

MID ISLAND RADIO ASSOCIATION

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This letter is to voice the great concern Canadian Amateur Radio operators have regarding ANY proliferation of a system of data communications over AC power lines which is referred to as BPL (Broadband over Power Line). This concept is not new. In fact it was first tested soon after WWII and it was found that the RF (Radio Frequency) noise that was radiated from the power lines caused an intolerable noise level of RF to other services, such as Amateur Radio and radio broadcasting.

In today's world there is an ever increasing demand for more high speed digital data transmission. As the rate of data transfer increases so also the bandwidth required for that transmission increases. This is the basic root for the need to develop newer and better modes of transmission. This need has created a new concept of data transmission re-using RF spectrum. What we have today is the clash between the individual frequency users such as Amateur Radio, radio broadcasting, radio services as well as a multitude of radio services that are designated as emergency services and the new concept of re-usable RF spectrum which has made the cell phone industry possible. The services that use the concept of re-usable RF spectrum are exclusively involved in frequencies above 1,000 MHz with the exception of BPL.

When data is transmitted over open un-shielded wires such as power lines the data takes the form of pulses of very small bandwidth. The problem here is that these pulses may be analyzed as generating a tremendous amount of RF interference. This is the basic truth because a square wave is analyzed as a fundamental frequency with an infinite number of odd harmonics in phase. The harmonics of one data service will mix with the harmonics of other data services using the same power lines thus causing a greater amplitude of RF interference or noise. It is this basic reason why early TV transmission engineers used shielded cables known as coaxial cables for their systems. The reason for using these coaxial cables was to reduce the amount of RF leakage from the cables.

In the testing that has been performed in the US it has been found that the BPL service created a noise level which completely eliminates any and all RF communications by Amateurs as well as other emergency communications services. It immediately seems that these services are no longer needed in the advanced society of today. This is incorrect as the recent disasters have revealed.

A very important factor is that BPL has now become technically obsolete as WiFi and later generations of digital communications are taking over. These new systems are based on the IEEE 802.11 protocol and these systems are increasingly becoming prominent in data systems.

It is correctly concluded that HF Amateur Radio operations will be effectively eliminated as well as other emergency HF systems if BPL is allowed to proliferate. While the ogre of BPL has been seen to diminish with testing it still is a very great threat to all users of the HF spectrum

We Ham radio operators have full faith that in Canada the completely unreasonable system of BPL will not be allowed to proliferate.

Respectfully, Gordon Sanders VA7XG
President MIRA