

How to use a Compass with a Map

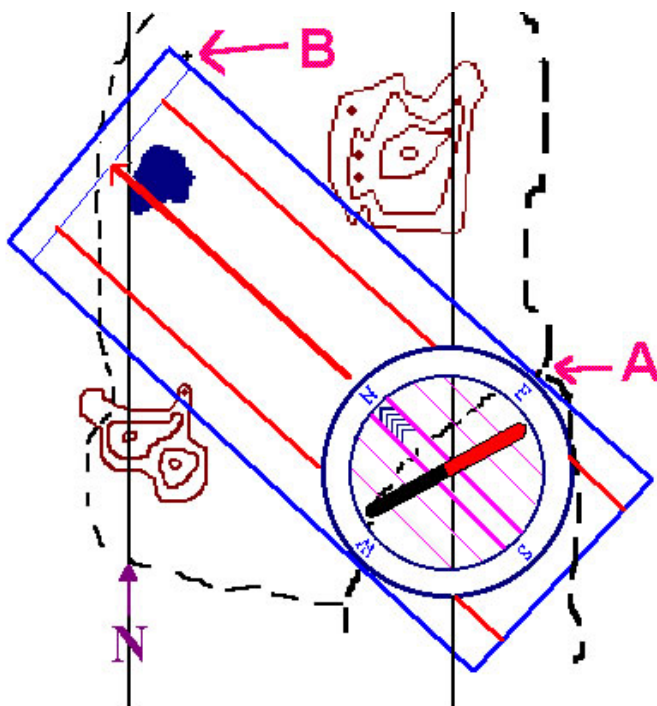
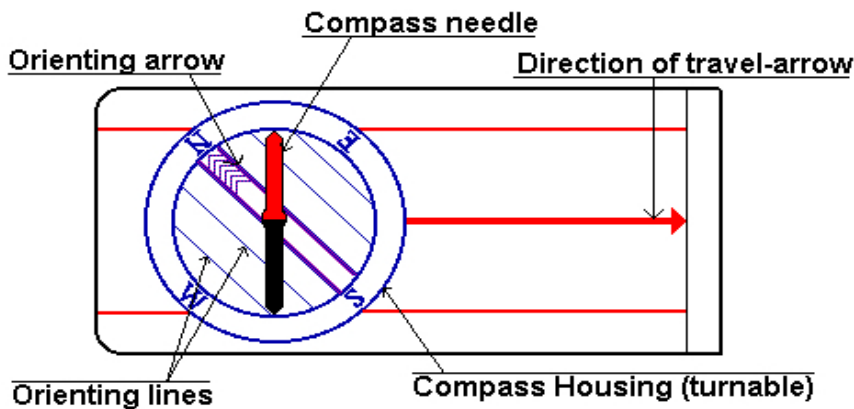
When you use both a compass and a map, the compass really shines. You will be able to navigate safely and accurately in terrain that you've never been before and without following trails. It will take some training and experience to become proficient.

Before you venture on you should be proficient on how to use a compass and how to read a map:

This is what you will learn on this page:

1. Align the edge of the compass with the starting and finishing point.
2. Rotate the compass housing until the orienting arrow and lines point N on the map.
3. Rotate the map and compass together until the red end of the compass needle points north.
4. Follow the direction of travel arrow on the compass, keeping the needle aligned with the orienting arrow on the housing.

Here is your compass

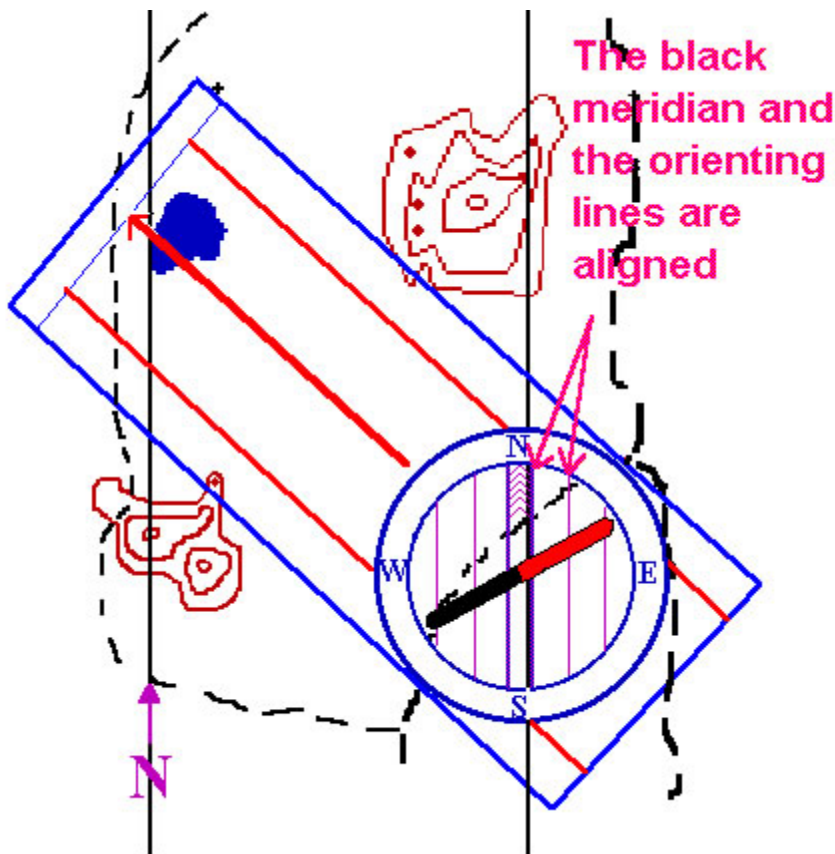


You want to go from the trail-crossing at point A, to the rock at point B. Of course, to use this method successfully, you'll have to know you really are at A. This is what you need to do:

1. put your compass on the map so that the edge of the compass is at point A. The edge you must be using, is the edge that is parallel to the direction of travel arrow.
2. take your compass, using the same edge, and move it to line up with point B, like you were going to draw a straight line between the two points. Of course, you could have used the direction arrow itself or one of the parallel lines on the compass, but usually, it's more convenient to use the edge.

At this point, some instructors may say that you should use a pencil and draw a line along your course direction. I would recommend against doing this because:

1. It takes a lot of time to get a pencil out and place the map on a flat surface to draw a line which offers no real enhancement in accuracy of this method.
2. If you are in wet weather, it may destroy your map, or if it is windy, you may lose it. You should keep your map (preferably in a sealed) transparent plastic bag or clear contact paper to keep the moisture out, and if it is windy, tied up, so the map can't blow away. But most important of all, is that any drawings may hide important details on the map.



Time to be careful again! The edge of the compass, or rather the direction arrow, **must** point from point A to point B! If you do this part wrong, you'll be walking off in the exact opposite direction of what you want to go. So take a second look at the compass and the map just to be sure. Remember, always check twice and walk once.

- Now keeping the compass steady on the map, you are going to align the orienting lines and the orienting arrow with the meridian lines of the map. The lines on the map that go from north to south (up and down).
- While you have the edge of the compass carefully aligned from point A to point B, turn the compass housing so that the

orienting lines in the compass housing are aligned with the meridian lines (north to south, up and down) on the map without moving the compass edge that is aligned from point A to point B. During this process, it is NOT important what happens to the compass needle.

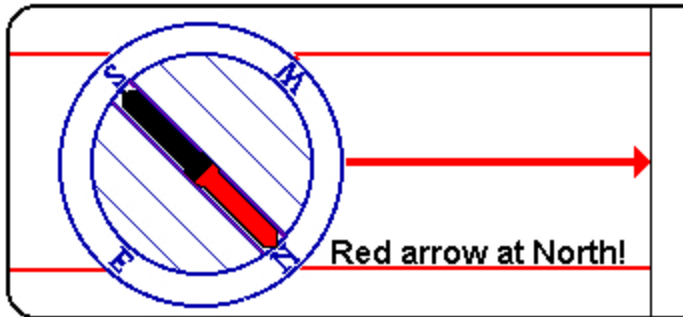
There can be a number of serious mistakes that can occur in the process above. Let's take the problem with going in the opposite direction first.

- Be absolutely certain that you know where north is on the map, and be sure that the orienting arrow is pointing towards the north on the map. Normally, north will be up on the map. The possible mistake is to let the orienting arrow point towards the south on the map.

- Keep an eye on the edge of the compass. If the edge isn't going along the line from point A to point B when you have finished turning the compass housing, you will have an error in your direction, and it can take you off your course.

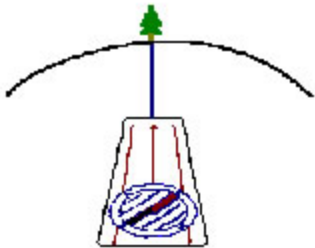
When you are sure you have the compass housing pointed in the right direction, you may take the compass off the map and read the azimuth (direction degree) off the housing, from where the compass housing meets the direction arrow.

Very Important. Be sure that the compass housing does not turn, before you reach your target point B! This will result in giving you the wrong direction to travel. If this occurs, you will need to use the map and re-plot your course (like above). One tip would be to write down the azimuth (direction degree) on a piece of paper.



The final step is to hold the compass in your hand holding it as flat as possible, so that the compass needle can turn. Then turn yourself, your hand, and the entire compass, making sure the compass housing does not turn. Turn until the compass needle is aligned with the lines inside the compass housing. The mistake here again is to let the compass needle point towards the south instead of the north.

The red part of the compass needle must point north in the compass housing, or you'll be go in the opposite direction.



It's time to start hiking to point B, but to do that with optimal accuracy, you'll need to do that in a special way. While holding the compass in your hand, with the needle aligned with the orienting arrow, aim, as careful as you can, in the direction that the direction of travel-arrow is pointing to. Fix your eye on some special feature in the terrain as far as you can see in the direction and hike there. Be sure as you hike that the compass housing **Does Not Turn!**. If you are hiking in a dense forest, you may need to aim you compass several times to get around obstacle like trees that are in your way.

After getting around the obstacle, use the above technique to re-aim you compass for the right direction. If this is done correctly you will reach your target point B.