System	Frequency range
RFID systems	125 to 134 kHz 13.56 MHz UHF (400 to 930 MHz) 2.45 GHz 5.8 GHz
AM radio (United States)	535 kHz to 1.7 MHz
Short wave radio	5.9 to 26.1 MHz
Citizen's band (CB) radio (40 channels)	26.96 to 27.41 MHz
Radio controlled airplanes	27.255 MHz (shared with CB channel 23)
Broadcast television channels 2-6	54 to 88 MHz
FM radio	88 to 108 MHz
Broadcast television, channels 7-13	174 to 220 MHz
Garage door openers, alarms	~40 MHz
Cordless analog phones	40-50 MHz
Baby monitors	49 MHz
Radio controlled airplanes	~72 MHz
Radio controlled cars	~75 MHz
Remote keyless entry (RKE) systems, tire pressure monitoring systems (TPMS)	315 or 433 MHz
RFID UHF	433 MHz
UHF television (channels 14-83)	470 to 890 MHz
Wildlife tracking collars, bank money dye packs (thanks Chris!) not a frequency you want to transmit...	215 to 220 MHz
Personal Locator Beacons and other emergency beacons. Thanks to Hiker Jim!	406 MHz
Cordless phones	864 to 868 MHz 944 to 948 MHz
Industrial, medical & scientific (ISM) band Europe including RFID	866-870MHz
Cell phones (GSM)	824 to 960 MHz
Industrial, medical & scientific (ISM) band United States including RFID	902 to 928 MHz
Air traffic control radar	960 to 1215 MHz
Global positioning system (GPS)	1227.6 MHz (L2 band, 20 MHz wide) 1575.42 MHz (L1 band, 20 MHz wide)

Globalstar satellite phone downlink Globalstar satellite phone uplink	1610 to 1625 MHz 2484 to 2499 MHz
Cell phones (GSM)	1710 to 1990 MHz
Digital cordless phones	1880 to 1900 MHz
Personal handy phone system (PHS)	1895 to 1918 MHz
Deep space radio communications:	2290 to 2300 MHz
Industrial, medical & scientific (ISM) band	2400 to 2483.5 MHz
Shared wireless data protocols (Bluetooth, 802.11b):	2402 to 2495 MHz
Microwave ovens	2450 MHz
Satellite radio downlink XM Satellite Sirius Satellite	2330 to 2345 MHz 2332.50 to 2,345.00 MHz 2320.00 to 2,332.50 MHz
Clear (Sprint) 4G	2.5 to 2.6 GHz
Radio altimeters	4.2 to 4.4 GHz
802.11a wireless local area network (WLAN)	5.15 to 5.25 GHz (lower band) 5.25 to 5.35 GHz (middle band) 5.725 to 5.825 (upper band)
Industrial, medical & scientific (ISM) band	5.725 to 5.85 GHz
Satellite radio uplink	7.050 to 7.075 GHz
Police radar	10.525 GHz (X-band) 24.150 (K-band) 33.4 to 36 GHz (Ka-band)
Direct broadcast satellite TV downlink (Europe)	11.7 to 12.5 GHz
Direct broadcast satellite TV downlink (US) for example, Echostar's Dish Network	12.2 to 12.7 GHz
Satellite Transmission uplink (news trucks, etc) in United States (thanks Chris!)	14-14.5 GHz
Automotive radar, distance sensors	24 GHz
Automotive radar, adaptive cruise control	76 to 77 GHz
E-band (new FCC-approved ultra-high speed data communications band)	71 to 76 GHz, 81 to 86 GHz and 92 to 95 GHz
The so-called "pain ray"	94 GHz

If you have any information on frequencies that we are missing, please send it to us!

Atmospheric attenuation

Below is a classic figure that dates back to at least 1968, Bean and Dutton's *Radio Meteorology*. You should be familiar with the water absorption bands at 22, 183 and 323 GHz, and the oxygen absorption regions at 60 and 118 GHz. These regions have higher attenuation, which is not always a bad thing, if you want your signal to die off at close distances, like for example the 4G applications (you don't want the neighbors accessing all of your wireless transmissions, do you?)

Notice the X-axis of the figure below is messed up, when is says "4" it means "40"! The A and B lines are for two types of weather (case A is rain).