

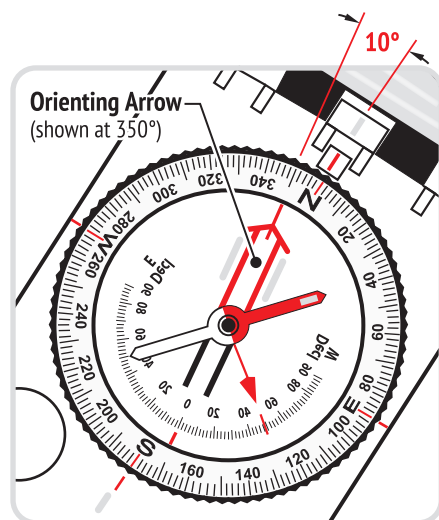
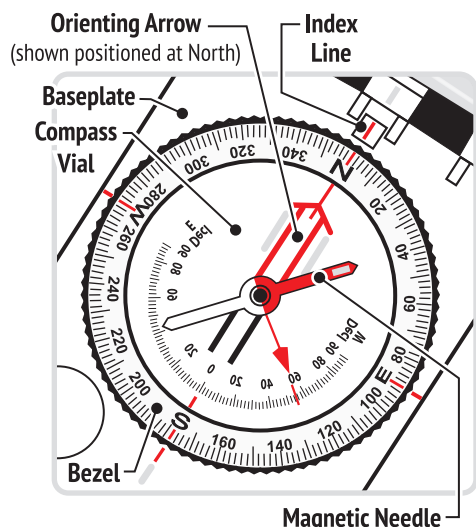


PROSIGHT COMPASS™

PRODUCT INSTRUCTIONS

I. Features

- Jewel bearing
- Super-luminous bezel/needle/markings
- Adjustable declination correction
- Sighting mirror + Protective cover
- Clinometer
- Magnifier 3X
- 4 map scales + mm + inch rulers
- Breakaway safety lanyard
- Silicone anti-slip foot pads
- 5 year limited warranty



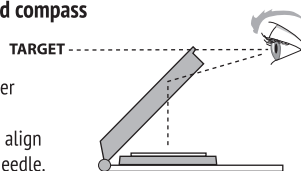
Correct Compass Vial position, if local declination is 10° Westerly.

In summary, if declination is **Westerly**, you will rotate the round Compass Vial **counter-clockwise** the specified number of degrees. If, for example, declination at your location is 10° Westerly, rotate the Compass Vial 10° counter-clockwise (while keeping the Bezel fixed in place). If declination is **Easterly**, follow the same procedure, but rotate the round Compass Vial **clockwise**.

IV. Six Compass Functions (Note: Correct for declination first.)

1. How to Sight with your mirrored compass

- Hold the compass level, with the Mirror at about a 45° angle.
- Use the sighting notch on the cover to align the compass with your target.
- Look into Mirror, and turn Bezel to align Orienting Arrow with North Magnetic Needle.



2. How to take a bearing on a Map

Definition of "Bearing": A clockwise angle showing difference in degrees between two lines: The line from True North to True South, and the line that runs between two points (typically, your current position and desired location).

- NOTE: When taking a bearing on a map you can ignore the magnetic needle.
- First lay either long side of Baseplate along an imaginary line between two points of interest on your map. Let's call them Point A (present location) and Point B (your desired location).
 - Envision an imaginary line running between the "N" and "S" markings on your bezel.
 - Still holding the compass in place, turn the bezel until the imaginary "N-to-S" line is positioned exactly parallel to the North-to-South lines on your map. (NOTE: The bezel's "N" must correlate to North on the map.)
 - Read your current bearing at the red Index line.

3. How to follow a bearing taken from a Map:

- After completing the steps above, remove compass from map and hold compass in front of you, with Baseplate horizontal, and Index Line directly in front of you. Hold the compass in a firm, fixed position.
- Turn your whole body (and compass) until the Magnetic Needle is centered inside the Orienting Arrow. (Red end of Needle must align with red end of Orienting Arrow). Then move forward, keeping the Magnetic Needle centered inside the Orienting Arrow.
- When you need to move around obstacles, try to realign yourself with the original line of travel. Then reposition the Magnetic Needle inside the Orienting Arrow, and continue on.

4. How to take a bearing in the Field:

- Amid your natural surroundings, find a landmark you want to reach.
- With compass held horizontal so needle moves freely, point Index Mark and yourself toward this landmark.
- Rotate the Bezel until magnetic needle is positioned in the center of the Orienting Arrow.
- Read your bearing at the Index Line.

5. How to follow a bearing taken in the Field:

- Once you've taken your bearing in the field, hold the compass steady and travel in the direction that the Index Line indicates.
- As much as possible, keep the Magnetic Needle centered inside the Orienting Arrow as you travel.
- When you need to move around obstacles, do so, then try to realign yourself with the original line of travel. Then reposition needle inside Orienting Arrow, and continue on.

6. How to orient your map to True North:

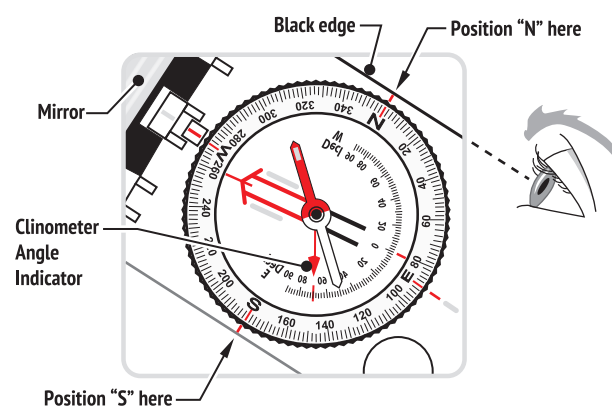
While this procedure may be less important to navigation, it can help you get a better feel for how your map relates to your surroundings. It takes just a moment, and it's easy.

- Rotate compass Bezel until "N" aligns with the Index Line. Place one long edge of Baseplate parallel to left or right edge of your topo map. Keep map and compass horizontal so needle can move freely. Index line must point to map's North (or top) edge. The North edge of map must be furthest away from your body. Hold the map and compass steady.
- Turn your body, the map, and the compass until the Magnetic Needle aligns inside the Orienting Arrow. Look up. Your map is now oriented to your natural surroundings. See if you can locate and match landmarks in the field and on the map.

V. Using the Clinometer to measure the height of a target

Your SUN compass is equipped with an accurate clinometer (angle indicator), which can help you determine the height of a landmark or other object. Here's how:

- First, rotate the Compass Vial so it is set to zero (no) declination. In other words, adjust the vial so the Orienting Arrow aligns with the "N" on the Bezel. (Refer to Section III for instructions on adjusting declination.)
- Next rotate the Bezel so "S" on the bezel aligns with the red line on left side of Baseplate. "N" on Bezel will then align with red line on right side of Baseplate. See below:



In this example, angle shown is 70°.

NOTE: When you view the angle measurement in the mirror, the angle numerals will not appear upside-down, as they do in the illustration above.

- Fold the Sighting Mirror to an angle of about 45° relative to the Baseplate. Locate the black edge of Baseplate marked "← Aim Slope Height." With your eye pointing in the direction of the ← arrow, hold the Baseplate close to your eye, and sight along this black edge, so the black edge points directly from your eye to your target. (In the illustration below, the target is the top of a rock formation.)

4. While sighting, look at the mirror and read the angular position of the red Clinometer Angle Indicator, along the curved Declination scale. The numeric value that lines up with the red Clinometer Angle Indicator arrow is the angle from your position to position of your target. (in the example below, that angle is 30°.)

5. To calculate the height of your target relative to your position, you must have three pieces of information:

- Angle shown by the Clinometer Angle Indicator (30° in below example)
- Distance from you to your target (300 ft. in example below). NOTE: One way to determine distance is to find your location and the location of your target on your topographic map. Then use the appropriate scale on your Baseplate to determine distance between the two points.
- Angle-to-Tangent Conversion table (see table below).

6. To calculate distance to your target, use this formula:

$$\text{Height of target} = \text{Tangent } \theta \times \text{Distance to target.}$$

In example illustrated below, then:

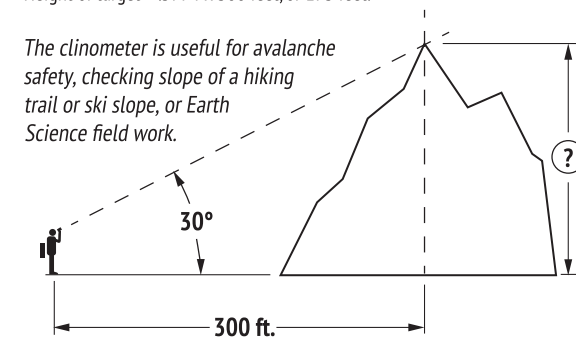
The clinometer shows the angle of the sight line from viewer to target is 30°.

From the table below, we know that Tangent θ for a 30° angle is .5774.

So...

Height of target = .5774 x 300 feet, or 173 feet.

The clinometer is useful for avalanche safety, checking slope of a hiking trail or ski slope, or Earth Science field work.



Tangent Table: 0° to 89°									
Angle in Deg	tan	Deg	tan	Deg	tan	Deg	tan	Deg	tan
1°	.0175	16	.2867	31	.6009	46	1.036	61	1.804
2	.0349	17	.3057	32	.6249	47	1.072	62	1.881
3	.0524	18	.3249	33	.6494	48	1.111	63	1.963
4	.0699	19	.3443	34	.6745	49	1.150	64	2.050
5	.0875	20	.3640	35	.7002	50	1.192	65	2.145
6	.1051	21	.3839	36	.7265	51	1.234	66	2.246
7	.1228	22	.4040	37	.7536	52	1.280	67	2.356
8	.1405	23	.4245	38	.7813	53	1.327	68	2.475
9	.1584	24	.4452	39	.8098	54	1.376	69	2.605
10	.1763	25	.4663	40	.8391	55	1.428	70	2.748
11	.1944	26	.4877	41	.8693	56	1.483	71	2.904
12	.2126	27	.5095	42	.9004	57	1.540	72	3.078
13	.2309	28	.5317	43	.9325	58	1.600	73	3.271
14	.2493	29	.5543	44	.9657	59	1.664	74	3.487
15	.2679	30	.5774	45	1.000	60	1.732	75	3.732

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