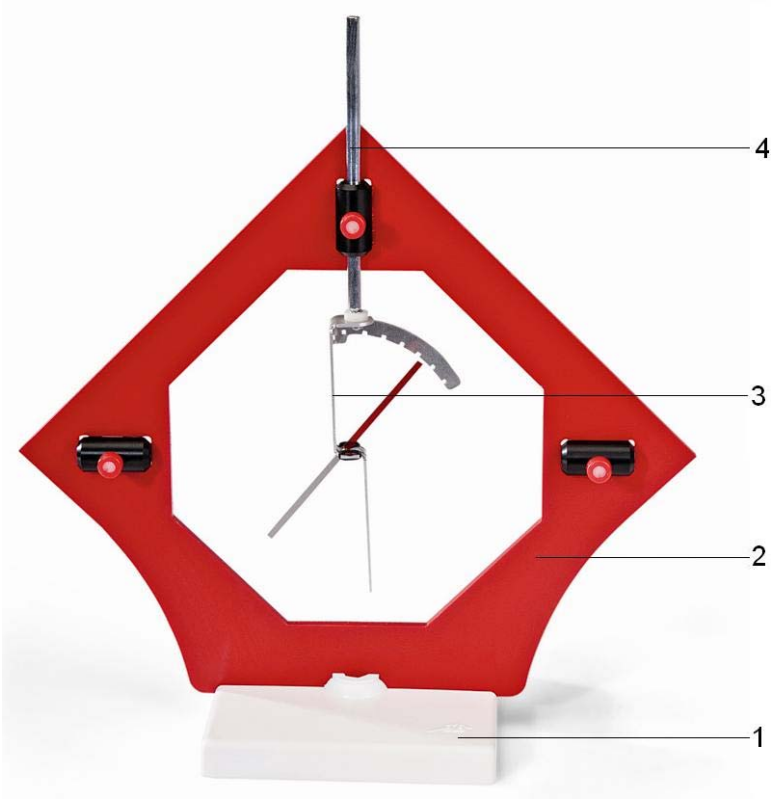
Electroscope S 1009964

Instruction Sheet

02/13 ALF



1 Stand base
2 Frame
3 Electroscope unit
4 Aluminium rod with magnet holder

1. Description

The electroscope S is used for the demonstration of electrical charges and voltages.

The electroscope features a plastic frame set on a base. The actual electroscope unit, consisting of a support and a pointer, is attached to an aluminium rod with a magnetic holder which is suspended within the frame.

2. Equipment supplied

1 Stand base
1 Frame
1 Electroscope unit
1 Aluminium rod with magnet holder

3. Technical Data

Dimensions:	280x80x280 mm^3 approx.
Weight:	500 g approx.

4. Operation

To perform experiments, the following equipment is also required:

Friction rods 1002709

Friction rod	Rubbing material	Charge polarity
PVC	Plastic foil	+
Acrylic glass	Plastic foil	-

To indicate the charge polarity the following equipment is recommended:

Charge Indicator 1009962

4.1 Electroscope set-up

- Insert the frame into the base.
- Slide the aluminium rod vertically into the frame.
- Attach the electroscope unit to the magnetic holder.
- Place the pointer needle in such a way that it automatically points to zero.

4.2 Charging up the electroscope by touching it with a statically charged body

- Rub the friction rod with the suitable material.
- Touch the aluminium rod with the charged rod. The pointer deflects.
- Remove the friction rod, the pointer remains deflected.
- Touch aluminium rod with your hand. The pointer returns to normal.
- Repeat the experiment with the second friction rod.
- Determine the sign of the charge using the charge indicator.

4.3 Using electrostatic induction to charge up the electroscope

- Approach but do not touch the aluminium rod with the statically charged friction rod. The pointer deflects.
- Remove the friction rod. The pointer returns to normal.
- Again approach the aluminium rod with the statically charged friction rod. Once again the pointer deflects.
- Briefly touch the aluminium rod with your finger to discharge it. The pointer deflection disappears and returns to normal.
- Now remove the friction rod. The pointer again shows deflection.

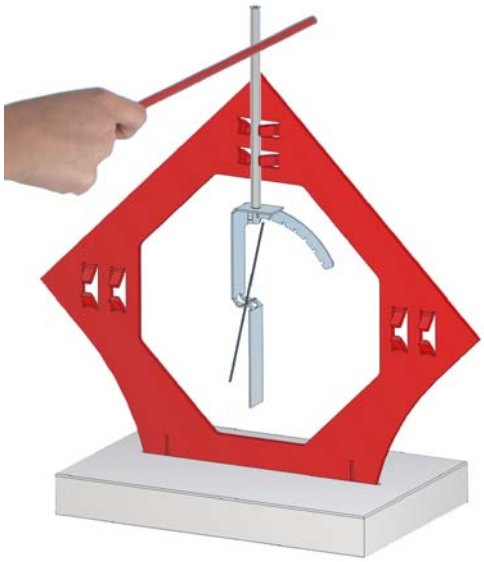


Fig. 1 Charging the electroscope using a statically-charged friction rod

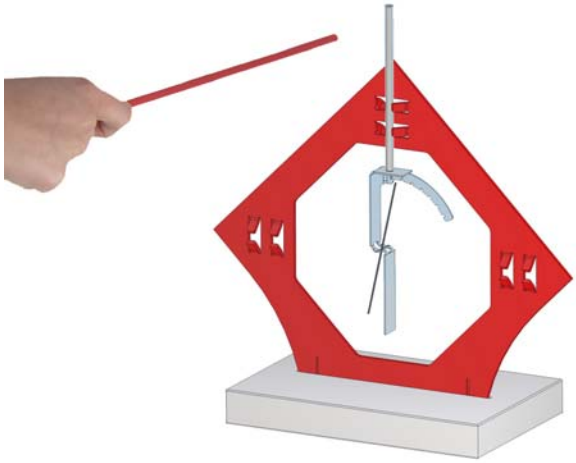


Fig. 2 Charging the electroscope using electrostatic induction