

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of)	
)	
Carrier Current Systems, including)	ET Docket No. 03-104
Broadband over Power Line Systems)	
)	
Amendment of Part 15 regarding new)	
requirements and measurement guidelines)	
for Access Broadband over Power Line)	ET Docket No. 04-37
Systems)	

**Phonex Broadband Corporation Response to ARINC Petition for
Reconsideration**

Phonex Broadband Corporation (Phonex), in accordance to section 1.429 of the Commission’s Rules, 47 C.F.R. §1.429, submits these comments in opposition to the petition for reconsideration filed by Aeronautical Radio, Inc. (“ARINC”) regarding testing and frequency allocation of Carrier Current Systems, including Broadband over Power Line (BPL) systems, on overhead low voltage power lines and In-House BPL systems in addition to Access BPL systems operating on medium voltage lines.

In their petition, ARINC urges for exclusion of Aeronautical Mobile and Aeronautical navigation frequencies on In-House BPL devices in addition to Access BPL systems. ARINC also requests a change in the extrapolation factor when testing at 3 and 10 meters for all BPL devices.

Introduction

Phonex produces In-House Narrow Band and BPL devices and has been involved with the development, compliance testing and manufacturing of Carrier Current products since 1989. Over the past 16 years Phonex has completed extensive testing on Carrier Current devices in various situations. Phonex believes that the new FCC rules of the Commission's *Report and Order*, FCC-04-245 should remain unchanged and that the arguments given by ARINC are not applicable to In-House BPL for the reasons discussed below.

Notched Frequency

ARINC states in their petition that they were able to trace interference with aeronautical communications to an In-House Carrier Current device used to transmit telephone signals over the wiring in a dwelling. ARINC uses this claim to argue that the aeronautical frequencies should be notched from In-House BPL. The known Carrier Current devices used for telephone communications within a house are Narrow Band analog devices. However, ARINC uses this isolated incident and generalizes that Narrow Band and BPL Carrier Current signals have similar characteristics, which is not the case. Phonex has extensive experience in testing both analog Carrier Current devices and In-House digital BPL devices and it is not correct to assume that the two types of power line technologies exhibit the same interference characteristics. It is not reasonable to require notched

frequencies for In-House BPL devices due to assumptions ARINC is making about analog Carrier Current devices.

There are also several hundred thousand In-House BPL devices (mostly HomePlug units) being used in the U.S. market that have not been shown to cause interference on the aeronautical frequencies.

Extrapolation Factor

ARINC requests that the extrapolation factor should be changed from 40 dB per decade to 20 dB per decade when measurements are made at 3 or 10 meters. This request is based on a brief analysis which included tests simulating Access BPL on a 2000 ft. section of overhead power line. This test is not representative of the interference caused by an In-House Carrier Current device. ARINC also states that relating this test data to the real world is difficult. ARINC states that they are willing to work with the Commission and BPL community as BPL systems are deployed. Phonex believes ARINC may not fully understand the impact of their request to the Commission on the Carrier Current product industry.

Changing the extrapolation factor will severely slow (if not eliminate) the development of all Carrier Current devices, including BPL. The number of reported cases of interference Phonex has received over the past 16 years has been extremely low. Phonex encourages the FCC to take steps to protect against the elimination of Carrier Current devices including BPL. The FCC's goal is to encourage, not hinder, the growth of new and useful technology.

We believe that this change will dramatically hinder the growth of Carrier Current technology.

Current Rules

The current Rules already provide limits for protecting the radio spectrum. They also provide safeguards in those rare cases where harmful interference is reported. In this case any manufacturer of BPL products, or any other electronic equipment, has an obligation to correct the problem. Phonex has had a long-standing policy of working closely with customers as well as any other group experiencing unwanted interference. Phonex has sold millions of Carrier Current products with very few cases of reported interference. As an example, during the much-reported case of a Phonex product transmitting on a ham radio band resulted in a vigilant search for this model by ham radio operators all across the country, relatively few cases of actual interference were reported. Phonex still worked positively with the ARRL and at great expense. Many of these devices were removed from the market whether they were causing interference or not. This illustrates the willingness of In-House power line communication companies (the major technologies being Phonex and HomePlug) to not cause interference. It also illustrates the current rules provide adequate protection.

Summary

The current FCC limits have allowed In-House BPL development while, at the same time, providing safeguards to the users of the radio spectrum. Any

changes to the current rules will drastically curtail the development of In-House Carrier Current technology and products. In addition to having verification and certification test procedures that require product compliance before being placed on the market, the Rules state that no equipment can cause interference while being used. This safeguard provides the protection to radio users and allows for the success of Carrier Current devices. In-House BPL and Narrow Band Carrier Current devices should not be eliminated by the unsubstantiated claims of ARINC for the reasons given in this paper.

Respectfully Submitted,

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