

# How to make the battery have magnetic current sound

How does a magnetic field affect a loudspeaker?

The fields can cause forces with other nearby magnets which can be used to make motors spin and loudspeakers produce sound. The motor effect is used inside headphones, which contain small loudspeakers. In these devices, variations in an electric current cause variations in the magnetic field produced by an electromagnet.

How does alternating current create sound waves?

Alternating current supplied to the loudspeaker creates sound waves in the following way: To make a loudspeaker cone vibrate correctly, the electric current must vary in the same way as the desired sound. Learn about and revise electromagnetism, the motor effect and its applications in motors and loudspeakers with GCSE Bitesize Physics.

How does electromagnetism affect loudspeakers?

Electromagnetism is due to the magnetic fields around electric currents. The fields can cause forces with other nearby magnets which can be used to make motors spin and loudspeakers produce sound. The motor effect is used inside headphones, which contain small loudspeakers.

Can a high voltage circuit make a sound?

Still, you can sometimes get audible sound from this with high voltage circuits. Electrodynamical force. A moving charge creates a circular magnetic field around it. The magnetic field is proportional to the current, and can be made quite strong by looping the wire into a coil.

Does a bar magnet move out of a coil of wire?

The magnet is stationary within the coil of wire, there is no current flow. The magnet moves out of the coil of wire and the ammeter registers negative current flow. The magnet moves out of the coil of wire and the ammeter registers negative current flow. Slide 1 of 4, A bar magnet rests outside a coil of wire.

How does electromagnetic induction work?

Electromagnetic induction can create a voltage by movement of a conductor in a magnetic field. This voltage can make current flow, and the effect is used in electricity generation and microphones. Headphones, which contain small loudspeakers, use the reverse effect to microphones - the motor effect.

Electrons moving along a wire make a magnetic field that goes in circles around the wire. When you bend the wire into a coil, the magnetic fields around each loop of the coil add up to make a ...

Electromagnetic interference (EMI) occurs basically for this reason: Any electrical current, flowing through a conductor, will produce a magnetic field. Wind a coil of ...

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Flowing current generates a magnetic field, and the alternating current in your typical power delivery systems changes the direction of this current (and the magnetic field) 120 times a ...

How can you make a simple electromagnet at home? Equipment: iron nail, copper wire, battery cell, clamps, paper clips, needles, spoon. Wind a copper wire around...

The cone vibrates as different magnetic forces act on the current-carrying coil. ... Many bicycles have generators that have a light that can be powered without a battery. Instead of a battery, a ...

Connect the battery. Wrap one end of the exposed wire around the positive side of the battery and the other end around the negative side of the battery. Use a small piece of ...

a current in the coil creates an electromagnetic field; the electromagnetic field interacts with the permanent magnet generating a force, which pushes the cone outwards

Active buzzers have oscillators and generate sounds when energized. It works by converting direct current into pulse signals, usually at a particular frequency. However, ...

When Zinc is put in the acid in a battery, and the right connections are made, then the North pole individual magnets will come out of the battery's positive terminal and South pole individual ...

You can also create more current by increasing the amount of magnetic force (i.e. by using a stronger magnet). In our experiment, the LED lit up only for a moment because electric current was generated only when the magnetic force ...

If you connect a very sensitive voltmeter to the wire, then the following will happen: Every time you connect or disconnect the first wire from the battery, you will sense a ...

A simple electromagnet can be made by coiling wire around a nail and connecting the ends of the coil to a battery. The battery produces an electric current that flows from the battery through the wire. As the current ...

It is a design aim of such a component to keep that magnetic field within the component (for instance inside the ferromagnetic core), but that won't be achieved for 100%. ...

In order to make electric current flow in a circuit, you need to have an electromagnetic effect and create an electromagnetic induction.

Hall effect sensors are the most common type of magnetic current sensor. Its operation relies on the Hall effect, shown in Figure 1(a) where current ( $I$ ) flowing through a ...

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Magnetic buzzers are electromechanical products that, like piezo buzzers, can be used to create audio tones. They differ from piezo buzzers in their components and processes for converting electricity into sound. Magnetic buzzers are ...

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