

Know your sport: Compasses

Although the two main requirements for an orienteering event are an area and a map, nearly everyone carries a compass and considers this their most important aid to navigation.

So here are some thoughts on compasses ...

Beginners often think that it is essential to use a compass to orienteer.

Wrong! It is essential to use the **map** and the compass is an aid to help you ensure that you are going in the right direction. Keeping in contact with the map (knowing where you are and identifying the features as you pass them) is important. The compass enables you to be confident that you are following the right path or heading in the correct direction across a block of forest or moorland. It is an aid to let you confidently tackle more technically difficult courses.

There are two main types of compass used in orienteering—the ‘baseplate’ compass and the ‘thumb’ compass.. Examples of each are shown above. Both types come in various variations and models.



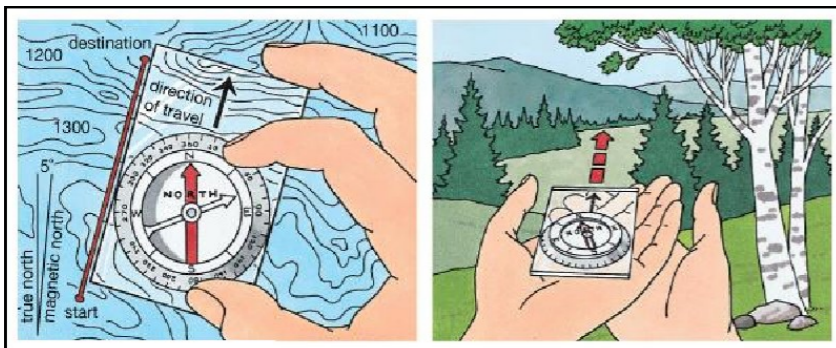
Using a Baseplate Compass.

The usual technique is shown below. The map will provide an indication as to the direction of magnetic North. On orienteering maps, this will be shown by regular lines placed at convenient spacings cross the whole map.

If you know the direction you wish to go then you need to set the compass so that the angle between magnetic North and the direction you wish to go is transferred to the compass. This is done by placing the compass on the map so that the baseplate is pointing in the direction you wish to go. Then the compass housing is twisted so that the arrow on the base of the housing (or parallel lines on many compasses) and the magnetic North lines are parallel. When the compass is then removed from the map and held in the hand, if the compass needle is lined up with the arrow on the base of the housing, the baseplate will point in the direction you need to go.

This is therefore a two stage process but can give a very accurate bearing when crossing a featureless area (or a very complex one). Of course you don't need to always set the

bearing. Just using the compass needle to ensure that you know which way is North allows you to run on a rough bearing towards a distant feature. Also checking that you are on the right path can often be done with a quick look at the compass and the map.



Using a Thumb Compass.



This type of compass was developed to allow the compass to be used in conjunction with the map. It is a single process where the compass is kept on the map allowing the orienteer to stay focussed on the most important part of orienteering — the map!

Although thumb compasses may have a rotating housing with lines visible through the base, these are not necessary when used directly in conjunction with the map. The key requirement is that when the leading edge of the compass base is aligned with the direction of travel, the compass needle is kept parallel with the magnetic North lines marked on the map.

The main benefit of this technique is that there is no need to remove the compass from the map — the map is always aligned so that directly in front of you is where you want to go. As you focus on the map you keep checking that the needle is parallel with the magnetic North lines.

Some personal thoughts

Having started orienteering about 40 years ago, I had only ever used a baseplate compass. However last Christmas I was given a thumb compass from one of my daughters.

I took it to the first event after Christmas and sat in the car trying to work out how to use it. All I knew was that it was fixed onto the thumb! I realised that I needed to prepare a bit first!

Before the next event I browsed the internet, read some instructions and checked some postings on 'Nopesport'. I was therefore more confident and took the plunge. I found it remarkable how well the compass complemented the map and encouraged me to take the direct route more frequently. I quickly gained confidence in using it! I have now used it at several more events and I am totally converted. The focus on the map and staying in contact with it is the main bonus. The main disadvantage is that, as the map is held so it fits under the compass, I am tending to fold it smaller. This means that when there is a long leg it is hard to see all the route choice options.

Finally I found at the first event, a frosty morning, my thumb got very cold. I have now loosened the elastic but added an elastic 'safety' loop to secure it to my wrist to reduce the chance of loosing it if I fall.



The 180° Error

The descriptions given have missed out one key point. The red end (usually) of the compass needle points North. The magnetic North lines run North-South and so although you twist the compass housing so that the lines on the base are parallel with the magnetic north lines, actually you need to know which way on the map is north and which is north for the compass (usually marked with an arrow on the base of the compass housing). Then, when removing the compass from the map, you face in the direction that places the red end of the compass over the arrow on the base of the compass. And then you are ready to head in the direction the baseplate now points.

Of course, this all adds to the time so frequently orienteers will ignore checking the correct N-S direction and hope that they already know roughly which direction they need to go. In many cases they will be right but, if not, then they will head off in the wrong direction, NE instead of SW for example. This is the 180° error and can happen to anyone — even the best!