

Table 2-2 Magnetic Fields from Electrical Appliances<sup>3</sup>

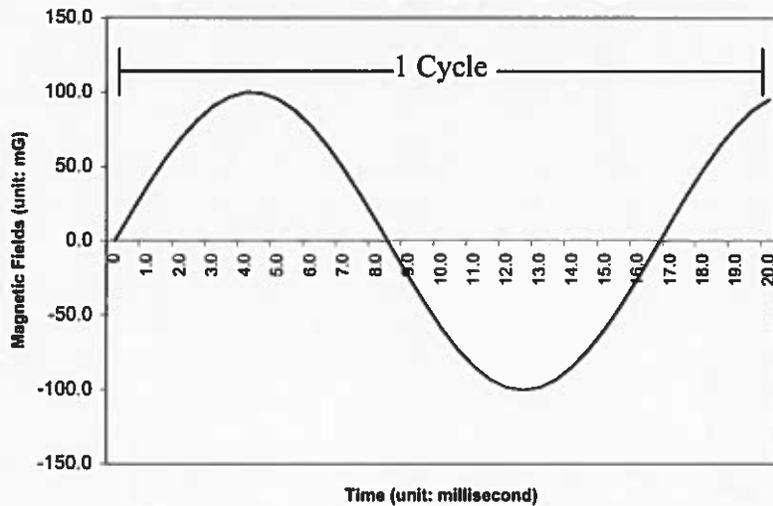
Table 2-2 shows magnetic field strength levels for various household and business appliances, ranging from 1500 mG for a can opener to nearly non-existent amounts as one moves away from the source. Magnetic field strength levels decrease quickly as the distance from these appliances increases. Figures represented in the table are provided by the National Institute of Environmental Health Sciences and the U.S. Department of Energy<sup>3</sup>.

The magnetic fields produced by power lines have properties similar to those of the Earth's magnetic field (the Earth's magnetic field ranges from 380 mG to 560 mG). The field has direction, polarity (+ or -) and magnitude (strength). However, unlike the earth's magnetic field, power line magnetic fields change magnitude and polarity with time, as illustrated in Figure 2-2.

Appliances	Magnetic Fields (milliGauss)			
	6 inches	1 foot	2 feet	4 feet
Hair Dryers	700	70	10	1
Electric Shavers	600	100	10	1
Blenders	100	20	3	-
Can Openers	1500	300	30	4
Microwave Ovens	300	200	30	20
Refrigerators	40	20	10	10
Washing Machines	100	30	6	-
Vacuum Cleaners	700	200	50	10
Power Saws	1000	300	40	4
Drills	200	40	6	-
Copy Machines	200	40	13	4
Fax Machines	9	2	-	-
Video Display Terminals	20	6	3	-
Electric Pencil Sharpeners	300	90	30	30

The "power-frequency" magnetic field, just like the AC electric current that produced it, makes one complete positive polarity/negative polarity cycle in 16.67 milliseconds, or 60 complete cycles per second. The field thus has a frequency of 60 cycles per second, or 60 "Hertz."

Figure 2-2 "Power Frequency (60 Hz)" Magnetic Fields



RECEIVED  
OCT. 3 2016  
BLAINE COUNTY  
LAND USE & BUILDING SERVICES

<sup>3</sup> Source: *Questions and Answers About EMF: Electric and Magnetic Fields Associated with the Use of Electric Power*, National Institute of Environmental Health Sciences and U.S. Dept. Of Energy: Pages 33-35. June 2002