

Report Date: 05 Jun 2013

Summary Report for Individual Task
061-320-5305
Orient the GLPS for Direction Using Back Polar Plot Method
Status: Approved

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

DESTRUCTION NOTICE: None

Condition: Given a battery occupying a firing position and emplacing howitzers, a gun laying positioning system, battery personnel, and equipment. Some iterations of this task should be performed in MOPP.

Standard: Orient the GLPS for direction using the back polar plot method without error following the procedural steps outlined in TM 9-6675-347-13&P.

Special Condition: None

Special Standards: None

Special Equipment:

Safety Level: Low

MOPP: Sometimes

Task Statements

Cue: Upon occupying a firing position and laying a battery.

DANGER

None

WARNING

None

CAUTION

None

Remarks: None

Notes: None

Performance Steps

1. Input reference point by selecting "Back Polar Plot".

Note: Back Polar Plot. Back Polar Plot is used when PLGR data is not available and remote known location data is available. The GLPS will measure the direction and distance from the current position to a known reference point in order to calculate the current position data. The reference point must be within 3500 meters and have line of sight with the orienting location.

2. Select reference point.

Note: This screen provides three methods of inputting reference point data. Input Ref Pnt allows the operator to manually input reference point data. Select RefPnt allows the operator to select and automatically transfer reference point data that has already been stored in the GLPS memory. Select WayPnt allows the operator to select and automatically transfer reference point data stored in the PLGR memory.

a. Input Reference Point. Input reference point (Input RefPnt) allows the operator to manually input reference point data. The data is input using the keypad by moving the cursor up or down to the selected line of data.

(1) Select "Input RefPnt" by pressing the right cursor or ENTR key.

(2) Input or change reference point data by pressing the right cursor key. This will highlight one digit within the selected line of data, as seen below.

(3) Press up or down cursor key to change the number until the desired digit is displayed.

(4) Press the right cursor key to move to the next digit. Continue this process until all digits in the line are correct, then press ENTR. The cursor will disappear.

(5) Press the down cursor key to move the cursor down to the next line of data, as shown in the screen below. Continue this process until easting, northing and altitude have been completed.

(6) Press ENTR when complete.

The next screen will instruct the operator to sight on the reference point, allowing the system to measure and store both vertical and horizontal angles for calculating location.

(7) Align the optics on the reference point and press ENTR.

The next screen will allow the operator to determine the range to the reference point and stores the range for calculating location

CAUTION

CAUTION. DO NOT DISTURB THE SYSTEM WHILE THE GYRO IS MEASURING.

(8) Align the optics on the reference point and press ENTR.

The next screen will allow the operator to determine the range to the reference point and stores the range for calculating location

(9) Press ENTR to engage the gyro. The gyroscope will require about three minutes to complete orientation.

(10) The system will automatically calculate and display the position data. GLPS is oriented and ready to perform gun laying. The Gun Laying menu will be displayed.

b. Select Reference Point. Select RefPnt, the second option on the Back Polar Plot menu, allows the operator to select and automatically transfer reference point data stored in the GLPS memory. This method is faster than manual input and eliminates the probability of operator error during the manual Input RefPnt method. Use Select RefPnt when reference point coordinates have been stored in the GLPS.

(1) Select "Select RefPnt" using the down cursor key, then press the right cursor or ENTR key. The Select RefPnt screen will be displayed.

(2) Press ENTR or the right cursor key to highlight the reference point number.

(3) Change the reference point number using the up or down cursor keys until the desired reference point is indicated, then press ENTR. The next screen will instruct the operator to sight on the reference point, allowing the system to measure and store both vertical and horizontal angles for calculating location.

(4) Press ENTR to continue. The next screen will instruct the operator to sight on the reference point, allowing the system to measure and store both vertical and horizontal angles for calculating location.

(5) Align the optics on the reference point and press ENTR. The next screen will allow the operator to determine the range to the reference point and stores the range for calculating location.

CAUTION

CAUTION. DO NOT DISTURB THE SYSTEM WHILE THE GYRO IS MEASURING.

(6) Ensure optics are properly aligned on the reference point and press ENTR. The system displays the measured range to the reference point in meters

(7) Press ENTR to engage the gyro. The gyroscope will take about three minutes to complete orientation. The system will automatically calculate and display the position data.

(8) Press ENTR to continue. The Gun Laying menu will be displayed.

c. Select Way Point. Select WayPnt, the third option on the Back Polar Plot menu, follows the same process as previously described in Select RefPnt with the exception that Select WayPnt allows the operator to select and automatically transfer reference point data stored in the PLGR memory.

(1) Select 'Select WayPnt' using the down cursor key, then press the right cursor or ENTR key. The Select WayPnt screen will be displayed

(2) Press ENTR or the right cursor key to highlight the reference point number. The reference point coordinates are displayed.

(3) Change the reference point number using the up or down cursor keys until the desired reference point is indicated, then press ENTR. The next screen will instruct the operator to sight on the reference point, allowing the system to measure and store both vertical and horizontal angles for calculating location.

(4) Align the optics on the reference point and press ENTR. The next screen will allow the operator to determine the range to the reference point and stores the range for calculating location.

CAUTION

CAUTION. DO NOT DISTURB THE SYSTEM WHILE THE GYRO IS MEASURING.

(5) Ensure optics are properly aligned on the reference point and press ENTR. The system displays the measured range to the reference point in meters

(6) Press ENTR to engage the gyro. The gyroscope will take about three minutes to complete orientation. The system will automatically calculate and display the position data.

(7) Press ENTR to continue. The Gun Laying menu will be displayed.

3. Orient the GLPS for Direction.

Note: GLPS Orientation for Direction. The operator will orient GLPS for direction following any method of positioning. Orientation is performed prior to laying howitzers or measuring angles. This function will start immediately upon GLPS receiving position data either from PLGR or an alternate method. Two methods are provided for orienting the system. GLPS provides the option of manually inputting a known azimuth. Orienting by Gyroscope is the primary method of orientation.

CAUTION

CAUTION. DO NOT DISTURB THE SYSTEM WHILE THE GYROSCOPE IS MEASURING. VIBRATION IN THE IMMEDIATE VICINITY OF THE GYROSCOPE WILL UNNECESSARILY INCREASE SPIN-UP TIME.

NOTE. In windy conditions, the operator should position himself between the instrument and the wind to block the wind. This will eliminate some of the vibration to the system from the wind and decrease gyroscope spin up time.

a. Gyro Orientation Method. The gyroscope measures the direction of true north and displays the direction in grid azimuth on the theodolite display.

b. Select Run Gyro by pressing the right cursor or ENTR key. This action will engage the gyroscope. This screen will remain visible until the gyro has completed measuring. The gyro requires approximately three minutes to complete orientation

c. After GLPS is oriented, the gun laying menu, paragraph 2-4.1b, will be dis

(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. Inputted the reference point.			
2. Selected reference point.			
3. Oriented GLPS.			

Supporting Reference(s):

Step Number	Reference ID	Reference Name	Required	Primary
	TM 9-6675-347-13&P	Operator, Organizational and Direct Support Maintenance Manual Including Repair Parts and Special Tools List for Gun Laying and Positioning System (GLPS): M67 (NSN 6675-01-430-1965) (EIC: CJ2)	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. The laser range finder is eyesafe when operated according to the operator manual.

Prerequisite Individual Tasks : None

Supporting Individual Tasks : None

Supported Individual Tasks : None

Supported Collective Tasks :

Task Number	Title	Proponent	Status
06-4-5021	Prepare Howitzer for Conduct of Fire Missions (Non-Paladin)	06 - Field Artillery (Collective)	Approved