

071-COM-1003
Determine a Magnetic Azimuth using a Lensatic Compass
Status: Approved

Security Classification: U - Unclassified

Distribution Restriction: Approved for public release; distribution is unlimited.

Destruction Notice: None

Foreign Disclosure: FD1 - This training product has been reviewed by the training developers in coordination with the G2, Fort Moore, GA 31905 foreign disclosure officer. This training product can be used to instruct international military students from all approved countries without restrictions.

Conditions: You are a member of a squad or team in a field environment and have been directed to determine a magnetic azimuth. You have a compass and a designated point on the ground. Some iterations of this task should be performed in MOPP 4.

Standards: Inspect the compass. Determine the magnetic azimuth to the designated point within 3 degrees using the compass-to-cheek method and within 10 degrees using the center-hold method.

Special Conditions: None

Safety Risk: Low

MOPP 4: Sometimes

Task Statements

Cue: None

DANGER

None

WARNING

None

CAUTION

None

Remarks: None

Notes: None

Performance Steps

1. Inspect the compass (Figure 1 and 2).

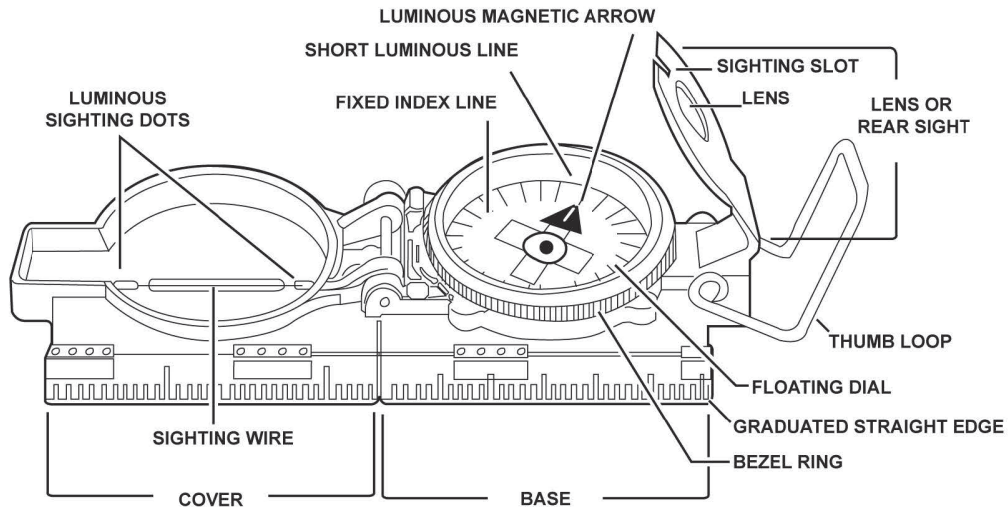


Figure 1. Lensatic compass.

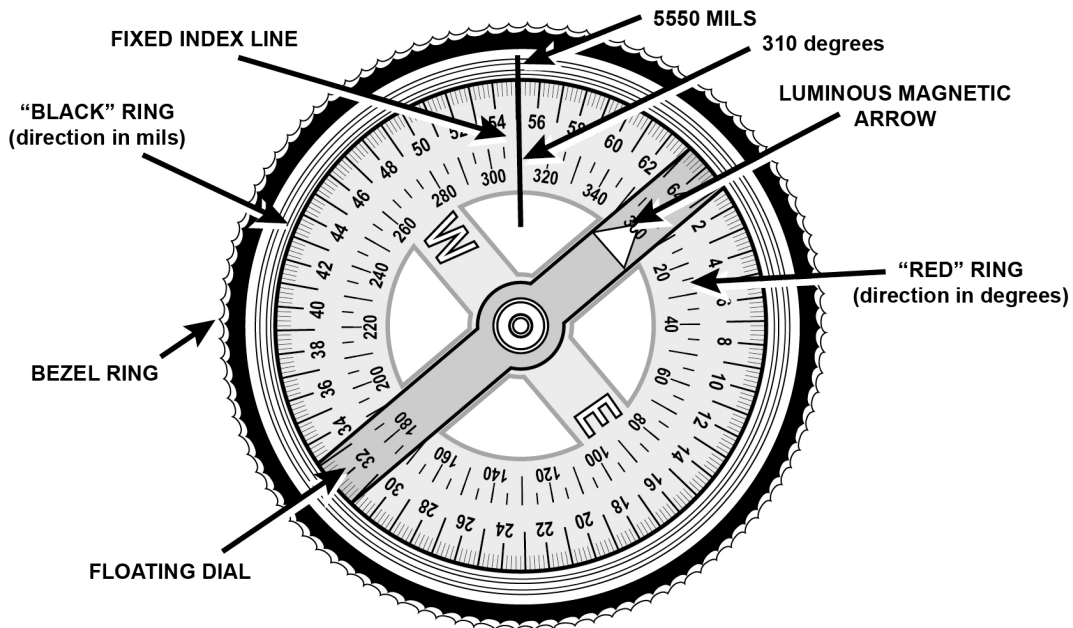


Figure 2. Lensatic compass floating dial.

- a. Ensure floating dial, which contains the magnetic needle, moves freely and does not stick.
- b. Ensure the sighting wire is straight.
- c. Ensure glass and crystal parts are not broken.
- d. Ensure numbers on the dial are readable.

2. Ensure there are no metal objects or electrical sources near by that will affect compass accuracy.

Note: Effects of Metal and Electricity. Metal objects and electrical sources can affect the performance of a compass. However, nonmagnetic metals and alloys do not affect compass readings. The following table (Table 1) contains suggested separation distances ensure proper functioning of a compass.

Object	Recommended Standoff Distance in Meters
High-tension power lines	55
Field gun, truck, or tank	18
Telegraph or telephone wires and barbed wire	10
Machine gun	2
Steel helmet or rifle	.5

Table 1. Magnetic object standoff.

3. Determine an azimuth with the compass-to-cheek method (Figure 3).

Note: The compass-to-cheek technique is used almost exclusively for sighting. It is the best technique for this purpose.

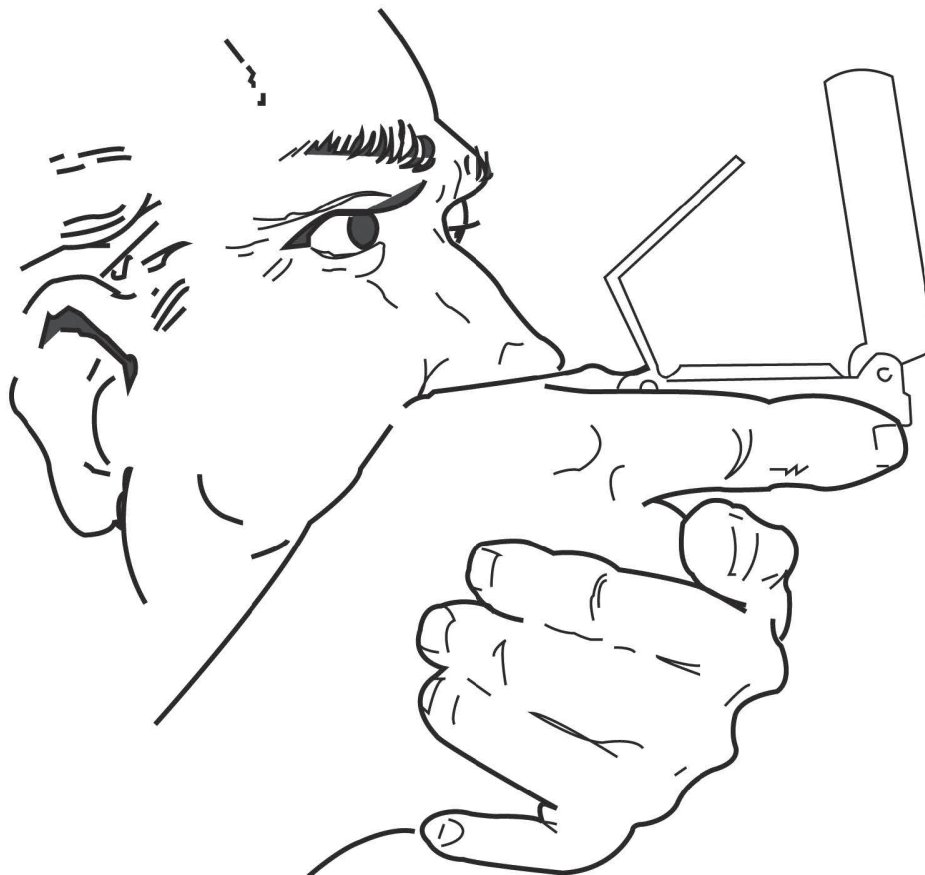


Figure 3. Compass-to-cheek method.

- a. Open the cover to a 90-degree angle to the base.
- b. Position the eyepiece at a 45-degree angle to the base.
- c. Place your thumb through the thumb loop.

- d. Establish a steady base with your third and fourth fingers.
- e. Extend your index finger along the side of the compass base.
- f. Place the hand holding the compass into the palm of the other hand.
- g. Move both hands up to your face.
- h. Position the thumb that is through the thumb loop against the cheekbone.
- i. Move the eyepiece up or down until the dial is in focus.
- j. Align the sighting slot of the eyepiece with the sighting wire (in the cover) on the designated point.
- k. Read the azimuth under the index line (Figure 4).

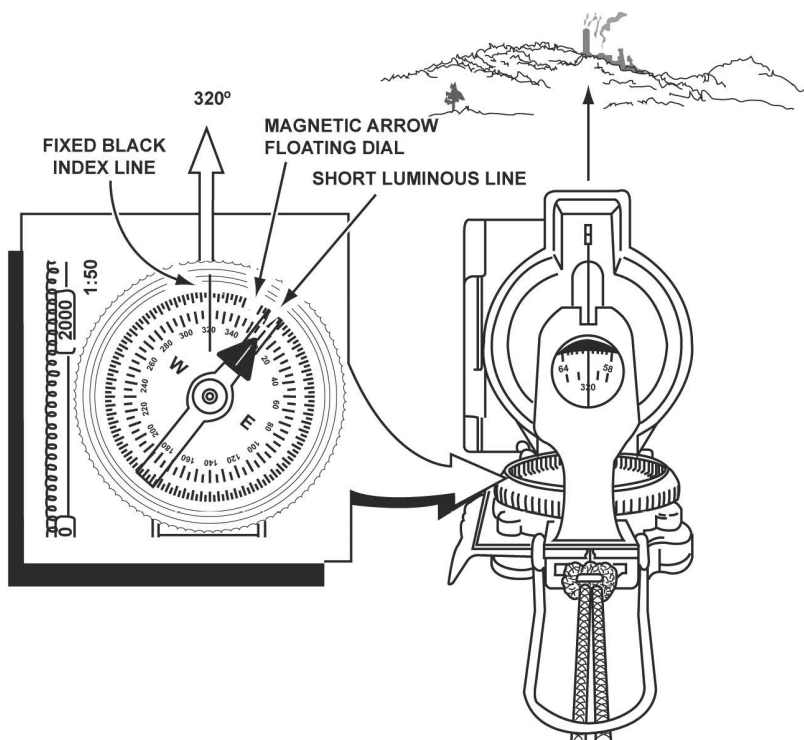


Figure 4. Reading the azimuth.

4. Determine an azimuth with the center-hold method (Figure 5).

Note: This method offers the following advantages over the compass-to- cheek technique:

- It is faster and easier to use.
- It can be used under all conditions of visibility.
- It can be used when navigating over any type of terrain.
- It can be used without putting down the rifle; however, the rifle must be slung well back over either shoulder.
- It can be used without removing eyeglasses.

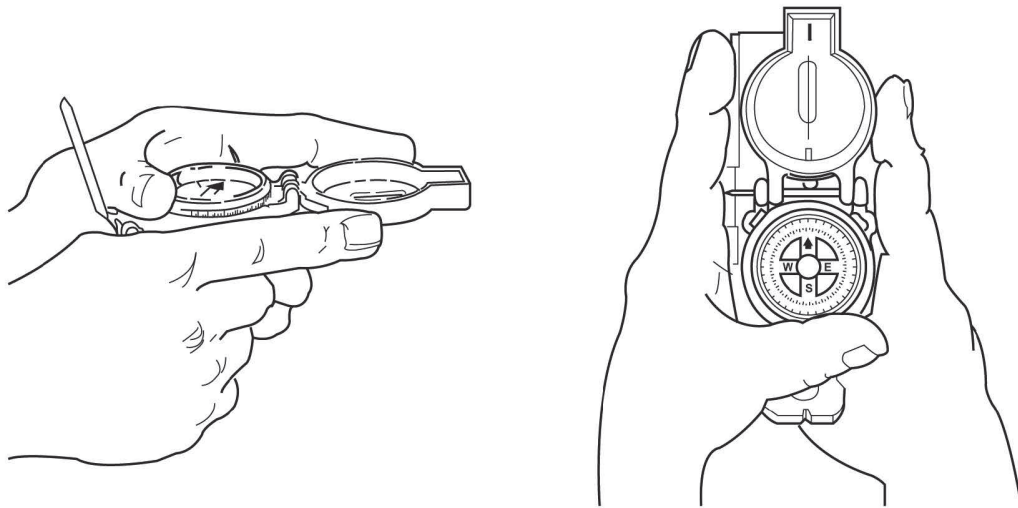


Figure 5. Centerhold technique.

- a. Open the compass so that the cover forms a straight edge with the base.
- b. Position the eyepiece lens to the full upright position.
- c. Place your thumb through the loop.
- d. Establish a steady base with your third and fourth fingers.
- e. Extend your index finger along the side of the compass.
- f. Place the thumb of your other hand between the eyepiece and lens.
- g. Extend the index finger along the remaining side of the compass.
- h. Secure the remaining fingers around the fingers of the other hand.
- i. Place your elbows firmly into your side.
 Note: This will place the compass between your chin and your belt.
- j. Turn your entire body toward the designated point.
- k. Align the compass to point directly at the designated point.
- l. Read the azimuth from beneath the fixed black index line.

(Asterisks indicates a leader performance step.)

Evaluation Guidance: Score the Soldier GO if all performance measures are passed. Score the Soldier NO-GO if any performance measure is failed. If the Soldier scores a NO-GO, show the Soldier what was done wrong and how to do it correctly.

Evaluation Preparation: Setup: Provide the Soldier with the equipment and materials described in the conditions statement.

Brief the Soldier: Tell the Soldier what is required to successfully complete the task by reviewing the conditions and standards. Stress the importance of observing cautions, warnings, and dangers, as applicable.

PERFORMANCE MEASURES	GO	NO-GO	N/A
1. Inspected the compass.			
2. Ensured there are no metal objects or electrical sources nearby.			
3. Determined an azimuth using the compass-to-cheek method.			
4. Determined an azimuth using the center-hold method.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary	Source Information
	TC 3-25.26	Map Reading and Land Navigation	Yes	Yes	

TADSS : None

Equipment Items (LIN):

LIN	Name
FG050B	Lensatic Compass

Material Items (NSN) :

Step ID	NSN	LIN	Title	Qty
No materiel items specified				

Environment: Environmental protection is not just the law but the right thing to do. It is a continual process and starts with deliberate planning. Always be alert to ways to protect our environment during training and missions. In doing so, you will contribute to the sustainment of our training resources while protecting people and the environment from harmful effects. Refer to the current Environmental Considerations manual and the current GTA Environmental-related Risk Assessment card.

Safety: In a training environment, leaders must perform a risk assessment in accordance with current Risk Management Doctrine. Leaders will complete the current Deliberate Risk Assessment Worksheet in accordance with the TRADOC Safety Officer during the planning and completion of each task and sub-task by assessing mission, enemy, terrain and weather, troops and support available-time available and civil considerations, (METT-TC). Note: During MOPP training, leaders must ensure personnel are monitored for potential heat injury. Local policies and procedures must be followed during times of increased heat category in order to avoid heat related injury. Consider the MOPP work/rest cycles and water replacement guidelines IAW current CBRN doctrine.

Prerequisite Individual Tasks : None

Supporting Individual Tasks : None

Supported Individual Tasks : None

Supported Collective Tasks : None

Knowledges :

Knowledge ID	Knowledge Name
071-NAV-0030	Grid Magnetic Angle
071-NAV-0032	Azimuths
071-NAV-0021	Compass Operations
071-OPN-0017	Safety Procedures
071-NAV-0023	Cardinal Directions
071-NAV-0025	Terrain Association

Skills :

Skill ID	Skill Name
301-S-171	Use a military compass.
071-NAV-0004	Determine Direction with a Compass

ICTL Data : None