

Author: Jonas Kämpe, [jonas@kampe.com](mailto:jonas@kampe.com)

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## **GPS: 'S' is for Sharing**

**A GPS system is becoming a standard tool in many settings, often hooked up to a PDA. Not just in freight ships and long-distance trucks, but also in privately-owned boats, cars and airplanes. As many users have discovered, making two or more applications get along and share access to the GPS device can be a real nuisance – but there are ways to get around it. In this article we will use a program called GpsGate to make two popular PDA applications share a single GPS.**

Many GPS applications make the daily routine so much easier that they quickly become essential to their users, a part of everyday life on the road, at sea and in the air. As digital assistants and cell phones have gained in computing power, many of us have switched from using a custom-made GPS system to simply adding a GPS receiver to our PDA. In fact, once you get used to having the GPS hooked up to your device, you discover new needs and want to add more and more applications to take full advantage of the device.

Would it not be great if you could run popular navigation software like TomTom, Mapopolis, Destinator, Routis, Vito or DeLorme together with custom map programs like Memory-Map? Or with a driver's log? Or combine your flight planning program with aviation weather data from a service like WxWorx? Or cover your geocaching needs while running an application giving you feedback on the reception and location of the GPS transmitters?

The problem is that many GPS applications for Pocket PCs or laptops have not been taught to share. This leads to a situation where you have to turn off one application to let another application use the GPS. In some cases, application developers might also try to intentionally hog the GPS, perhaps in an attempt not to confuse the user.

The tool GpsGate from Franson Technology solves this kind of multi-use problems. By installing it on a device, you can easily give most applications access to a single GPS. In addition, you can log GPS data and re-feed it into other applications.

### ***Quick guide: Setting up GpsGate to share a GPS***

In this example, we will show how to set up and start using GpsGate. First of all, make sure you have installed the GPS applications you want to use on the PDA. Also check that you have plugged in the GPS receiver into your device, or enabled wireless communication on both devices if you are using Bluetooth.

Then, download the latest version of the GpsGate software (<http://franson.com/gpsgate/download.asp>) and install it. There is an evaluation version. Note that GpsGate works just as well on PocketPC devices as on any Windows laptop.

On the handheld device, you launch GpsGate by tapping "Start→Programs→GpsGate". When the program is running, it will appear as a tray icon on the "Today" screen.

To get up and running as fast as possible, there are a couple of settings you have to do. You reach the settings by tapping the tray icon and choosing "Settings" from the menu.

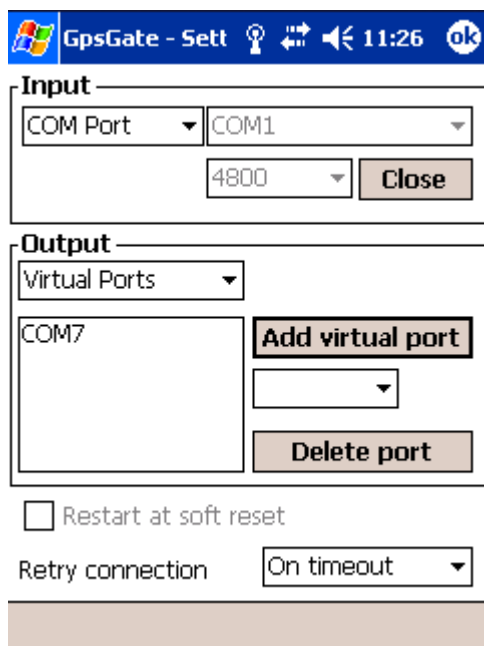


Figure: GpsGate settings

Initially, you need to tell GpsGate a bit about your GPS input. The GPS device is connected to a so-called COM port, so you should select "COM port" as input. You must be aware of the number of the port to which the GPS receiver is connected. Select that number from the drop down menu. Then set the speed by which data is read from the receiver. The baud rate is 4,800 baud for most GPS devices. After that, tap the "Open" button. Doing this will make GpsGate start attempting to receive data from the GPS.

When GpsGate has successfully connected to the GPS receiver, the color of the tray icon will change to indicate its new status. The GPS application will only use a correct position when the tray icon is green.



No GPS or NMEA data is detected by GpsGate.



Valid GPS data has been detected at the selected input, but we are still trying to determine its position (no fix).



A valid GPS position (fix) has been detected at the selected input.

Figure: GpsGate tray icons

Next, you should create a "virtual serial port" for each GPS application. GpsGate works by taking one physical data input and splitting it into several virtual output ports. Instead of having an application read data directly from a physical port, it will read from one of the virtual output ports instead. This allows for any number of applications to read data from a single physical input.

To create a new output port for the first GPS application, select a free COM port under "Add virtual port" and then click the button. Then, create a second "virtual serial port" for the other application.

Finally, make sure that both GPS applications you want to run simultaneously are set up to fetch their GPS data from these newly created virtual serial ports. And that's all there is to it!

### ***More uses...***

GpsGate is available in two versions, a standard version and an express version at half the price. The express version enables two applications to share the GPS, while the standard allows for any number of applications. Both versions support sharing a GPS with the popular TomTom navigation software. They also provide the ability to share a Garmin USB GPS 18. Garmin uses a custom-made technology which means that most other applications are not able to use it. GpsGate addresses this limitation and makes the Garmin GPS appear as a regular GPS device to other applications. This means you can continue using all your current applications, even if you buy one of these new Garmin devices.

In addition, the standard version also provides some extra features. One of them is GPS data logging. When this mode is used, all GPS data is logged to a file on the device. This file could be used to analyse data in, say, an Excel sheet. This gives you the possibility to relive your flight, to ponder about new ways to navigate around rocky islets and skerries or it might give you better ideas on how to lower your gasoline bills. GpsGate also gives you the possibility to set the saved data file as a GPS source, and that way feed back the collected data to all running GPS applications. That comes in very handy when you want to demonstrate a route to any interested party, like at a trade show.

All in all, GpsGate is a quick and easy way to double the use of your GPS receiver and its applications, at a reasonable cost.