A PASCO Motion Sensor works on the same principle as the echolocation of a dolphin or bat.

1. A series of sound pulses are emitted from this screen.
2. The sound reflects off the first object it hits and its echo returns to the screen, where it is detected.
3. The distance is calculated for the time it takes the sound to make a round-trip.
4. There are two range settings, “near” for a cart on a track and “far” for larger objects or longer range.
5. There is a brief time of less than 1/1000 of a second where the sensor will not detect a return echo, which translates to about 15 cm of distance in front of the screen that can’t be measured.