The analogue multimeter serves to measure DC and AC voltage as well as DC and AC amperage. An ideal and versatile measuring device with two double scales, designed specially for students.

The scales 0...3 / 0...10 have the zero point on the left boundary of the scale. For measurements involving a possible change of the plus or minus sign in front of the value read, the device can be switched to the scales -5...0...+5 / -1.5...0...+1.5 with the zero point at the midpoint of the scale.

The double scale 3 / 10 is mirrored in order to guarantee accurate readings.

The analogue multimeter is electronically overload-protected in all areas.
Operation:
1) The analogue multimeter is always ready for operation (as long as the batteries are properly functioning).

2) The type of power to be measured is set by using the mode switch (6). In addition, in the case of direct current, this switch is used to select between zero at midpoint or at the left side. The adjustment screw (11) can be turned appropriately in order to set the needle to zero if necessary.

3/a) When measuring current, set the step switch for selecting measurement range (10) to the largest possible measurement range, 1 A, for the applicable current type (AC/DC). Only for measuring current > 1 A the connecting wire is to be unplugged from receptacle (8) and plugged into receptacle (9). In this fashion the device is automatically switched to the 10 A measurement range. Under alternating current the indicator needle always moves to the right, under direct current it moves to the right when the positive terminal of the power source is connected to receptacle “V/A” (8) or “10 A” (9) and to the left when the positive terminal is connected to receptacle “COM” (7).

3/b) When measuring voltage, only the receptacles “COM” (7) and “V/A” (8) are used. The step switch for selecting measurement range (10) is set to the largest measurement range, 30 V. Select the appropriate current type using the mode switch (6). Switch the step switch (10) to a more sensitive range only after the power supply has been connected. The indicator needle moves in the same way as when measuring current.

Note: the current measurement range 100 µA corresponds to a voltage measurement range of 100 mV.

Overload protection: The measuring element and the internal measuring circuits are electronically protected against the occurring overload. Due to safety reasons, a maximum voltage of 42 V is not to be exceeded.

Battery check: Turn the mode switch (6) all the way to the left. If the needle moves all the way to the right within the measuring scale “BAT”, then the batteries’ capacity is alright. In order to replace the four 1.5 V mignon cells, remove the rear panel. Only alkaline batteries are recommended to be used with this device.

Turning off the measuring device: If the mode switch (6) is set to DC (“OFF”), the set of batteries should theoretically last about 10 years. The effective operating time is limited by the natural durability of the batteries (Please check the information on the battery package).

Should the device not be used for several months at a time, remove the batteries so as not to damage the device in the case of battery seepage.

A special feature of this device is the very good frequency response: typical -1.5 db at 20 kHz. Therefore measurements are possible in all kinds of resonance circuits.