WT 15-85

In the Matter of	)	
	)	
ACR Electronics, Inc. Request for Waiver of Section 95.1402(b) of the Commission's Rules	)	WT Docket No. 14-196

COMMENTS OF THE UNITED STATES COAST GUARD (USCG) AND THE UNITED STATES SARSAT PROGRAM

Introduction

On April 7, 2015, the Commission requested comment on the ACR Electronics, Inc. (ACR) request[1] seeking certification and use of a new personal locator beacon (PLB) – SARLink – that transmits a distress signal on 406.0-406.1 MHz for communication with the Cospas-Sarsat satellite system and supports two-way text messaging via the Iridium satellite system. SARLink does not also transmit a 121.5 MHz signal, however, and ACR therefore seeks a waiver of section 95-1402(b) of the Commission's Rules, which provides that all "406 MHz PLBs must contain, as an integral part, a homing beacon operating only on 121.500 MHz."[2]

The United States Coast Guard (USCG), which is part of the Department of Homeland Security, is the executive branch agency with statutory authority to conduct Search and Rescue (SAR) within the United States Search and Rescue Region. For the reasons set forth below, the USCG respectfully requests that the Commission grant ACR's request only upon compliance with the conditions set forth herein. This position also reflects the views of the United States SARSAT Program which, in addition to the USCG, is comprised of the Department of Commerce's National Oceanic and Atmospheric Administration, the Department of Defense's United States Air Force, and the National Aeronautics and Space Administration's (NASA). The U.S. SARSAT program represents the United States Government as a Party within the International Cospas-Sarsat Program.

Comments

It is the USCG and SARSAT Program understanding that the ACR SARLink was developed in conjunction with the U.S. Department of Interior to meet requirements for use by U.S. Park and Forestry Service officers in the performance of their duties. As such, the users of the SARLink beacons would be highly trained operators and the text message alerts from the SARLink routed to a U.S. Park and Forestry Service center with full-time staffing. In this specific or a similar purpose, with a well-trained and qualified user base, the SARSAT Program opines the removal of the 121.5 MHz homing signal is mitigated by the continuous tracking capability of the Iridium

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[1] *Wireless Telecommunications Bureau Seeks Comment on ACR Electronics Request for Waiver*, WT Docket No. 15-85, DA 15-423 (rel. Apr. 7, 2015) (*Public Notice*), http://apps.fcc.gov/ecfs/comment/view?id=60001028379.
[2] 47 C.F.R. § 95.1402(b) (2014).

device, increasing the probability that SAR responders receive an accurate location, and does not significantly increase risk to the safety of a trained user. If the SARLink device is granted a Type Approval Certificate or Letter of Compatibility by the International Cospas-Sarsat Programme and the sale and use is limited to government (Federal, State, or local) agencies and high-risk commercial industry, the SARSAT Program does not object to granting ACR Electronics permission to produce and sell the SARLink for government or high-risk industrial use.

The above position, however, does not extend to a general approval to replace the 121.5 MHz homing signal in PLBs for general public use. Text messaging, due to its inherent design to provide point to point communications, is not a suitable replacement for a broadcast locating signal in many situations. Text messaging by its nature is limited to a designated recipient(s) and unless that recipient(s) is available 24 hours per day, a text message may go undetected and unanswered for an indeterminate amount of time, significantly increasing the risk to the person in distress.

ACR's petition may be misleading in that they initially assert that "... the 121.5 MHz homer provides little to no ability to alert others of an emergency situation." The 121.5 MHz homer is not intended for distress alerting but rather on-scene locating by response personnel. Later ACR concedes that, "The 121.5 MHz homer ... is intended to provide locating assistance to SAR personnel, but has limitations." They further assert that the range of the 121.5 MHz homer is limited to less than 1 mile. The actual range is dependent upon several factors, including the terrain, obstructions, and the height of antenna of the beacon and direction finder receiver. While the 121.5 MHz homing signal is less than ideal, the USCG believes it does provide foreign and domestic SAR forces a useful capability in SAR response.

Two key services SARLink relies upon to achieve the proposed locating capability are the Global Positioning Service (GPS) for geo-positioning and Iridium for two-way communication. The availability of GPS service is world-wide with information readily available to users and SAR responders on temporary outages or service disruptions via the Internet. The Iridium service, used for the SARLink text messaging, also provides global coverage but information on service outages, reductions, or disruptions may not be readily known or easily available to users or SAR responders for planning or risk mitigation purposes.

The waiver request indicates the SARLink device has "a dedicated backend communication channel directly to SAR personnel" but the waiver does not describe in detail how this service will be accomplished. At this time, neither the USCG nor the USAF, the agencies that operate the nation's Rescue Coordination Centers (RCC), have been approached by ACR regarding establishing such a channel. It cannot be assumed in a distress situation that an untrained individual will have the appropriate contact numbers for the regional RCC or that a text message to a relative or friend will be received and immediately forwarded to the appropriate RCC. If the text message recipient contacts a local 911 public safety answering point (PSAP), procedures would need to be established and in place to facilitate timely routing of the report from the PSAP to the correct RCC. With a large number of local PSAPs and the twelve US RCCs, each with different geographic regional responsibilities, a single dedicated communication channel as described in the waiver request may be more appropriate and a procedure to route the messages

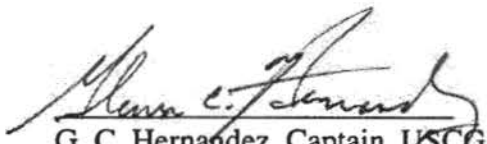
based on geographic location may be required to ensure receipt by the responsible RCC. Also, bordering nations, such as Canada, where these devices may be carried and used, may not have the infrastructure and procedures in place to receive and respond to a distress alert via the texting capability.

The SARSAT Program recommends ACR provide additional information and detail addressing the following elements for consideration in the waiver process for general public use:

- Define and describe the established dedicated back-end communication channel;
- Define and describe a common central or regional process flow for receiving and routing PLB text messages; and
- Identify the recommended primary recipient and any alternate recipients (e.g. Iridium call center, ACR service center, PSAP, RCC, etc.) of the distress text messages.

Text messaging as an augmentation of the 121.5 MHz homing signal may be viable with a reduced duty-cycle 121.5 MHz homing signal and could be a valuable improvement of the PLB capability to aid in responding to and locating persons in distress.

For the reasons set forth, the USCG and SARSAT Program respectfully requests that the Commission only grant ACR's request at this time for limited use by government (Federal, State, or local) agencies and high-risk commercial industry where potential users are certified and highly trained with an organized support activity or call center to manage and respond to calls. Thank you for your consideration of these views.



20 JUL 2015

G. C. Hernandez, Captain, USCG
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date