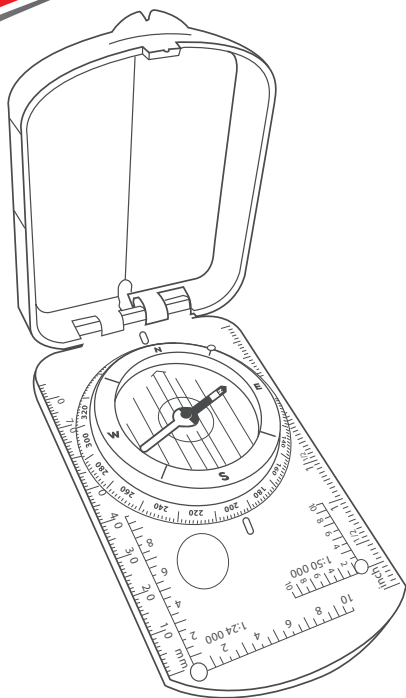
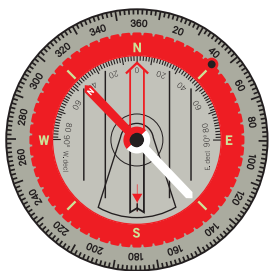




PREPARED4X MIRROR SIGHTING COMPASS



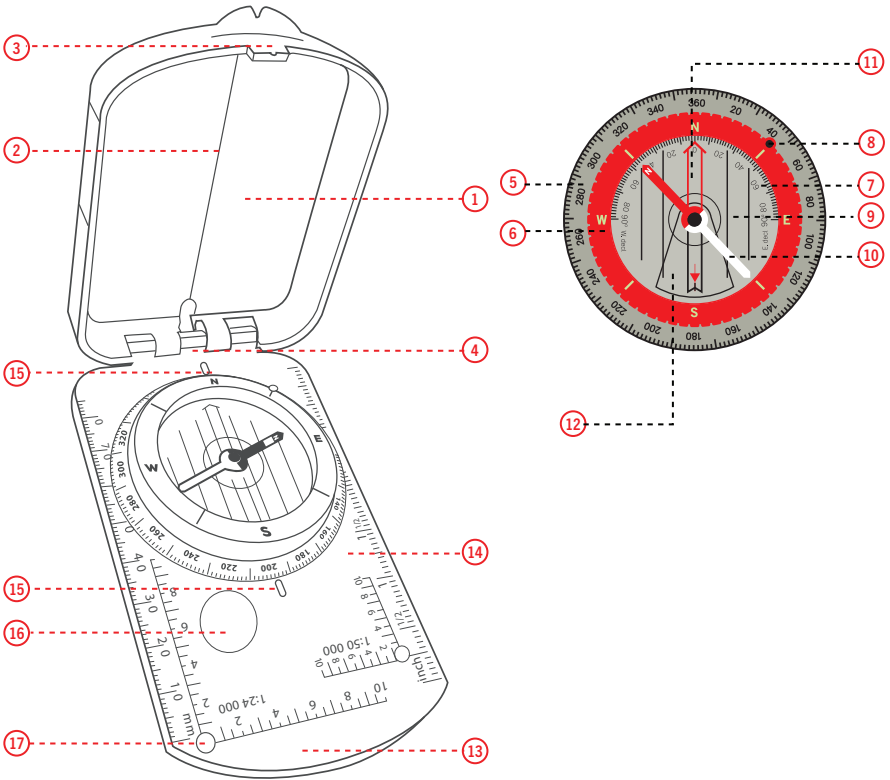
User Manual



Congratulations on your purchase of our Mirror Sighting Compass. It is a precision instrument designed for professional use and is the most reliable navigation method if you know how to use it. It is a rugged, durable piece that, with proper care, will remain dependable and accurate.

We recommend that you read this manual to understand the basic functions of the compass, before using it.

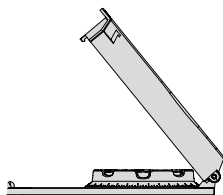
BASIC COMPASS FEATURES



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1 SIGHTING MIRROR

Using a Sighting compass increases the accuracy in the compass field work. The mirror enables the user to simultaneously sight the bearing in the terrain while checking that the compass needle is aligned with the North arrow in the compass housing. A mirror-sighting compass is at its best in open terrain where you must determine direction over long distances.



When using a sighting compass with a mirror, hold the compass at eye level with the mirror tilted to a 45° angle (the horizontal part of the sighting cross shall align with the center of the compass housing). Now you can check your direction by looking at the bezel in the mirror while sighting in the correct direction of travel at the sighting cross and sight.

2 SIGHTING CROSS

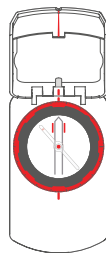
The vertical part of the sighting cross shows the direction that you want to travel along or the bearing you are taking. It is aligned with the index line and the sight. The horizontal part helps you setting the mirror at a correct angle.

3 SIGHT

See 1, Sighting mirror.

4 LUMINOUS MARKINGS/RING

The luminous marking and graduation ring allows for continuous navigation and compass reading in the dark. Expose the compass to daylight or flashlight so the luminescent markings are properly charged. Once charged, they can give up to 4 hours of light.



5 GRADUATION RING / GRADUATION SCALE

The angle between true North and the direction of travel is called bearing (the direction from where you are, to where you want to go). The value of this angle can be read directly off the scale on the graduation ring. Our compass have a graduation scale divided into 360 degrees. The Graduation ring is also marked with the cardinal points (N-S-E-W) on some models. A unique feature of the graduation ring is its 'glow in the dark' feature for better night navigation.

6 TURNABLE COMPASS HOUSING

This is used to set your bearing or when navigating with the map and compass.

7 8 DECLINATION SCALE (FIXED) / DECLINATION ADJUSTMENT

Declination is the difference between true north and magnetic north. This feature allows you to account for this difference, instead of the archaic method of accounting for it by using an addition-subtraction method (Read more under 'MAGNETIC DECLINATION').

9 LIQUID FILLED CAPSULE

The capsule is filled with anti-static liquid that helps the magnetic indicator settle quickly, perfect dampening, stability and accuracy of the needle. The capsule is hermetically sealed to protect against corrosion and moisture.

10 COMPASS NEEDLE

High quality, stainless steel, magnetic needle. The combination of a jewel bearing and a steel pivot minimizes friction, which consequently gives fast and precise movements.

11 ORIENTING LINES / ORIENTING ARROW

Our compass has red/black north-south lines and arrow in the capsule bottom for easy and safe settling. They are fixed within the compass housing and designed to be aligned with the vertical grid lines on a map. The orienting arrow is aligned to north on the graduation ring.

12 CLINOMETER

The clinometer is useful in uneven terrain where you need to determine the angle of slopes (tilt), elevation or depression. Open cover completely and hold compass at eye level, on its side. The clinometer needle should move freely. Tilt the compass upward, with the terrain. Read inclination from where the inclination needle meets the declination scale.

13 BASEPLATE

Highly durable baseplate in transparent acrylic plastic. The transparent plastic makes it great for map use. Use the edge of the baseplate to get your bearing.

14 SCALES

There are scales on the baseplate for measuring distances, etc. on a map. Each edge of the compass has different rulers for use with different map scales. The scales and prints are engraved on the compass to ensure extra durability and resistance.

MAP MEASURING SCALES:

A map is a reduced picture of the terrain. It is the ratio of a distance on the map to the corresponding distance on the ground. The determined proportion between the distances on the map and the corresponding distance on the ground is called a map scale. To obtain the corresponding distance in the field, the distance on the map must be multiplied by the divider of the scale. The most common scales are 1:10 000, 1:15 000, 1:25 000 and 1:50 000. For example, the scale 1:10 000 means that 1 cm on the map corresponds to 10 000 cm = 100m in the terrain.

RULER:

If the map scale is 1:50 000, and your compass has the corresponding map measuring scale, use this to measure distance. If your compass lacks the corresponding map measuring scale, use the regular Metric or Imperial Ruler found on the edge of the baseplate. Example: If the map scale is 1:50 000, then 1 mm on the map = 50m in the terrain. Example: If the map scale is 1:24 000, then 1 inch on the map = 24000 inches (2,000 feet) in the terrain.

ROMER SCALES:

Use the Romer coordinate scales on the baseplate to measure distance or accurately work out a six figure grid reference that lets you determine the coordinates of a known position on the map (or to determine the position of known coordinates on the map).

15 INDEX LINE

The index line is fixed beneath, or at the outer edge of the compass housing as an extension of the sighting cross and sight. It marks the bearing you set by rotating the compass housing. If you rotate the graduation ring to line-up the red north of the compass needle to the North arrow, a bearing can be taken from the graduation scale at the index line.

16 MAGNIFYING LENS

The magnifying lens is for detailed map reading.

17 RUBBER FRICTION FEET

Located at the bottom side of the baseplate, it gives the compass a good grip and prevents it from slipping on the map, guaranteeing a precise map reading.

HOW TO NAVIGATE

Orienting the map means to line it up with the terrain, so that the north on the map is pointing to North in the real world. Firstly, lay out your map on a relatively flat, smooth surface. Then, place your compass on your map with the edge of the baseplate parallel to the north-south meridians on the map. Notice the orienteering lines and direction-of-travel arrow are all parallel with the map lines. Now, the map is oriented to the real world, remember to keep the map oriented at all times. By doing this it will be very easy to follow your route since turning right on the map also means turning right on the ground! A map that is properly oriented is easier to interpret and follow than a map spread out haphazardly.

NAVIGATING WITH THE MAP AND COMPASS

When navigating with a map and compass, you must first determine your destination on the map and then transferring that direction to the real world.

1. Place your compass on the map so that the straight side of the baseplate lines up between your current position and your destination. Make sure the part with the mirror points towards your destination.
2. Now, rotate the compass housing until the orienting lines on the compass are parallel to the meridian lines on the map with N pointing north.
3. Lift your compass from the map and hold it horizontally in your hand. Turn yourself and the compass until the red end of the needle is inside the red north/south arrow. Now the sighting cross and sight will point towards your destination. (Compensate for declination)
4. Select a visible landmark your path to help you maintain your direction while travelling and start moving.

MAGNETIC DECLINATION

The meridian lines on a map indicate the direction toward true north while your compass needle indicates the direction toward magnetic north. The difference between Magnetic North and True North is “magnetic declination“. Before navigating you should check your local magnetic declination from a trusted source, such as a recent topographical map or the NOAA website. In areas with significant declination, you must compensate for it when navigating and adjustments must be made to walk a correct bearing. Declination can be handled either with a fixed declination scale or declination adjustment in the compass capsule.

FIXED DECLINATION SCALE

The Prepared4x mirror compass has a fixed declination correction scale, to simplify the calculations required in a way that the number of degrees you read off the bezel factors the declination in, without you having to add or subtract degrees in your head.

HOW TO:

Identify the declination variance from your map. In this example, 20° east.

Follow the instructions in ‘NAVIGATING WITH THE MAP AND COMPASS’. Before taking step 2, turn yourself and the compass until the red end of the compass needle points to 20° on the “E.decl” on the fixed scale according to your current location. Hold the compass steady and turn the compass housing to align the orienting arrow with the new needle position. Now the sighting cross and sight will point towards your destination. Select a visible landmark your path to help you maintain your direction while travelling and start moving.

ADJUSTABLE DECLINATION FEATURE

Prepared4x mirror compass has a declination adjustment screw, located on the bezel, which allows you to rotate the orienting arrow independently of the compass dial. With this feature, you will be able to calculate your map bearing without adding or subtracting the amount of local magnetic declination. For this feature, you will need the adjustment key, which can be found inside the safety release of the lanyard included in the package.

HOW TO:

Identify the declination variance from your map. In this example, 20° east.

Insert the adjustment key into the declination adjustment screw, located on the bezel. Turn the screw until declination indicator is 20° at the “E.decl” scale. Remember to use the orienting lines at the bottom of the capsule and NOT the orienting arrow as map North reference lines when taking the bearing on the map. After you have adjusted your compass for declination, the compass needle still points towards magnetic north.

PRECAUTIONS FOR USING COMPASS

1. Keep the compass away from all metal objects such as keys, steel screws, wristwatches, etc. since these can result in false readings by deflecting the magnetic needle
2. Keep the compass away from any magnets or appliances that contain magnets or generates magnetic fields such as mobile phones, speakers, etc.
3. Do not expose the compass to extreme temperatures (high or low), as such exposures can permanently damage the compass.
4. Always examine your compass and ensure it is functioning properly before embarking on your expedition.

CARE INSTRUCTIONS

- Only use damp cloth and mild detergent for cleaning and clean your compass regularly.
- Do not use abrasive detergent or apply solvent on the compass.