

OpenCPN auxiliary hardware:

Using Older Android (ver 4.3 Jelly Bean and up) Phones to provide GPS to a Computer

#### WHAT YOU HAVE AND WHAT YOU NEED

- So you have boat and a drawer full of old Android phones.
- You have a Windows laptop too, but it doesn't have GPS.
- You have installed OpenCPN, but you're not sure how to get GPS data to it.
- You don't want to use your day-to-day phone as a dedicated GPS dongle.

Well you're in luck. There are several Android apps design to share GPS over Wi-Fi, Bluetooth and USB to Windows computers. There are older versions of these apps that work with older OS versions.

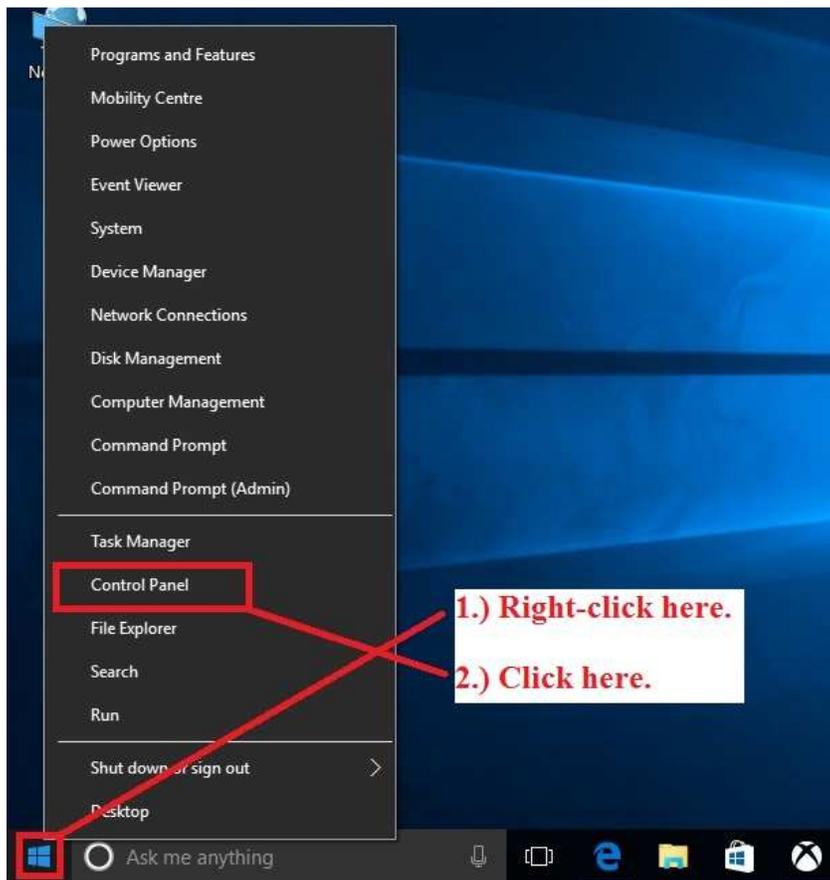
In this example, Windows 10 (Anniversary update) is running on an HP Elitebook 8440p laptop with OpenCPN installed. The phone is an old Sony Xperia Z phone running on Android version 4.3 (Jelly Bean) and with the ShareGPS app ver 2.0 downloaded from the author's website. However, the steps will be similar for many older Android phones.

NOTE: This is not the latest version of ShareGPS. There are numerous reasons for using the older version of ShareGPS with older phones running under older versions of the Android OS. That would be an article in itself. Suffice to say that this version works well and was designed to run on the older version of Android. Should you have a newer phone with a newer Android OS version and you can connect through the phone service or WiFi, then feel free to download the latest version of ShareGPS from the Play Store.

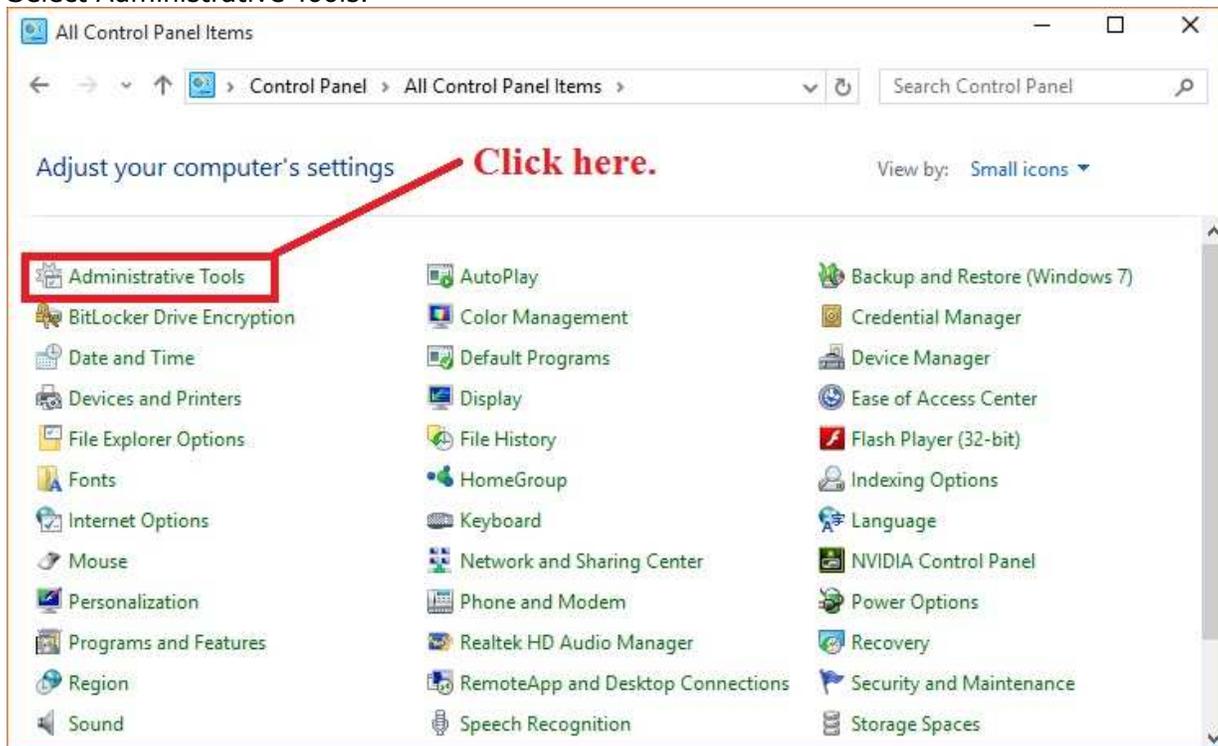
#### **SECTION I**

The first order of business is to activate the Bluetooth function on your computer and make it discoverable, if it isn't already. If you do have Bluetooth activated then you can skip this section and go to **Section II**.

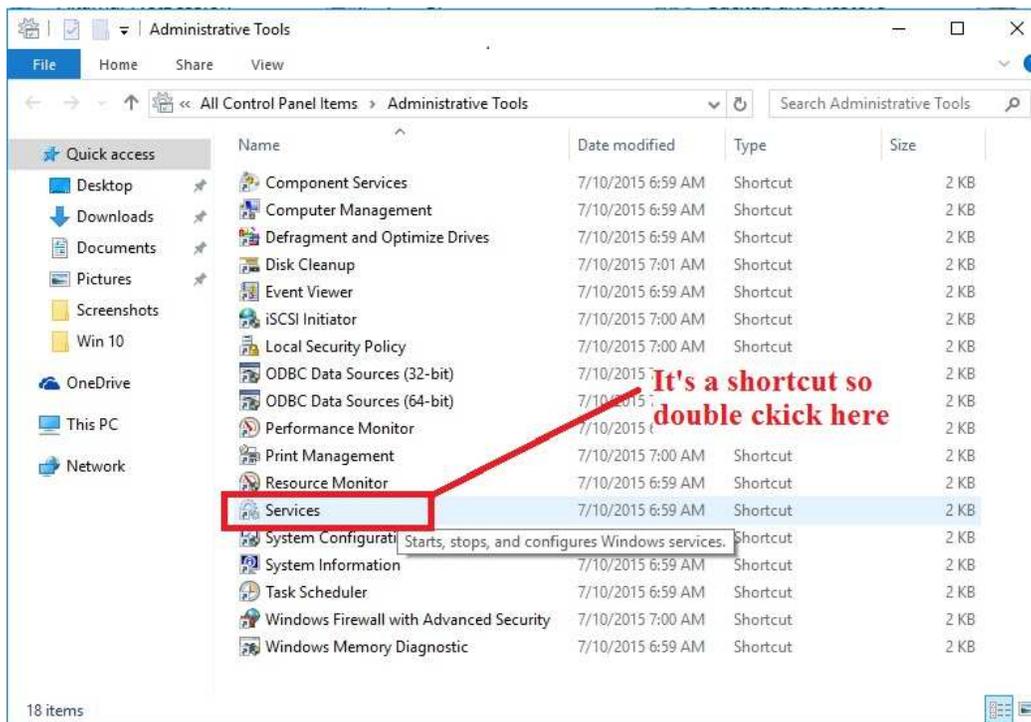
In Windows 10, right-click on the Start Icon. Select Control Panel from the menu.



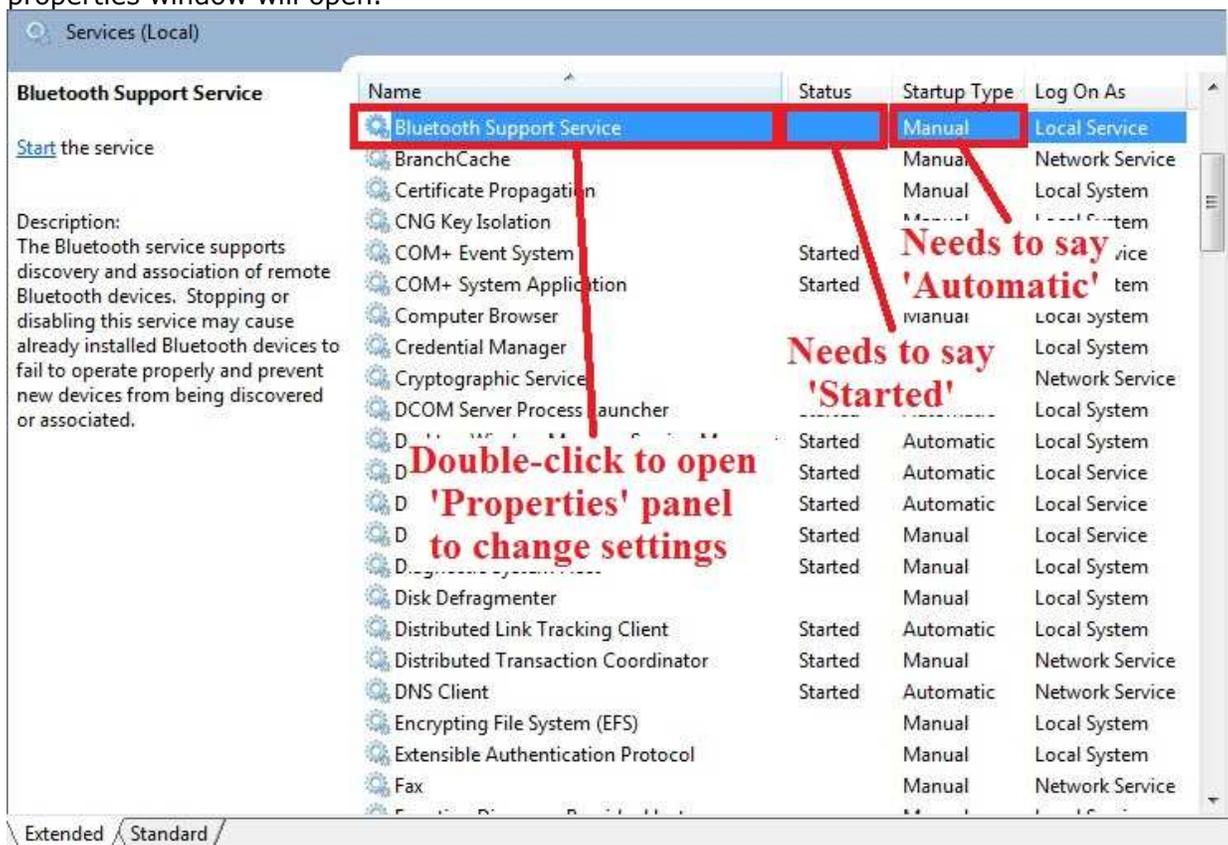
Select Administrative Tools.



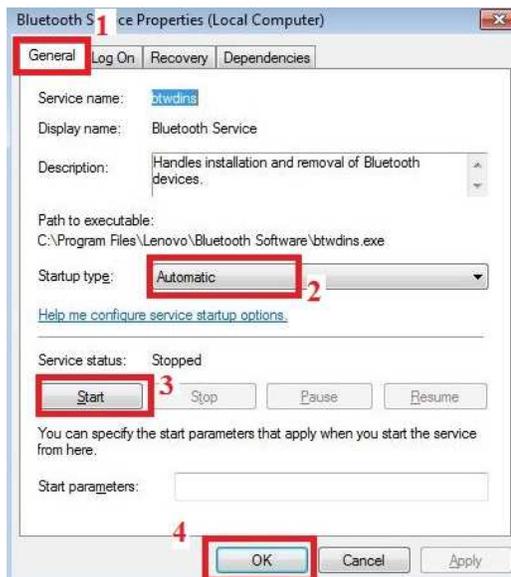
Select Services. NOTE: Double-click 'Services'. This is a shortcut link.



Find Bluetooth Support Service. Under the Startup Type column it should read, "Automatic (Trigger Start)" and under the Status column it should read "Started". If it does not, double-click Bluetooth Support Service and it's properties window will open.



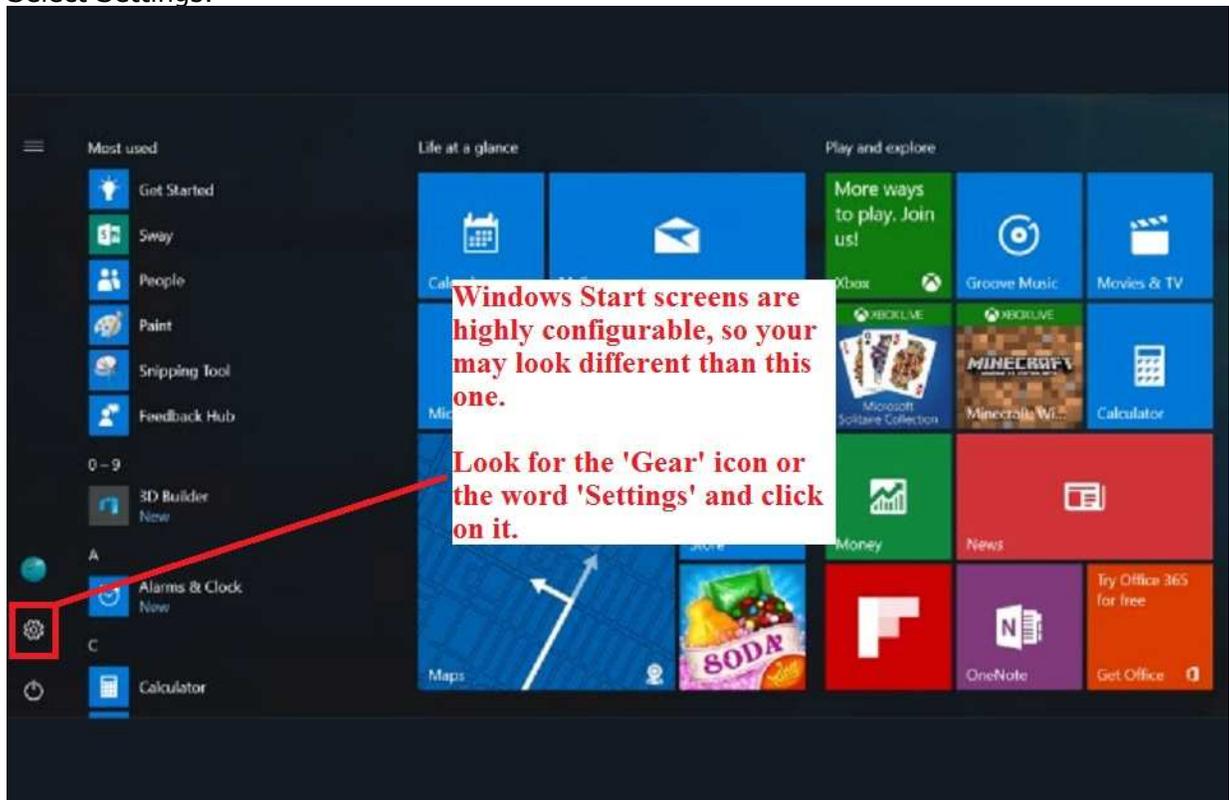
Under the General tab, set Start Type in the dropdown box to Automatic, click Start to start the service if it is stopped and then click OK to save changes.



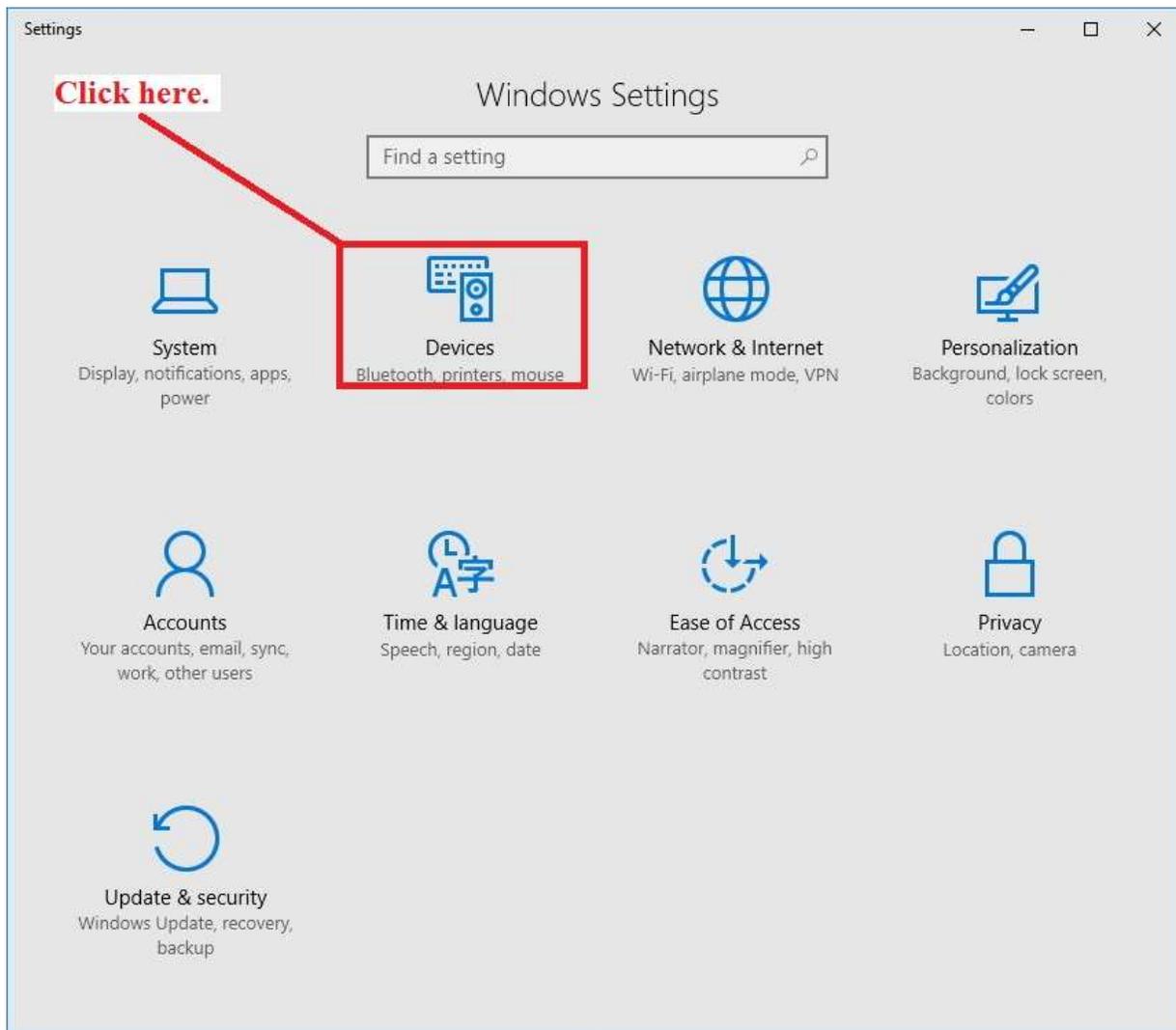
Close the Services window.  
Close the Administrative Tools window.  
Close the Control Panel.

## Section II

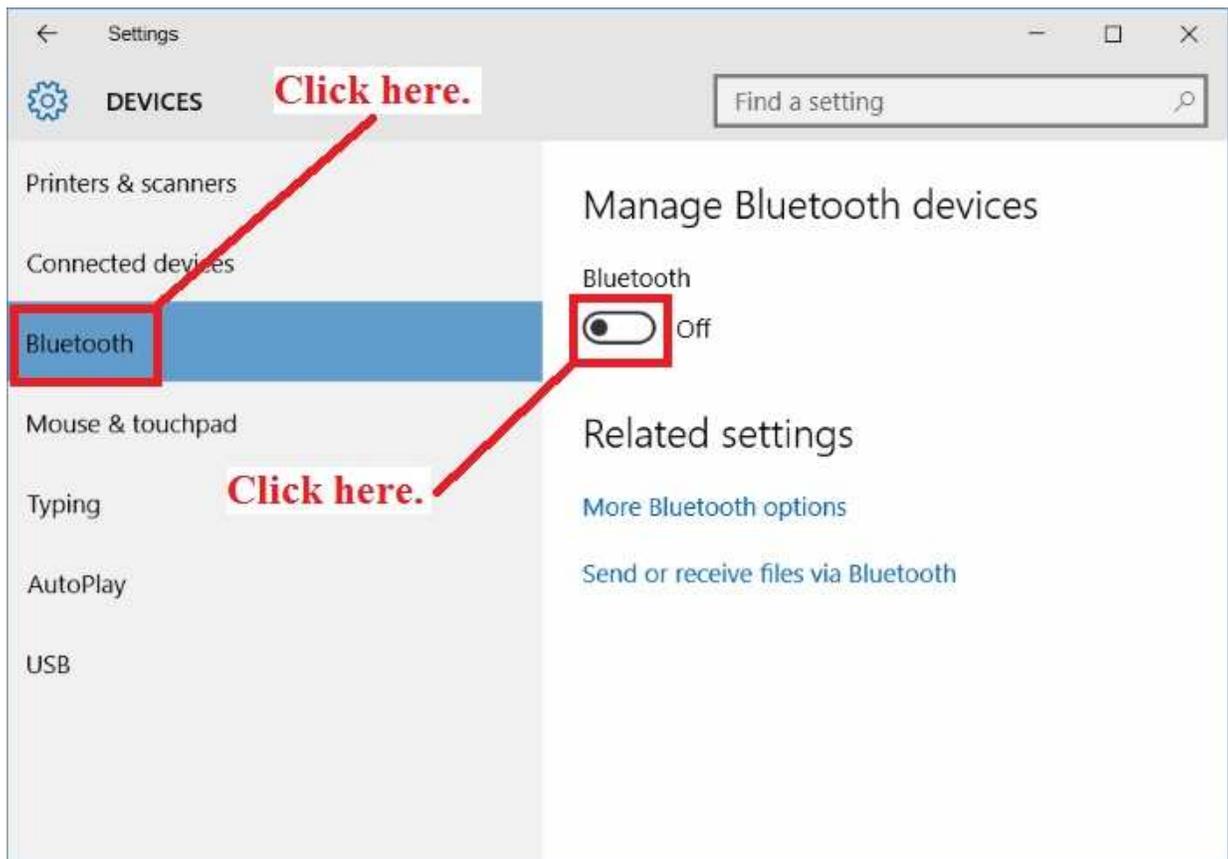
Select Windows Start. Look for "Settings" or the gear icon.  
Alternately, you may simply type 'Settings' to find the Settings app.  
Select Settings.



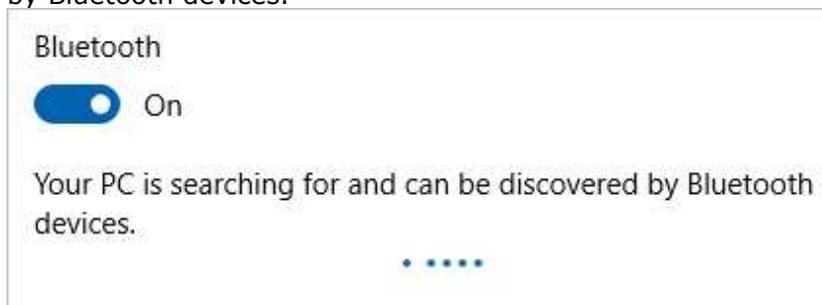
Select > Devices.



Select > Bluetooth and turn on the Bluetooth toggle.



You should see the message, "Your PC is searching for and can be discovered by Bluetooth devices."



**IMPORTANT NOTE:** Make sure the computer is; 1) not paired with another device and 2) scanning for devices. If it is connected to another device, you must disconnect the device and 'Forget' the device. Make sure it is still scanning. You may have to toggle Bluetooth Off and then On again to resume scanning.

Go to the phone next. Install and test your GPS sharing app on an Android cell phone. If the phone is active, get the app ShareGPS from the Google Play Store. (<https://play.google.com/store/apps/details?id=com.jillybunch.shareGPS&hl=en>). Most phones you will find in a drawer run an old versions of the Android OS, do not have service, and may be incompatible with the latest version of ShareGPS.

If the phone is running an older version of Android OS and does not have active service, go to the author's website Jillybunch, (<http://www.jillybunch.com/sharegps/index.html>) to download ShareGPS ver 2.0 apk file to your laptop, then side load it from your laptop to your phone via a USB connection.

This example presumes you know how to download a file to your Windows

computer and transfer files to a phone over a USB connection. If you don't, you should get someone more technically proficient to help you.

Via a USB connection, the apk is copied from the laptop to the phone's 'download' folder (any folder will do as long as you remember the name and where it is on your phone) and then opened with the phone's 'Files' app (or My Files or any other file app you may be using). This action should automatically install the app for you. Just follow the prompts.

Once installed, turn on Airplane Mode.

Turn on GPS.

Turn on Bluetooth.

Turn off Wifi.

\*\*\*\*\* Needs expansion, illustrations and editing  
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At this point, I also turned off Mobile Data, Auto Sync, turned down all of the volume levels and disabled every app that I did not intend to use or want running in the background. In the Developer options settings, I turned ON 'stay awake' while charging and later, after the installation was complete, I dimmed the display to 0.

This is done in an effort to reduce CPU, radio, display and memory usage, thereby reducing both heat and battery consumption. These are important considerations on a boat and for a phone that might be sealed in a watertight bag or case. The phone should stay connected to a battery or it will shut down. You will have to restart the phone and the ShareGPS app if it does.

Next, check your computer. Make sure it is still scanning for devices. If it is connected to another device, you must disconnect the device and 'Forget' the device. Toggle Bluetooth off and on again to start scanning. Leave it scanning.

Open the ShareGPS app on the phone.

Find the three vertical dots.

When pressed, a menu will open with a number of choices. Select 'Connect with Bluetooth Device' then select the 'Scan'.

Follow the prompts on the phone first and then the computer. It is important that the Bluetooth connection is established from within the ShareGPS app (not from the phone's Settings >Bluetooth menu) and then confirm the Bluetooth pairing from the phone and the computer.