



Setup of the Garmin Oregon 550 and 550t Units

Abstract

This guide outlines the recommended settings for the Garmin Oregon 550 and 550t GPS units for NRCS users in Indiana. The recommended settings are made to insure that data collected in the field is consistent with most of the GIS data and imagery currently available in USDA Service Centers in the Toolkit environment (which applies to the majority of users). Note that the layout of icons on the menu screens in this guide may differ from the layout of icons on a given unit, but all icons should be available.

Steps: Press Setup – Set System > GPS to WAAS/EGNOS – Set Position Format > Position Format to UTM UPS – Set Map Datum to WGS84 (or NAD83) – Set other optional settings as outlined below

Details

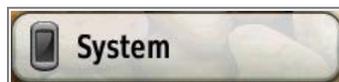
Settings

The following section headings correspond to the menu options found under the **Setup** button. All settings are managed from menus and options found under the **Setup** button.

Listed below are the recommended settings for NRCS users. The underlined headings with a corresponding graphic indicate which sub-menu under **Setup** contains the setting. Critical settings are listed in ***bold italics*** and should be reviewed before each use to ensure data is collected correctly. Settings not listed in this guide typically should not affect most uses and can remain default. Note that settings shown in screenshots are not always the recommended setting due to adjustments made to work with the unit during the creation of these task guides. Please review the text of any given setting recommendation to fully understand that setting and make the choice appropriate to your desired work task.



System Settings



GPS (or GPS Mode): Set to ***WAAS/EGNOS***. The ***WAAS/EGNOS*** setting improves the accuracy of unit's independent position readings under all circumstances. The only time to use ***Demo Mode*** would be when performing a class instruction or demonstration indoors. When the unit is On while indoors, it will prompt you whether or not to continue searching for satellites. If you answer No, the unit will default to ***Demo Mode***. Before using the unit outdoors again, make sure the mode is switched back to ***WAAS/EGNOS***.

Battery Type: Set to ***Rechargeable NiMH***, or as appropriate.

Interface: Set to ***Garmin Spanner***. Spanner allows the user to choose the type of connection to the computer to be a live feed or mass storage whenever connected. Spanner outputs NMEA sentences during live feeds of data. Any change to this setting will be called out in the applicable guide.



Position Format Settings

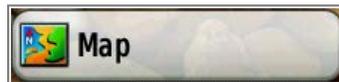


Position Format: This setting controls the coordinate display in various screens on the GPS unit. It does not control the format of output coordinates from the unit. All coordinates in the unit are stored and transferred out as lat/long values, regardless of this setting. The two recommended values are **UTM UPS** or **hddd°mm'ss.s"**.

Map Datum: This setting does affect the positions collected by the unit. The recommended setting is **WGS84** to match the standard datum for transfer with DNRGPS. However, the **NAD83** setting is also acceptable.

Map Spheroid is automatically updated based on the selected Map Datum.

Map Settings



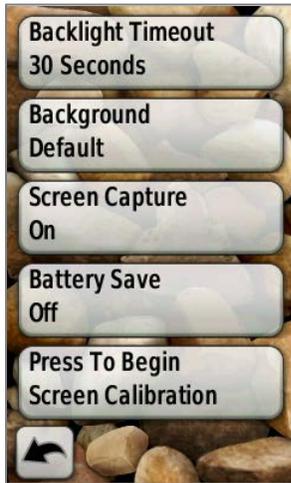
Orientation: This controls how the map is shown on the *Map* screen. *Track Up* will always place your direction of travel at the top of the *Map* screen. *North Up* places north at the top of the *Map* screen. This setting is variable to task and user preference.

Data Fields: This will show information while on the *Map* screen that is similar to the information shown on the *Compass* screen. Zero will show none; two will show *Speed* and *Heading* info; four will show the previous two types plus *Elevation* and *Trip Odometer*. This setting is variable according to user preference.

Map Information Select Map: This menu allows you to enable or disable base map data loaded on the unit. Oregon 550t units will have the **Topo 100k** preloaded and it should be **enabled**. Oregon 550 units need to have the microSD card with the Topo 100k data loaded in the microSD card slot in order to enable the same option. Other default maps can be disabled.



Display Settings



Backlight Timeout: This setting controls how long after the last interaction that the screen remains fully illuminated. After that time elapses, the screen will dim. This setting can be adjusted by user preference, but the longer the choice the faster the battery will drain while using the unit.

Screen Capture: This setting will allow a user to take a screenshot of whatever is displayed on the unit by tapping the Power button. It is recommended to leave this setting as *Off*. (It is *On* here for the creation of the screenshots in the task guides).

Battery Save: This setting will shut off the screen completely at the same time as the *Backlight Timeout* takes effect. Recommend setting to *Off* if *Backlight Timeout* is 30 seconds or less, otherwise set to *On*.

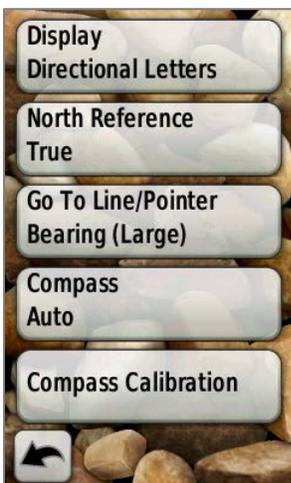
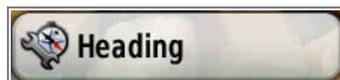
Press to Begin Screen Calibration: This will launch the screen calibration wizard. Use it the first time you use the unit, or if the screen doesn't seem to be registering your touches correctly. Follow the prompts when it opens.

Adjusting Brightness

There are no Brightness settings in the *Display* menu. While the unit is powered on, tap the Power button on the side of the unit. A screen will appear with a light bulb graphic and +/- buttons. Tap the plus or minus buttons to adjust the screen brightness. As you tap the "+" button, the light bulb will gradually fill up with a yellow/orange color and the screen will brighten. Press the "x" button to exit the brightness screen and return to the previous screen. Garmin recommends about a 50% setting to optimize battery life, however we recommend setting the unit to the brightness you need to view the unit as conditions change and keeping extra batteries on hand while in the field.



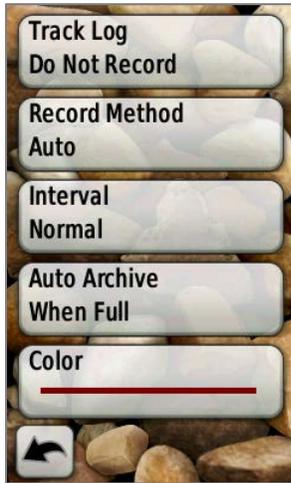
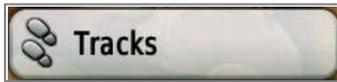
Heading Settings



Compass Calibration: Use the *Compass Calibration* function to calibrate the unit's compass. Follow the onscreen directions once this function is activated in order to perform the calibration.



Tracks Settings



Track Log: Sets whether or not the unit is recording a track as you move. If you are just taking waypoints and are not working with tracks, the recommended setting is **Do Not Record**. If you need to work with tracks, the recommended setting is **Record, Do Not Show** or **Record, Show On Map**. Note that the unit will always be recording a track when either of the *Record* settings are active. You can interactively control saving, clearing, and starting new tracks from the *Tracks* screen. See the task guide on *Tracks*.

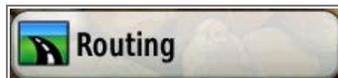
Record Method: Auto

Interval: Normal

Auto Archive: When Full

Color: User preference. This line color will be the color used to draw the track on the *Map* screen.

Routing Settings



Guidance Method: Set to *Off Road* when not using navigation functions.

Lock On Road: Set to **No** when not using navigation functions. Currently the units do not have a navigable road layer loaded so the road based navigation functions will not work. To prevent error messages from appearing when trying to use the *Compass* screen to navigate to a waypoint in a field, the recommended setting is *No*.



Camera Settings

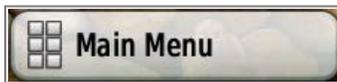


Photo Resolution: The camera has three options for photo resolution. Each option increases the file size of pictures taken, which will in turn fill up the storage of the unit more quickly. Normally, this is not a factor unless storage is being used by additional onboard datasets. Typically 1 and 2 megapixel pictures are quite suitable for 3x5" or 4x6" photos, with higher resolutions only needed for photos to be printed at 8.5x11" or larger. This setting is left to user preference. Examine the following chart to determine what best suits your needs. The number of files assumes 1 GB of internal storage.

Setting	File Size	# of Files	Use
1 MP	~250 kb	~4,000	3x5 or 4x6 images
2 MP	~375 kb	~2,650	3x5 or 4x6 images
3.2 MP	~550 kb	~1,800	Full page or poster images

Save Photos To: This setting controls storage of photos on the device, prior to transfer to the computer. Set to *Internal Storage* unless you have a microSD card loaded that has space to hold photos.

Main Menu



The *Main Menu* option under *Setup* allows the user to rearrange icons on the main screens of the unit. It also allows users to hide icons. It is recommended that users move more commonly used icons to the leftmost screens and unused icons to the rightmost screens. When a user accesses this button, a screen will come up that looks just like the main screens of the unit, except the *Go Back* and *Trash Can* buttons will also be present. The following adjustments can only be carried out while within this menu.

To hide an icon, navigate to the icon you want to hide, tap the icon once to highlight it, and then tap the *Trash Can* button. The icon will be grayed out and moved to the rightmost screen. That icon will no longer display on your main screens when you go back to using the unit.

To move an icon, navigate to the icon to be moved, tap the icon to highlight it, navigate to the screen where you'd like to place the icon, and tap an icon on the new screen where you want to drop the previously highlighted icon. The icon initially highlighted will swap places with the icon you last tapped.

To restore a hidden icon, navigate to the icon to be restored (hint: it will be grayed out) and tap the icon to highlight it. Once highlighted, the *Trash Can* button will change to a "+" button. Tap the "+" button to restore the icon.

The following icons are frequently used functions or tools and are recommended to be moved to the leftmost screens: *Mark Waypoint*, *Waypoint Manager*, *Map*, *Where To?*, *Compass*, *Camera*, *Waypoint Averaging*, *Track Manager*, *Photo Viewer*, *Share Wirelessly*, *Profile Change*, and *Setup*.



Profiles Menu



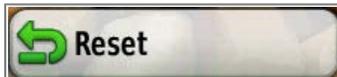
The Profiles menu can be used to create and save the current settings for a particular activity as a profile. Once several profiles are created, multiple settings can be changed at once simply by going to the Profiles menu and selecting the desired settings profile to be loaded. To create profiles, refer to the *Oregon Series Owner's Manual*.

Recommended Profiles to Create:

Waypoints *GPS:* WAAS/EGNOS
Position Format: UTM UPS
Map Datum: WGS84 (or NAD83)
Map Orientation: North Up
Backlight Timeout: 1 minute
Battery Save: On
Track Log: Do Not Record
Guidance Method: Off Road
Lock On Road: No

Tracks: *GPS:* WAAS/EGNOS
Position Format: UTM UPS
Map Datum: WGS84 (or NAD83)
Map Orientation: Track Up
Backlight Timeout: 30 seconds
Battery Save: Off
Track Log: Record, Do Not Show or Record, Show on Map
Guidance Method: Off Road
Lock On Road: No

Reset Menu



The *Reset* menu has options to clear all trip data, all waypoints, and the current track. It also has the option to restore the unit to its default settings under all menus and the default layout of buttons on the main menu screens. Users should not use this screen unless they are certain they want to perform any of these four tasks.