

FSX and Prepar3D – GPS 500

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1. Introduction: This document is designed for people needing basic instruction on the usage of the GPS 500, a popular “gauge” in FSX and P3D. For beginners, just learning to “fly” can be a challenge of practice and sometimes frustration. But once the “up and safely back down” of flight simming is mastered, then what? Then, you GO somewhere. But the first question is how do I get there from here? This document is a [very] BASIC starter guide. For the BEST information on the GPS 500 go to: <https://www.youtube.com/watch?v=nLVPIGoYVxs>.

Flight Planning Programs: A “must” for simmers is a good Flight Planning Program. At Return to Misty Moorings, we recommend Plan-G and VFR Flight. Both are FREEware and both work well. You can find these at:

- PLAN-G - <http://www.tasoftware.co.uk/planG.htm>
- VFR Flight - <http://vfrflight.org/en/index.html>

2. The GPS 500: The GPS 500 will get you from “Here to There” very efficiently. There are parts of it that are not intuitive and many people do not use it for that reason. We will be looking at how to use the GPS 500 in different situations. In each situation, we will give you a step by step “how to” with screenshots so you will soon be an expert on this very useful device.

From the Garmin Website:

<https://buy.garmin.com/en-US/digital/in-the-air/discontinued/gps-500/prod115.html>

- *GNS 500 seamlessly integrates built-in terrain and navigation databases, providing a clear, concise picture of where you are and where you’re heading. The 500’s huge Jeppesen® database, updated with front-loading data cards, contains location reference for all airports, VORs, NDBs, Intersections, Flight Service Stations, published approaches, SIDs/STARs, Special Use Airspace and geopolitical boundaries. A detailed basemap clearly shows airports, cities, highways, railroads, rivers, lakes, coastlines and more. Using information from the built-in terrain and U.S. obstacles databases, the 500 displays color coding to graphically alert you when proximity conflicts loom ahead.*



Button 1: Nearest Airport Button

Button 2: Omni Bearing Selector

Button 3: Message

Button 4: Flight Plan Button

Button 5: Terrain Button

Button 6: Procedures Button

Button 7: Zoom In

Button 8: Zoom Out

Button 9: Direct to Button

Button 10: Menu Button

Button 11: Clear Display Button

Button 12: Enter (or Execute) Button

Button 13: Inside Cursor Ring

Button 14: Outside Cursor Ring

Button 15: Cursor on/off Button

4. DIRECT TO You can fly directly to an airport, an NDB or an ILS by inputting it's ICAO code into the GPS.

- Click on the DIRECT button (9)
 - A Flashing Green Square appears
- Click on the Outside Cursor Ring (14)
 - A smaller flashing square appears for the letter input
 - Now your keyboard is active to input the ICAO (code for feature)
- Input the Code to your keyboard (example KSAV) ... When the GPS recognizes the code for your feature, it fills in the information.1
- Press ENT (12) Button and the flashing green square now lights up the whole code you have put in (KSAV)
- Press ENT (12) again ... a white “Activate?” comes up.
- Press ENT (12) again ... to execute the activate
 - Now the GPS will display the direct route to the feature.
- Note: If you make a mistake, press the CLR (11) Button and start over

For autopilot, do the above to select a destination. On the autopilot, make sure your GPS/NAV switch is set to GPS, then press the NAV Button on the autopilot. The plane will now turn to your new track and follow the GPS to the location.

5. The NRST (Nearest) Button (and going directly to the nearest you select)

When you are flying and you want to know where the nearest airport, NDB, VOR, Airspace or ILS is, you use the NRST button (1).

- Press the NRST (1) button
 - The Nearest Airports Screen comes up
 - Press Outside Cursor ring Right Arrow (14)
 - Nearest Intersections screen comes up
 - Press Outside Cursor ring Right Arrow (14) again
 - The Nearest NDB's screen comes up
 - Press Outside Cursor ring Right Arrow (14) again
 - The Nearest VOR's screen comes up
 - Press Outside Cursor ring Right Arrow (14) again
 - Nearest airspace screen comes up

For more information from one of these screens:

- Press the CRSR button (15) ... a selection lights up
- Press the Inside Cursor Ring (13) ... this changes the selection, use the left and right arrows to move within the screen.
- Once Selected, press the ENT button (12) This selects then gives you information on the feature.
- Press the Cursor (15) button to select it. You can then press the ENT button again to select the feature. If you want to go direct to that feature, you then press the DIRECT button (9) and Activate it by pressing ENT (15) again. Direct route is displayed.

6. GPS Approach Planning with the Garmin 500

This assumes you already have a “direct to” airport loaded into your GPS. You are flying to the airport ... but how do you approach it? The 500 has approach plans for all the airports in the simulator. The GPS can give you an approach for any runway and lead you right to the “numbers” on the runway. Unlike an ILS, you will have to control the altitude to get down to the runway.

Let's use KSAV “direct” for our example. (Put KSAV into the 500, Direct)

- Press the PROC button (6) and a screen comes up that has “Select Approach” lit.
- Press ENT button (12) and a list of approaches for that airport comes up.
- In our example, we'll choose GPS for Rwy 09. You do this by pressing the arrows on the OUTSIDE cursor ring to light up RWY 09. When the correct feature is highlighted, press ENT button (12).
 - You can go to any of the way points that the approach uses, they will be listed for you, but for our example, you leave “Vectors” highlighted. Select vectors by pressing the ENT button (12)
 - Now “Load or Activate” comes up. You use the INSIDE cursor ring (13) to choose between the two. If you do “load” the GPS has the approach in memory, but it is not active. If you choose Activate, then the new GPS course for the approach is activated and if you are on autopilot, the plan begins tracking to the approach you selected.

Note: When you look at your GPS, you will no longer see a route directly to the airport. What you will see is the approach pattern and your aircraft is flying to the initial way point. Once that way point is activated, the plan then turns to the next way point.

7.The Flight Plan Button (4)

When you enter a flight plan for your flight, for instance using Plan-G or VFR Flight, that plan will be in your GPS. You can view the flight plan by pressing (4). Sometimes you will be executing a flight, and you will have to stop and leave the computer or turn it off. When you come back to restore where you were, the GPS will tend to start at the beginning. This can be frustrating when you are halfway through a flight. The Garmin allows you to pick a start leg.

- With a flight plan in the GPS, press FPL Button (4). The flight plan appears.
- Press the Push Cursor button (15) and “Enroute” lights up at the top.
- Press the INNER cursor ring (13) button twice, and your first way point is displayed. Continue pressing the arrows on 13 until you are at the Leg you want to activate.
- When the leg is highlighted, press the MENU (10) button and it will ask if you want to activate the leg.
- Press ENT (15) to activate the leg.

8. The MSG (3) button. When the MSG light is flashing, you can click the message button and it will give you information. Mostly this will be warning you about being in or approaching an airspace. If you are an advanced simmer, using all radio protocol, this can be very important for you.

9. The TERR button (5) (Terrain)

Pressing the TERR button changes the display from “night” to “day” display. The night display is mostly blue and black, the day display will show you terrain as it might be seen from a satellite, showing water and mountains, ridges, rivers, lakes, etc. You select the display that works best for you.

A more detailed “Day” display: There is a “fix” you can use to make the day terrain display far more accurate than what comes with your sim. It is FREEware. Those of us flying “low and slow” can use this to fly between mountains and up river basins easily. If you are a “high flyer” (commercial jets, etc), this will not make a lot of difference for you.

- From the [RTMM FAQ Page](#):
- Here is some new software for your Garmin GPS on your aircraft. All you do is rename your fs9gps.cab in your gauges folder to fs9gps.cab.old then put in this new fs9gps.cab in its place. That is ALL there is to it (I even got it right the first time!).
- I flew through a valley about 10 aircraft widths wide this afternoon and had the GPS zoomed in and EASILY stayed right in the middle of the valley, twisting and turning with the contours. The accuracy is perfect and you won't believe how much more detail there is on your GPS screen. A great addition. You can download the cab file [HERE](#)

You can see the better definition in this example.



Summary:

We hope this document gives the beginner a boost in being able to navigate in FSX and P3D. This should expand your horizons nicely and hopefully add to your enjoyment of the simulators. But again, this is only a VERY BASIC document, just to give you a “quick start” with the GPS 500. To learn ll the things this amazing “gauge” does please visit the YouTube instruction for it [HERE: https://www.youtube.com/watch?v=nLVPIGoYVxs](https://www.youtube.com/watch?v=nLVPIGoYVxs)

This document is created courtesy of [Return to Misty Moorings](#). We are a flight sim site that specializes in the Alaska area for Bush flying. We include hundreds of scenery locations for ORBX PNW, PFJ and SAK. All of our locations are FREEware, you are welcome to download them.

You will also find this document on our website on the [FAQ page](#) where many other tips and tricks can be found.

We hope you find this helpful and hope you make [Return to Misty Moorings \(RTMM\)](#) a regular stop in your virtual travel schedule.

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