

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

In the Matter of	)	
	)	
Carrier Current Systems, including Broadband over Power Line Systems	)	ET Docket No. 04-37
	)	
Amendment of Part 15 regarding new requirements and measurement guidelines for Access Broadband over Power Line Systems	)	ET Docket No. 04-37

**COMMENTS OF THE  
ROADRUNNERS MICROWAVE GROUP**

**I INTRODUCTION**

1. The Roadrunners Microwave Group (hereinafter referred to as “RMG”), pursuant to Section 1.405 of the Commission’s Rules and Regulations, respectfully submits these comments in response to the Commission’s Notice of Proposed Rule Making, ET Docket No. 04-37, released February 23, 2004.

**II PRELIMINARY STATEMENT**

2. RMG was founded in 1997 in the State of Texas, and is recognized by the Internal Revenue Service as a 501(c)(7) organization. RMG’s membership is engaged in the utilization of traditional and innovative techniques to explore the propagation of radio frequencies in the RF spectrum from 903 MHz to 24 GHz and above. These endeavors require the use of extremely sensitive receiving equipment, some of which use intermediate frequency conversion in the frequencies between 14

and 1300 MHz. Our operations are from both fixed locations, and from mobile stations.

### **III BACKGROUND**

3. The concerns of the RMG membership center on the very high probability of interference from the BPL system. While the fast rise-time waveforms of digital data transmission are claimed by proponents of BPL not to generate harmonic frequency radiation, RMG asserts that this is not factual. Indeed, this is a standard method of generating harmonic RF at frequencies much higher than the original frequency.
  
4. The normal generation of harmonic RF energy from the BPL would be further exacerbated by any loose connections, electrostatic discharge, or high voltage leakage on the power grid. Anyone who has driven through city or country listening to AM auto radio is well familiar with such faults in the power distribution system – they cause interference, and they are widespread. Their effect is up to frequencies of over 500 MHz, and these are harmonics of the very low frequency of 60 Hz. Harmonics of RF BPL would necessarily be much stronger, and to much higher frequencies.

5. RMG is concerned about BPL increasing the noise floor of the RF spectrum by the generation of much more interference, the generation of much more robust harmonics, the effect of the mixing of such harmonics in the power grid, and the widespread radiation of such interference.
  
6. Beyond the hobby aspects of BPL interference, individual RMG members have expressed concern about the effects of such interference on other relatively low power communications which are a part of normal American life. Examples include various no-license radios used by many thousands of people for a variety of purposes. Baby monitors, home cordless telephones, remote temperature sensors for indoor/outdoor thermometers, RF linked zones of home/business security and fire alarms, RF tv/satellite remote controls, VCR “rabbits” to send TV signals between rooms, and a host of other devices could be degraded or rendered useless. The same applies to X-10 home controls for lighting, garage door openers, security “panic buttons”, medical alert call buttons, and so forth. These devices of legitimate and compliant users, in previously assigned spectrum, are important to RMG members and their families. We are citizens, as well as amateur radio operators.

#### **IV CONCLUSION AND RECOMMENDATIONS**

7. For the reasons cited, RMG urges the Commission not to allow Access BPL systems. RMG urges the Commission to require testing of any BPL trials or demonstrations for interference at up to fifty times the highest frequency employed by that system.

Respectfully Submitted,

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President