

MESA PRIETA PETROGLYPH PROJECT

April 3, 2020

USING THE GPS RECEIVER

GPS stands for Global Positioning System which is a system of satellites orbiting the planet Earth. The GPS unit sends a signal to several satellites which then return the signal to the receiver. The length of time it takes for the signal to return to the receiver indicates the distance the receiver is from each satellite. The receiver triangulates all these distances to calculate where the receiver is on the surface of the planet. The Datum that our GPS units are set up to use is NAD 83.

The Locational Format that the Project uses is UTM UPS, a precise metric locational format.

HOW TO USE THE GPS UNIT

1. Turn on the unit by pressing and holding the RED POWER BUTTON for 2 seconds. Press the PAGE button twice until you see the SKY VIEW PAGE. It should say "Acquiring Satellites".
2. Hold the unit, or prop it up, so that it is nearly vertical. The antenna is in the top of the unit. Nearby buildings, trees and cliffs may obscure the satellite view.
3. Wait until the Sky View Page shows that at least 4 satellites have been received and that the bars at the right are black.
4. The UTM coordinates will appear at the bottom of the screen. Wait until these numbers stop changing and the accuracy stabilizes (see #5) before recording your reading. The "Easting" Coordinate starts with 13S. This is the first seven digit number that is entered onto the Photo Data Sheet and the Mapper's Notes. This number always begins with 0 (zero). The zero as well as 13 S is already printed on the recording forms, as it never changes. The "Northing" coordinate is the second row of numbers below the "Easting" and is the second seven digit number you will enter on the recording forms.
5. At the upper right corner of the Sky View Page is the ACCURACY, in meters, of the reading. Accuracy depends on cloud cover, terrain, etc. Enter the accuracy on the recording forms, i.e. 2.5m. In the space underneath where the dimensions are recorded. A good accuracy reading is below 4m, preferably below 2 m depending on the unit being used.
6. Turn off the GPS unit by holding the POWER button until screen goes blank. BE CERTAIN TO TURN THE GPS UNIT OFF AT THE END OF THE DAY.

GPS EXERCISES

DETERMINE UTM COORDINATES FOR A LOCUS:

- Turn on GPS unit by pressing red button for 2 seconds, then press "Page" button twice (slowly) until Sky view (satellite page) is displayed.

- Hold the GPS Unit vertically and observe the Sky View page until the coordinates display stabilizes and GPS Accuracy is <4 M. Document the UTM coordinates for a locus (location) in the field.

HOW TO ASSESS GPS ACCURACY

- GPS ACCURACY field in upper right corner of Sky View Page
- Hold GPS vertically until GPS Accuracy is <4M
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MARK UTM COORDINATES AND NAME AS “WAYPOINT” (E.G., CAR LOCATION)

Mark the waypoint pressing the “mark” button on the GPS. Name the waypoint as you would a car location for this date, e.g. “car312”

- Press and hold “Enter/Mark” button
- Use Rocker Key to highlight top line (number) and enter CAR312 using Rocker Key to select letters and numbers
- Press “Enter” and use Rocker Key to move to “OK” at the bottom of the page, press “Enter” to save waypoint.

USE “GO TO” FEATURE

Walk a short distance and return to starting point using “Go To” feature

- Press and release “Nav” button briefly
- Select “Go To Point”, Press “Enter” (use Rocker Key to highlight if needed)
- Select “Waypoints” and press “Enter” to access “Nearest Waypoints”
- Press menu button once if “Find by Name” is displayed
- “Car312” should be nearest waypoint, select and press “Enter”
- Select “Go To” on “Waypoint” page, press “Enter”
- Press “Page” button to access “Compass” page. Arrow points in direction of saved waypoint. Press “Page” again to see distance to destination.
- To stop navigation, press “Nav”, scroll down to “Stop Navigation” and press “Enter”. Be certain to Stop Navigation when Go to is Complete as that function uses battery power at a higher rate.

HOW TO ACCESS SAVED WAYPOINTS.

- Press “menu” twice
- Select “Points”
- Select “Waypoints”
- Display “Nearest Waypoints” (press menu button once if “Find by Name” is displayed)
- Use Rocker Key to scroll to other points

CHANGE UTM COORDINATES FROM UTM/UPS TO LAT/LONG (FOR EMS INFORMATION IN CASE OF AN EMERGENCY)

- Press Rocker Directional Button to the left or right one time
- See UTM Coordinate display at the bottom of the Sky view Page change to minutes and degrees
- Read this number to the EMS dispatcher if EMS call made
- To return coordinate to UTM/UPS, press Rocker Directional Button to the left or right one time until UTM coordinates are displayed.

*note: additional exercises will soon be added to practice these skills with new tech.

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