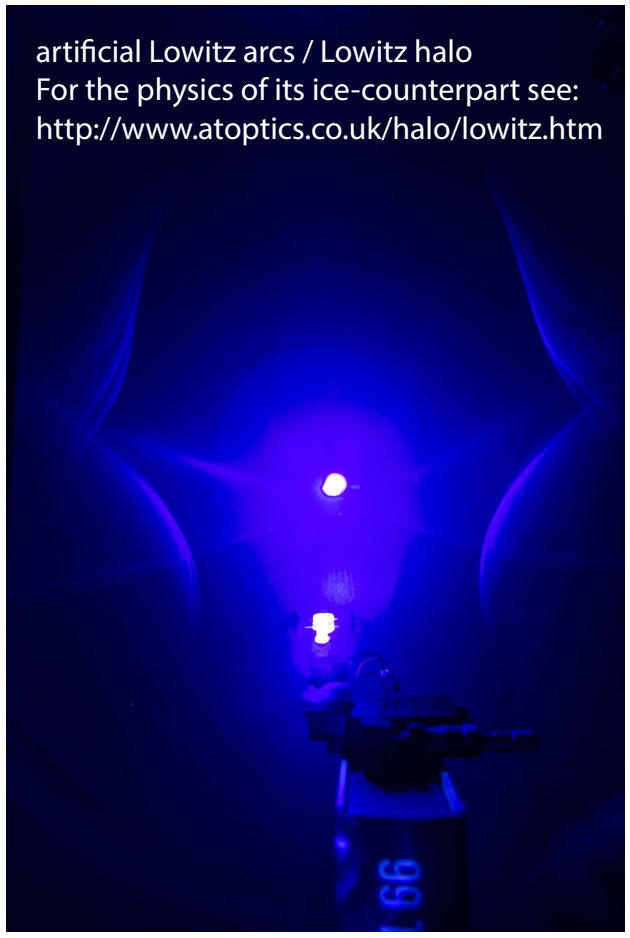
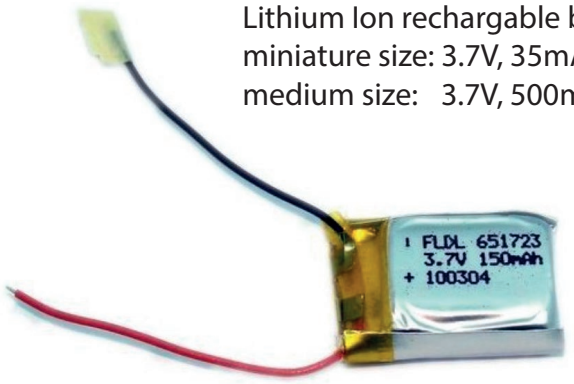
Lowitz arc halo machine

artificial Lowitz arcs / Lowitz halo
For the physics of its ice-counterpart see:
http://www.atoptics.co.uk/halo/lowitz.htm

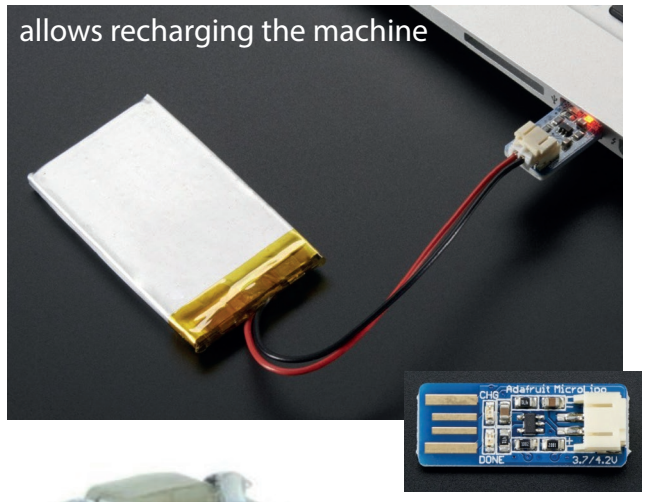


Power:

Lithium Ion rechargable battery
miniature size: 3.7V, 35mAh, **~3€**
medium size: 3.7V, 500mAh, **~15€**

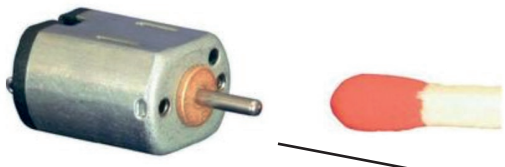


Adafruit Micro Lipo - USB LiIon/LiPoly charger - v1
https://www.adafruit.com/products/1304, **~5€**



Motors:

Motraxx Mikro-Elektromotor K10WA, ~20500 U/min
without load, DC 1.5V, **~10€**

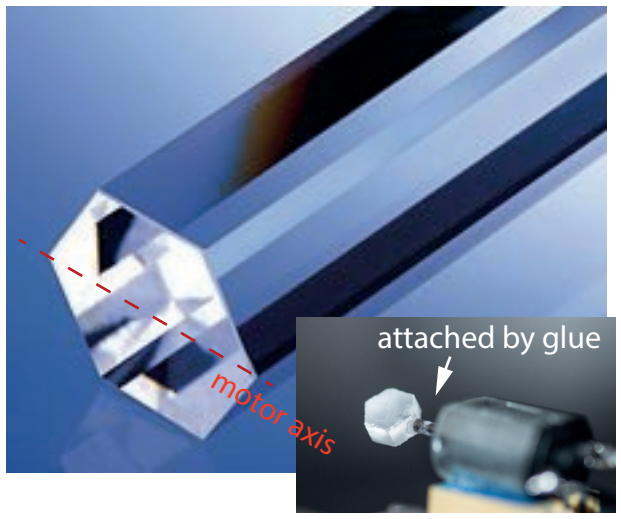


adjusting ring for the motor-axis:
Modelcraft 10541, 4mm, **~5€**

Motraxx Mikro-Elektromotor 2025-22, ~8000 U/min
without load, DC 1.5-3.0V, 4mm shaft **~4€**

The Crystal:

hexagonal lightpipe, 4mm aperture, **~75€**
just a small chunk / slice is needed.
Order from Edmund Optics GmbH



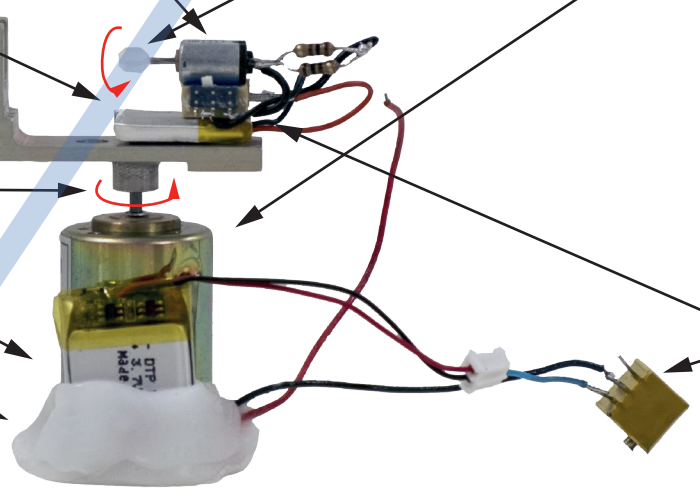
Construction:

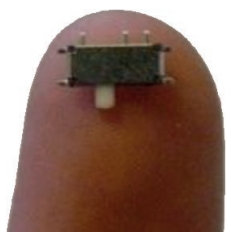
any superglue **~5€**
(mounting the prism, the axis coupler etc.)
+ some piece / bar of metal

Gorilla plastic **~10€**
(to model the stand of the device)

projection screen

laser beam





2 x micro slide switches
~2€

50Ohm
precision multi-turn
potentiometer **~2€**
(coarse control
of recolution number)