

Recommendation for Setting Up Any GPS for Locating Approximate Property Corners and Property Lines

Detailed Recommendation for Setting Up a Garmin Oregon 6xx GPS

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PropertyLineMaps.com

For other GPS tips related to finding approximate property corners and property lines please visit our website and click on “GPS Tips” in the menu bar.

Generic GPS Setup Recommendation

If you plan to use the GPX file we provided together with your GPS to locate approximate property corners and property lines, then here are some basic setup recommendations that apply to any GPS.

1. WAAS = On
2. GLONASS (if available) = On
3. Datum = WGS84
4. North = true north
5. Coordinate format = decimal degrees (dd.ddddd)
If your GPS is used for geocaching then the coordinate format is likely set to degrees and decimal minutes (dd mm.mmm). If you need to enter the property corner coordinates that we provided by hand, then it is essential that you first change the coordinate format to decimal degrees.
6. Set the map screen so north is ‘up’
7. Data fields for the map screen. First two are the most important. If your GPS is not a Garmin brand, then some of these data fields might have different names.
 - Bearing (0 - 360 degrees)
 - Distance to next
 - GPS accuracy
 - Off course

Detailed Setup Recommendation for an Oregon 6xx GPS

Here are step-by-step instructions you can follow to quickly setup a Garmin Oregon 6xx GPS so it is well-configured for finding approximate property corners and property lines. These setup instructions are based on the following assumptions:

- * Your GPS has a waypoint at each property corner
- * The electronic compass in your GPS is turned off and you are using a hand compass to follow the bearing (that is displayed by your GPS) to the next waypoint on the route.

I recommend turning the electronic compass off for the following reasons.

1. It drains the battery

2. It becomes un-calibrated
3. Your GPS can display the direction you are moving by just using the satellite data
4. A good hand compass is more accurate

If you do use the electronic compass be certain to calibrate it.

Some of the recommended settings you will see below are simply my personal preference for how and where information is displayed on the screen. For example, the setting for how long the backlight stays on. These settings do not affect the accuracy of the location data produced by the GPS and you certainly might prefer different settings for these features.

Helpful links for the Oregon 6xx GPS

Here is a link to owner's manual for the Oregon 6xx:

http://static.garmincdn.com/pumac/Oregon_6xx_OM_EN.pdf

A great source of information to help you learn about your Oregon 6xx GPS is:

<https://garminoregon6xx.wikispaces.com/>

The information on this site is thorough and well-written. This site also has a forum that is specific to the Oregon 6xx models. To find the forum link, open the above wikispaces website, look at the sidebar on the left side of your screen and scroll to the bottom.

Another good forum for information on Garmin handheld GPS units is

<http://forums.gpsreview.net/viewforum.php?f=21>

If you need help with Garmin's free BaseCamp program, then here is the best forum for that topic:

<https://forums.garmin.com/forumdisplay.php?179-BaseCamp>

Also for BaseCamp, here is the printed 'Help' information from Garmin:

http://static.garmincdn.com/basecamp/4_2/en/Default.htm

Register your GPS

1. Find your serial number.

Open the battery cover and write down the serial number. It is on a sticker on the inside edge of the battery compartment. If you installed batteries you need to remove them to see the serial number. Save your batteries for when you really need them. Just follow the steps below and your GPS will run just fine on external power via the USB cable.

2. Go to <https://my.garmin.com> and register your serial number.

Install BaseCamp and update the GPS firmware

3. Go to <http://www.garmin.com/en-US/shop/downloads/basecamp>.

Scroll down on that page and then download and install Garmin's free BaseCamp program. If the program starts after it is installed, then close it.

4. Put your GPS into mass storage mode.

With the GPS off, connect it to your computer with the supplied USB cable. When you make the connection, the GPS will start. If you are asked if you want to go into **“mass storage” mode**, then answer yes. If you do not see this question, then your GPS likely automatically went into mass storage mode. When the GPS is in mass storage mode the word Garmin appears in the middle of the screen and below that is a symbol that looks a bit like a wire that splits into three parts.

5. Use BaseCamp to update the firmware in your GPS.

On the menu bar, click Device ==> Check For Device Software Update. Follow the instructions to update the firmware to the most recent version. At the present time version 3.6 is the most recent firmware for the Oregon 600. If BaseCamp complains that it did not find your GPS then make sure you complete step 4 before starting BaseCamp.

Note: If you scroll down on <https://garminoregon6xx.wikispaces.com/Firmware> then you will find a history of the firmware releases for the Oregon 6xx GPS line.

6. Use BaseCamp to backup any data in your GPS.

If your GPS is new and you have not saved any waypoints or other data that you want to keep, then you can skip this step.

Here are Garmin's step-by-step instructions for backing up your data using BaseCamp.
<https://support.garmin.com/support/searchSupport/case.faces?caseId={7fdc4230-f13b-11df-ea12-000000000000}>

7. Close Basecamp

Do a factory reset and backup all the GPS system files

If your GPS is new, it is highly recommended to make a complete backup of all the system files on it. Also, prior to your first backup I recommend doing a factory reset. Then if you even need to restore the files on your GPS by using the backup copies, you will be restoring those files to the factory configuration.

8. Change the GPS from mass storage mode to GPS mode.

In the system tray on your computer, click the icon that lets you safely remove hardware. In the popup window, your GPS is listed as two drive letters. One for the internal memory and one for the micro SD card (even if no micro SD card is present). After a few seconds your GPS will begin running as a GPS. In other words, it is no longer in mass storage mode. It is using power supplied by the USB cable and the main GPS menu is displayed.

9. Do a factory reset.

Open the application drawer by touching the 2 bars (drawer symbol) at one edge of the main menu screen. Start the Setup application and scroll to the bottom of the list of items. Touch Reset ==> Reset.

10. Change from GPS mode to mass storage mode.

Put your GPS back into mass storage mode by turning it off (hold power button until you hear two beeps) and then back on. When your GPS is in mass storage mode it simply looks like a removable hard drive named “Garmin” to your PC.

11. Backup all the files on the GPS.

Make a folder on your hard drive and give it a name that includes the version number of the firmware in your GPS. Then use My Computer or whatever tool you prefer to backup all the files from the “Garmin” removable drive to your PC.

Backing up all the system files on a Garmin Oregon 6xx GPS is easy to do, only takes a couple of minutes and potentially can save you much grief. If the system files on your GPS ever get corrupted then you can easily fix things by putting the GPS into mass storage mode and copying the files from the backup you made over to the GPS.

Configure your GPS for locating approximate property corners and property lines

Now that you have registered your GPS, updated its firmware and made a backup of the GPS with all of its original files and settings, you are ready to start configuring your GPS for the purpose of locating property corners and property lines.

Garmin Oregon 6xx GPS units have a feature called profiles. A profile stores most of the settings for the various features. **Caution!** The setup values for a few GPS features must be entered by hand since those values are not stored in the profile.

12. Download the profile I made, save it as a txt file and copy it to your GPS.

I went through all the setup options (there are many) and selected values that I feel are the most useful for finding approximate property corners and property lines. Right click the following link and download the “Corners” profile I made. **Save it as a txt (text file). Make sure the file name remains Corners.gpf**

https://propertylinemaps.com/p/profile_gps/Corners.gpf

Your GPS should still be in mass storage mode after #11. Open the Garmin folder on your GPS and find the “Profiles” folder. Copy the Corners profile into that folder.

13. Change the current profile in your GPS to the Corners profile

Change the GPS from mass storage mode to GPS mode. (See step 8 for help.) Then go to the GPS application drawer and select Profile Change ==> Corners.

14. Configure the settings that are not stored in the profile

It seems silly to me that some of the settings are not stored in the Profile but that is Garmin’s doing not mine. Below are the setup things that I recommend you do by hand. The values for these features are not stored in the profile. The first entry on each line is the GPS application you need to start in order to drill down to feature that needs to be set.

Setup ==> System ==> Satellite System ==> GPS + GLONASS

Setup ==> System ==> WAAS/EGNOS ==> On

Setup ==> System ==> AA Battery Type ==> (whatever you are using)

Setup ==> System==>Routing==>Route transitions ==> Manual

Congratulations! You are now done setting up your Garmin 6xx GPS for the purpose of finding property corners and property lines.

How to save a change you make to the Corners profile

If you want to tweak any of the settings that are saved in the Corners profile, then you need to know the trick that will save the changes you make to those settings. Except for the four settings listed above, all of the other GPS’s settings are stored in the Corners profile. If you wish to change any of those settings and have your change present the next time you turn on your GPS, then I recommend you proceed as follows:

1. Profile Change ==> 3 bars ==> Profile Setup ==> Create New Profile

This new profile is a copy of the current profile that the GPS is using.

2. Select the new profile ==> Edit name

Give your new profile a descriptive name. This is now the 'current' profile

3. Make the new profile the current profile

Go back out to the main GPS screen. Then do "Profile Change" and select the name of your new profile.

4. Change GPS settings

Make any changes to the various settings so your GPS operates as you prefer.

5. Save your revised GPS settings in your new profile

December 23, 2013 update: If you are using firmware 3.6 or later in an Oregon 6xx GPS then your new settings are saved right away in your current profile. You do not need to change to a different profile in order to save you new settings.

Start "Profile Change" and switch the profile to any one other than the current one. Think of this step as **closing** the current profile before opening a different profile. **Any changes you made to the GPS settings (except for the four settings listed above) are saved in the profile being closed.**

6. Switch back to your new profile.

Go back out to the main GPS screen and then use "Profile Change" again to switch back to your new profile.

Technical details about the Corners profile

By default, an Oregon 6xx GPS will use a profile called Recreation. The Corners profile makes a number of changes to the settings in the Recreation profile. Those changes are listed below. If a particular GPS setting is not listed below then it means either (1) the Corners profile uses the same setting value for that feature as the Recreation profile or (2) I made a mistake and should have included that setting in the following list. As you explore your GPS you will discover that there are a large number of settings and options.

When the Corners profile is the current profile, the following applications appear on the main menu:

- Map
- Where to?
- Active route
- Trip computer

The most useful apps related to finding property lines and property corners have been moved to the top of the application drawer.

1. **Backlight**

- a. Set to about 60% via the status screen. When the corners profile is active quickly pressing the power button twice will display the status screen.

2. **Maps application**

- a. Orientation ==> North up
- b. Dashboard ==> Small data fields
- c. Guidance text ==> Never
- d. Advanced setup
 - i. Shaded relief ==> Do not show
 - ii. Zoom controls
 - (1) Portrait buttons ==> Bottom
 - iii. Text size
 - (1) User waypoints ==> Large

Map dashboard - The four data fields are set to:

- Bearing
- Distance to next
- GPS accuracy
- Off course

3. **Trip computer application**

The corners profile turns the compass off. If you insist on turning the compass on then you find the trip computer application setup as follows:

- a. Dashboard ==> Favorites
- b. Layout
 - i. One big data field and 4 smaller data fields
- c. Big data field ==> Location - selected (coordinates in decimal degrees)
- d. Four small data fields
 - Bearing Distance to next
 - Off course GPS Accuracy

4. **Compass application**

- a. Setup heading
 - i. Display ==> Numeric degrees
 - ii. Go to line/pointer ==> Course
 - iii. **Compass** | ==> **Off**
 - iv. Four data fields ==> None

The Corners profile turns the compass off. The four data fields are set to “none” and therefore blank. If you turn the compass on then (1) be sure to calibrate the compass and (2) you will likely want to tap each empty data field and select something to be displayed.

5. **Track manager application**

- a. Current track
 - i. Show on map ==> Off

6. **Setup application**

a. **System**

Some of the settings in this section might already be the default for the recreation profile which was copied to make the corners profile.

- i. Satellite system ==> GPS + GLONASS
- ii. WAAS/EGNOS ==> On
- iii. Text language ==> English
- iv. Interface ==> Garmin Spanner
 - (1) Baud ==> 9600
- v. Configure keys
 - (1) Power key
 - (a) Single tap ==> Screen on/off
 - (2) User key
 - (a) Double tap ==> Active route
- vi. AA Battery Type ==> Alkaline

b. **Display**

- i. Backlight timeout ==> 30 seconds

Note: Do not turn on the 'battery save' feature since doing so disables WAAS and most likely will cause the GPS to become less accurate.

c. **Appearance**

- i. Mode ==> Day
- ii. Landscape controls ==> Right

d. **Map** (already described - see above)

e. **Routing**

- i. Activity ==> Direct routing
- ii. Route transitions ==> Manual
- iii. Lock on road ==> No

f. **Tones** (proximity alarm remains on, others turned off)

- i. Message beep ==> Off
- ii. Turn warnings
 - (1) Early turn warning ==> Off
 - (2) Final turn warning ==> Off
- iii. Proximity Alarms
 - (1) Approaching alarm ==> Off
 - (2) Leaving alarm ==> Off
 - (3) Upcoming speed alarm ==> Off

- g. **Heading**
 - i. Display ==> Numeric degrees
 - ii. Compass ==> Off (see comment below)
 - iii. Calibrate compass (If you turn the compass on, be sure to calibrate it.)

- h. **Shortcuts**
 - i. A shortcut to the maps application is made and put in the favorites dashboard.

- i. **Main Menu**

Corners profile shows these applications on the main menu:

 - Map
 - Where to?
 - Active route
 - Trip computer

Applications in the drawer have been rearranged so those potentially the most useful for finding property lines and property corners are at the top of the drawer.

- j. **Position Format**
 - i. Position format ==> hddd.ddddd (scroll to top to see this choice)

- k. **Accessibility**
 - i. Touch sensitivity ==> Normal
 - ii. Scroll controls ==> On

- end -