

# THE SOUND

Emission, propagation and perception

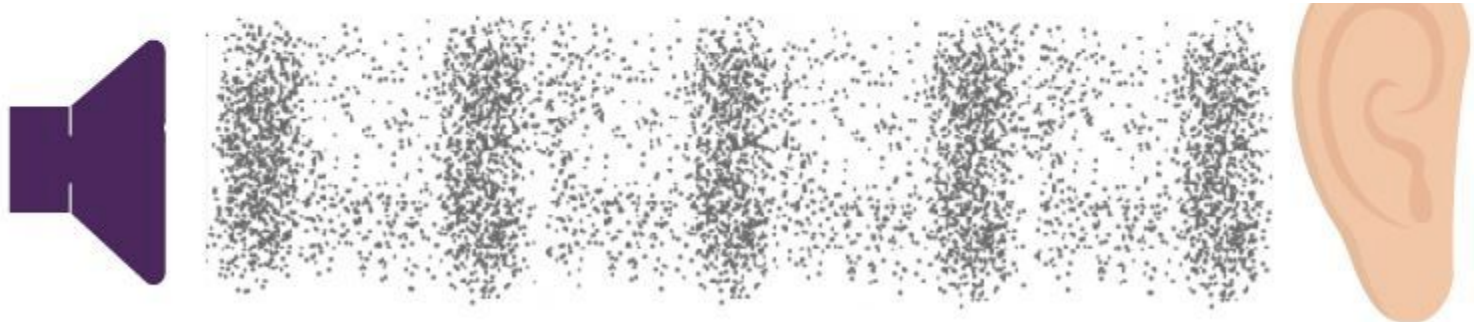
# Sound emission



# Sound emission



# How does a sound spread?



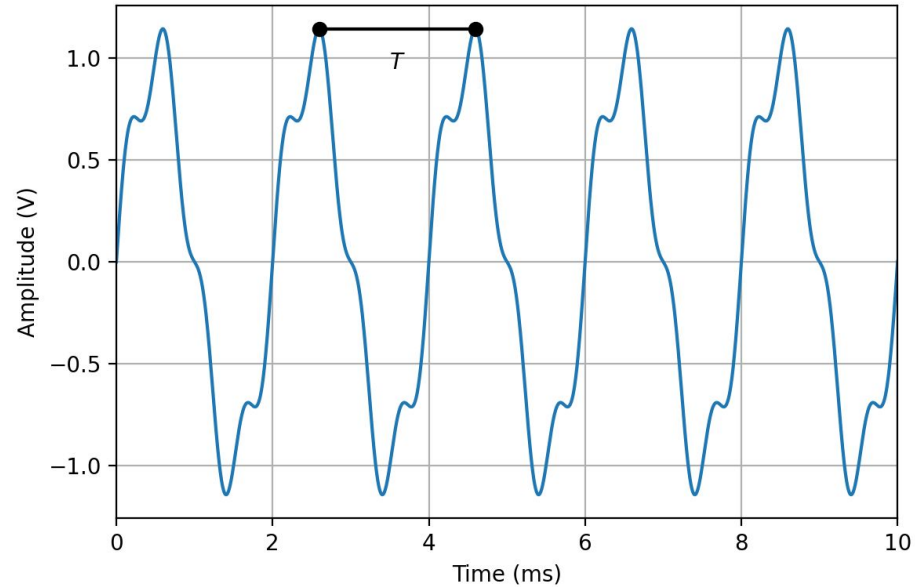
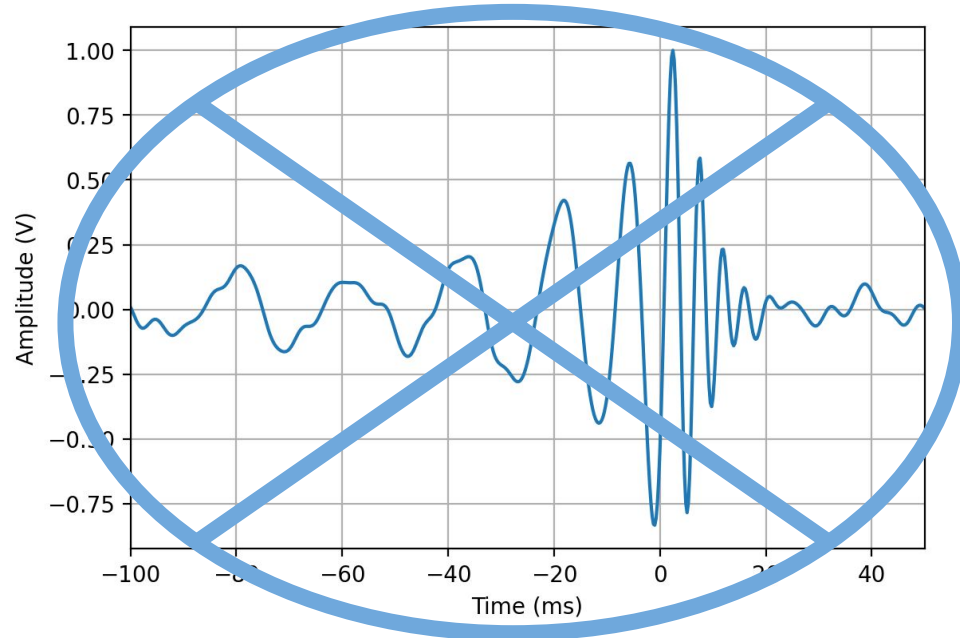
# Periodic signal

- A signal that repeat it self after a given length of time is **periodic**.

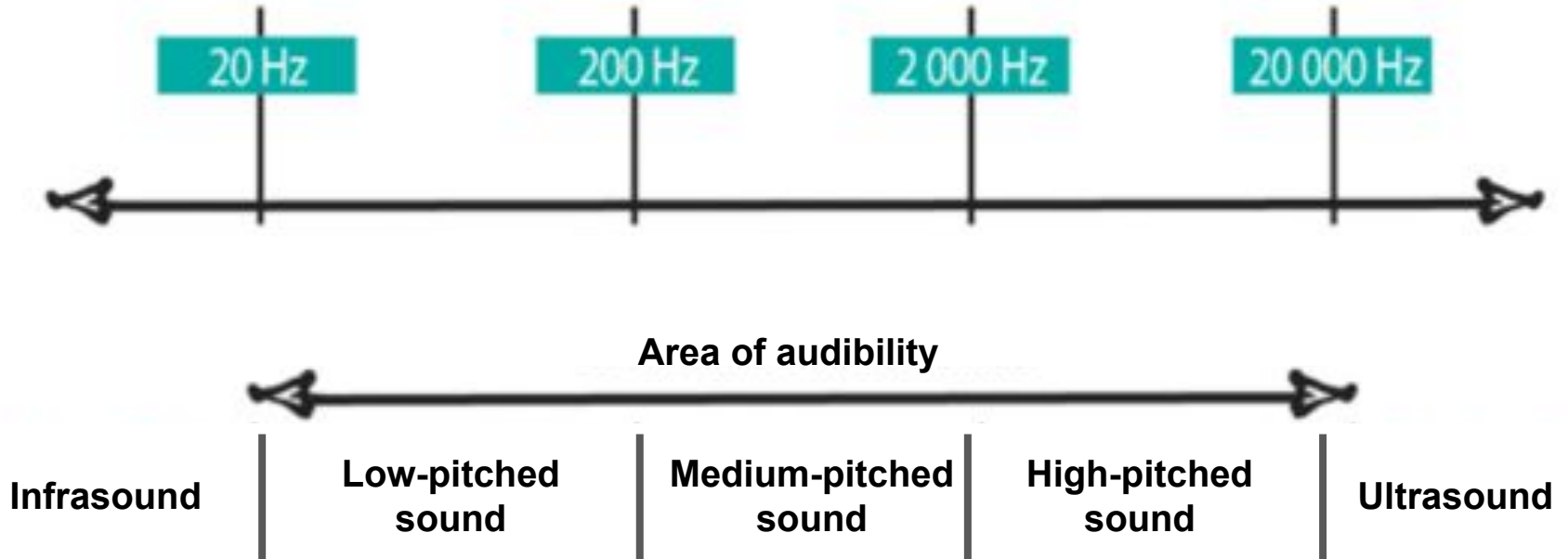
Frequency  
(Hz)

$$f = \frac{1}{T}$$

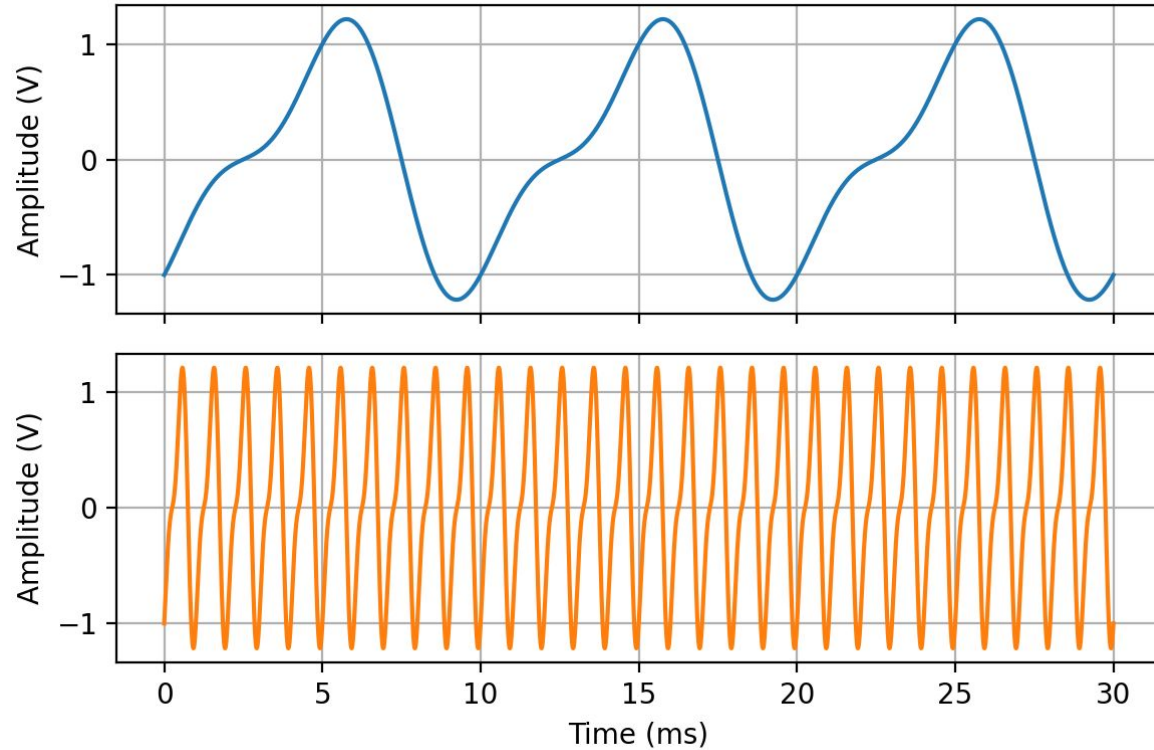
Period  
(s)



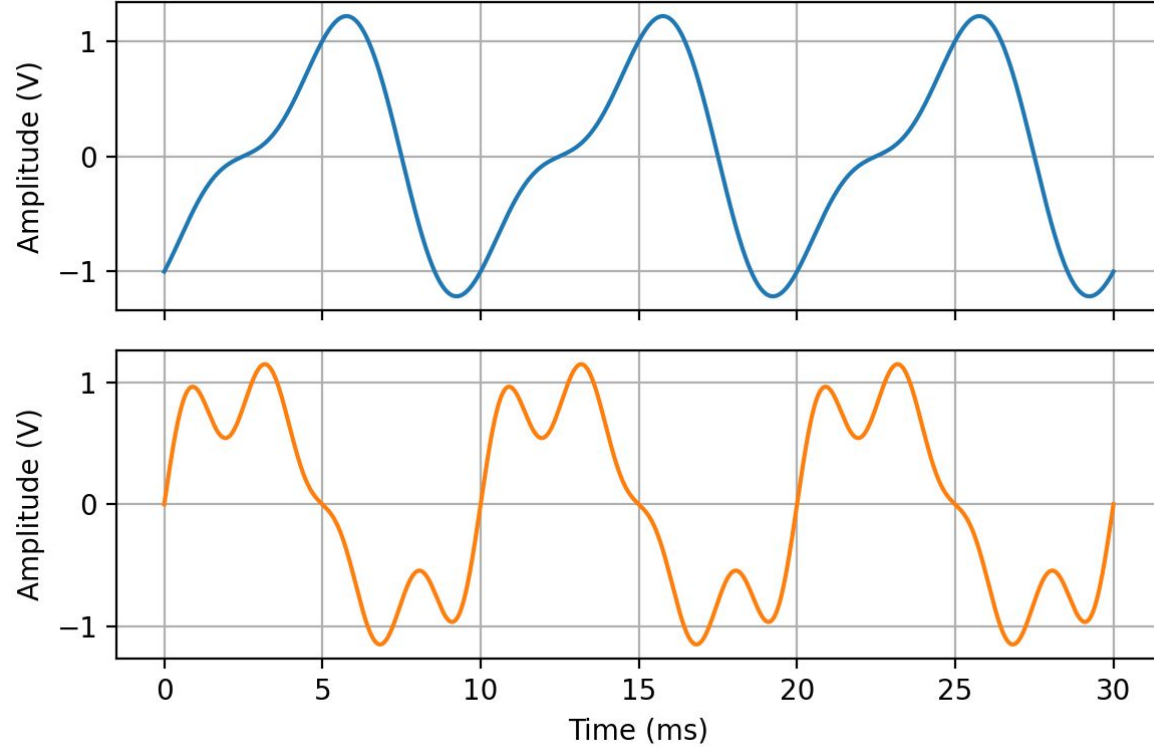
# Sound frequency domain



# Pitch and voice timbre



# Pitch and voice timbre





# Noise level and risks

