



Vocabulary: Doppler Shift Advanced



Vocabulary

- Doppler shift – the apparent change in the wavelength and *frequency* of sound waves that is caused by the movement of the sound source, observer, or both.
- Frequency – the number of times something happens in a given period of time.
 - The frequency of a sound wave is equal to the number of waves that pass a point each second.
 - The unit of frequency is the hertz (Hz). One hertz is one event per second.
 - The shorter the wavelength of a wave is, the greater its frequency. Longer wavelengths correspond to lower frequencies.
- Pitch – the perceived frequency of a sound.
 - Shrill sounds like sirens or smoke alarms are high in pitch and frequency.
 - The deep sounds made by foghorns and tubas are low in pitch and frequency.
- Radar gun – a device that uses the Doppler shift to measure the speed of a moving object.
 - Radar guns transmit radio waves at a certain frequency. The frequency of the radio waves changes when they bounce off of a moving object. The reflected waves are detected and the speed of the object is calculated based on the frequency shift.

