

Basic Instructions for Using a Compass

What is Declination?

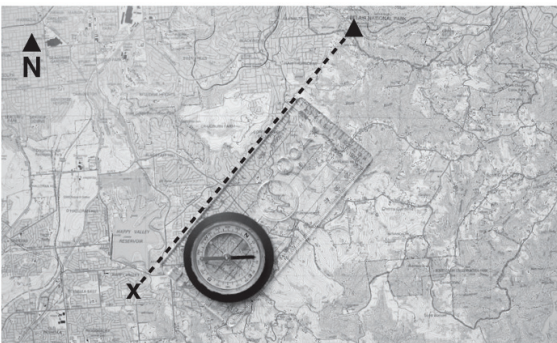
To understand declination (sometimes referred to as Variation) you must first realize that there are two North Poles. There is a True Geographic North Pole at the top of the world, and a Magnetic North Pole. The Magnetic North Pole is always moving. It has been as much as 1,200+ miles from true north, but in 2005 was only around 500 miles from the True North Pole.

We typically say that a compass points to Magnetic North, not True North. Technically, that is not exactly true. Knowing the difference (measured in angular degrees) between true north and the horizontal trace of the magnetic field for your location allows you to correct your compass for the magnetic field in your area. This angular difference is called your declination.

Declination varies from 0 to 30 degrees in most populated regions of the world. These declination values usually change slightly over time, as the earth's plates shift. The actual value of declination and its annual rate of change for your area will usually be shown on your map. This will be expressed as either an Easterly or Westerly declination, depending on your location.

For an easterly declination, you must subtract the value from your reading. For a westerly declination, you must add the value to your reading. Remember that most topographical maps will give the declination specific to that area, making it easy to calculate on the go.

Using your compass with a Map



- 1 a) Place the compass on the map so that the long edge connects the starting point with the desired destination.
b) Make sure that the direction arrows are pointing from the starting point to the place of destination (and not the opposite way).
c) At this point, you may want to use the scales on your compass (if available) to determine the distance you need to travel.



- 2 a) Hold the compass firm on the map in order to keep the base plate steady.
b) Turn the rotating capsule until the North-South lines on the bottom of the capsule are parallel with the North-South lines on the map.
c) Be sure that the North-South arrow on the bottom of the capsule points to the same direction as North on the map. It is here you will make adjustments for declination, if necessary. See above for information about declination.



- 3 a) Hold the compass in your hand in front of you. Make sure that the base plate is in horizontal position, and that the direction arrows are pointing straight ahead.
b) Rotate your body until the North-South arrow on the bottom of the capsule lines up with the magnetic needle, and the red end of the needle points in the same direction as the arrow.
c) The directional arrows on the base plate now show your desired travel direction.

Now that you have determined your necessary bearing, you need to make sure you maintain an accurate bearing. First, you should find a suitable target in the terrain (e.g., a tree, boulder or a bush) towards which the direction arrows point. Walk towards the chosen object without looking at your compass. In denser areas, targets will be closer and need to be found more regularly. In more open areas your suitable target may be quite some distance away, allowing you to use your compass less often. When you reach your target, find a new object that is aligned with your bearing, and repeat the process.

Tip: Sometimes the compass capsule may get turned accidentally while you are walking. Remember to check from time to time that the capsule has not deviated from the direction that had been set on the compass.