

WJEC England GCSE Physics

8.4 - Microphones and Speakers

(Higher)

Flashcards



How do loudspeakers make use of the motor effect? (Higher)



How do loudspeakers make use of the motor effect?
(Higher)

The motor effect is used to convert variations in the current of an electrical circuit into the pressure variations which produce audible sound.



Explain how a loudspeaker works.
(Higher)



Explain how a loudspeaker works. (Higher)

- A cone with a wire wrapped around it is connected to an a.c power supply and is placed in a permanent magnetic field.
 - When current flows through the wire, it creates a second magnetic field, which interacts with the permanent field.
- This produces a force which causes the cone to vibrate.



How is the pitch of the sound from a
loudspeaker changed? (Higher)



How is the pitch of the sound from a loudspeaker changed? (**Higher**)

- The frequency of the a.c current is altered.
- This creates a different frequency of vibration in the cone.



What electromagnetic effect is used by a microphone and how? (Higher)



What electromagnetic effect is used by a microphone and how? (Higher)

- The generator effect.
- It converts the pressure variations in sound waves into alternating current in a circuit, which forms a signal.

