

### What is vibration?

Vibration is a mechanic process. An oscillator/object vibrates. The vibration is periodic, so it is a kind of loop.

What can be an oscillator or vibration object?

An vibrating object can be everything which is not fixed. The object has to be kind of elastic in order to be able to vibrate. A weight, which is tide to an elastic band is for example able to vibrate if you pull it down and release it after, it will vibrate. Therefore every object, which is connected to its environment some how elastic is able to vibrate. Also air and water molecules are able to vibrate. This fact causes, that we can hear sound. A sound wave is a spreading vibration.

What does periodic mean?

Vibrations are periodic. If you do not influence a vibration it will continue in the same "rhythm" or frequency. The speed of a vibration depend on its frequency. In order to stick to our example: Imagine the weight, which is tide to the elastic band. After triggering the vibration it will bounce or vibrate several times if you do not influence it. The frequency depends therefore on periods per second. We measure the time for one period counting the seconds from one state of the

oscillator until it is in the same state again.