The Altazimuth-mounted Telescope

To a large extent, a telescope is only as good as its tripod and mounting.
A telescope is used to magnify the sky, but unfortunately it also magnifies vibrations.

So a telescope mount has two primary functions:

1. To support the telescope firmly so that objects can be viewed and photographed without vibrations
2. To provide a system for smooth controlled movement to point and guide the instrument

The **Altazimuth Mount** (sometimes called alt-az) is the simplest type of mount with two motions, altitude (vertical) and azimuth (horizontal): thus the name Altazimuth.

To set up an Altazimuth mount, you simply spread the tripod legs and adjust them to a convenient height, with the tripod level to the ground. This simple two-axis mount both supports and rotates the telescope about its two perpendicular axes.
It can adjust the telescope's altitude via the vertical axis and rotation about this axis varies the azimuth (compass bearing) of the pointing direction of the telescope. So you can rotate it to point east, west, etc.
You can also raise and lower the aim closer and farther away from the horizon. This is achieved by altering the horizontal axis.

Good Altazimuth mounts have slow-motion knobs for making precise adjustments, aiding smooth tracking across the sky. These types of mounts are generally good for scanning the sky at lower power but not for deep sky photography.
Some Altazimuth mounts are now computer driven and allow a telescope to track the sky more accurately. This is generally good for visual use but it can lose tracking on longer exposures.

So whilst the biggest advantage of an alt-azimuth mount is the simplicity of its mechanical design, its primary disadvantage is its inability to follow astronomical objects in the night sky as the Earth spins on its axis.

MLS. 11.05.2017