

INTRODUCTION TO TWONAV

TwoNav is a very intuitive and efficient software that offers a wide range of tools to get the best of your outdoor activities. This software can be installed on tablets, mobile devices and GPS receivers to discover a new navigation way, two navigation systems can be displayed: on-road (streets and roads) and off-road (outdoor).

Another important issue is the versatility of this software while using topographic maps as well as the wide range of map formats that TwoNav can support and work with (both: commercial and free maps). Some GPS devices like Aventura, Sportiva, Sportiva+ and Delta have TwoNav application already installed, but it should be noticed that TwoNav is also available for iPhone, iPhone, and for mobile phones using Windows CE, Windows Mobile or Android operating systems, as well as PDA and TabletPC.

In order to write and illustrate these tutorials we used Sportiva and Aventura. TwoNav has been designed by the team of CompeGPS which guarantees a total compatibility and optimal interaction between TwoNav and Land softwares.



Figure 1

Version and Update

First of all you need to know the application version installed on your device. To do this, turn on your receiver or run the software. In the presentation screen, upper left corner, you shall see the software's version number (Figure 1).

At www.compegps.com, at "Updates" section, you will find a list of possible devices which include the latest version of the software. At the same website you will find the instructions to follow to update TwoNav application of your device. Keep in mind that each device is updated using a different way (Figure 2).

You can also know your TwoNav version by selecting at the main menu Settings > System > About.

>>> www.compegps.com



Figure 2.





Figure 3

Navigation mode

TwoNav has two navigation systems: on-road and off-road.

You will be able to use the software as a urban GPS navigator (on-road mode) and on the other hand, if the user applies off-road mode, TwoNav will become the best manager for routes, maps and waypoints during outdoor activities.

In order to turn from one mode to the other one, you only have to open the main menu window and press the shaped green leaf for off-road mode , while the gray color wheel is reserved for on-road navigation mode .

The color of the menu always indicates the navigation mode which is displayed at this moment, if interface mode is green, the user is using off-road mode, on the other hand, if the interface is gray on-road mode is being used. All actions explained in these tutorials are working with off-road mode on.

Main menu

TwoNav interface is organized into three main screens: navigation screen, screen displayed menus and data fields (Figure 3). Press the leaf icon at the left bottom of the screen to display it. At the top you will see two buttons that allow you to change the navigation modes (explained earlier in this tutorial). Below, you will visualize five large buttons: **Navigate**, **Data**,

Discover, **State** and **Configuration**, each one with different series of submenus which will be explained later in this tutorial.

Navigate button allows you to travel to a selected destination: waypoints, tracks, routes and geocaches, etc... By applying this option is also possible to set a defined destination or even enter specific coordinates.

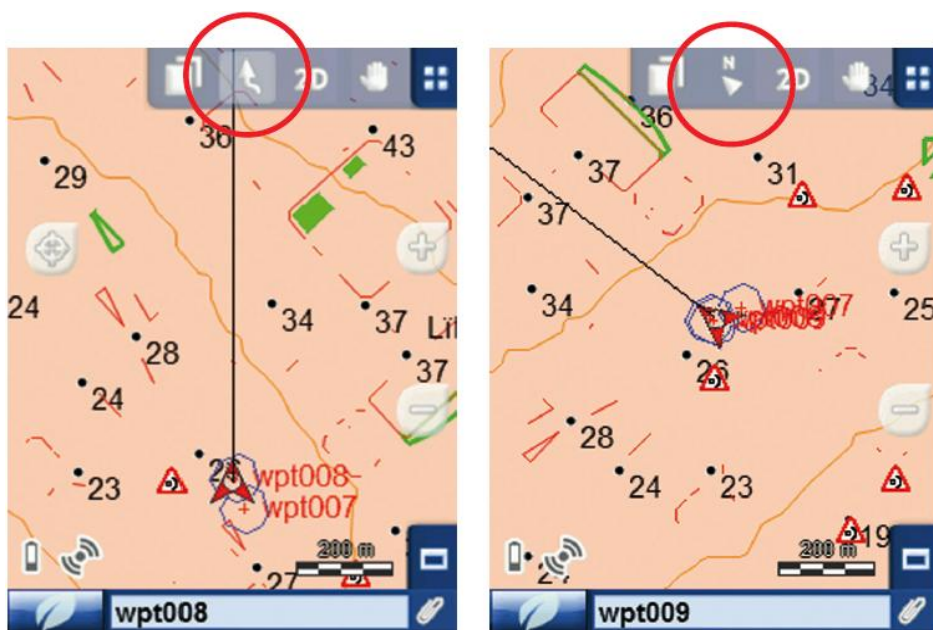


Figure 4

Data button allows you to manage files containing maps, tracks, routes and waypoints stored in your GPS device.

Discover is a button that allows to get access to a number of useful tools to explore the locations that the user might visit and even make simulations.

Status button indicates the overall state of your device and shows battery level and the quality of satellite signal reception.

Configuration button provides access to options that customize the main features of the software based on the usage of each user.

Basic configuration

TwoNav has default functions which are the most-used features by standard users. However, is very important for the user to spend a little time to optimize the possible options that this software offers you. Most options presented in this software can be adapted to your needs.

Options presented at **Configuration** button are grouped into four main groups: **Display**, **Vehicle**, **Navigation** and **System**.

Display menu



Most interesting features are:

Automap: With this option enabled, you will have the best map displayed for each navigation mode. When using on-road mode, TwoNav

will automatically open the road map and the off-road map will be closed. Automap will always open the map with the highest resolution in your current position.

Orient: The user can choose between two ways of orienting the map: by bearing or following north orient position (Figure 4).

The first option will rotate the map to be adapted to user's trip, so you will see on the screen the actual situation in perspective.

If you select **North**, the map will be presented in a static mode oriented to the north, while the pointer which indicates the position will rotate as we move. From navigation window the user will be able to switch modes by clicking at  and .

2D/3D: TwoNav offers three ways to display maps: flat, in perspective, or using 3D relief view. Perspective map is a flat-3D map, while 3D is a map that shows relief terrains. This option will only be visible if a raster map image and a relief map are stored at maps folder (Figure 5).

Re-center: While navigating you have the possibility to move your maps by dragging it in order to see other portions of map. In these cases an icon (icon 3) is presented on screen, in case you press it, the map will be placed again at the original position. TwoNav has an automatic re-centering function that you can set by applying this option. At the same menu you can define the delay in which the automatic re-centering will be done.

Rot. Screen: This option allows you to rotate the screen and display it horizontally or vertically.

Themes: You are able to choose the color of TwoNav interface.

Nightview: Brightness can be a problem for screen in determined situations where few light is provided. In order to avoid dazzle, TwoNav has a unique feature that reduces the brightness of the screen and displays an interface with darker tones specially at night and inside tunnels... The user can fix this option automatically or manually.

Labels: You will be able to choose the size, color and background of labels' names that appear for each recorded waypoint.

Hint: you can define which information is presented (in case you want to show any) on the map each time you click in any section of it. Information displayed can be: altitude, distance to waypoint to navigate, point coordinates, etc...

Data fields: TwoNav has abundant information about navigation. This data is basically displayed in two separate areas: at the bottom bar of the navigation window or at data pages. With TwoNav you are able to define what data you want display in each of these spaces.

Tool bar: You can customize the toolbar (which appears at the top of the navigation window) and select the information that you want to appear in it.

Pointer (Advanced mode): With this option you can customize the pointer which shows your position and direction. By applying this feature you will be able to define parameters such as colour and shape of the pointer and the colour and size of the prow line.

Vehicle menu

This section allows you to choose the type of vehicle that you are using. By selecting it you will be able to optimize software data and adapt it to the expected speed of the specific vehicle which you are using (Figure 6). If you click at **Settings** button, you are able to change the average speed of chosen vehicle.

Navigation menu

Tracklog: TwoNav can automatically record tracks. In this section you define the settings for this recording (for example: the recording interval between track points, format of the track, etc...).

Alarms: With this option enabled TwoNav will detect the proximity to a waypoint and will display a sound, a text or a picture or a video. These files should be stored in the folder **TwoNav/Data**. The user can also define an alarm for deviation when far from waypoint's radius (*more information at: [Data field alarms](#)*).

Altitude: TwoNav gets altitudes by two different ways. One of them is the altitude which is stored at the

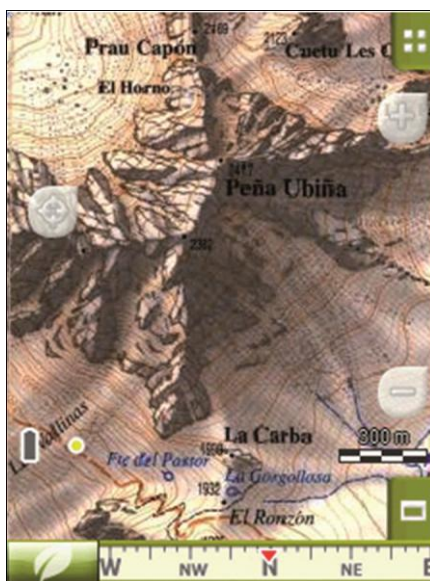


Figure 5

GPS, and the other one is the altitude displayed by the barometric altimeter of the device. It is important to calibrate very well the barometric altimeter. Since the GPS records two altitude values, the user can predefine any of the two values for track recordings. If you select "automatic", TwoNav will use the barometric altitude but it calibrates the barometer automatically taking the GPS altitude value using an algorithm that optimizes the final result. This will minimize the characteristic error for altitude value while



Figure 6

overcoming the limitations of the barometric altimeter due to change of pressure and temperatures.

Bearing: TwoNav offers three ways to know your current bearing: according to the GPS (track's last stored positions, so if you stop the trip data reliability will not be very realistic), electronic compass (must be pre-calibrated), and automatic bearing calculation. Automatic mode is best way to calculate it because at low speeds it uses compass data while at high speeds data is taken from the GPS.