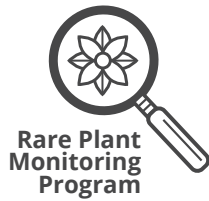




Rare Plant  
Monitoring  
Program

Using a GPS





## Basic GPS Instructions

If you need to borrow a GPS unit there is one available through the Rare Plant Monitoring Program. Useful instructions for how to use this model (GPSmap 60Cx) are below. Note that each unit is similar though slightly different. Instructions may vary depending on the model you are using. Also note that there are many apps that can be used to acquire GPS coordinates. If you have a smartphone this may be a better option than coordinating a time to pick up and drop off the program GPS unit.

### Pacing Protocols

The power button on the GPSmap 60Cx is located on the top of the unit (Figure 1). You may have to hold the button down for 1-2 seconds. Once you turn on the unit you will hear a brief noise. If the screen is too dark, you can increase the brightness by hitting the power button again briefly. Use the rocker to adjust the brightness up and down.

The GPS unit will now say "Acquiring Satellites," and you will have to wait while enough satellites are found to get an accurate reading. After three satellites are found, the accuracy will appear in the upper left corner of the screen. The GPS coordinates of your current position will be in the upper right corner. Moving in a straight line or standing in an open area (vs. closed canopy forest or indoors) will improve the unit's ability to find satellites. You can often acquire a good signal in an open area and then bring the unit into a closed canopy area while maintaining your signal strength. If possible, you should wait until you have 3-8m accuracy.

To determine the coordinate system and datum, press the Page button until you reach the Main Menu (Figure 2). Use the Rocker button to navigate to the "Setup" icon and press the Enter button. In the Setup Menu navigate to the "Units" icon and press the Enter button. Here you will be able to select your coordinate system ("Position Format") and map datum. Use the Rocker button to navigate to each field. Press enter and again use the Rocker button to find the appropriate coordinate system (decimal degrees; "hddd.ddddd") and map datum (NAD83).

### Obtaining GPS Coordinates

At any point you can press the Page button to get back to the Map Page, displaying your location on a topographic map. You may have to press the Page button a few times. Notice that your location is indicated by the solid black arrow. You will also notice that by using the Rocker button on the Map Page a white arrow will move around the screen. The GPS coordinates in the upper left corner of the Map Page correlate to the location of the white arrow, not necessarily your location (the black arrow). By pressing the Quit button you can temporarily eliminate the white arrow. If you want to obtain the GPS coordinates of a distant point without actually being there (e.g., a lake, the peak of a hill etc.) you can use the white arrow to navigate to the point and then record the coordinates.

If you want to record the GPS coordinates of your location, simply press the Mark button. Note that the coordinates that appear after pressing the Mark button are the coordinates of where you are at that time. If you move around after hitting the Mark button the coordinates will not change. Press the Enter button to save these coordinates as a waypoint. The waypoint number will be at the top of the page before you press Enter and will now appear on the Map Page. If you do not want to make a waypoint simply press Quit to return to the Map Page.

## **Navigating to an Existing Waypoint**

If you have already created a waypoint and want to navigate to it, press the Find button. On the Find Menu, use the Rocker button to navigate to the "Waypoint" icon and press Enter. In the Waypoint directory use the keyboard to locate the waypoint you want to find. Press enter and you will be transported back to the Map Page with a purple line connecting the black arrow (your location) to the waypoint you want to get to. Keeping the nose of the arrow on the purple line, walk toward the waypoint. You should see the distance between you and the waypoint in the upper right of the screen. As you approach the point, be sure to zoom in, using the Zoom In key. You will see the scale of your screen in the bottom left of the Map Page.

If you make a waypoint at the location of a rare plant subpopulation and later want to see the GPS coordinates, simply press Find, then Enter on the Waypoint icon. Navigate to your waypoint (hopefully, you recorded what number it was!). Press Enter on the waypoint to see the GPS coordinates.

## **More Information**

For more information on how to use the GPSmap 60Cx, including more advanced tools see the user manual available on the Garmin website.



## Using the GPSMAP 60Cx Keypad

### POWER key

- Press and hold to turn the unit on or off.
- Press and release to adjust the backlighting.

### IN/OUT Zoom Keys

- Press to zoom in or out on the Map Page.
- Press to scroll up or down a list on any other page.

### FIND/MOB key

- Press and release at any time to view the Find Menu.
- Press and hold for MOB\*

### MARK key

- Press and release at any time to mark your current location.

### QUIT key

- Press and release to cancel data entry, or exit a page.



### ROCKER key

- Press up, down, left, or right to highlight options; and to enter data, or move the map panning arrow.

### PAGE key

- Press and release to cycle through the main pages.

### MENU key

- Press and release to view page options.
- Press twice to view the Main Menu.

### ENTER key

- Press and release to enter highlighted options, data, or confirm on-screen messages.

\* Man Overboard (MOB) feature stores a waypoint and then navigates back to it.

Figure 1. Buttons of the GPSmap 60Cx. Image from GPSmap 60Cx User Manual.



**Main Menu**

Figure 2. Press the Page button to get to the Main Menu. From here you can navigate to the Setup icon to change your coordinate system or map datum. Image from GPSmap 60Cx User Manual.