

<http://lggagnon.wordpress.com/2012/07/20/how-to-use-an-orienteeing-thumb-compass/>

How to Use an Orienteering Thumb Compass

Introduction

The “thumb compass” was a slow revolution in the sport of orienteering when it was first designed by Suunto in 1983. Its use amongst orienteers is still not ubiquitous – but should be. Some orienteers still use the older technology small rectangular “base plate” O compasses.



Typical thumb compass



Typical baseplate compass

The advantages of the thumb compass over the baseplate compass are significant and it is my suggestion that all orienteering coaches and O clubs should be teaching beginners the proper use of a thumb compass and should not even be selling base plate compasses.

As far as I am concerned, base plate compasses confuse the orienteer by adding the unnecessary skill of rotating the compass bezel to take a compass bearing. Bearings are not really required in

orienteeing and the setting of such bearings will add minutes to your overall race time. All that is required is that the orienteer knows his/her position and that the north needle on the compass is aligned with the north lines on the map. Compass bearings give the orienteer a false sense of reliance on the compass rather than the map. Base plate compasses also make it more difficult to keep track of your position on the map. They also cover up more features on the map making it more difficult to navigate in open terrain. Lastly, they are more difficult to keep overlain on the map without using more finger and hand pressure and this can get uncomfortable over a longer O event.

In orienteeing the map is much more vital to successful orienteeing than the compass. Two phrases easily sum up successful orienteeing:

- always keep the map oriented to north
- stay in touch with the map

The way to keep the map oriented is to ensure that the compass needle is always pointing to the north along the magnetic north lines on the map. The way to stay in touch with the map is to keep your body and map oriented with the features around you and to keep the tip of the thumb compass point on your present map location. A thumb compass makes both these techniques easier.

Equipment

Thumb compasses are manufactured by all the usual suspects: Brunton, Moscow, Silva and Suunto. They are sometimes overpriced in my estimation – usually around \$65 retail and I have seen them advertised for as high as \$120. I have no vested interest in [o-store](#) but they have good prices on the Moscow Compass units (CDN\$26-49). However, a Chinese manufacturer (Riching's "Kanpass" compass) is trying to get into the game and they may create more price competition.

When I talk about a thumb compass for this blog I talk about those which do not have rotating bezels that enable compass-set bearings to be taken. If you have such a rotating bezel thumb compass I suggest for the exercise of properly using such a compass that you set the housing to its north position and leave it there for this exercise and all future O events, or better yet use some small dabs of super glue or epoxy cement to keep the housing from rotating. However, the advantage to having a thumb compass with a rotating bezel is that you can take bearings if absolutely necessary – and the only times I find that convenient are when I am doing course setting and control pickup, or on rogaining events where the distance between controls is very long and there are high elevation points to take bearings on.

Technique

1. decide which hand is more comfortable for you to hold the map in while running. This same hand's thumb is used for the compass. Make sure you buy the correct hand compass (they come in left and right hand, obviously). Normally right-handers use the left hand

and vice versa. Some elite coaches suggest you should [determine what your dominant eye is](#) and use that same hand as it will reduce parallax. This is somewhat anal. Whatever feels most comfortable. See photo below.

2. place your SI stick on the index finger of the opposite hand and your O control description sheet holder should be on the same wrist that you are holding your map with.
3. with the thumb compass secured snugly on your thumb take the map and with the opposite hand fold it conveniently in half or even thirds such that the map is manageable with just one hand, not cumbersome and shows at least the next 2-3 control locations and a reasonable area around them.
4. know that the magnetic north lines on any orienteering map are light blue and are 250m apart. Also know that the control numbers, control descriptions and any map logos and text are also oriented to magnetic north – you can use these if a magnetic north line is not obvious on the map. If necessary you can also fold your map along the north lines so that one edge of the map can be used as a north line. These tricks, along with ensuring the needle is always oriented NORTH and not SOUTH will keep you from making 180 degree errors.
5. hold the map and compass hand horizontal and at belly or waist height in the centre of your body. Then place the tip of the thumb compass on your current map location while the longitudinal part of the compass housing (the line of travel) is oriented in the direction of your planned route to the next control and perpendicular to your body.
6. move your feet and upper body as a unit to rotate your body such that the compass needle aligns with north on the map.
7. the longitudinal pointer of the compass now points in your chosen direction of travel. Look up and around you and pick something distinctive to aim for in that direction.
8. Go!

The key technique is to keep the tip of the compass on your location and keep the north arrow aligned with north on the map. Secondly, your body should be aligned with your direction of travel as is the longitudinal part of the compass housing.



On-route from Control 6 to 7 on a sprint course, position about 100m NW of control 6, compass aligned to north on map and orienteer aligned with chosen route.

If you are a complete newbie with a thumb compass my suggestion would be to find yourself an old sprint map near your home and practise the correct technique on some ghost controls that you circle on the map beforehand. Preferably the map should have a lot of open areas to make the training easier. Or find an experienced orienteer to assist you.

Bonus Techniques

Sector Colours

Some thumb compasses have coloured sectors on the housing dial (photo right) . These are not essential but can help to keep in touch with your direction of travel and you can essentially use them for taking bearings without having to rotate the bezel. The example at right would have a bearing of “6.5 green” or “D”.

Scales

Thumb compasses will also be graduated with a small centimeter scale on the direction of travel line (longitudinal part) and possibly also on the thumb side of the compass, depending on the make/model of thumb compass you have. The scale is usually graduated into two 1 centimeter

length marks. One centimeter on an orienteering map is either 50 metres on the ground (for 1:5000 sprint maps), 100 metres on the ground (for 1:10,000 normal maps) and 150 meters on the ground (for 1:15,000 elite class maps). I am getting out of the subject of this blog but you should also learn how to pace count and to know what a 100m distance is in various terrain. The scale on your compass is useful for judging distances between features along your planned route to the next control.

Feature Alignment

With the compass and map aligned properly check the direction of the north needle. Now look at the map and relate the feature alignments to north. This is a useful method for relocation when you loose touch with the map.



Using edge of control description box to align compass needle to north. Position is about 80m NE of Control #4 on a 1:5000 sprint map. Note that road is aligned NW-SE as we crossed it. Also the bearing is “middle blue” or “B”. The compass and map have yet to be aligned with the runner’s direction of travel (i.e. – the compass and map need to be rotated left to directly ahead).
NOTE: compass not usually required for sprint courses!