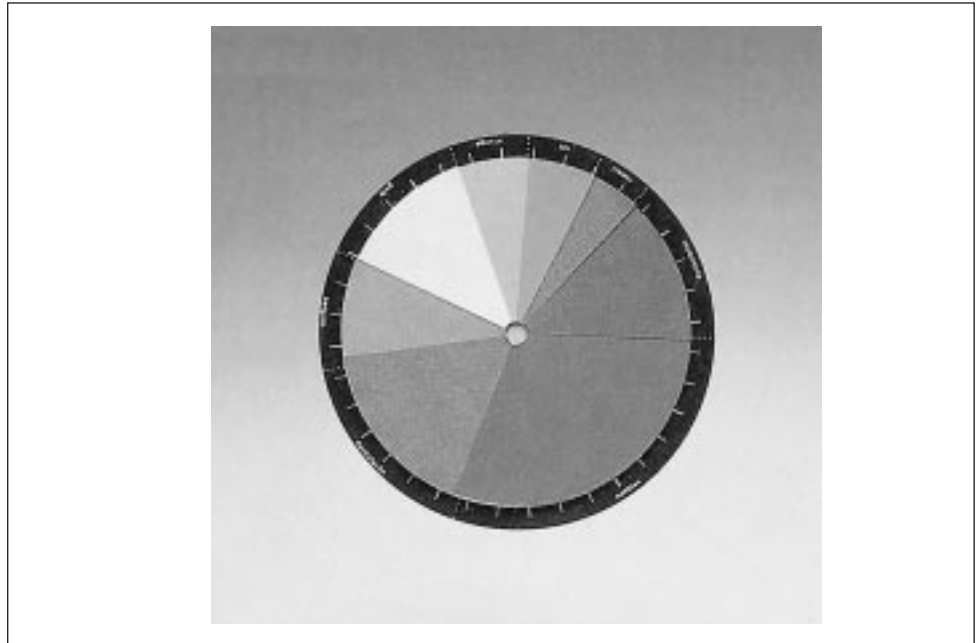




Colour disk, variable

65987.00

## Operating instructions



### 1 PURPOSE AND DESCRIPTION

The colour disk allows to demonstrate how different colours are generated through additive mixing of single colours. It also allows students to perform experiments to demonstrate this by themselves.

The set consists of eight circular disks of the same size, made of coloured cardboard (red, orange, yellow, pale green, dark green, pale blue, violet), which are slotted along a radius up to the hole at the centre ( $\varnothing$  10 mm). Interlocking two or more disks, a disk with sectors of different colours is obtained. This disk can be fixed to the axis of a laboratory motor. As off about 25 revolutions per second, the human eye can no longer resolve the single coloured sectors. The onlooker has the impression of seeing a colour generated by mixture (additive mixture of colours). The size of the single coloured sectors can be read from the subdivision in degrees ( $10^\circ$  for each subdivision) of a metallic disk placed behind the cardboard disks. Furthermore, the colour distribution and size of sectors required to create the impression of the colour "white" is also given (pointed lines).

### 2 HANDLING

The coloured disks are carefully interlocked (as shown in fig. 2). Two or three colours are usually sufficient to generate mixed colours, but the eight colours are required for "white". It is recommended to interlock the eight disks, also in order to avoid the loss of disks, according to the order indicated on the metal disk (beginning with any colour). A colour which is not needed can simply be hidden by sliding it under the disk above it.

The interlocked coloured disks are laid on the metallic disk subdivided into degrees, and the latter is fixed to the axis of a motor. The 12 V- motor with disk holding device 11614.00, the power of which is supplied over an exterior power supply, is suitable for this, as well as laboratory motor 11030.93 (the power of which is directly supplied from the grid) with disk holder 02531.00. The nut of the disk holder must be

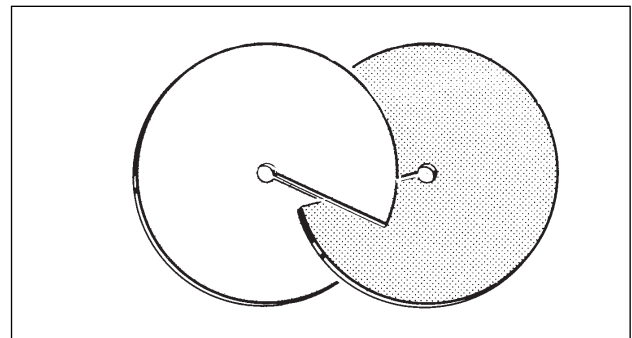


Fig. 2

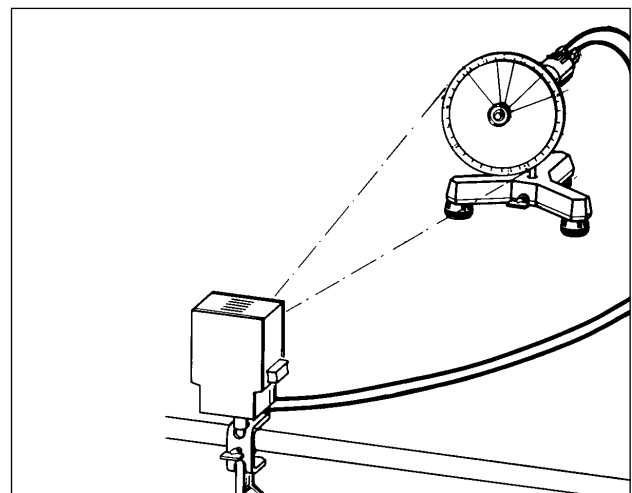


Fig. 3

tightly fixed, however not before having exactly adjusted the single coloured sectors with the subdivision in degrees of the metallic disk.

During the experiment, the rotating coloured disk must be brightly illuminated (e. g. with laboratory lamp 11601.10).

Both the lamp and the 12 V motor can be supplied simultaneously by power supply 13505.93. An experimental set-up is shown in fig. 3.

### 3 EXPERIMENTAL LITERATURE

PHYWE Units for Laboratory Work in Biology  
Sensorial Physiology: Light Sensitivity 16703.01

### 4 LIST OF ACCESSORIES

#### 4.1 Supply upon delivery

Colour disk, variable 65987.00

#### 4.2 Recommended accessories

Motor with disk holder, 12 V- or	11614.00
Laboratory motor	11030.93
Disk holder	02531.00
Power supply 0 ... 12 V	13505.93
Laboratory lamp 5, with rod	11601.10