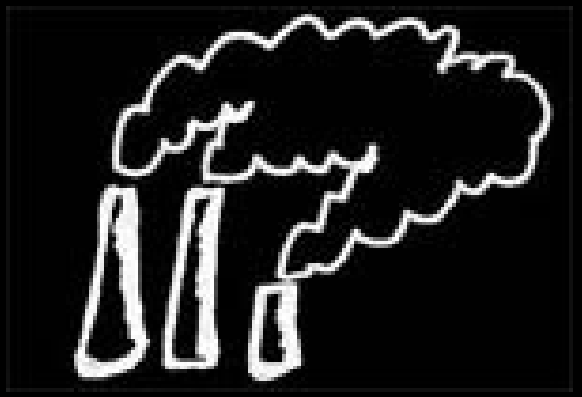
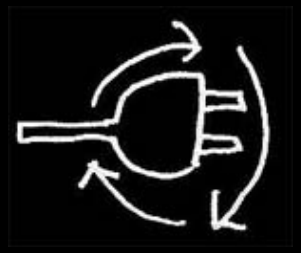
THEMA:



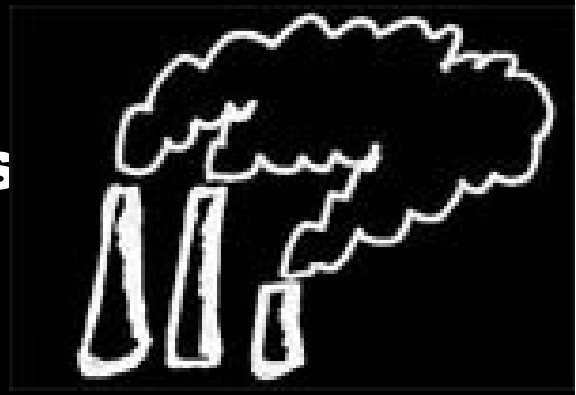
Strom sticken

Der Strom aus der Batterie kann durch zwei Qualitäten beschrieben werden:

Volt und Ampere.



Volt ist die Strom „Spannung“, die den nötigen „Druck“ erzeugt, um die freien Elektronen durch den Schaltkreis zu treiben.



Ampere ist die SI-Basiseinheit der elektrischen Strom „**Stärke**“ und misst die Menge der Ladung: die Anzahl freier Elektronen, die einen bestimmten Punkt im Schaltkreis zu einem gewissen Zeitpunkt durchlaufen.

Die Ladung kann über Widerstand

beschrieben werden,

Widerstand verhindert das Fließen von

E

Widers  in Ohm

.

Jedes elektrische Gerät braucht Strom.

Strom kann aus einer Batterie oder aus der Steckdose kommen.

Wir kennen **Gleichstorm und Wechselstrom**:

Gleichstrom (DC: Direct Current) fließt nur in eine Richtung.

Wechselstrom (AC: Alternating Current) **ändert** mehrmals in der Sekunde seine **Richtung** in bestimmten Intervallen und wird in den meisten Geräten verwendet.

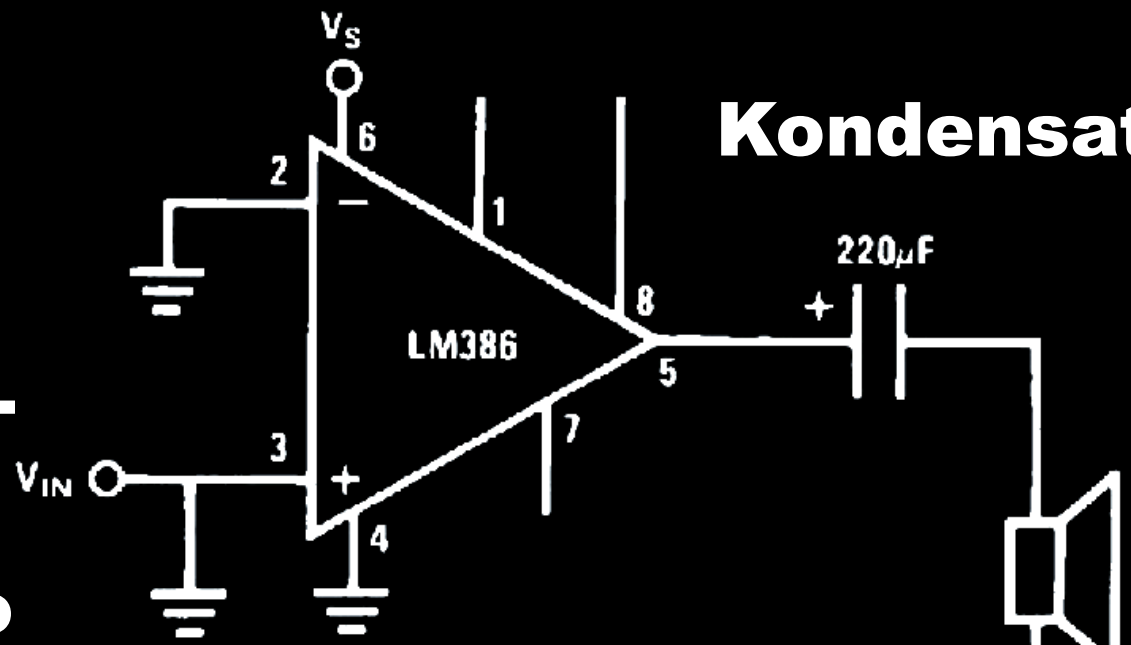
Wir arbeiten jetzt mit Gleichstrom (DC) aus der 9 Volt Batterie.

Gleichstrom (*DC*) ist Strom in seiner direktesten Form. Batterien und Solarzellen geben uns Gleichstrom. Gleichstrom hat immer zwei Seiten: PLUS und MINUS, *power and ground*. Auf allen Kabel und Batterien stehen Bezeichnungen dafür „ + “ „ - “

Widerstände (*Resistors*) leisten Widerstand, blocken aber den Fluss der Elektronen nicht vollkommen ab. Durch Widerstände können wir den Fluss der Elektronen kontrollieren. Der Strom kann in beide Richtungen durch den Widerstand fließen.

Kondensatoren (*Capacitors*) speichern Elektrizität für kurze Zeit und geben dann Strom ab, wenn keine Elektrizität nach kommt. Manchmal haben sie eine Plus und Minus Seite, manchmal nicht, das steht dann auf dem Kondensator als „ -“ Minus angeschrieben

NEUN VOLT



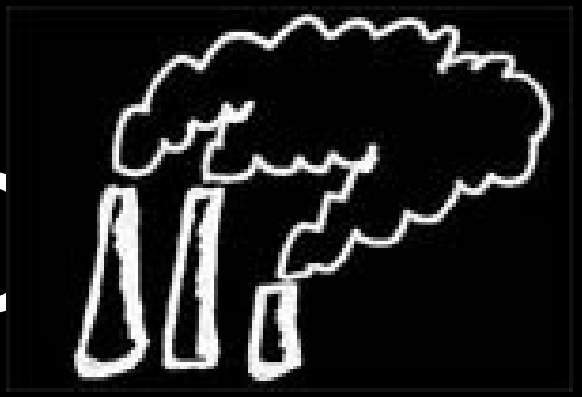
Kondensator

INPUT von Mikro

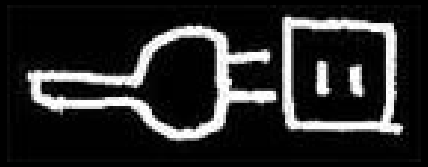
LAUT-SPRECHER

ERDUNG, MINUS, (GROUND)

HOT TOPIC

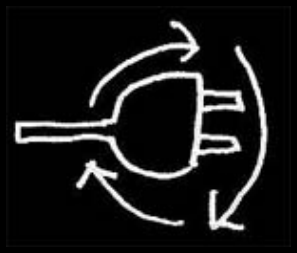


ELECTRICITY

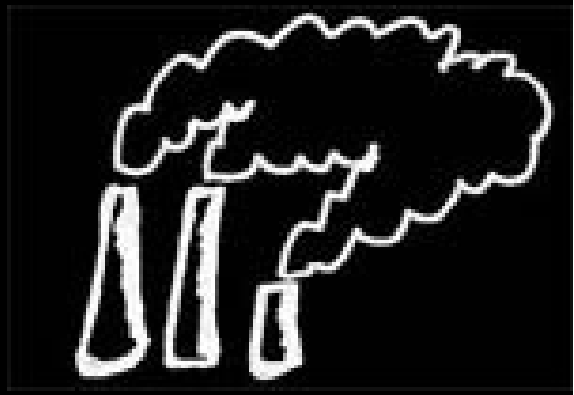


Electricity is described with two enteties:

Voltage and Current.



The **volt (symbol: V) is the unit for electromotive force, called Voltage: it** determines how quickly the electrons will travel through the circuit. Voltage is the electrical “pressure” that causes free electrons to travel through an electrical circuit.



Current is the amount of electrical charge (the number of free electrons) moving past a given point in an electrical circuit per unit of time.

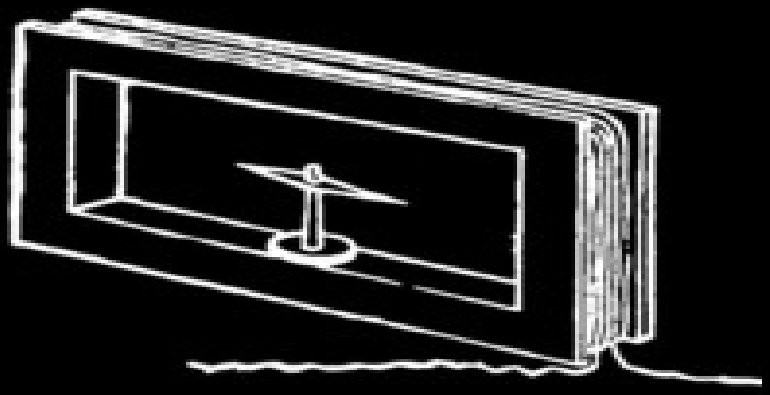
Current is measured in amperes.

AMPERE

In practical terms, the ampere is a measure of the amount of electric charge passing a point in an electric circuit per unit time with 6.241 × 1018 electrons, or one coulomb per second constituting one ampere.

amperes can be viewed as a "rate of flow" and coulombs viewed as an "amount of flow."

Current can be measured by a galvanometer, via the deflection of a magnetic needle in the **magnetic field** created by the **current**.



The load, in turn, has a characteristic called resistance, a medium which opposes the flow of electrical current through itself.

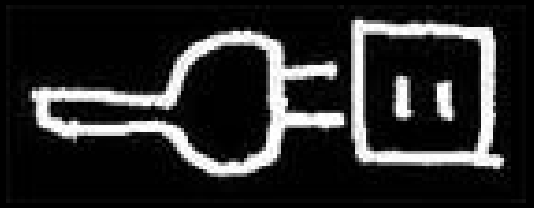
Resistar  sured in ohms.

DC (or direct current) is electricity in its pure form.

Batteries and solar panels give us DC power.

DC electricity always has two sides: + and -, known as

power and ground.



Batteries and solar panels give us DC power, and

most electronics require DC power to run.

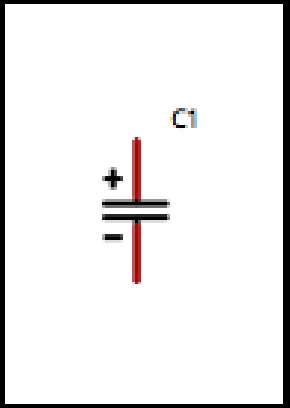
DC electricity always has two sides: + and -, known as

power and ground.

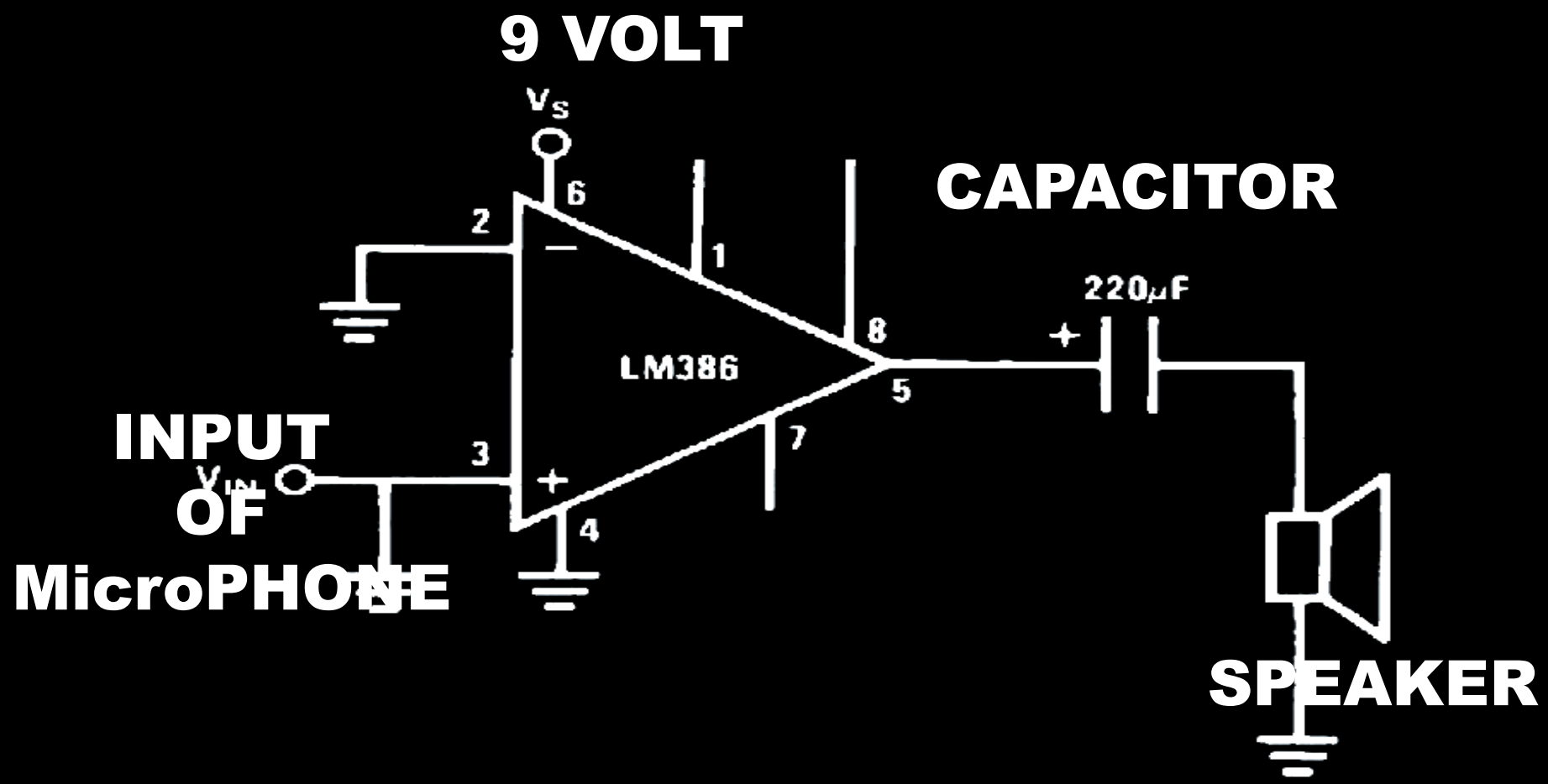
AC power changes direction many times a second

symbol for resistance

Capacitors



store up electricity while current is flowing into them, then release the energy when the incoming current is removed. Sometimes they are polarized, meaning current can only flow through them in a specific direction, and sometimes they are not.


9 VOLT
Vs
6
2
1
8
LM386
5
7
3
4
CAPACITOR
220μF
INPUT
OF
MicroPHONE
VIN
SPEAKER
Ground, MiNUS

LÖTEN

When heated, solder becomes a liquid. And like water, it has a surface tension and can
Behave unexpectedly. It flows well over surfaces that are evenly heated, so the goal is to
heat the target surface properly so that the solder covers it smoothly.
The general idea behind soldering is to have the soldering iron be the first and last thing
against the part to be soldered. Try not to let the solder touch the iron itself. Only apply
solder to a part that is already hot.

1. hold the soldering iron against the surface to be heated

2. apply some solder

3. remove the solder

4. remove the soldering iron

Wenn du schwanger bist, atme bitte

den Rauch beim Löten nicht ein.

A to Z Part 1 - Figure 2