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OUTDOORS**

CB-202053

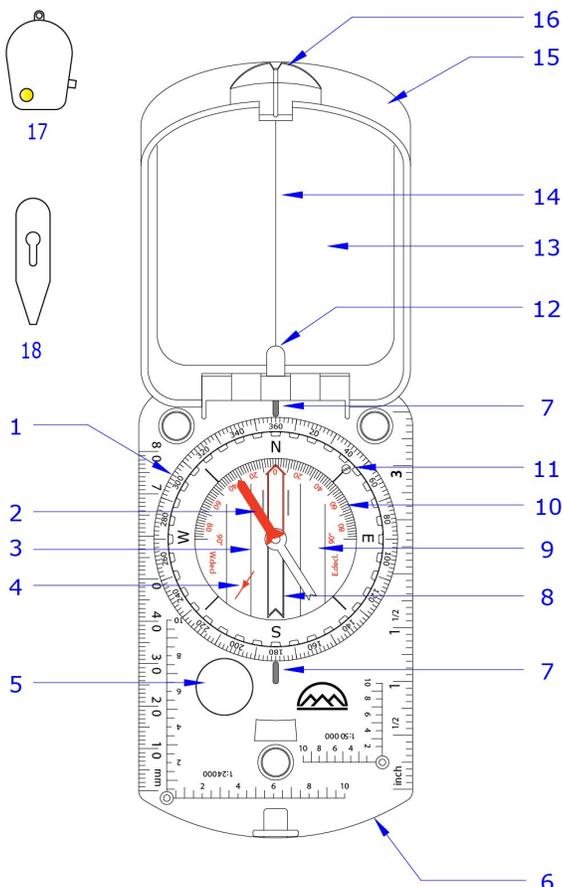
RS46 Sighting Compass

User Guide

Congratulations on choosing the RS46 compass. The mirror compass design allows you to view the compass dial and the background at the same time. The fact that the compass dial can be seen at the same time the reference point is aligned makes mirror compasses ideal for taking accurate bearings for navigation. Whether you are an experienced navigator, or new to the field of orienteering, we are confident that this compass will satisfy your needs and provide you with years of reliable service.

IMPORTANT

The RS46 compass reads Magnetic North which is not the same as True North. The meridian lines on a map indicate the direction toward true north while your compass needle indicates the direction toward magnetic north. The angle between these two directions is called magnetic declination and will vary by geographic location. Before navigating you should check your local magnetic declination from a trusted source, such as a recent map or the NOAA website. This variance or declination will vary depending on your location, but in most locations, there will be more than a few degrees of variance between true North and Magnetic North which must be accounted for in order to navigate accurately. This compass allows for adjustment to compensate for this. Please see step 7 for declination adjustment

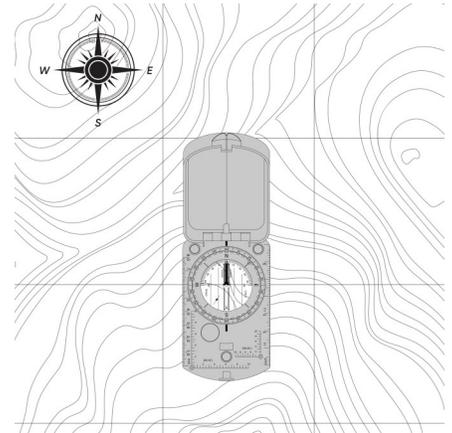


RS46 COMPASS FEATURES

- 1 - Luminous Graduation Ring
- 2 - Magnetic North/South Indicator Needle
- 3 - Orienting Lines (x4)
- 4 - Clinometer Needle
- 5 - Magnifier Lens
- 6 - Base Plate
- 7 - Luminous Bearing Marks (x2)
- 8 - Orienting Arrow (aka Box / Shed)
- 9 - Liquid Filled Needle Capsule
- 10 - Magnetic Declination Scale
- 11 - Declination Adjustment Screw
- 12 - Peep Sighting Hole
- 13 - Reflective Sighting Mirror
- 14 - Sighting Line
- 15 - Protective Cover
- 16 - Upper Sighting Notch
- 17 - LED Micro Light (uses CR1220 battery)
- 18 - Declination Adjustment Tool

1. Orienting the Map

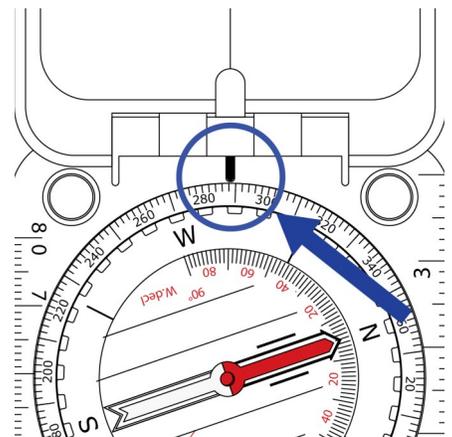
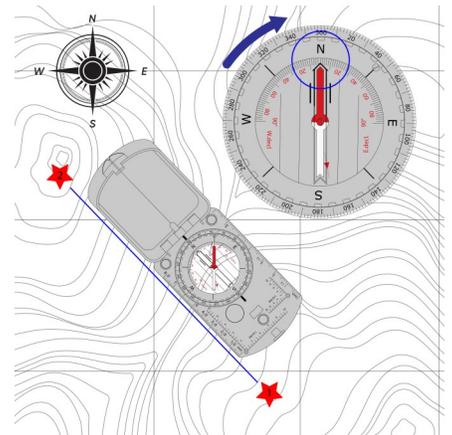
To better understand your surroundings, you should use your compass to first roughly orient your map in the proper direction. This ensures the geographic features around you are in the same general direction as you see them on the map. To do this, hold your compass level and look at the red end of the needle to see where north is. Then turn the map so that the northern upper edge is pointing in the same northern direction.



2. Set Bearing with Map

When navigating with a map and compass, you are first determining a direction of travel on the map and then transferring that direction to establish your travel path (step3).

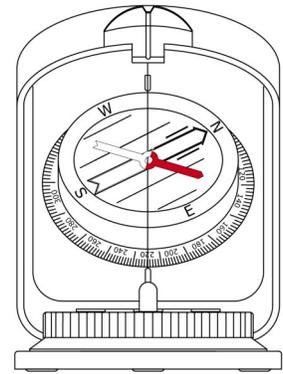
- With the map still oriented correctly, place the compass on the map between your starting point (A) and your target point (B)
- Turn the bezel (red) until the Orienting Arrow is lined up with the Main Indicator Needle
- Note the bearing which is indicated by the index line/graduation ring. It is recommended that you carry a notebook to write these bearings down as you navigate your course



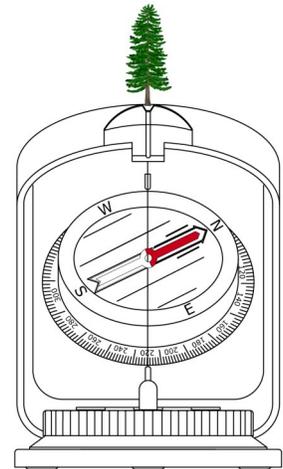
4. Navigate Using Map Bearing

Using the map bearing generated in the prior step, you can then apply this to identify your travel path.

a. Raise the compass up to eye level while keeping the baseplate flat and level. Adjust the angle of the sight mirror so that as you look through the peep hole, you can clearly see the directional needle capsule.



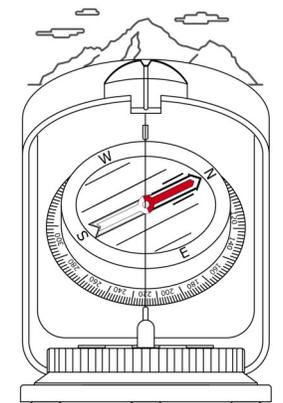
b. Slowly turn your body until the directional needle is within the orienting arrow. Select a visible target such as a tree or large geographical feature in front of you to help you maintain your direction while traveling. If you need to continue past your target feature, just sight again to acquire a new target feature. This process can be repeated as many times as necessary.



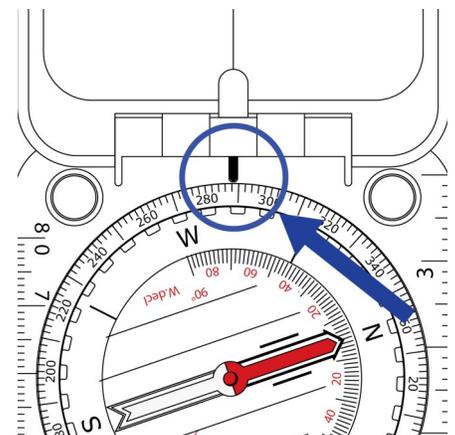
5. Sight a Target Bearing

A bearing is the angle between direction to north and the direction to a target. This can be used for example, for documenting your travel route, or communicating directions with others.

a. Align the target with the sighting notch or hole, keeping the center line on the mirror in line with the center of the capsule.



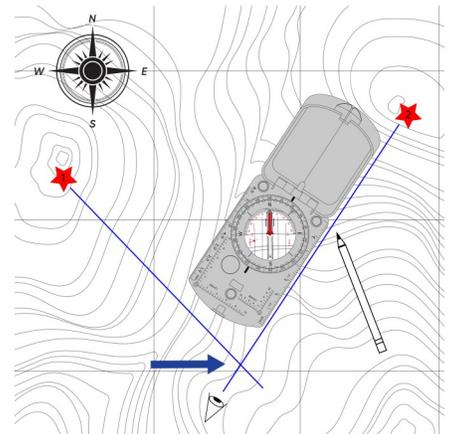
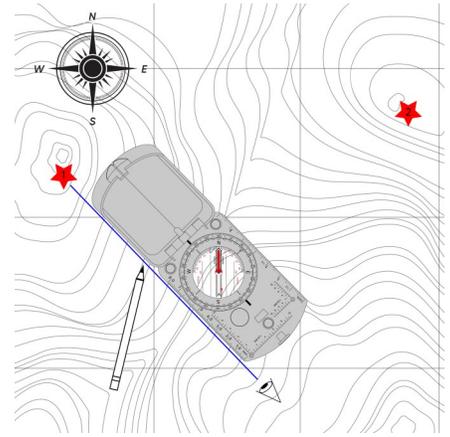
b. Hold the compass steady and turn the capsule (red dial) until the orienting arrow and needle are aligned. You can then read the numerical bearing indicated at the graduated ring vs bearing line. It is recommended that you carry a notebook to write these bearings down as you navigate your course



6. Finding Your Location

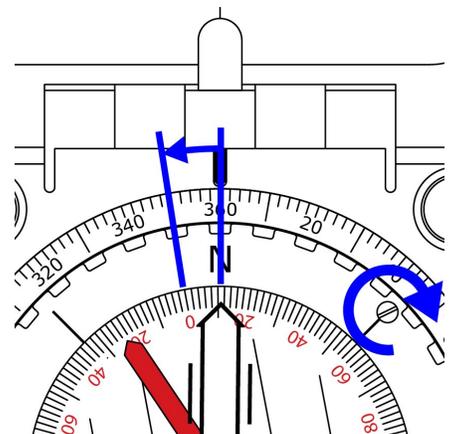
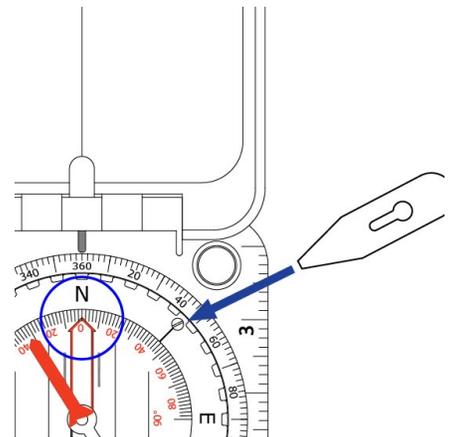
You can sight two or more objects and use triangulation to accurately determine your current location.

- a. Find a visible object that is identifiable on your map, and mark that point.
- b. Follow steps in previous 'Sight a Target Bearing' procedure to locate your first target.
- b. Place the compass on the map, and align one end of the compass edge with target 1.
- c. Turn the compass baseplate until the directional needle is within the orienting arrow. Draw a line along the edge of the compass baseplate.
- d. Choose a second object (target 2) and repeat steps. The intersection of the two lines indicates your position, and the closer the angle between the intersecting lines is to 90°, the greater the accuracy.



7. Declination Correction

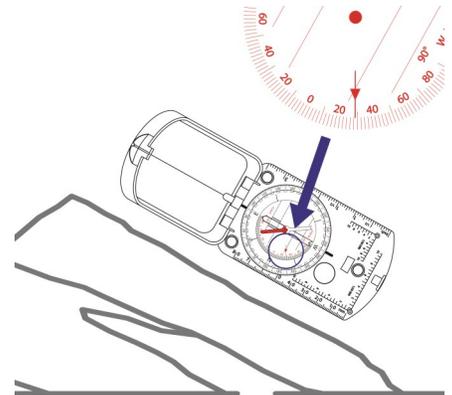
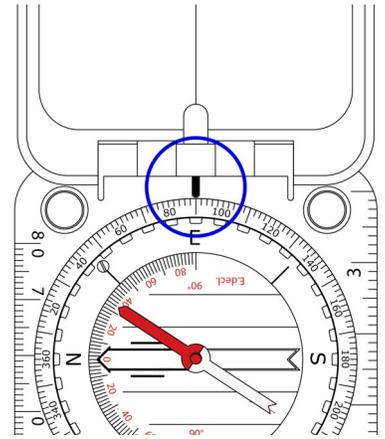
The meridian lines on a map indicate the direction toward true north while your compass needle indicates the direction toward magnetic north. The angle between these two directions is called magnetic declination. Before navigating you should check your local magnetic declination from a trusted source, such as a recent map or the NOAA website. This variance or declination will vary depending on your location, but in most locations, there will be more than a few degrees of variance between true North and Magnetic North which must be accounted for, for accurate navigation. This information is normally indicated on most topographic maps. The RS46 compass allows for declination adjustment by simply Inserting the metal key (included) into the adjustment screw located in the upper right quadrant of the red bezel ring.



8. Measure Slope Incline

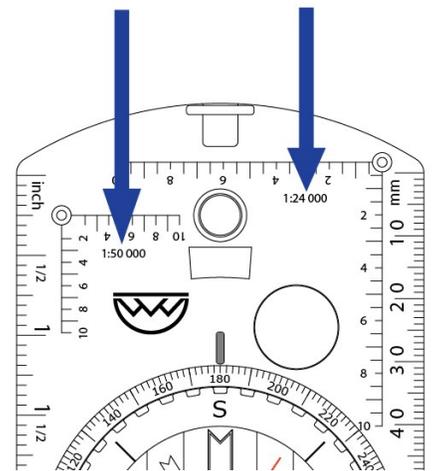
The declination scale within the liquid filled capsule also functions as a scale for the clinometer that allows the measurement of slope angle for features such as hillsides and mountains.

- a. Turn the graduated index dial so that the forward bearing reads 90° (due East) and tilt compass on its side with the declination scale downwards.
- b. If you have a clear view across the slope, align the compass to the slope with the compass baseplate facing you.
- c. If you have a clear view up or down the slope, sight the top or the bottom edge of the baseplate.



9. Measuring Distances on Map

The RS46 compass includes two romer scales and general measuring scales on the baseplate to help you calculate distance on a map. If using the romer scales, be sure to use the same scale as indicated on your map. If the romer map scale is not shown, use a general scale (cm or inch) to calculate distance



10. Care

The RS46 compass will, if treated carefully, serve you well for many, many years. Always check that your compass is functioning properly before heading out. Avoid exposure to extreme temperatures such as leaving it on a dashboard or out in the direct sunlight which can deform the plastics with a leaking compass capsule as a result. Avoid dropping the compasses on hard surfaces and handle it with care. Don't store or place the compass close to strong magnetic fields such as knives, mobile phones, radio speakers, magnets etc. This can potentially cause reversed polarity of the compass needle which will result in it pointing south instead of north. Clean your compass regularly using only fresh water and mild soap. Operating/storage temperature: -30° C - +60° C / -22° F - +140° F