

# Using the FLTC's Garmin Montana 680 to GPS Trail for the FLT

December 1, 2015

## Contents

Introduction .....	1
Equipment.....	1
GPS Receiver.....	1
How to Capture Track and Waypoint Data .....	1
Prepare for your hike at home .....	1
At the Trailhead .....	1
Hike the trail.....	3
At the end of your hike.....	8

## Introduction

This guide is for FLT volunteers who want to GPS trail for the Finger Lakes Trail using the FLTC's Garmin Montana 680.

Whenever a new trail is created or a trail re-route is completed, someone must hike the trail with a GPS unit to accurately record the new path. That GPS "track", along with notes and photos, is sent to the FLT mapping team, who will use it to update the maps and gpx tracks that we sell in the FLT store.

This guide covers how to capture the track and waypoint data we need by hiking the trail with FLTC's Garmin Montana 680 GPS unit.

## Equipment

### **GPS Receiver**

The FLTC purchased a Garmin Montana 680 in 2015 to provide to volunteers who will walk new trail sections to record track and way points. This is Garmin's top of the line GPS unit for hiking, has a touchscreen for control and includes a camera.

## How to Capture Track and Waypoint Data

### **Prepare for your hike at home**

1. Borrow the GPS unit from the office. Ensure that the office has loaded any software or firmware updates, and has pre-loaded the device with all the current FLTC GPX data.
2. Check the FLT website for any recent track condition reports and/or closure updates regarding the section you plan to hike.
3. Charge the battery or insert fresh batteries (and bring extra batteries). The 680 has a single battery which can be replaced by 3 AA batteries. It is charged using the USB cable.

### **At the Trailhead**

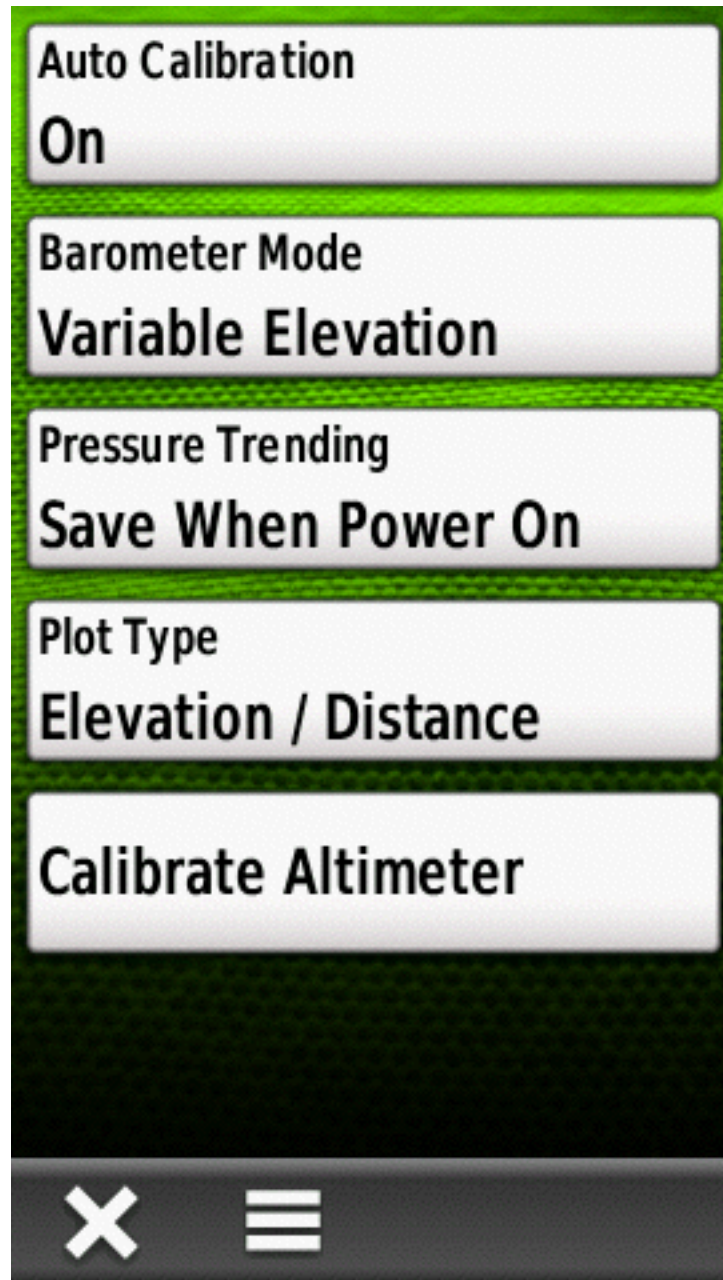
1. Turn the unit on and allow it to tune in to satellites until location is discovered. When you power on the device, a splash screen will display for 20 seconds. The text will say: This GPS Device belongs to the Finger Lakes

Trail Conference. 6111 Visitor Center Road, Mt. Morris, NY 14150 FLTinfo@fingerlakestrail.org +1 585-658-9320.

2. You will then see the main menu screen which includes, top to bottom, left to right:
  - a. GPS signal strength bars, GPS Coordinates and Battery charge indicator
  - b. Time of Day
  - c. Date
  - d. Map, Trip Computer, Track Manager, Camera, Mark Waypoint, Current Track, Setup, Reset, and Altimeter applications. More applications are accessible by pressing the up arrow at the bottom of the screen.



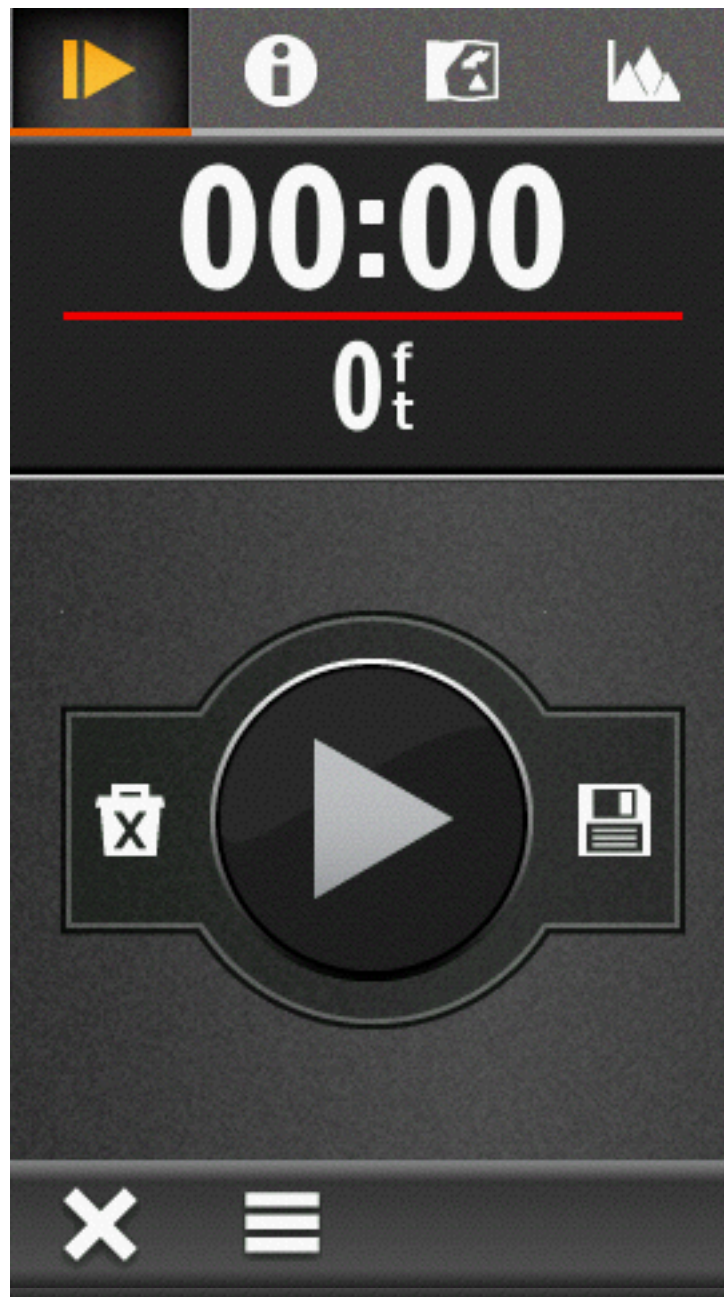
3. If you know your correct altitude, from a trusted map, re-calibrate your altimeter if necessary using the Altimeter application:. Then return to the main menu.



4. Reset Trip Data and the Track Log using the Reset shortcut, (click on Reset Both, below) then return to the main menu.

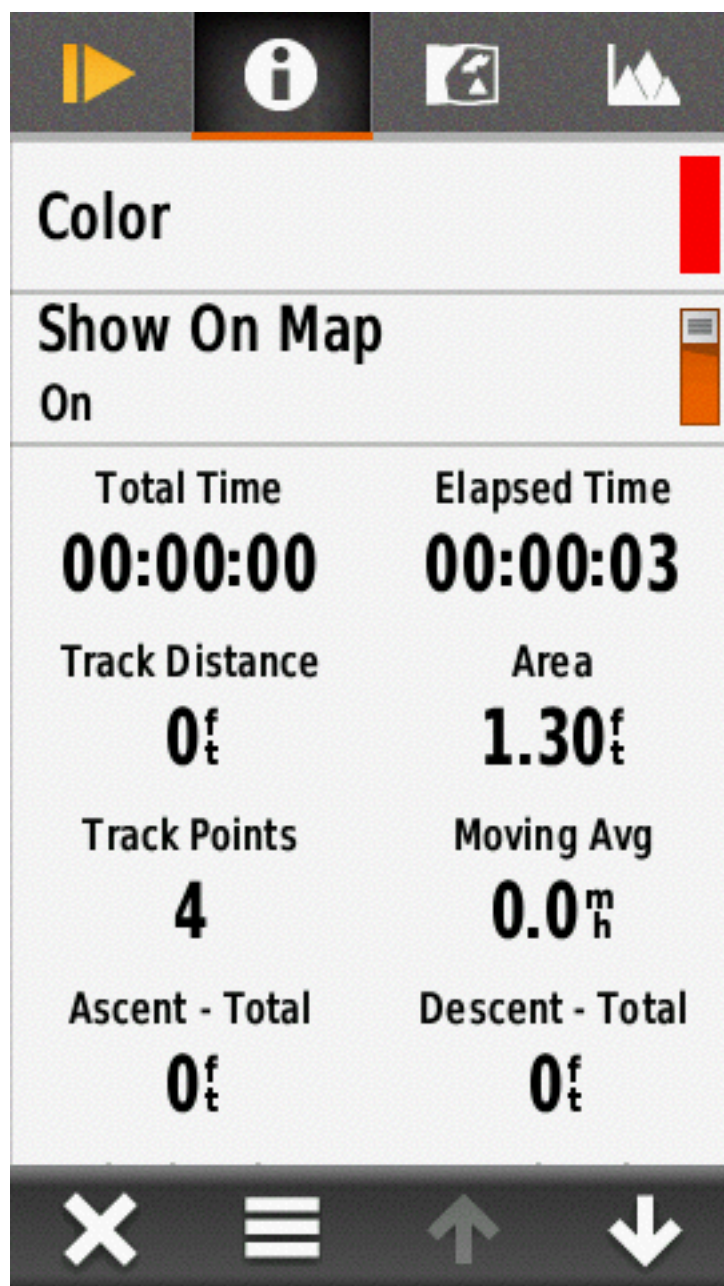
### **Hike the trail**

1. When you are ready to start recording a track, start the Current Track application.
2. Pause the current track if the timer is moving.
3. Clear the current track by touching the trash can symbol and then confirming you want to Clear the track log.
4. Now press the start arrow in the center and begin walking.



Current Track screen

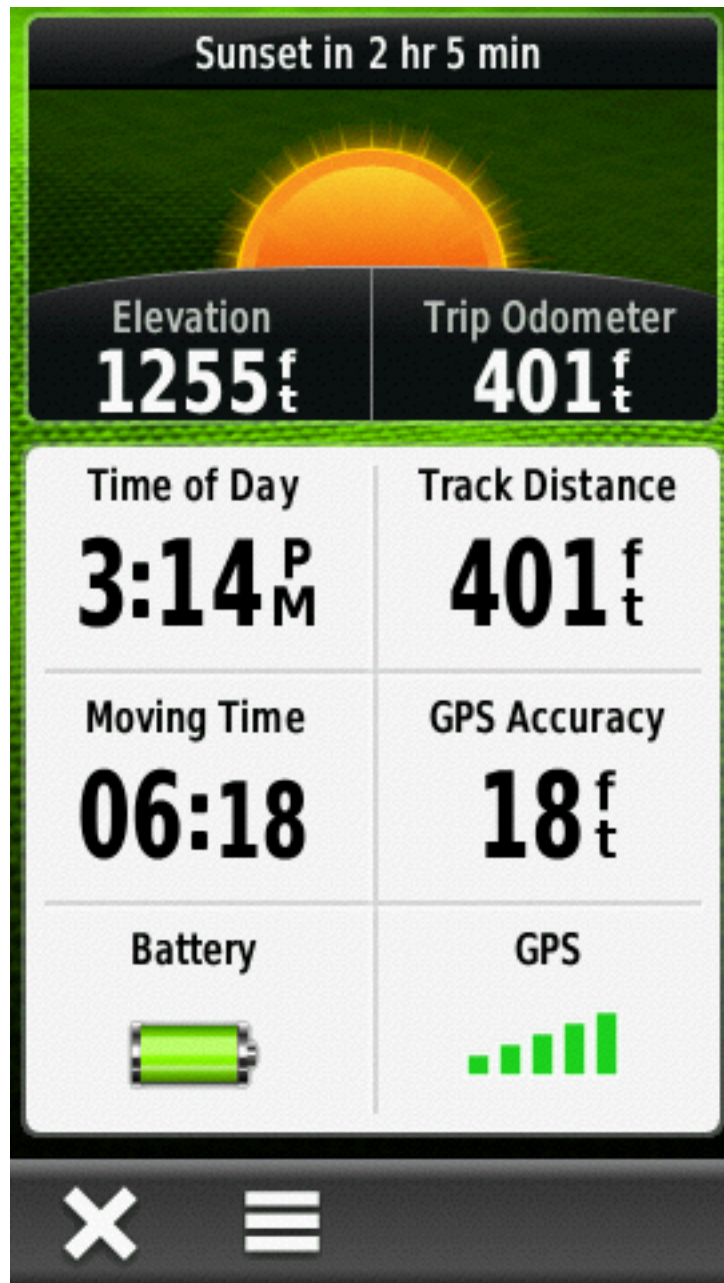
5. The X in the lower left will return you to the main menu. Once there, you may use any application, and the track recording will continue until you stop it (see below.)
6. While still on the current track screen, if you press the "i" Information icon, you will see the Current Track Information screen. It allows you to see and change the current track color. This has been preset to red, as it shows well on the map screen. Other information about the current track being recorded is also displayed on this screen.
7. Again, the X in the lower left will return you to the main menu. Once there, you may use any application, and the track recording will continue until you stop it.



Current Track Information screen

8. If you wish, you may lock the screen by pressing the Power Button and then the lock symbol. To unlock the screen, press the Power Button and then the unlock symbol.
9. Check GPS accuracy frequently. Both the Map and Trip Computer application data fields have been configured to display GPS Accuracy for this reason. If it goes much above 40' stop for a while to see if accuracy returns (but this might take some time) OR take waypoints at the beginning and end of the "poor track" section so that you might return to re-GPS or use prior data (if available). If you are hiking out-and-back, you may find that you get a better GPX "fix" on the return hike.
10. Pay attention to the trail and do not shortcut it. This is especially tempting when you have accidentally gone down the wrong trail and then backtrack. When rejoining the main (correct) trail, there is a temptation to curve across the corner, and then the side trip ends up looking like a Y. When editing later, it's difficult to tell exactly

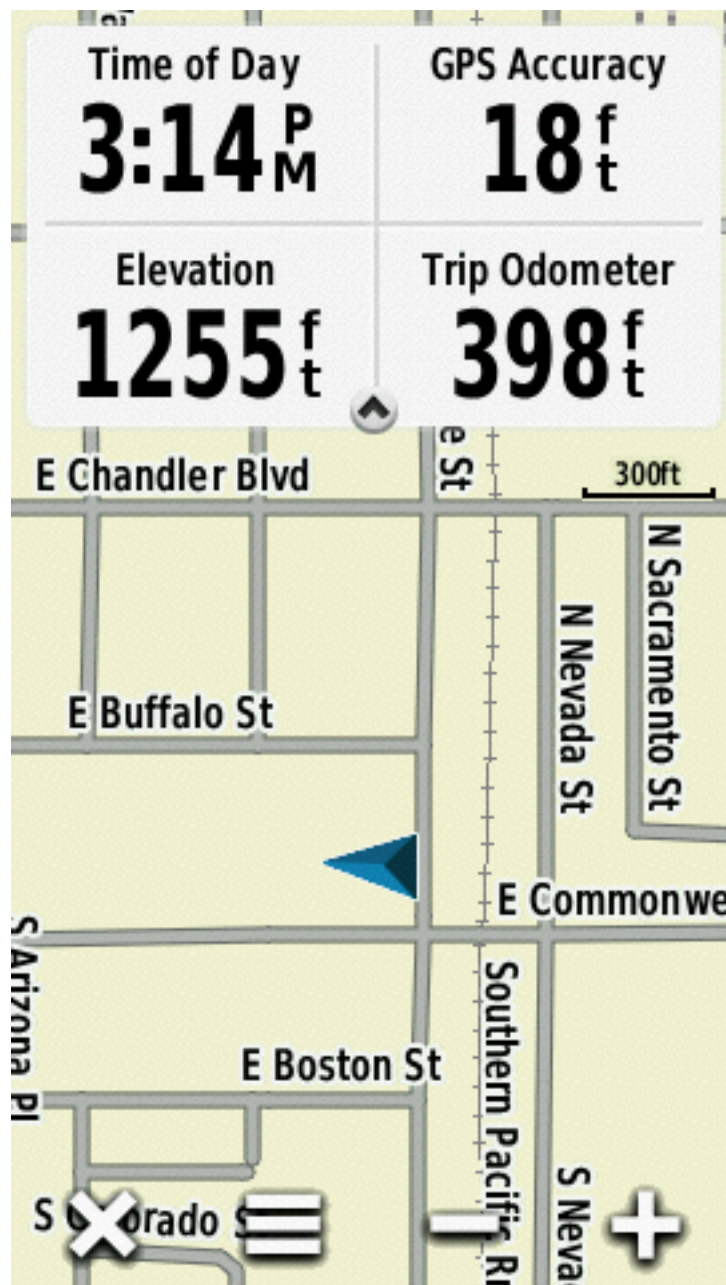
what the correct path is. It is better to backtrack well back onto the original trail, then turn around and follow the correct trail. That way when editing, it's clear which parts to delete.



Trip Computer screen

11. Capture waypoints at significant locations, such as trail junctions, parking spots, access points, viewpoints, trail registers, structures, facilities, etc.
  - a. Whenever you capture a waypoint, make a note or record a memo with the waypoint number and what is at the location.
  - b. Capture a waypoint even though the location already exists on the map. Many times waypoints, such as registers, are relocated, and the Mapping Team is never notified. Other times new features are added.
  - c. Capture the parking coordinates, which may be different than the trailhead.

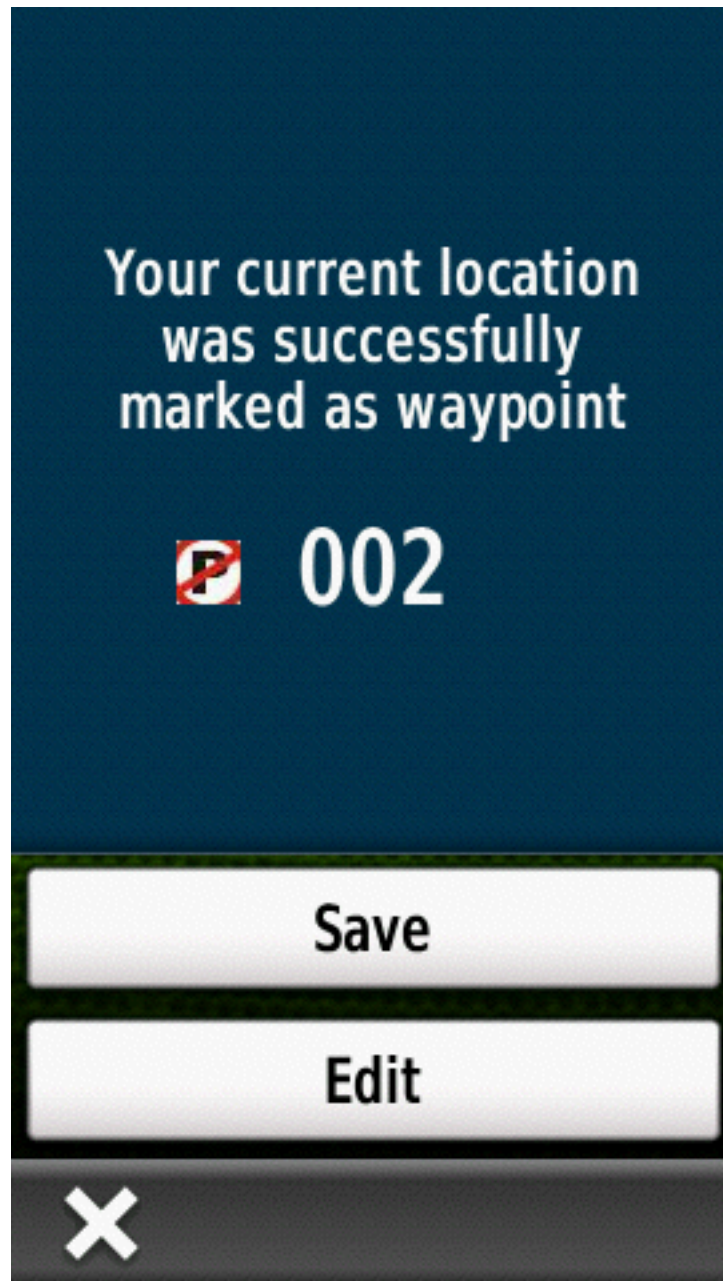
- d. If you get off the trail, set waypoints (to be deleted during the editing phase) when you realize you got off the trail and backtracked, just so it is sure to be noticed during the editing phase.



Map screen

- 12. Take notes during the hike.
  - a. Describe all waypoints (this allows you to use the default numeric label rather than having to enter a name on the GPS device).
  - b. Note anything that might be included on the back of the map, such as what you can see from a viewpoint (and what direction), directions, etc.
  - c. Estimate the approximate number of parking spots at parking locations, as we are now including this in the trail description.

6. Optionally, take photos (as well as record waypoints and take notes) of any new or changed structures. This information is useful when writing the description for the back of the map.



### **At the end of your hike**

1. Store (save) the complete track.
2. Record the trip computer data that you need. Either take notes or use the screen capture function.
3. Return the device to the Office so they may transmit the GPS data to the Mapping Team.