

I have been an active ham radio operator for almost 40 years presently holding an Amateur Extra class license. IN July of 2003 I made a field trip to Cape Girardeau MO to experience first hand the interference effects that BPL has on spectrum ranging from 1.5 to 21.5 MHZ.

Using a commercial amateur radio HF transceiver and my the standard AM/FM broadcast radio in a late model General Motors vehicle I was able to get a sense of what users of spectrum in the range stated above will be facing if BPL as it was deployed in Cape Girardeau is deployed over the United States.

The test area in Cape Girardeau was very small. covering at most 2 blocks. I first detected what I identified as BPL interference on the 40 meter Amateur allocation about 1/4 mile away for the test site. When the test site was entered I was measuring interference levels registering 25 – 30 dB over S-9 on the meter of my commercial Icom 737 transceiver. My antenna was a Hustler with resonators for the 75 – 40 – 20 and 15 meter bands mounted in such a way that I could jump from one amateur band to another from within the vehicle. The Hustler antenna is no where near as efficient as a standard fixed location antenna system would be.

I make no claim as to the calibration of the S-meter on the Icom but I can say that the BPL interference did not allow the reception of any signals on any of the amateur bands I had capabilities for. Checks on 75 meters showed a slightly less S-meter reading while 20 and 15 meters showed considerably higher S-meter readings than 40 meters. I also tuned my AM radio to the top of the AM broadcast band and immediately detected the BPL interference. It was clearly audible down to about 1400 kHz.

I noticed that the BPL interference sounded almost the way a Geiger counter sounds only at much higher amplitude. I also noticed that there were times when the interference levels dropped down considerably for a short time and then resumed its previous strength levels.

I knew I was in the test area because I could easily identify the unique inductors which were mounted on several power poles in the test area.

My primary concern with wide deployment of BPL is that it will render the frequency range between about 1500 kHz to 80 MHz unusable for presently licensed services who operate in that spectrum. Over the air television, public safety agencies, AM broadcast, The SWL community, Radio controlled aircraft in the 72 MHZ band (possible public safety issues there) and yes.... Amateur radio communications will all be adversely affected.

From what I have read, BPL has been tried and found wanting in other countries for some of the reasons stated above. I does not seem to make sense to deploy a technology which has the potential to destroy the use of prime spectrum that supports long distance communications and is the main spectrum used in regional disaster planning.

If BPL is to be widely deployed, it might be wise to explore the possibilities of using spectrum in the UHF or microwave regions of the spectrum.

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