

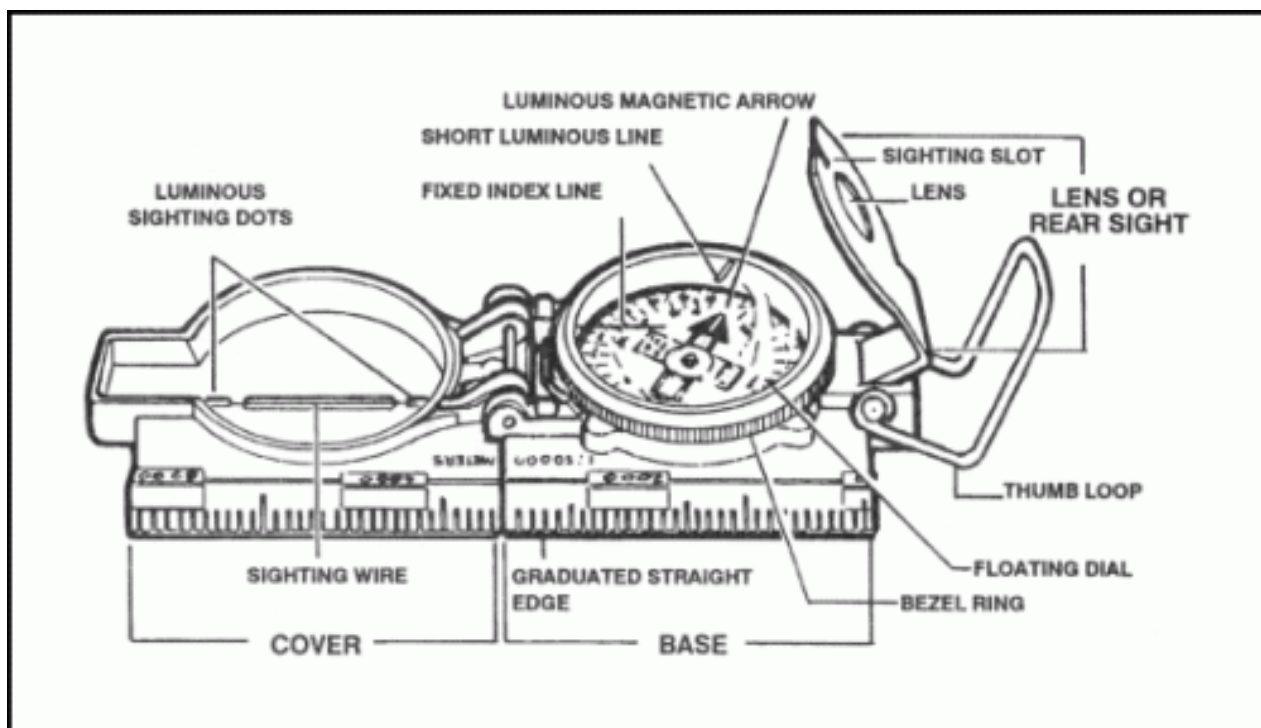
Introduction

An Engineer's or Lensatic compass maintains a primary function of taking accurate bearings for land navigation. An additional function of this compass is to direct artillery fire. For these reasons, it is a highly coveted piece of equipment used by the military. Standard Lensatic covering is square with one side ruled. This is to aide military personnel in triangulating known landmarks to gauge positioning.



The compass is comprised of three major components: the cover, the base and the lens. The cover serves the purpose of protecting the compass rose dial. It contains sighting wires and dots utilized in nighttime navigation.

The base is where all movable parts of the compass reside. A floating dial rotates indicating direction each time the compass maintains a level position. Incandescent figures depict the directions east (E) and west (W). In the center lies the directional arrow. This always points in the direction of north (N). East falls at 90° and west at 270° . There are also two scales. The outer scale denotes miles and the inner scale denotes degrees. The inner scale indicator is in red color.



A bezel ring is also inside the compass base. This ratchet device turns 120 clicks on a full rotation. Each individual click represents 3° . A short incandescent line works with the north-

directional arrow in navigation. This line lies in the glass face of the bezel ring. The floating dial contains a fixed black index line as well. The final component of the base is a thumb loop. This simply attaches to the base as a handling mechanism.

The last component of the Lensatic compass is the lens. This is what reads the floating dial. A rear-sight navigational slot works with the front sight wires in the cover to locate objects. In addition, this slot protects the compass when in the closed position. This works by a lock and clamp system. The rear-sight mechanism must remain open at a minimum of 45° in order for the compass floating dial to work.

To Take a Bearing

1. Unlock the cover half way so that the compass card forms a 90° angle.
2. Raise the lens arm to a 45° angle.
3. Stabilize the compass by placing thumb inside the thumb hook. Ensure the hook is all the way towards the bottom before doing so.
4. Locate the target object.
5. Adjust the sighting wire so that it lies in the center of the target object.
6. Read fine degree marking on the compass card. Do this by moving the lens up and down until the degree mark reads without taking your eye off the target.
7. Read the bearing in degrees or MILS, whichever is preferred.

Set a Bearing

1. Follow the directions above.
2. Bring the marking on the bezel in line with the north direction arrow. Indication of this comes off the compass card.
3. Once the bezel marking and directional arrow align, orientation is set.
4. Proceed on course in direction indicated by sighting wire.

Follow a Bearing

1. Follow directions above.
2. Pinpoint landmark in the distance to serve as a reference point.
3. When reference point disappears, due to weather or trees, use compass to stay the course.
4. Occasionally set a new bearing for your selected reference point.