

**Summary Report for Individual Task
061-266-4013
Declinate the M2 or M2A2 Aiming Circle
Status: Approved**

DISTRIBUTION RESTRICTION: Approved for public release; distribution is unlimited.

DESTRUCTION NOTICE: None

Condition: Given a section occupying a position, with a howitzer and aiming circle emplaced, a declination station with known data, and Field Manual FM 6-50. Some iterations of this task should be performed in MOPP.

Standard: Declintate the aiming circle to ensure the magnetic needle provides an accurate measurement of magnetic north IAW the technical guidance listed in FM 6-50.

Special Condition: None

Special Standards: None

Special Equipment:

Safety Level: Low

MOPP: Sometimes

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|------------------------|
| Task Statements |
|------------------------|

Cue: During a storm, if it is dropped, or moved greater than 25 miles.

DANGER

None

WARNING

None

CAUTION

None

Remarks: None

Notes: None

Performance Steps

1. Determine when declination is required.

Note:

a. After an electrical storm.

b. Anytime the instrument has received a severe shock. For example, if it is dropped from the bed of a truck to the ground. The magnetic needle is a delicately balanced mechanism, and any shock may cause a significant change in the declination constant.

c. Anytime the aiming circle is moved 25 miles or more from the area in which it was last declinated. Because of local magnetic attractions, any move of the aiming circle may result in an appreciable change in the relationship of grid north and magnetic north as measured by the instrument.

d. A minimum of once every 30 days to determine if any changes in the declination have occurred because of the annual shift of magnetic north or because of accidents involving the instrument that may not have been reported. If a radical change is observed, the instrument should be declinated again within a few days to determine if the observed change is a result of an electrical storm or is a real change in the characteristics of the instrument.

e. When the aiming circle is initially received or anytime it is returned from ordnance repair.

2. Determine the declination constant.

Note: Normally the declination station is established by the battalion S3 in an area convenient to the using units. This area must be free from magnetic attractions. Azimuths must be known to two or more azimuth marks, preferably in opposite directions. These azimuth marks should be a minimum distance of 300 meters, preferably 1,000 meters.

3. Declinate the aiming circle by using magnetic north.

a. Set up the aiming circle and level it.

b. Set the known azimuth to the azimuth marker with the upper (recording) motion.

c. Sight on the azimuth marker, with the lower (nonrecording) motion, that corresponds to the azimuth set with the upper motion.

Note:

At this time, the 0-3200 line will be aligned with grid north.

d. Release the magnetic needle, With the upper (recording) motion, float and center the magnetic needle.

e. Read the declination constant directly from the scales (to the nearest 0.5 mil).

f. Repeat the process with the second azimuth. (If a second azimuth marker is not available, use the first marker again.

g. Compare the two declination constants determined.

Note: Note. If the two values differ by more than +/- 2 mils, repeat the entire process.

h. Determine the mean if they agree within +/- 2 mils.

Note: Express it to the nearest whole mil by using standard artillery expression.

i. Record the mean (four-digit number), the date, and the initials of the individual performing the declination on the notation pad.

4. Declinate the aiming circle by using grid north.

Note: Note. Declination can be performed by scaling a grid azimuth to two distant points.

- a. Level the aiming circle over the selected point.
- b. Select two distant points on a map.
- c. Scale the direction to each from the occupied point.
- d. Declinate the aiming circle by the procedures previously discussed and with the directions scaled from a map.
- e. Compare the two values determined. They must agree within +/- 10 mils.
- f. Record the mean (four-digit number) if the values agree within +/- 10 mils, the date, and the initials of the individual performing the declination on the notation.

(Asterisks indicates a leader performance step.)

Evaluation Preparation: Setup: Ensure that all information, references, and equipment required to perform the task are available. Use the performance measures and the references to score the Soldier's performance. Brief the Soldier. Tell the Soldier what he is required to IAW the task conditions and standards.

| PERFORMANCE MEASURES | GO | NO-GO | N/A |
|--|----|-------|-----|
| 1. Determined when declination is required. | | | |
| 2. Determined the declination constant. | | | |
| 3. Declinated the aiming circle by using magnetic north. | | | |
| 4. Declinated the aiming circle by using grid north. | | | |

Supporting Reference(s):

| Step Number | Reference ID | Reference Name | Required | Primary |
|-------------|------------------|---|----------|---------|
| | FM 6-50 | Tactics, Techniques, and Procedures for the Field Artillery Cannon Battery | No | No |
| | TM 9-1290-262-10 | Operators Manual for Aiming Circle, M2 W/E (NSN 1290-00-314-0008) and M2A2 W/E (1290-01-067-0687) | No | No |

Environment: Environmental protection is not just the law but also 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.

Safety: In a training environment, leaders must perform a risk assessment in accordance with FM 5-19, Composite Risk Management. Leaders will complete a DA Form 7566 COMPOSITE RISK MANAGEMENT WORKSHEET 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 FM 3-11.4, NBC Protection, FM 3-11.5, CBRN Decontamination. NA

Prerequisite Individual Tasks :

| Task Number | Title | Proponent | Status |
|--------------|-------------------------------------|------------------------------------|----------|
| 061-266-4000 | Set up the M2 or M2A2 Aiming Circle | 061 - Field Artillery (Individual) | Approved |

Supporting Individual Tasks :

| Task Number | Title | Proponent | Status |
|--------------|-------------------------------------|------------------------------------|----------|
| 061-266-5302 | Orient the M2 or M2A2 Aiming Circle | 061 - Field Artillery (Individual) | Reviewed |

Supported Individual Tasks :

| Task Number | Title | Proponent | Status |
|--------------------|---|------------------------------------|---------------|
| 061-266-4016 | Verify Orientation of an M2 or M2A2 Aiming Circle | 061 - Field Artillery (Individual) | Proposed |
| 061-266-5302 | Orient the M2 or M2A2 Aiming Circle | 061 - Field Artillery (Individual) | Reviewed |

Supported Collective Tasks :

| Task Number | Title | Proponent | Status |
|--------------------|---------------------------------|-----------------------------------|---------------|
| 06-4-5042 | Establish a Declination Station | 06 - Field Artillery (Collective) | Approved |