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# Optical low vision devices



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# Introduction

- A low vision device is a device that enables the patients to improve visual performance .
- Prior we have to know about magnifications.



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# Types of magnification

**1. Relative size magnification:** any activity of daily living in which the object being viewed can be made larger

**Example:** Large print readers digest.

**2. Relative distance magnification:** reduce the distance between the object and viewer.

**Example:** Moving closer to TV.



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**3. Angular magnification:** use of an optical system between the eye and object to appear larger.

**Example:** Telescope.

**4. Projection magnification:** use of an electronic optical system to make the object appear larger.

**Example:** CCTV.

**5. Combinational types:** when more than one type can be used.



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# Types of optical low vision devices

**Telescope:** it is an Afocal system used to magnify distance object, it provides angular magnification.

## Types of Telescopes:

1. Galilean Telescope.
2. Keplerian Telescope.



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Fig no 1 : Telescopes



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# Advantages

- Variable working distances.
- Can be a monocular or binocular devices.
- Can be a spectacle mounted or hand held .



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# Disadvantages

- Restricted field of view .
- Restricted light gathering properties.
- Limited depth of focus.



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# Uses

- Enables copying from the board in classroom.
- Identifying street signs, addresses.
- Seeing traffic signals .
- Identifying bus numbers.
- Reading bus, train schedule.
- Watching movies in theatre.
- Enjoying sporting events.



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