

Leseprobe

SOLARTRAINER *junior*

Christiani

est. 1931

Experiments with solar cells

Instructions



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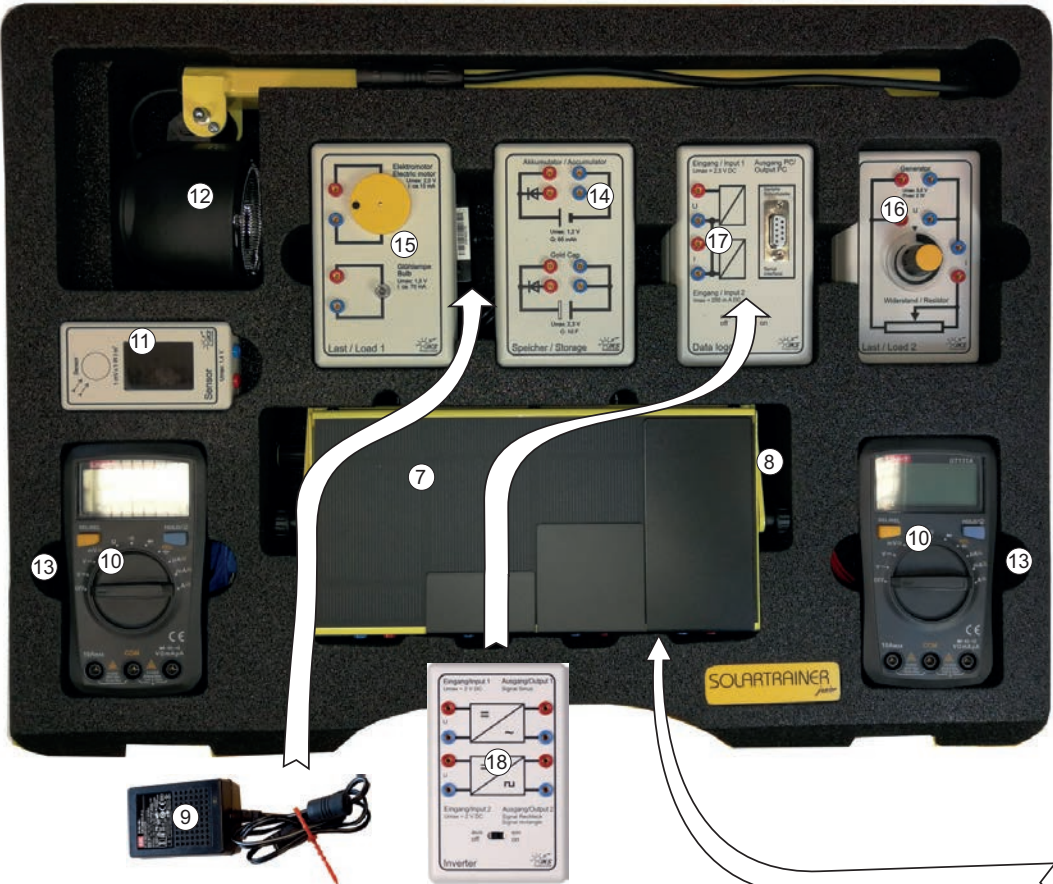
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Contents and arrangement within the box



- ① Base plate
- ② Support for base plate
- ③ Instructions
- ④ Solutions
- ⑤ Interface cable (optional)
- ⑥ Programm CD (optional)





- ⑦ Solar cell unit
- ⑧ 3 shading plates
- ⑨ Mains cable (below solar cell unit)
power supply (below load 1 and storage)
- ⑩ 2 multimeters
- ⑪ Sensor
- ⑫ Irradiation unit
- ⑬ 12 measuring cables, 6x red,
6x blue below the multimeters
- ⑭ Storage
- ⑮ Load 1
- ⑯ Load 2
- ⑰ Data logger (optional)
- ⑱ Inverter
(option below data logger)
- ⑲ Foam upholstery for covering
the components (in the box
lid, no figure)

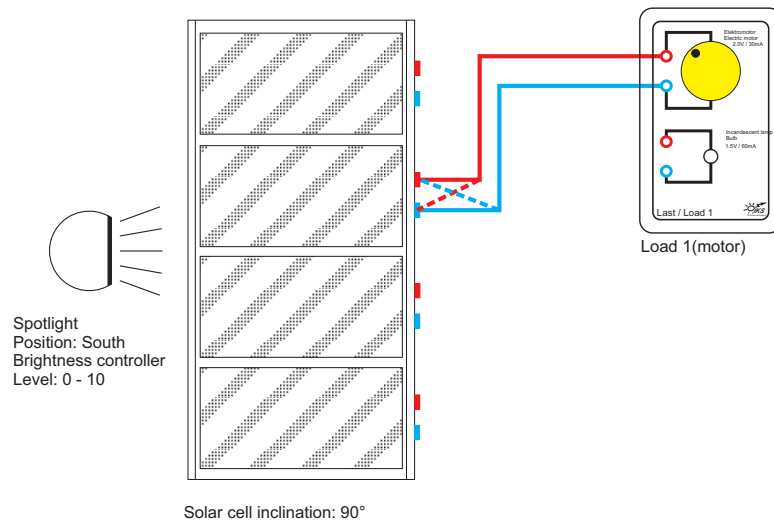
Contents and arrangement within the box

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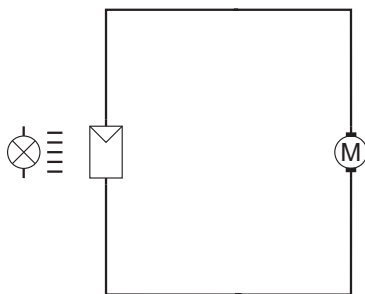
The solar cell as energy converter

Experiment 2

Set-up

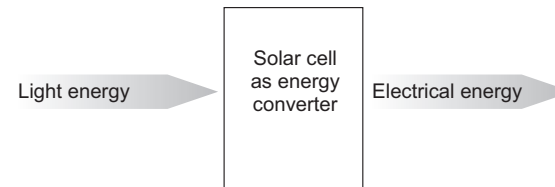


Wiring diagram



Information

A solar cell converts light energy to electrical energy.



Assignment

Set up the experiment according to the figure shown above.
The lamp arm is in the **South** position, the brightness controller is on level **10**.

A: What happens when the connecting cables on the solar cell are commutated?

B: Set different irradiance values on the brightness controller and observe the electric motor in doing so.

C: Specify the energy conversions within the solar cell and the electric motor.

A:.....
.....
.....

B:.....
.....
.....

C:.....
.....
.....
.....