Eyeskey

PRODUCT MANUAL

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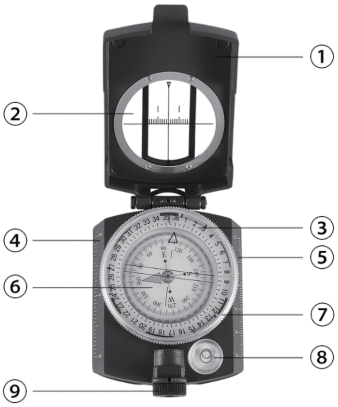
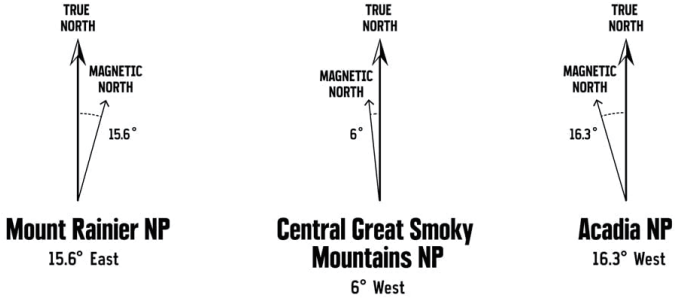
PARTS OF THE COMPASS



① Metal Cover
② Sighting Window with Reticle
③ Fluorescent Flat with Red Travel Arrow/Index Pointer
④ Side Scale (2-inch)
⑤ Side Scale (5-centimeter)
⑥ 360° Pivoting Dial
⑦ Bezel with Orienting Arrow & Lines
⑧ Level Bubble
⑨ Sighting Eyepiece

NOTE.

Magnetic declination is an important concept for accurate navigation. Because declination varies depending on where you are on the globe, your first step is to find the declination value for your trip area.
You could find your local declination from the NGDC (the National Geophysical Data Center), or alternatively, find it near the legend on your map, make sure to use the most recently-published map available for the most accurate values.



HOW TO DETERMINE TRUE NORTH?

Step 1: Rotate the bezel so the orienting arrow is aligned with the travel arrow (the red line on the fluorescent portion of the compass). If you do so, the red line should beneath the number “36” on the bezel.

Step 2: Hold your compass flat and level in front of you, make sure the level bubble keeps still in the middle circle. When the dial stops moving, the direction the green arrow points is magnetic north. Rotate your body until the green arrow on the dial is lined up with the orienting arrow on the bezel (and, thus, the travel arrow as well), now you are facing the magnetic north.

Step 3: Turn the bezel the same magnitude and direction as your declination value. Let’s say you are in Mount Rainier NP where the declination is 15.6° East, then you turn the bezel towards East (clockwise) for 15.6°.

Step 4: Line up the green arrow and your orienting arrow by turning your body again. You should be facing true north now.

HOW TO ORIENT YOUR MAP?

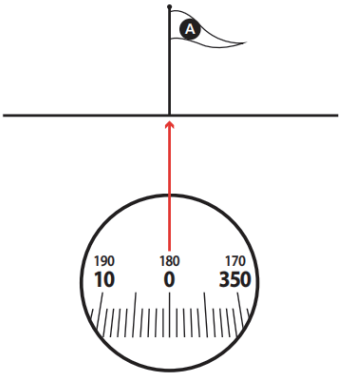
Step 1: Place the compass on your map with one of its straight edges aligns with the edge of your map and the travel arrow pointing toward the north of your map.

Step 2: Repeat Step 1 & Step 3 in the last section.

Step 3: While holding both map and compass steady, rotate your body until the green arrow is lined up with the orienting arrow. Now you have the map oriented correctly and can identify nearby landmarks on it.

Step 4: Line up the green arrow and your orienting arrow by turning your body again. You should be facing true north now.

HOW TO TAKE A BEARING IN THE FIELD?



Step 1: Finding a landmark that you can also identify on your map or any objects that you can target on.

Step 2: Hold your compass flat and level with the direction of travel arrow pointing away from you and directly at the landmark.

Step 3: Hold your compass steady and keep both eyes open and look through the sighting window towards the target object. Making sure the object and sighting line appear to overlap, allowing an accurate reading. Then read the bearing value through the optical eyepiece. (THE MAIN SCALE (BLACK) IS THE BEARING FROM YOU TO THE OBJECT. THE SECONDARY SCALE (RED) IS THE REVERSE BEARING FROM THE OBJECT TO YOU.)

Step 4: Calculate the true bearing by plus or minus your local declination. The magnetic declination is expressed in degrees and east or west to indicate the direction of magnetic north from true north. If it's east, then you add the number of degrees upon the bearing you've captured, otherwise, you reduce it.

For eg.
If you are targeting on your campsite and the number is 80, and your local declination is 14.2° E, then to get there, you might follow a bearing of 94.2 degrees (80° + 14.2° = 94.2°).

NOTE: IF YOUR EYES ARE NOT PARALLEL, AS IN THE CASE OF HETERO-PHORIA, YOU MAY NEED TO SIGHT WITH ONE EYE. CHECK BY FIRST TAKING A READING WITH BOTH EYES OPEN. THEN CLOSE THE EYE LOOKING AT THE OBJECT. IF YOUR READING CHANGES SIGNIFICANTLY, USE JUST ONE EYE TO SIGHT OBJECT AND TAKE READING.

HOW TO TAKE A BEARING FROM A MAP?

If you know exactly where you are on a map and you want to use the compass to follow a bearing to your destination, you need to take a bearing from your map.

Step 1: Draw a line on the map starting from your position to your final destination.

Step 2: Open your compass and set it on the map so that one of the straight sides of the base aligns with the line you just drew. Make sure the direction of travel arrow is pointing in the general direction of your destination.

Step 3: Rotate the bezel until the orienting lines on the compass are aligned with the north-south grid lines and pointing north on the map.

Step 4: Turn the bezel the same magnitude and direction as your declination value. (Clockwise for the east, counterclockwise for the west.) Look at the index line to read the bearing you've just captured.

Step 5: Hold the compass flat and level in front of you, then rotate your body until the green arrow is lined up with the orienting arrow. Now you are facing the bearing you captured and you can follow it to your destination.

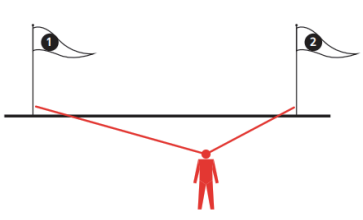
HOW TO LOCATE YOURSELF ON THE MAP?

Now you know how to take a bearing in the field, you can sight two or more bearings and use triangulation to accurately determine where you are.

Step 1: Take reverse bearing of at least two objects visible from your viewpoint and indicated on your map. (DON'T FORGET TO CALCULATE THE TRUE BEARING BY PLUS OR MINUS YOUR LOCAL DECLINATION.)

Step 2: Using a protractor and straight-line tool, draw lines on map from position of objects according to measured bearings.

Step 3: Estimate your current position based on where the lines intersect.



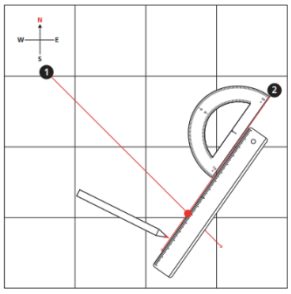
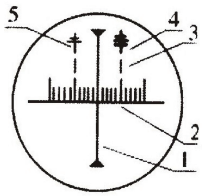


TABLE FOR CALCULATE

I Angl 0-360	II Angl 0-6400	III Pendence %	IV Height distance
1	18	2	1/60
2	35	3	1/30
3	53	5	1/20
4	71	7	2/30
5	89	9	7/80
6	107	10	1/10
7	125	12	1/8
8	142	15	1/7
10	178	18	1/6
12	219	21	1/5
14	250	25	1/4
17	302	30	3/10
18	320	33	1/3
20	355	36	3/8
22	391	40	2/5
24	426	45	4/9
27	480	50	1/2
31	551	60	3/5
34	604	66	2/3
35	622	70	7/10
37	658	75	3/4
40	711	84	5/6
42	747	90	9/10
45	800	100	1/1
50	889	120	1+1/5
I Angl 0-360	II Angl 0-6400	III Pendence %	IV Height distance

MEASURING THE DISTANCE WITH SCALE-MARKED GLASS

1. Aiming line
2. Horizontal line with measuring notches
3. Measuring line
4. First object
5. Second object



The glass cover of some models , in addition to the aiming line, is provided with notches which allow you to measure the distance from an object when the distance between the target and another visible object on the same level of the observer's is known. Start by counting how many notches (2) run between two targets on the horizontal line of the glass. Each notch is worth 10 units. Divide the distance in meters by the number of units and multiply by 1000.

For example, if the distance between two objects is 36m and the notches on the glass are 12. The result will be:

12 notches X 10 = 120 units

$$\frac{36m}{120units}$$ X1000=300m of distance

When the two targets are exactly on the measuring line (3), multiply by 10 the distance in meters between the two objects.

WARNING!

In superior quality compasses the oscillation of the needle is stabilized by the liquid in which it is totally dipped. Strong variations in temperature or rose. These bubbles do not interfere with the compass functioning and, under normal temperature conditions, they will disappear in 24-48 hours. Avoid anyhow to use the compass at temperatures much under -20° centigrade. Make sure to be always far from magnetic fields created by iron parts, magnetic cores or electric wires which cause the compass to show wrong values. Prevent your instrument from falling or getting damaged and never tamper it (so as to keep your guarantee always valid).