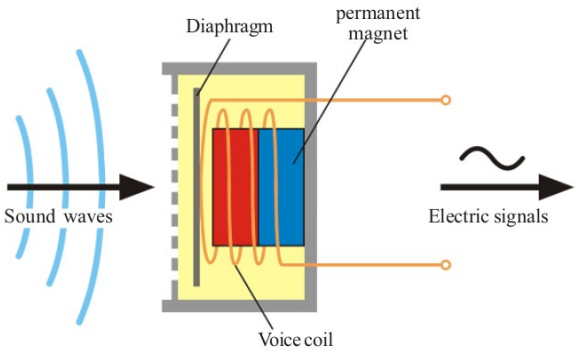
PHYSICS - X-PART-10 CLASS 28

Moving Coil Microphone



* Working principle : Electromagnetic induction

* What is the energy transformation that takes place in a moving coil microphone?
  - Mechanical energy - Electrical energy.

* Which are the main parts of a moving coil microphone?
  - Diaphragm, Permanent magnet and voice coil.

* Which is the moving part in it?
  - Diaphragm and voice coil

* If a sound is produced in front of a movable diaphragm, what will happen to the diaphragm?
  - Diaphragm Vibrate corresponding to the sound signals.

* What happens to the voice coil then?
  - Vibrate

* What will be the result?
  - Creates electric signal corresponding to the sound

The working of Moving coil microphone

When a sound is produced in front of a microphone

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The diaphragm connected to the voice coil vibrates in accordance with the sound waves falling on it

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As a result, electrical signals corresponding to the sound waves are generated in the voice coil.

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The weak signals obtained from the microphone are strengthened by an amplifier.

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The signals reaching the amplifier are strengthened and sent to the loud speaker.

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The loud speaker reproduces the original sound.

* Find out the similarities and differences between a moving coil microphone and a moving coil loud speaker

	moving coil microphone	moving coil loud speaker
Similarities	Voice coil Permanent magnetic Diaphragm	Voice coil Permanent magnetic Diaphragm
Differences	Mechanical energy – Electrical energy	Electrical energy – Mechanical energy
	Electromagnetic induction	Motor Principle

Power Transmission and Distribution

AC generators are used to produce electricity for the purpose of distribution. How do we get mechanical energy for such generators?

* Water from dam
* Nuclear energy
* Heat produced during the combustion of Naphtha, Coal, Lignite...

- ➔ Power stations are places where electricity is generated on a large scale for distribution.
- ➔ Three Phase AC Generators are used in power stations.

* Write down the name of some power stations in Kerala.

Idukki – Moolamattom
Idukki – Pallivasal
Alappuzha – Kayamkulam

Assignment

1. In connection with the working of a microphone, a few statements are given in boxes. Arrange them in the proper sequence.