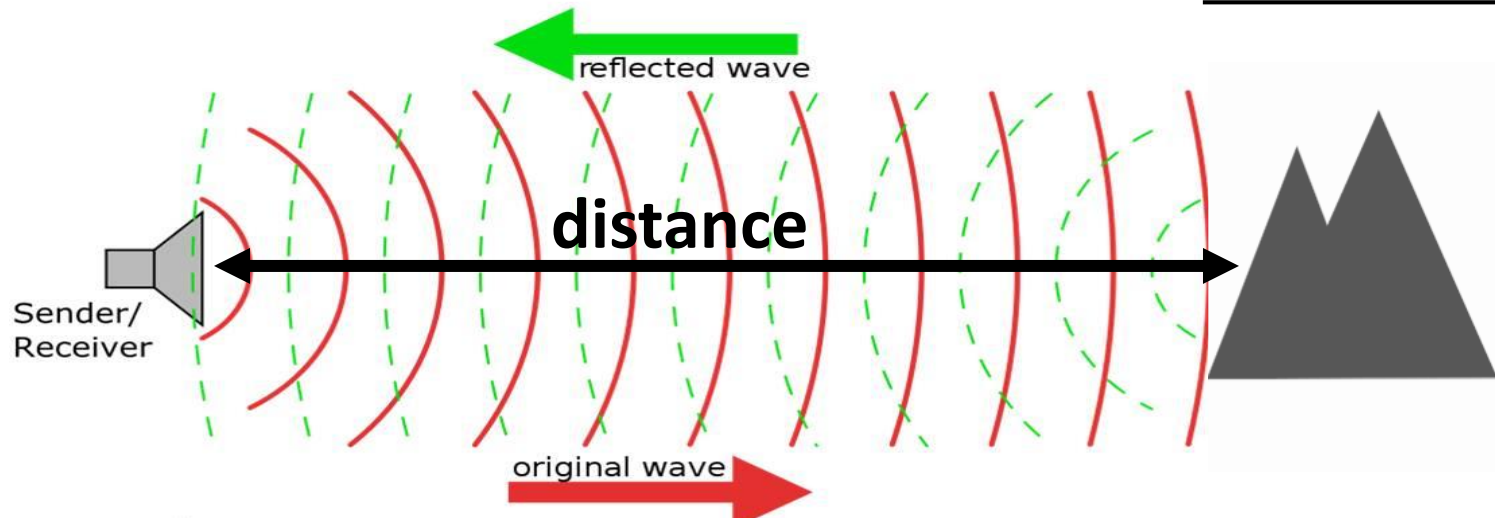


What is the minimal distance to an object that guarantees a clear echo?

- Let's consider AIR: sound travels at 343 m/s in air
- Time delay between the original sound and reflected one: minimum 0.1 s



$$\text{DISTANCE} \cdot 2 = \text{SPEED} \cdot \text{TIME} = 343 \cdot 0.1 = 34.3 \text{ m}$$

Distance to an object must be **more than 17.2 m** (34.3 m back and forth) to produce a clear echo!