

SOUND

JINSA K JOY
DEPT.OF MULTIMEDIA

Sounds

Audible

Sounds which we can hear

Example

Sounds with frequency
from 20 Hz to 20,000 Hz

Inaudible

Sounds which we cannot hear

Example

Sounds with frequency
Less than 20 Hz
Or
More than 20,000 Hz

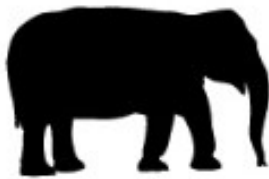
Ultrasound & infrasound

Sound waves with a frequency *too low* for the human ear to hear are called **infrasound**.

INFRA SOUND

Sound waves with a frequency *too high* for the human ear are called **ultrasound**

ULTRA SOUND



Animals such as whales, elephants and hippopotamus use infrasound to communicate over distances.



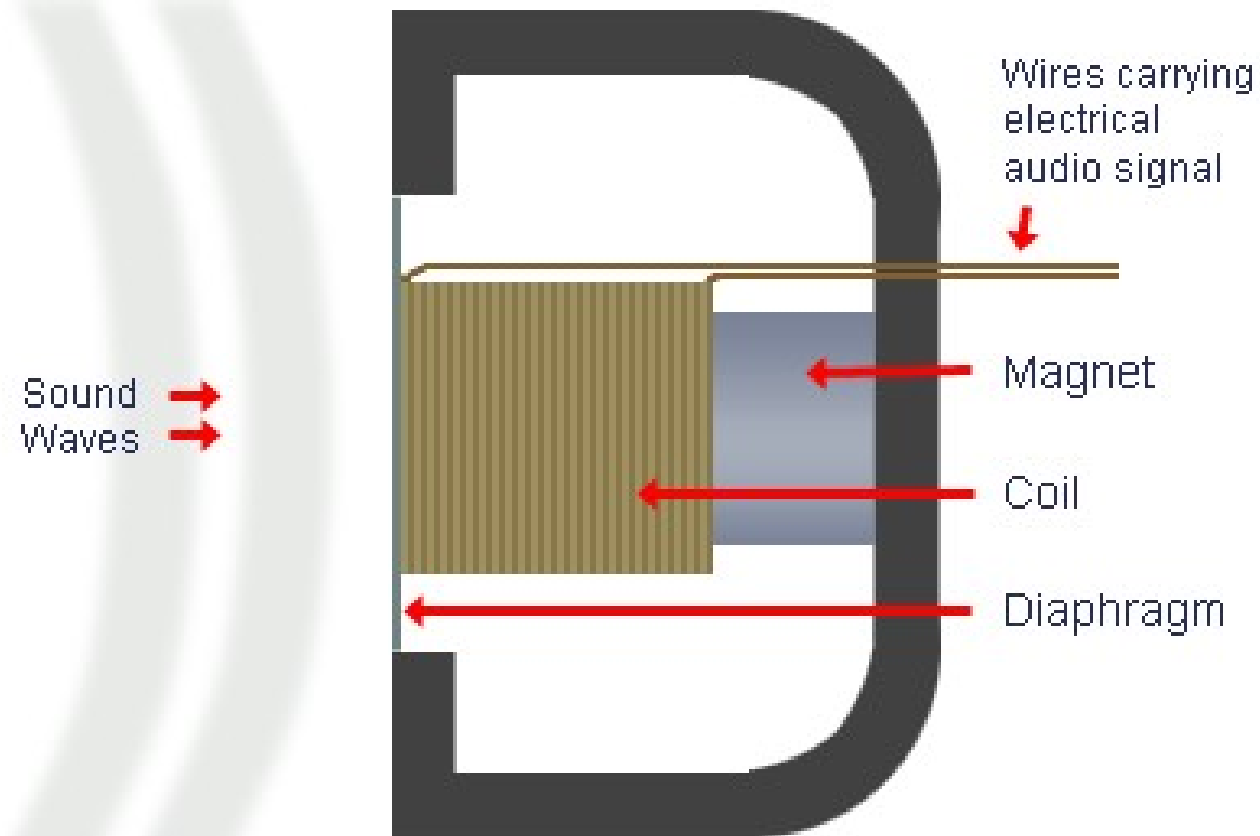
Animals such as dogs, bats, birds and insects can hear ultrasound.



Dynamic Microphones

- The dynamic microphone is a good all rounder microphone which can be used for Vocals, recording drums as well as guitar amps.
- It does not need a power supply
- They are fairly low cost
- Most common type are the SHURE SM57 and the SHURE SM58

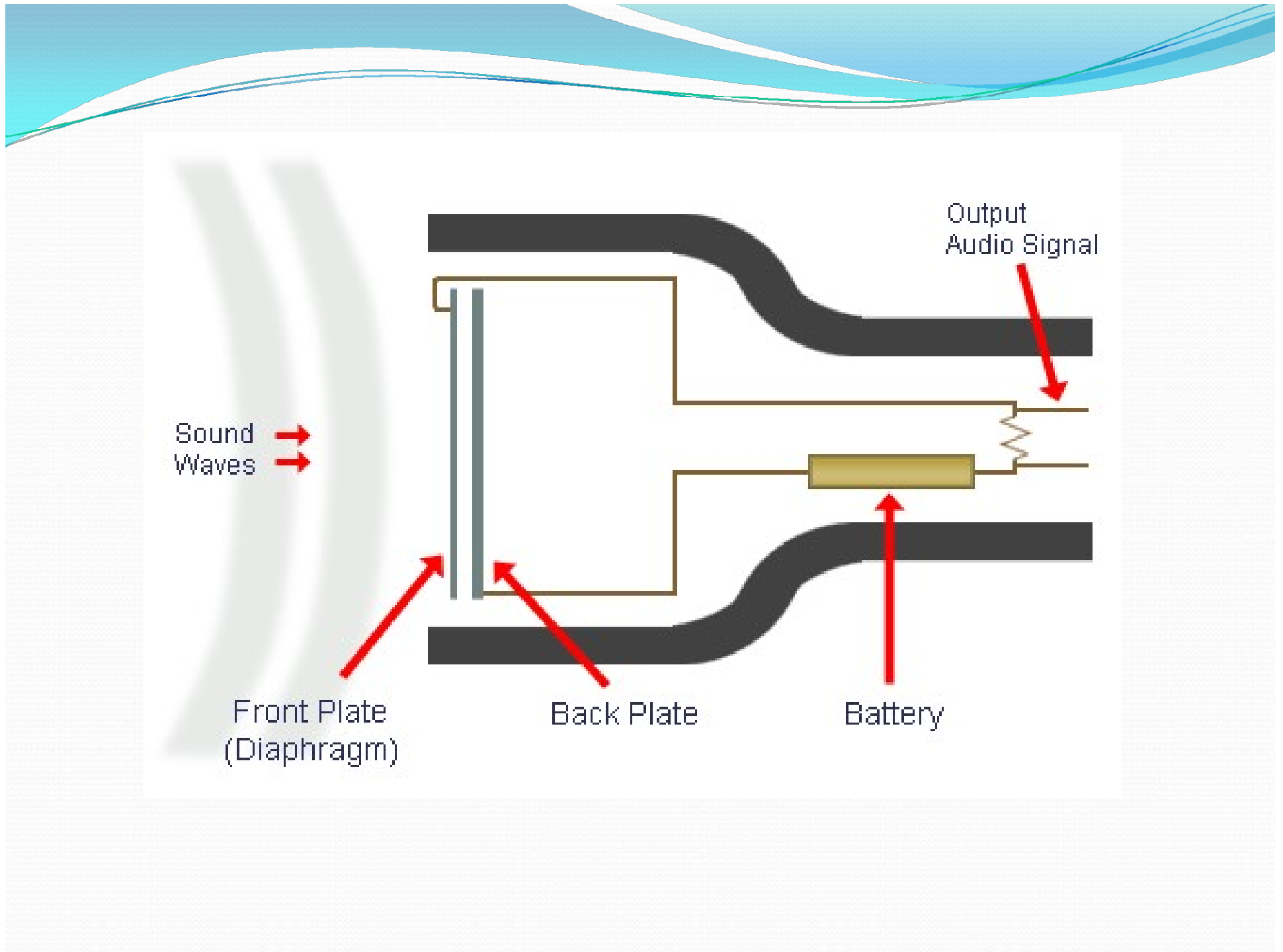
Cross-Section of Dynamic Microphone





Condenser Microphones

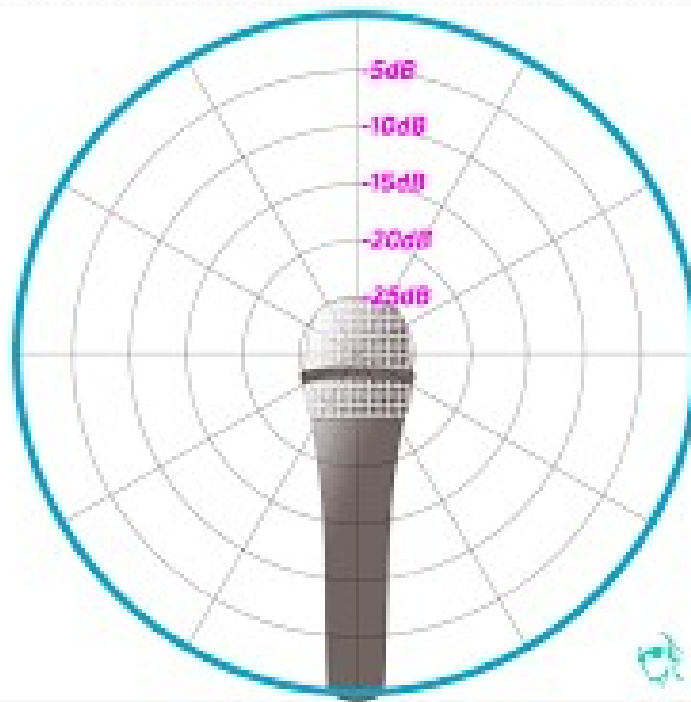
- Ideal for recording vocals or acoustic guitars
- Perfect for precision recording and capturing subtle nuances on pianos or acoustic guitars
- They do need a power supply
- Very sensitive to breathing and “popping”



Directional Properties

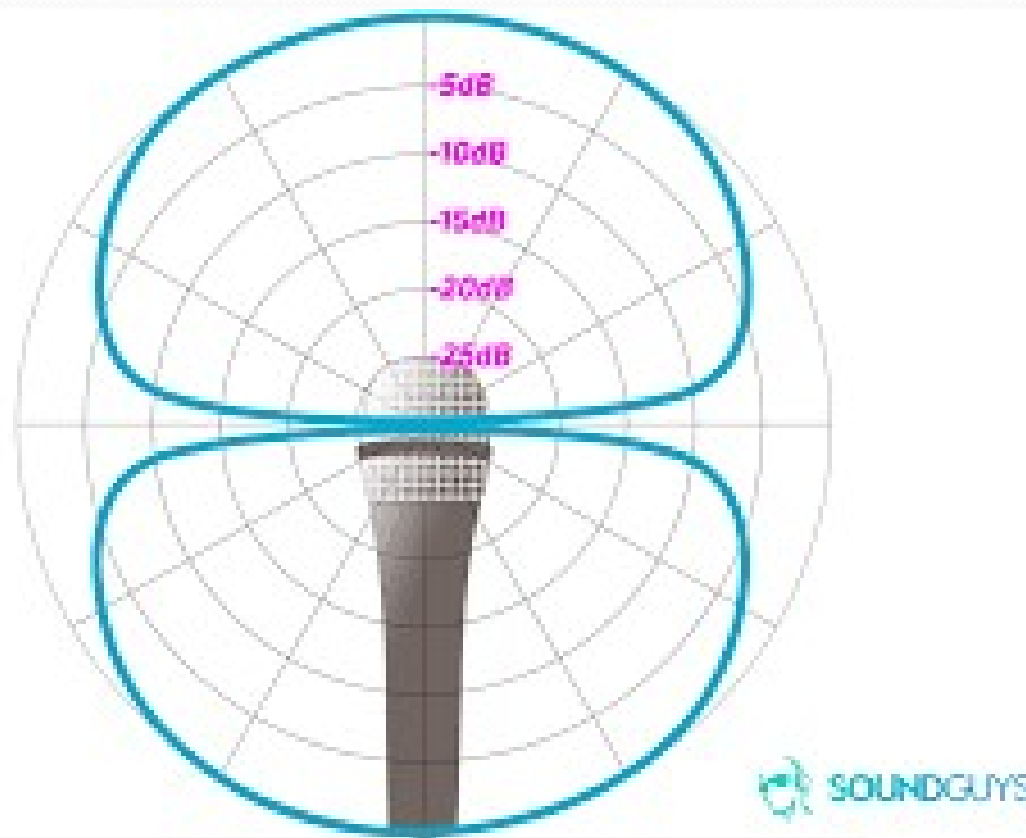
Omnidirectional

Picks up sound evenly from all directions
(omni means "all" or "every").



Bidirectional

Picks up sound from two opposite directions.



Unidirectional

Picks up sound predominantly from one direction. This includes cardioid and hypercardioid microphones (see below).

