

Hello,

I am a licensed amateur radio operator. A new technology is making its rounds and may soon be implemented, called BPL (Broadband over Power Line), and I am sure it will be carried in many markets soon. However, with BPL comes much radio frequency interference (RFI) on the High Frequency bands, which are licensed for use by Government Bureaus, amateur radio operators such as myself, world broadcast radio (Shortwave Radio), and many other services. Tests by the American Radio Relay League (<http://www.arrl.org>) have shown that these systems cause interference levels over many radio frequencies with signal strengths of 9+ (on a the standard 1-9 scale).

So far, the FCC has proposed that BPL will function as a Part 15 device, meaning that it must accept any interference and that it must not interfere with any licensed services. With this in mind, if you intend to carry BPL services, I ask that (before you get complaints) you add upgrades to prevent this kind of interference from happening before it becomes a problem (upgrading after implementation will be more costly). The most talked-about upgrade is called "notching" where you can block out the RFI radiation from specific frequencies. As a customer, and as an amateur radio operator, I ask that you consider this if you indeed decide to implement BPL technology. This will prevent interference from licensed services to your customers, and will prevent interference from BPL-equipped lines from disrupting other services. If anything, I urge you NOT to even implement this technology, as it can even disrupt life support machines and MRIs (cell phones put out less interference and still have disrupted life support machines). There are many more viable alternatives to BPL, and I urge you to explore those instead, if possible.

Here are some examples of what has been and could be affected by BPL:

1. HF overseas aircraft communications disruption.  
Loss of or inability to communicate with aircraft in flight, due to near-field

or cumulative far-field noise intensities experienced by land-based stations of the FAA and Aeronautical Radio, Inc. This will ultimately have life-safety consequences.

2. FEMA domestic emergency network disruption. As I think you know, FEMA maintains a network of government and civilian volunteer stations for communications during regional and national emergencies. Inability to communicate with this system may have life safety and homeland/national security consequences.

3. Explosives detection systems. Certain detectors, including some used by the military, utilize a high frequency signal just above 3 MHz to detect the presence of Nitrogen compounds in explosives. Inability to properly detect explosive devices may have life-safety consequences.

4. Military Communications. The military, even with the deployment of satellite-based systems, still utilizes high frequency equipment to communicate. Disruption may have homeland/national security implications.

5. Public Safety radio systems. From 30 MHz to 50 Mhz, public safety agencies including police and fire departments, utilize specific, fixed channels for dispatch during emergencies. The inability of personnel to communicate during emergencies will have life-safety Consequences.

6. Aircraft VHF & Ship to Shore Communications and navigation systems. Even though the primary frequencies assigned for this purpose are from 118 to 136 MHz, & Ship to Shore Communications and navigation systems which has established the purpose, rules, and procedures, on the use and allocation of the radio spectrum. The marine VHF radio band, which is in common use on commercial and recreational boats, has been designated specifically for the safety and communications of ships at sea, for navigation of ships at sea, and movement of vessels in harbours

Southbound II (Herb) 12359khz 1600 local; Caribbean Weather Net (David) 8104khz 0830 local Caribbean Weather Net (David) 12362khz 0900 local;

Caribbean Weather Net (David) 16528khz 0930,  
local Safety & Security Net 8104 khz

The effects of strong 3rd harmonic radiation from BPL pulse radiation may raise noise levels and impede communication with aircraft in flight and ship to shore radios in the vicinity of operating BPL systems. If communication is impaired or erroneous, this may have life-safety consequences.

7. Interference to sensitive instrumentation.

Although HF BPL energy has been claimed to not conduct past distribution step down transformers, interference to RF-sensitive medical instrumentation may occur. Traditionally, point source emitters, such as individual transmitters could be controlled in sensitive facilities. But, with the widespread, distributed emission of HF BPL signals, sufficient coupling may occur onto low voltage distribution wiring as to effect life saving equipment and systems.

8. Time and Frequency Stations WWV and WWVH.

Accurate, precise time data is broadcast by these stations and used by government and private industry for system timing and coordination. Interruption or inability to receive this data may have property damage consequences.

9. The Amateur Radio Service.

Use of HF spectrum by amateur operators during emergencies to communicate regionally, nationally and internationally will be impaired and may have life safety, property damage and homeland security impacts.

10. Local Radio and TV RFI

Radio: AM ( 535-1605 Khz); SW (1200 ~ 3000 Khz); FM (88~108 Mhz);  
TV 59.740 MHz, 59.750 MHz, 59.760 MHz (USA TV Antennas).  
Some Effects of strong 3rd and 4th harmonic radiation from BPL pulse radiation may raise noise levels and impede communication with Local radio and VHF TV BANDS due to near-field or cumulative far-field noise intensities from BPL pulse radiation may raise noise levels and interfere with Radio and TV Communication.

Here is a long list of frequencies that BPL will have an effect on:

0.535 - 1.705 AM Broadcast Standard North America AM  
0.610 KFRC Berkeley  
1.400 KRE Berkeley  
1.610 TIS Berkeley  
1.705 - 1.800 Fixed Service Land/Mobile/Marine  
1.800 - 2.000 Amateur 160 Meters  
2.000 - 2.107 Maritime Mobile  
2.107 - 2.170 Fixed Service Land/Mobile/Marine  
2.170 - 2.194 Land Mobile Service  
2.194 - 2.300 Fixed Service  
2.300 - 2.495 Shortwave Broadcast 120 Meters  
2.495 - 2.505 Time Standard  
2.505 - 2.850 Fixed Service Land/Mobile/Marine  
2.850 - 3.155 Aeronautical Mobile Transoceanic Flights  
3.155 - 3.200 Fixed Service  
3.200 - 3.400 Shortwave Broadcast 90 Meters  
3.400 - 3.500 Aeronautical Mobile Transoceanic Flights  
3.500 - 4.000 Amateur 80/75 Meters  
3.900 - 4.000 Shortwave Broadcast 75 Meters, Not in Region 2  
4.000 - 4.000 Time Standard New WARC Allocation Region 3  
4.000 - 4.063 Fixed Service  
4.063 - 4.438 Maritime Mobile Ship / Shore  
4.438 - 4.650 Fixed Service  
4.650 - 4.750 Aeronautical Mobile Transoceanic Flights  
4.750 - 5.060 Shortwave Broadcast 60 Meters  
5.000 - 5.000 Time Standard WWV  
5.005 - 5.450 Fixed Service  
5.450 - 5.730 Aeronautical Mobile Transoceanic Flights  
5.730 - 5.950 Fixed Service

5.950 - 6.200 Shortwave Broadcast 49 Meters  
6.200 - 6.525 Maritime Mobile Ship / Shore  
6.525 - 6.765 Aeronautical Mobile Transoceanic Flights  
6.765 - 7.000 Fixed Service  
7.000 - 7.300 Amateur 40 Meters  
7.100 - 7.300 Shortwave Broadcast 41 Meters, Not in Region 2  
7.300 - 8.195 Fixed Service  
7.335 - 7.335 Time Standard CHU Canada  
8.000 - 8.000 Time Standard New WARC Allocation Region 3  
8.195 - 8.815 Maritime Mobile Ship / Shore  
8.815 - 9.040 Aeronautical Mobile Transoceanic Flights  
9.040 - 9.500 Fixed Service  
9.500 - 9.900 Shortwave Broadcast 31 Meters  
9.775 - 9.995 Fixed Service  
10.000 - 10.000 Time Standard WWV  
10.005 - 10.100 Aeronautical Mobile Transoceanic Flights  
10.100 - 10.150 Amateur 30 Meters CW Only  
10.100 - 11.175 Fixed Service  
11.175 - 11.400 Aeronautical Mobile Transoceanic Flights  
11.400 - 11.650 Fixed Service  
11.650 - 12.050 Shortwave Broadcast 25 Meters  
12.050 - 12.330 Fixed Service  
12.330 - 13.200 Maritime Mobile Ship / Shore  
13.200 - 13.360 Aeronautical Mobile Transoceanic Flights  
13.360 - 13.600 Fixed Service  
13.600 - 13.800 Shortwave Broadcast New WARC Allocation  
13.800 - 14.000 Fixed Service  
14.000 - 14.350 Amateur 20 Meters

14.350 - 14.995 Fixed Service  
15.000 - 15.000 Time Standard WWV  
15.010 - 15.100 Aeronautical Mobile Transoceanic Flights  
15.100 - 15.600 Shortwave Broadcast 19 Meters  
15.600 - 16.460 Fixed Service  
16.460 - 17.360 Maritime Mobile Ship / Shore  
17.360 - 17.550 Fixed Service  
17.550 - 17.900 Shortwave Broadcast 16 Meters  
17.900 - 18.030 Aeronautical Mobile Transoceanic Flights  
18.030 - 18.780 Fixed Service  
18.068 - 18.168 Amateur 17 Meters  
18.780 - 18.900 Maritime Mobile Ship / Shore  
18.900 - 19.680 Fixed Service  
19.680 - 19.800 Maritime Mobile Ship / Shore  
19.800 - 21.000 Fixed Service  
21.000 - 21.450 Amateur 15 Meters  
21.450 - 21.850 Shortwave Broadcast 13 Meters  
21.850 - 22.000 Aeronautical Mobile  
22.000 - 22.720 Maritime Mobile Ship / Shore  
22.720 - 23.200 Fixed Service  
23.200 - 23.350 Aeronautical Mobile  
23.350 - 24.990 Fixed Service  
24.890 - 24.930 Amateur 12 Meters  
25.000 - 25.000 Time Standard  
25.020 Petroleum Products  
25.040 Petroleum Products  
25.060 Petroleum Products  
25.080 Petroleum Products  
25.100 Petroleum Products

25.120 Petroleum Products  
25.140 Petroleum Products  
25.160 Petroleum Products  
25.180 Petroleum Products  
25.200 Petroleum Products  
25.220 Petroleum Products  
25.240 Petroleum Products  
25.260 Petroleum Products  
25.280 Petroleum Products  
25.300 Petroleum Products  
25.320 Petroleum Products  
25.600 - 26.100 Shortwave Broadcast 11 Meters  
25.870 Broadcast Pickup  
25.910 Broadcast Pickup  
25.950 Broadcast Pickup  
25.990 Broadcast Pickup  
26.030 Broadcast Pickup  
26.070 Broadcast Pickup  
26.090 Broadcast Pickup  
26.110 Broadcast Pickup  
26.130 Broadcast Pickup  
26.150 Broadcast Pickup  
26.170 Broadcast Pickup  
26.190 Broadcast Pickup  
26.210 Broadcast Pickup  
26.230 Broadcast Pickup  
26.250 Broadcast Pickup  
26.270 Broadcast Pickup

26.290 Broadcast Pickup  
26.310 Broadcast Pickup  
26.330 Broadcast Pickup  
26.350 Broadcast Pickup  
26.370 Broadcast Pickup  
26.390 Broadcast Pickup  
26.410 Broadcast Pickup  
26.430 Broadcast Pickup  
26.450 Broadcast Pickup  
26.470 Broadcast Pickup  
26.480 - 26.950 Government  
26.620 Civil Air Patrol  
26.950 - 26.960 International Fixed Sve  
26.965 CB Class D Channel 01  
26.975 CB Class D Channel 02  
26.985 CB Class D Channel 03  
26.995 CB Class C  
27.005 CB Class D Channel 04  
27.015 CB Class D Channel 05  
27.025 CB Class D Channel 06  
27.035 CB Class D Channel 07  
27.045 CB Class C  
27.055 CB Class D Channel 08  
27.065 CB Class D Channel 09  
27.075 CB Class D Channel 10  
27.085 CB Class D Channel 11  
27.095 CB Class C  
27.105 CB Class D Channel 12  
27.115 CB Class D Channel 13

27.125 CB Class D Channel 14  
27.135 CB Class D Channel 15  
27.145 CB Class C  
27.155 CB Class D Channel 16  
27.165 CB Class D Channel 17  
27.175 CB Class D Channel 18  
27.185 CB Class D Channel 19  
27.195 CB Class C  
27.205 CB Class D Channel 20  
27.215 CB Class D Channel 21  
27.225 CB Class D Channel 22  
27.235 CB Class D Channel 23  
27.245 CB Class D Channel 24  
27.255 CB Class D Channel 25  
27.265 CB Class D Channel 26  
27.275 CB Class D Channel 27  
27.285 CB Class D Channel 28  
27.295 CB Class D Channel 29  
27.305 CB Class D Channel 30  
27.315 CB Class D Channel 31  
27.325 CB Class D Channel 32  
27.335 CB Class D Channel 33  
27.345 CB Class D Channel 34  
27.355 CB Class D Channel 35  
27.365 CB Class D Channel 36  
27.375 CB Class D Channel 37  
27.385 CB Class D Channel 38  
27.395 CB Class D Channel 39

27.405 CB Class D Channel 40  
27.430 Business  
27.450 Business  
27.470 Business  
27.490 Business  
27.510 Business  
27.530 Business  
27.710 Forest Products  
27.730 Forest Products  
27.750 Forest Products  
27.770 Forest Products  
27.790 Forest Products  
27.900 US Army  
28.000 - 29.700 Amateur 10 Meters  
29.700 - 29.800 Forestry Service  
29.800 - 29.890 Fixed Service  
29.890 - 29.910 Government  
29.910 - 30.000 Fixed Service  
30.010 US Government  
30.030 US Government  
30.050 US Government  
30.070 US Government  
30.090 US Army  
30.110 US Army  
30.130 US Government  
30.150 US Navy  
30.170 US Government  
30.190 US Government  
30.210 US Government

30.230 US Government  
30.250 US Government  
30.270 US Government  
30.290 US Army/US Navy  
30.310 US Government  
30.330 US Coast Guard  
30.350 US Government  
30.370 US Government  
30.390 US Government  
30.410 US Coast Guard/US Navy  
30.430 US Government  
30.450 US Army/US Navy  
30.470 US Government  
30.490 US Army  
30.510 US Air Force/US Army  
30.530 US Government  
30.550 US Government  
30.580 Special Industry  
30.600 Special Industry  
30.620 Special Industry  
30.640 Special Industry  
30.660 Petroleum Products/Motor Carrier  
30.680 Forest Products  
30.700 Special Industry  
30.720 Forest Products  
30.740 Petroleum Products/Motor Carrier  
30.760 Business  
30.780 Special Industry

30.800 Business  
30.820 Petroleum Products/Motor Carrier  
30.840 Business  
30.860 Forestry Conservation/Motor Carrier  
30.880 Business  
30.900 Forestry Conservation/Motor Carrier  
30.920 Business  
30.940 Forestry Conservation/Motor Carrier  
30.960 Business  
30.980 Forestry Conservation/Motor Carrier  
31.000 Business  
31.020 Forestry Conservation/Motor Carrier  
31.040 Business  
31.060 Forestry Conservation/Motor Carrier  
31.080 Motor Carrier - Buses  
31.100 Forestry Conservation/Motor Carrier  
31.120 Motor Carrier - Buses  
31.140 Forestry Conservation/Motor Carrier  
31.160 Business  
31.180 Forestry Conservation/Motor Carrier  
31.200 Business  
31.220 Forestry Conservation/Motor Carrier  
31.240 Business  
31.260 Forestry Conservation/Motor Carrier  
31.280 Motor Carrier - Buses  
31.300 Forestry Conservation/Motor Carrier  
31.320 Motor Carrier - Buses  
31.340 Forestry Conservation/Motor Carrier  
31.360 Business

31.380 Forestry Conservation/Motor Carrier  
31.400 Business  
31.420 Forestry Conservation/Motor Carrier  
31.440 Business  
31.460 Forestry Conservation/Motor Carrier  
31.480 Motor Carrier - Buses  
31.500 Forestry Conservation/Motor Carrier  
31.520 Motor Carrier - Buses  
31.540 Forestry Conservation/Motor Carrier  
31.560 Business  
31.580 Forestry Conservation/Motor Carrier  
31.600 Business  
31.620 Forestry Conservation/Motor Carrier  
31.640 Business  
31.660 Forestry Conservation/Motor Carrier  
31.680 Motor Carrier - Buses  
31.700 Forestry Conservation/Motor Carrier  
31.720 Motor Carrier - Buses  
31.740 Forestry Conservation/Motor Carrier  
31.760 Business  
31.780 Forestry Conservation/Motor Carrier  
31.800 Business  
31.820 Forestry Conservation/Motor Carrier  
31.840 Business  
31.860 Forestry Conservation/Motor Carrier  
31.880 Motor Carrier - Buses  
31.900 Forestry Conservation/Motor Carrier  
31.920 Motor Carrier - Buses

31.940 Forestry Conservation/Motor Carrier  
31.960 Business  
31.980 Forestry Conservation/Motor Carrier  
32.010 US Government  
32.030 US Government  
32.050 US Army/US Navy  
32.070 US Government  
32.090 US Army  
32.110 US Army  
32.130 US Government  
32.150 US Government  
32.170 US Government  
32.190 US Coast Guard  
32.210 US Government  
32.230 US Government  
32.