), is 3.1 kHz.~~

(5) ~~A RTTY, data or multiplexed emission using a specified digital code listed in § 97.309(a) of this part may be transmitted. The symbol rate must not exceed 19.6 kilobauds.~~ A RTTY, data or multiplexed emission using an unspecified digital code under the limitations listed in § 97.309(b) of this part also may be transmitted. The authorized Occupied Bandwidth, bandwidth as defined by § 2.202(a), is 20 kHz.

(6) ~~A RTTY, data or multiplexed emission using a specified digital code listed in § 97.309(a) of this part may be transmitted. The symbol rate must not exceed 56 kilobauds.~~ A RTTY, data or multiplexed emission using an unspecified digital code under the limitations listed in § 97.309(b) of this part also may be transmitted. The authorized Occupied Bandwidth, bandwidth as defined by § 2.202(a), is 100 kHz.

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47 CFR § 97.309(a) Where authorized by §§ 97.305(c) and 97.307(f) of the part, an amateur station may transmit a RTTY or data emission using the following specified digital codes:

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(4) An amateur station transmitting a RTTY or data emission using a digital code specified in this paragraph may use any technique whose technical characteristics have been documented publicly, such as CLOVER, G-TOR, JT-65, ~~or~~ PacTOR version one, PSK-31 or a version of STANAG for the purpose of facilitating communications.

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W.L.M. 12/16/13