

Colour Mixing Apparatus

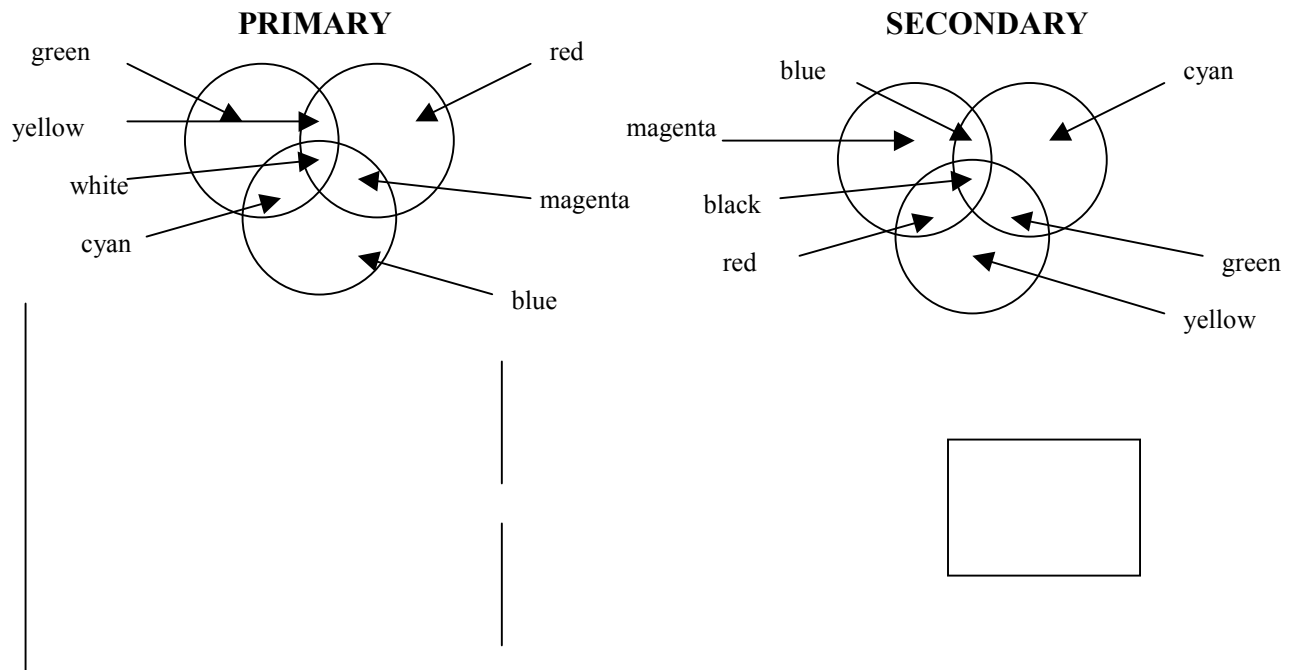
The apparatus is supplied with two “shadow masks”. These are used as follows:

The primary shadow mask has a 16mm hole drilled at one end and two smaller holes at the other end.

- Switch on the apparatus by plugging in the power supply – the red, blue and green leds should illuminate.
- Aim the unit at a vertical white surface from a distance of about 60cm and hold the 16mm hole in the mask about half way between the unit and the white surface.
- The primary colour mixing circles should be displayed – you may need to scan the mask backwards and forwards to achieve a satisfactory image.

The secondary colour mask looks like a lollipop.

- Hold the lollipop about halfway between the unit and the white surface. You should see the secondary colours on the outside, the primary colours in the inside and black in the middle



White surface

Shadow mask

Colour mixing apparatus

Colour TV mask

- Behind the glass screen of a colour TV cathode ray tube there is a metal sheet with many holes drilled in it. These are used to ensure that a particular electron beam (say red) only hits the red phosphors.
- Aim the unit at the two hole end of the mask and observe what you see on the white surface.
- It should be noticed that the coloured spots are reversed from the positions of the leds on the unit. This is because of the inversion effect caused by shining light through a hole. eg. the pupil of the eye.
- The unit comes supplied with a plug top PSU. Any voltage between 4.5V and 12V may be used.

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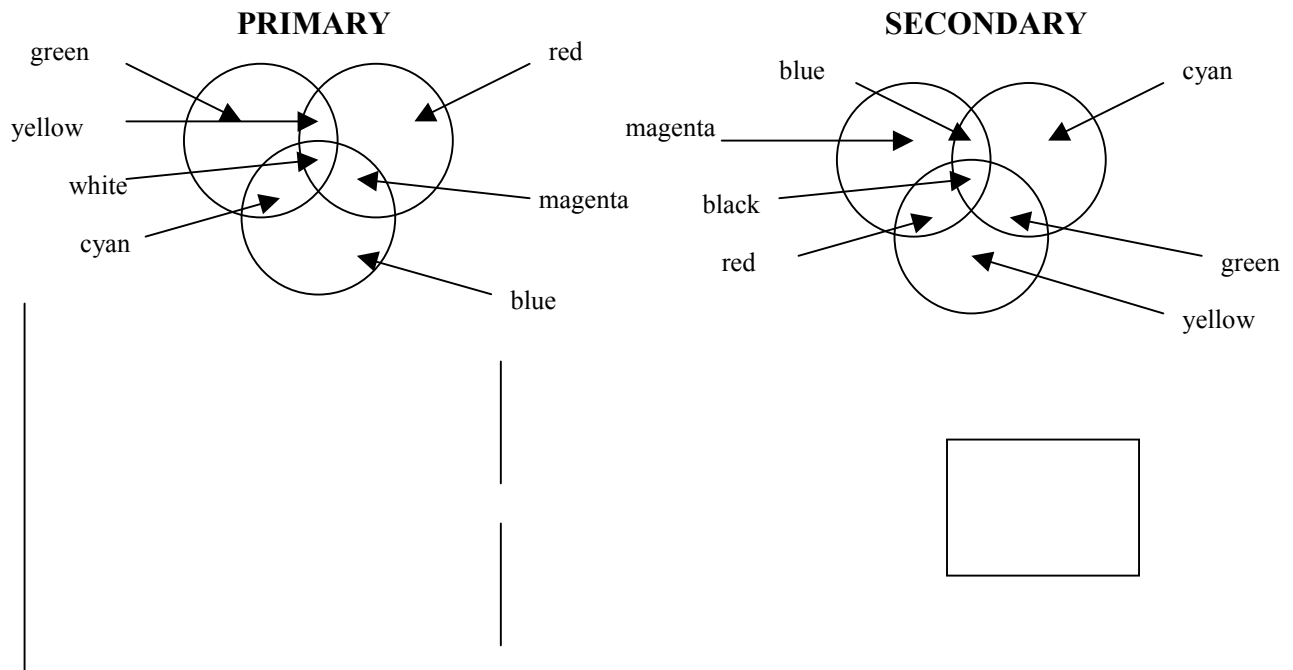
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