

The word on the street is that Broadband over Power Lines (BPL) is the greatest thing since sliced bread. I wholeheartedly agree. Internet access has been limited to one of three venues: Phone, Cable, and the “cable look-alike” satellite system. Each of these falls short in that you must have another service already in your home to add the Internet access. I myself have used broadband cable and currently use DSL from my phone company. I look forward to another choice from that ubiquitous service, The Power Company.

What I don't look forward to is the interference BPL has the potential of providing to the High Frequency radio spectrum. Recognizing the fact that BPL must fall under the guidelines of Part 15, I know that BPL has a very low power level allowed to them to transmit their signal.

Being a Radio Technician in the Marine Corps for the past 19 years I have learned about Radio Frequency energy and antennas. I know that a very small signal can be radiated long distances given the right frequency and a good antenna. I have also learned that a multiple wavelength long wire antenna is the easiest way to increase the gain of this RF signal. The power company has miles of these lines running, some of them within a hundred yards from my house.

I am also an Extra Class Amateur Radio operator. I use the frequencies within the BPL frequency range to communicate around the world, and the easiest way to communicate with a distant station is to be able to hear them. Let's return to those power lines by my house. I can filter out the 60 Hz signal running on those lines. It's below the frequency I want to hear and very easy to do. Now let's put some BPL signals on the line at the radio frequency I'm listening to. If I filter out that BPL signal, I also filter out the weaker signal I'm trying to listen to. This presents a problem.

I have come up with a solution. Being a communicator in the Marine Corps, there are certain frequencies I am not authorized to use in the Marine Corps, even though my radios are capable of using them. Most of these frequencies are in the Amateur Radio (Ham) bands. It is possible for me to “lock out” those frequencies designated by the FCC for exclusive non-governmental use, why not encourage the BPL companies to “lock out” the amateur frequencies, and other licensed service frequencies, from their portion of the radio spectrum. Part 15 users are required to minimize the interference to licensed users, and I'm sure they don't want to deal with the Amateurs interfering with their signals close to the high power, high gain antennas we tend to use in the HF bands.

Let's do some quick math. BPL is authorized to use the frequency spectrum in the range of 2 – 80 MHz. That is a 78 MHz spread. Amateur operators use nine “bands” in that range covering a total of 7.55 MHz, a little less than 10% of the spectrum available to BPL. There are already similar technologies available on a smaller scale, HomePlug comes to mind, that “notch out” the Amateur frequencies to ensure that no interference will become an issue.

I agree that BPL is coming and I look forward to it. My hope that that the FCC and the power companies take the time to avoid interference with the Ham bands, allowing us the licensed users to use the frequencies we are licensed to use.

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