

# TwoNav Easy 2.3 User's Manual

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## 1 Introduction

Having an appliance which offers directional assistance can prove invaluable for increasing the safety of these journeys.

Despite this, there is the possibility that, under certain circumstances, the user may become distracted by misuse of this technology, whereby it may in the end become a hazard to him or her, and to his or her environment.

This possibility of using TwoNav in any type of vehicle makes it particularly important to consider a series of rules and regulations for using it so, far from being a source of potential risks, will contribute to personal safety.

Most of these recommendations are concerned with using the system fitted in vehicles, although the bases of them should also be taken into account for journeys on foot.

- **Fitting the appliance correctly:** The appliance should be fitted in a place where it will not obstruct the vehicle driver's visibility of the road. It should additionally be secured, to ensure it cannot fall off easily and hinder driving.
- **Do not handle the appliance whilst driving:** The route planning should be completed before setting out. Any change or clarification required must be made with the vehicle stopped in a safe place, away from traffic (not on the road or kerbs).
- **When on the road, you should be guided by the sound signals:** The program's voice system will warn you of upcoming manoeuvres and of the distance to when you will have to carry these out. A glance at the visual information may be useful, but you should resort to this only if it can be done safely (with the vehicle appropriately stopped). When driving, you should always keep your eyes on the road.
- **The front-seat passenger can be a great help:** The navigator is normally facing the driver. If you have a front-seat passenger, we recommend this person be in charge of handling the appliance, making any clarifications or changes as required.
- **Getting it wrong is not a problem:** Neither navigators nor people are infallible machines. In the event an indication cannot be followed and a direction other than the fixed one is taken, the system will automatically calculate a new route, which will adapt to the new situation and will take you to your destination just the same.
- **Maps always contain errors:** Despite the tremendous updating work done by Tele Atlas, it is impossible to have 100% accurate information. Recent changes in correct street directions, new streets or restrictions due to road works are examples of circumstances that may partially invalidate the route calculation made by TwoNav. It is very important to be alert to these changes and to adapt to the new situation. As soon as the program detects that it has not been able to follow the preset route, it will calculate a new one, which will take you to your destination just the same.
- TwoNav assists you in navigation. **Traffic regulations have always preference!**

## 2 General description

### 2.1 Navigation window

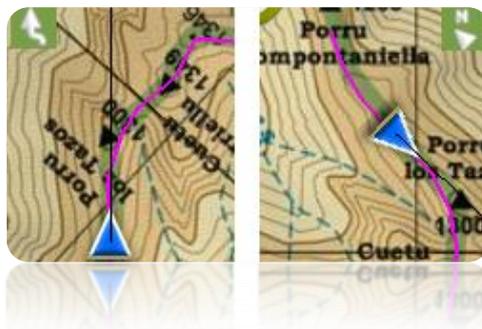
General/On-road 

(On-road mode will only be available if V-map is available)

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- Distance to next event:** Distance left to next event (roundabout, waypoint, exit).
- Next manoeuvre:** When navigating On-road, the 'next event' space will display a representation of the next manoeuvre to be done (right turn, left turn, roundabout, diversion, etc.).
- Tool Bar:** Its content can be customized from [Tool bar manager](#)
- Show/Hide tools**
- Mute**
- Orient map (north up/track up)\*:** The map may be fixed on the north or rotate, depending on our movements.



- 2D/3D:** Changes the perspective between 2D and 3D ([+info](#)).
- Data pages:** Enter [data pages](#) to check all type of information relating to your present navigation.
- Data bar:** Shows the data that is set from 'Settings > Display > Data fields' ([+info](#)).

10. **Show/Hide Data Bar:** You may hide the data bar to get a broader view of the map.
11. **Time:** It is refreshed with the data received from the GPS
12. **Speed**
13. **Distance to Destination**
14. **Estimated time of arrival to destination**
15. **Menu button:** Goes to TwoNav Main menu.
16. **Status icons (enters status window):** To indicate the present battery and GPS coverage level. The page '[Status](#)' is entered by pressing on them.
17. **Speed limit of present road:** Indicates the legal speed limit of the road on which we are.
18. **Re-centring (after sliding the map):** Press the '[re-centre](#)' button to focus on your present position after sliding over the map.
19. **POI:** V- map [point of interest](#) (petrol station, hotel, cash point, etc).
20. **Present position:** Indicates your position and present course. Its colour changes depending on the configured vehicle or if it is in '[Simulation](#)' mode.



21. **Manoeuvre indication:** Illustrates the manoeuvres to be carried out on the map and more accurately.
22. **Calculated Route:** Shows the automatically calculated route to be followed.
23. **Zoom +**
24. **Zoom -**
25. **Scale ruler:** Visual ruler to quickly evaluate distances on the screen.
26. **Next Street:** Indicates the next street to be taken following navigation.
27. **Present Street:** Name of the street where you are.

## 2.2 Menu

Most of the options of the program may be entered from the TwoNav Main menu.

### 2.2.1 Navigate...

Check the section 'Select destination' for further information

### 2.2.2 Discover

From the option 'Discover' on the main menu, you may enter useful tools in order to explore the areas you are going to visit:

- **Zoom to...:** Choose the element (address, POI, favourite, data or coordinates) that you wish to see on the map and it will be displayed on a new window.
- **Geocaching:** This section centralizes geocaching features, allowing to set a geocache as destination, see its information and generate field notes.
- **Simulate:** You may select two spots (present position, by address, by map, POI, etc.) to execute a simulation of navigation from spot **A** to spot **B**.
- **Stop simulation:** It stops the ongoing simulation.
- **3D Panorama:** By using this option you may get an aerial view of the surroundings. In order to do it, [3D mode](#) must be activated.
- **Data pages** ([+info](#))

### 2.2.3 Status

The 'Status' allows you to know the general status of the TwoNav by displaying fields such as battery level, reception and position of satellites, luminosity of the screen, sound volume or the recording of a track. There are two ways of entering the 'Status' page:

- From 'Main Menu > Status'
- From the map, with the icons located on the bottom left

Once in the 'Status' page, you may enter to set the parameters it contains by pressing briefly on the percentage bar of each element. You will then enter the following items:

**Satellites status:** enter to see the number of satellites available, their distribution orbiting over the vault and the coverage they reach.



To disconnect the GPS press on the  button. If the GPS is disconnected, TwoNav will not receive any position signal and many of the options will stop working properly.

TwoNav will attempt to fix the current position. If you are anywhere without GPS cover (e.g.: inside a building), the GPS status will be "**Without position**"; i.e.: TwoNav has successfully established communication with the GPS, but the GPS cannot fix your position because there is no satellite signal.

GPS possible states:

Disconnected	
--------------	--

Connecting...	
Error (not found)	
Connected without position	
Connected and with position	
Simulating	

**Battery:** you will be able to see the percentage of load in the battery and, by clicking on it, you may manage the autonomy options of the device. ([+info](#))

**Volume:** set the general volume and the volume of each audible element individually. ([+info](#)).

#### 2.2.4 Settings

The page 'Settings' enters the main options to customize TwoNav for each type of use (see section [Settings](#) for more details).

### 3 Settings

TwoNav is set by default so as to meet the needs of most users. However, it is important that you spend some time analyzing which are the best options for the use you want to give to it and to adapt it to the conditions in each moment.

#### 3.1 2D/3D

TwoNav offers two visualizing modes so you have the most adequate perspective in each moment.

- 2D: Zenith Plan.
- 3D: Three dimensional flat image, i.e. with no relief, but with a perspective.

Press  button in tools bar to change mode.

## 3.2 Data fields

TwoNav contains a multitude of data on your navigation that may be of great interest in your outings (speed, height, distances...). This data is basically found in two spaces:

1. **Data bar:** The data bar will be displayed at the bottom of the screen during navigation. You will be able to keep it visible or hide it by means of the  icon.



2. **Data pages:** The data pages offer you an additional space to the data bar in order to display a larger number of fields in a more clear way. Press the  button to enter them.

Both the data bar as the data pages can be [set](#) in order to show the field that interests you most.

Besides, most of them have additional functions, such as an alarm programmer.

### 3.2.1 Selection of the data fields

You can select data fields in two ways:

- **Change just one field:** By opening the contextual menu in any field (long click) and selecting 'Change this field'. This will let you choose directly the data to display in that field.
- **Data field manager:** From 'Main Menu > Settings > Display > Data fields'. Check the section '[Fields](#)' for a more detailed description of the functionalities of this editor.

You can find the list of the available fields in [appendix 1](#)

### 3.2.2 Special Functions

When opening a contextual menu on a data field, you will find the available functions associated to this field.

The options are not the same in all fields. Here follows a description of the ones you may find:

1. **Data Fields:** Enters the editor of the available fields.
2. **Don't show this field:** Eliminates a datum immediately.
3. **Program alarm:** Define a higher or lower limit as the type of signal (visual or audible) to let you know when exiting this range. In case an audible signal is added, you must choose the sound file you wish to be reproduced.
4. **Reset:** Typically, you may find it in fields such as the travelled distance meter (odometer) o chronometer. They reset the counter to 0.
5. **Reset all:** Resets all data fields that can be reset except total odometer 1 and 2.
6. **Countdown:** You may define the value from which units of distance and time will keep being subtracted (according to field) until reaching 0.

### 3.3 Favourites

TwoNav also has the possibility of setting up all types of geographical locations, such as **Favourites** points to which navigate. Your home, a restaurant you like, a spectacular park you have visited, your children's school..., may become part of your favourites list.

You may enter to set up your **Favourites** from the main menu:



The **Favourites** list is not set by default, so you have to set it up yourself introducing the elements to make up this list. Therefore, the first time you enter **Favourites**, you will find the following screen:



Press on the 'stylus' icon to edit this list 

On the following screen, the 'add' icon lets you create your first **Favourite** point 

Choose the way you want to create your Favourite point:

- **Present position:** it will establish your [current position](#) as a favourite point, and will ask you directly to add a name or establish it as your home.
- **Present destination:** it will establish the present destination of the active navigation.
- **Address:** it will let you create by choosing an address (city, street, number).
- **By map:** you will be able to create a favourite on the map currently loaded. Press on the wished place and a red cross will indicate the point where this favourite will be established.

Your **Favourites** will be displayed on the map and in the favourites list with the  icon.

The point established as 'Home' will be represented by the  icon

Once a **Favourite** point is created you will be able to:

- Edit the characteristics of your **Favourite** by means of the  tool.
- Add or delete **Favourites** from your list by means of the   tools
- Make this **Favourite** your present destination by means of the  tool.



## 3.4 Display

### 3.4.1 Orientate map

You may choose between two display modes for the elements loaded on the map window:

- Orientate map towards  course (track upwards): The map will rotate to adapt to your present course, and so the perspective in front of you will be displayed on the screen.



- No orientate the map  (north upwards): Your position will be marked with the pointer in the centre of the screen and the pointer will rotate to show your present course. The map won't rotate and the North will always be upwards.



You may modify this option from the button bar on the navigation window or from the 'display' menu.

### 3.4.2 2D/3D

If you want to change between 2D to 3D, or vice versa, you only have to alternate both modes at 'Menu > Settings > Display'. ([information about 3D mode](#))

### 3.4.3 Auto zoom



If the Auto zoom mode is active, the program will calculate the most suitable zoom for the present speed. Generally, the higher the speed, the further it will go.

**Note:** 'Auto zoom' is only active in On-road mode, as topographic maps used in Off-road mode may have different resolutions among them and it is not possible to define an automatic zoom that shows all of them properly.

#### 3.4.4 Night view

In low ambient light conditions, the colours and brightness of the TwoNav screen may dazzle you.

TwoNav contains a 'night mode' that reduces the brightness of the screen and displays a user interface of darker tones.

By activating the 'At night and tunnels' option, TwoNav changes to 'night mode' automatically at night or when inside a tunnel.

The option 'At night' makes it automatic but only for night and not for tunnels.

If 'automatic' is off, you will be able to select manually if you wish to have the night mode on or not.

**Note:** TwoNav always keeps the time updated as long as the device receives the GPS signal. Usually, inside buildings, there is no reception of satellite signals and so, automatic 'Night View' may be affected.

#### 3.4.5 Re-centring

While navigating you may move the map to see other parts of the grounds, losing the reference of your present position. In these cases, a re-centring button  will be displayed on the screen.

TwoNav contains an automatic re-centring function, so if the map is not moved manually for 10 seconds, it will centre back to its present position.

The time for re-centring may be modified and even turn it off, leaving the option of pressing the re-centring button to go back to your position.

Re-centring can be performed with a smooth movement or instantaneously. Enable or disable 'smooth re-centre' option as you prefer.

**Note:** If the function 'auto zoom' is activated, when pressing re-centring, the zoom suitable for your present speed will also return, losing then the variation of the zoom level you may have done.

#### 3.4.6 Rotate screen

By activating the option 'Rotate screen' you may get a landscape view of it and then use TwoNav horizontally.

Rotate the screen in the various angles to adapt it to your preferences.



### 3.4.7 Themes

You can select different color combinations according to your preferences.

### 3.4.8 Labels

Next parameters can be configured:

- Font size for all labels: Labels of elements like waypoints or POI will have this size.

### 3.4.9 Hint

Specific information for each clicked point on map will pop up on the screen in a yellow label showing fields with useful information.



This function can be personalized, or even disabled, according to the will of the user. There you will be able to add or exclude data fields which later on will be displayed on maps:

- Map info: only for vector maps like Vmaps.
- Coordinates
- Bearing (from current position)
- Distance (from current position)
- Height (if CDEM available)

### 3.4.10 Data Fields

Data bar and data pages can be configured to fit your specific preferences.

Once inside the editor, take the following steps:

1. Press on the 'Type' pull-down menu to choose the section to be set.
2. Select the space you wish to edit (bar, page, compass or graph).
3. You may delete data by pressing on the left 'check' mark and add other data by pressing on them. See a list of these variables and their meaning in [Appendix 1](#).
4. On the compass and graph pages, a squared icon on the side shows the place corresponding to the enhanced field (normally compass and track graph) that will be enlarged on the screen.



5. You may modify the order of the data on screen with the arrows on the right of the window and they will shift the datum up or down one position.

**Note:** By default, only fields of frequent use will be shown, alphabetically ordered. If 'infinite'  button is pressed, full list of data fields will be shown.

You can also add or remove pages to de default ones using the + or - symbols at top right of the data field manager window.



Just press - to remove currently selected data page.

Follow next steps to add a new page:

1. Press '+'
2. Enter a name for new page
3. Select a template for new data page



4. Choose data fields for it.

You can find a list of the available fields in [appendix 1](#)

#### 3.4.11 3D mode

You may set the following options for 3D mode:

- Field of vision: the field of vision determines the angle from which the map will be seen. When introducing angles over 60°, it is like a camera with wide lenses.
- Misty horizon: the furthest part to the perspective becomes faded, creating a misty effect between the sky and the map that distinguishes them more clearly.

#### 3.4.12 Active POIs

By means of the active POIs list you will be able to choose the POIs categories that the map is to show.

All the POIs will be shown by default, but if the vision of certain categories is useless for you or even interferes, you may take them off so the map does not show them.

When [selecting destination](#) or '[zoom to](#)' you will have all the information of the POIs categories, even those not being shown on the map.

#### 3.4.13 Scale bar

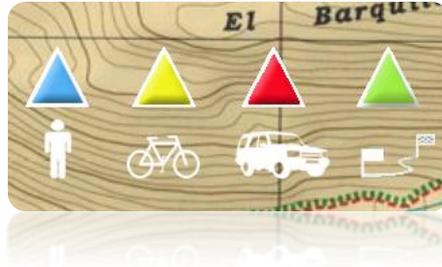
The Scale Ruler draws a metric visual reference over the distances managed by the screen. The scale changes size to represent 'rounded' measurements.



#### 3.4.14 Pointer

The icon signalling your present position can be modified choosing among various designs.

Different icon can be chosen for each [vehicle](#).



Besides, you may find different utilities to help you control your movement better:

- **Fixed ring and parallels:** a circumference encircling our position will be drawn and two lines will indicate the course.
- **Fixed ring radius:** it determines the size of the circumference surrounding our position.
- **Draw the parallel bow lines:** we may choose to display or not the parallel lines of the first option.
- **Prow lines:** you can configure the length of the prow line by setting a defined option:
  - Disabled
  - Pixels (pixels)
  - Real distance (meters)
  - Expected distance in time (minutes): TwoNav will calculate the estimated distance to be covered in that time at current speed.
  - Infinite

**Note:** These properties depend on the selected vehicle.

- **Variable ring:** you may add more rings around your position. You have to define the radius of the inner ring and the number of successive rings which will be equidistant from the first inner ring.
- **See turning radius:** when turning, the radius corresponding to the circumference described will be displayed.
- **See bow line:** shows the direction line from the point of the position arrow (only in '[Off-road](#)' mode).

### 3.4.15 Smoother

The smoother lets the program calculate an interpolation of movement between the positions that the GPS adopts with the aim of showing a gentler movement to allow for a better perception of the speed at which we are driving in relation with the surroundings. This helps enormously the driver to calculate the distances and the exact moment in which to carry out a manoeuvre.

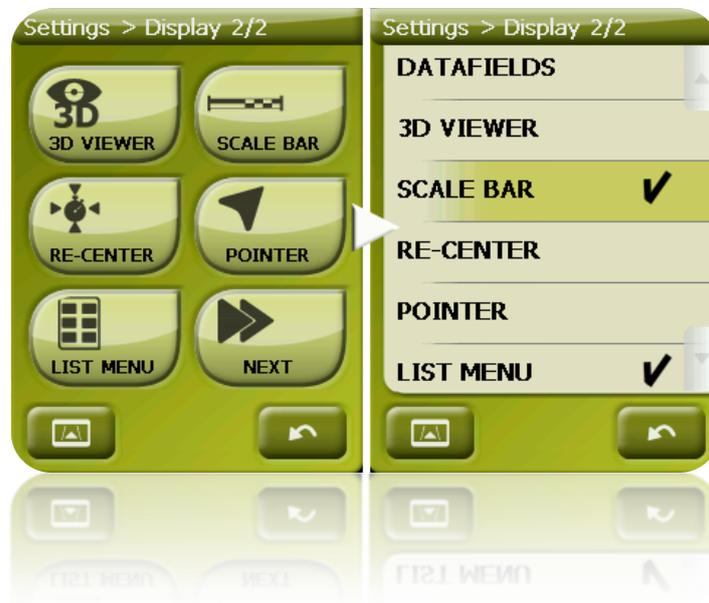
Besides, it also makes a prediction of GPS position, correcting delay on the signal caused by the system, achieving to show current position almost in real time.

Smoother is based on route calculated in On-Road mode, so it will only work if a destination is set and route has been automatically calculated on V-map.

### 3.4.16 List menu

You may choose between two display modes of the submenus:

- Button menu: This is the traditional mode. If there are more options than the screen can display, the 'next' button will appear in order to enter it.
- List Menu: The options will be displayed on a continuous list. To move the list UP and DOWN keep the finger or the stylus on the list and drag.



### 3.5 Vehicle

Choose your transport system to adapt aspects such as the types of roads allowed, the consideration of street direction or the expected average speed.

The icon indicating your position will change colour depending on the chosen system of transport.



Available vehicles are:

- Walk
- Bike

- Car
- Boat

Next parameters will vary depending on the current vehicle:

- Hint content
- Cruise speed
- Autorouting restrictions (On-Road)
- Estimated times
- Pointer
- 'Minimum moving speed'

### 3.5.1 Vehicle configuration

Next parameters can be configured for each vehicle:

- Cruise speed: Expected mean speed for that vehicle. This value will determine 'Estimated time at destination (cruise)' and 'Estimated time at next (cruise)' data field.

Default 'Cruise speed' is:

- Walk: 3km/h
- Bike: 15km/h
- Car: 80km/h
- Boat: 20km/h
- Draft (only for 'Boat'): depth to which a vessel is immersed. This value will determine the 'depth alarms'.

### 3.5.2 Special stuff on 'Boat' vehicle

Since marine navigation has special needs comparing to terrestrial navigation, when 'Boat' vehicle is selected some special changes (in addition to normal changes related to vehicle) will take place:

- Specific 'Data fields' in Data bar and Data pages
- Specific main menu (specially changing 'Navigate...' section)
- Specific tool bar
- 'Man Over board' command available for main menu and tool bar
- Different skin
- Marine units (nautical miles, knots...)
- Marine charts will be loaded if present, only if 'Automaps' option is enabled.

**Note:** Since 'On-Road' navigation has no sense in 'Boat' vehicle, 'Off-Road' mode will be automatically enabled when 'Boat' is selected. If 'On-Road' tab is pressed, vehicle will be changed to the previously selected in that mode.

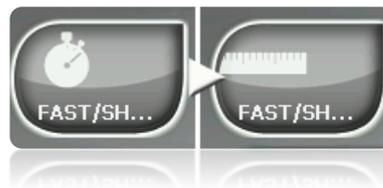
### 3.6 Navigation Options



The 'On-road' navigation mode can be adjusted so the automatic calculation of your routes is done according to your preferences:

- Fast/Short: The first option will calculate the estimated time of arrival, bearing in mind the speed of each road and will suggest the navigation which takes shorter. The second option will suggest a navigation based on distance, choosing the shortest way, although it may not be the fastest.

When the option 'by time' is activated, a chronometer will be displayed as a key icon. If a rule is displayed, the shortest route in distance will be calculated.



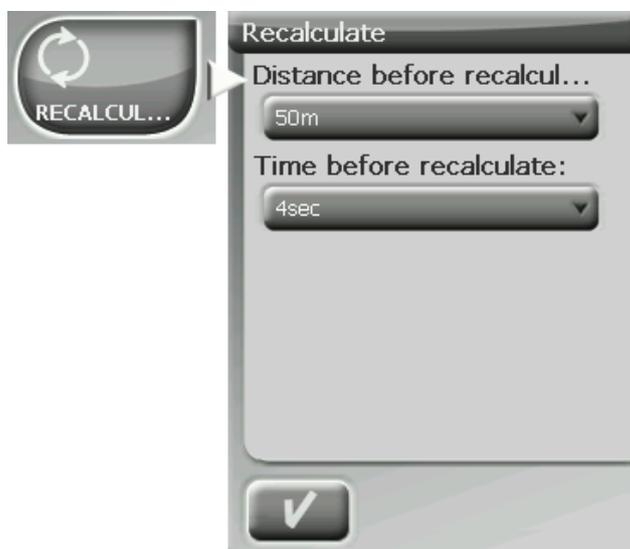
- Tolls/Highways/Unpaved: Select to choose any of these types of roads.



A tick on the icon means that this type of route won't be used for the automatic calculation of the route.



- Re-calculation: Although TwoNav is configured with the most suitable relation for most cases, you may select the time or distance from the programmed route before it is considered that you are not following it and it is recalculated, adapting it to the present position.



### 3.6.1 Speed limit

This section gives you options related to the speed alerts and traffic radars and can be set according to your preferences:

- **Set a speed limit:** the speed limit of each particular road will be considered by default, but you can set a fixed speed limit disregards the limit of each road.
- **Speed alert:** If you wish TwoNav to let you know when you drive over the established speed limit, you may choose among the different alert types, such as a speed limit icon, a visual alert or a visual alert plus an audible alert, or on the contrary, choose that it does not inform of it.
- **Speed to block interface:** When is higher than this value, User Interface will be blocked to user can not manipulate the system. It is important to configure this function according to laws of each country.
- **Radar alert:** You may select if you wish to be informed of the presence of radars on your route by activating this option.
- **Radar distance alert:** You may select the distance at which you wish to be informed of the presence of a radar within some preset values.
- **Show radars:** The exact position of all radars will be indicated by means of an icon on the map. I have a question.

**Note:** For all the radar related functions to be operative you must have a file with this information in 'TwoNavData > Radars' ([+info](#)).

### 3.6.2 Ecocalculator

The Ecocalculator lets you know the CO<sub>2</sub> emissions of your car and show it after the Data Bar ([Data fields](#)) during navigation if preset. To be able to calculate this emission, TwoNav considers the following parameters:

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- Type of fuel: choose if the fuel is diesel or gasoline and introduce directly the emission per grams of CO<sub>2</sub> per kilometre of your vehicle if you know this data.
- Administrative Power: engine power (CV), choosing among the preset options shown.

### 3.6.3 Tracklog

While navigating, TwoNav may [automatically record the track](#) of your departure and save it in the **TwoNavData** folder. Set up according to your needs or preferences:

- **Recording interval:** Choose the type of recording and interval you wish for the track to be generated for your navigation.
  - **By time:** The point of each track will be recorder every X seconds.
  - **By distance:** The point of each track will be recorder every X meters.
  - **Automatic:** the track will be automatically recorded when changing course and depending on speed. In a straight line, the program will record few points.
- **Track colour\*:** Choose the colour for the generated track.
- **Thickness\*:** Choose the thickness of the line representing the track between values of 1 to 7 points.
- **Points shown without reduction\*:** The recorded track will be visible on the screen. Latest points will be shown as they are recorded (no reduction). You can choose how long will be this latest section of the track which will show all of its track points.
- **Reduction for previous points\*:** In order to save memory, it is recommended to make a reduction of the rest of the shown track. Choose a reduction % and the shown track (except the latest points) will be reduced. For example, if you choose 80% reduction, only 1 of every 5 points will be shown on screen.  
**Important:** This reduction does not affect the recorded track file, which will keep all points. Only concerns to what is displayed on screen at that moment.

\* Option only shown if '[advanced mode](#)' is activated.

### 3.6.4 WPT alert

- 'Sound alarm at waypoints' Activate this option if you wish that, when reaching a waypoint, a sound is heard. Load your SD card (folder: 'TwoNavData/Data' by default) the sounds that you want in \*wav format and select the sound.
- Auto-play attached images/sounds/text: If waypoint has [associated files](#), they can be automatically reproduced when inside waypoint radius.

### 3.6.5 Next WPT

When navigating a route, you can select the required event to validate a waypoint and switch to next one:

- Radius of the next WPT: Enter inside the radius of the next waypoint (not any).
- Radius of any next WPT: Enter inside the radius of any of the next waypoint (next one and any of the succeeding ones are OK but not the previous).

- Roadbook mode: When entering the radius of any waypoint, it will be set as next. When going out of it, next one will be activated. This mode is thought for roadbooks, because when following a roadbook it is required to show the information of the current waypoint while in its surroundings. This way, instructions for each point can be followed correctly.
- Bisector inside next WPT: Enter inside the radius of next waypoint and cross the bisector that is formed with the previous and the next.
- Bisector inside next WPT or 10% of the radius of any WPT: Same as the previous, but if any waypoint is very near (10% of its radius) it will be validated and the next one will be activated.
- Only buttons bar: Never will automatically change to next waypoint, only manually with 'NextWPT' and 'PreviousWPT' buttons at buttons bar.



Also from this options section, a default radius can be assigned for route waypoints, which will be taken when this information is not available. It means, if we defined a radius for a concrete waypoint of the route, it will be respected. But if it doesn't have radius the default one will be used.

### 3.6.6 Tracks

Track navigation can be configured to on several points.

Especially interesting is to choose the distance from current position at which GOTO arrow will show track direction, so you can predict the bends.

- Virtual Coach ([+info](#))
- Draw arrows over the track: To easily know its direction.
- GOTO arrow tangent at: GOTO arrow shows direction of the following section of the track. This parameter is the distance to calculate tangent to give direction. Normally higher speed of the vehicle will require higher distance value:



- Exit WPT after: If track has waypoints (roadbook), navigation will switch to next point when leaving the current one. This parameter determines the how far we have to go.
- Different display for active tracks: Once you are navigating a track you will see the difference between the active track and the other tracks. The active one has a different on-screen display which can be personalized by the user. Usually, the active track has a notable thickness and it is related to a different colour to make it different from the rest.



This parameters can be configured at 'settings > navigation > tracks', there you will be able to change the navigating track colour as well as double line's thickness, opacity and colour.

## 3.7 System

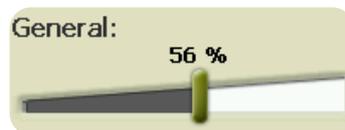
### 3.7.1 Volume

On this page you will find the following settable elements:

- **Silence:** By activating this option, all the sounds from the device will be turned off, independently of the volume percentage set for every option.



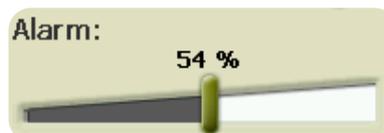
- **General:** Regulate the general volume for the audible elements group. All the sounds are regulated by the preset of this option.



- **Voice:** Regulate the volume of the alert voices for the next manoeuvre.



- **Alarm:** Regulate the volume of the alarms and radar warnings, speed limits and arrival at waypoints.



- **Clicks:** Regulate the volume of pulses on the touch screen or buttons.



### 3.7.2 Autonomy

In this section you will find utilities that will help you maximize the autonomy of the system:

- **'Shutdown screen':** determine a time after which the screen will automatically turn off \*. Select 'never' to activate this function.

\* **Note:** The option 'Turn screen off after' won't work if the device is connected to an external power source and 'car' has been selected as vehicle.

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- 'Disconnect GPS at stops': it will detect a stop in your itinerary and will disconnect the GPS. A message will then appear asking if you wish to activate the GPS again. It is important to say yes to this message when setting out again.

### 3.7.3 Language



You may modify the language of the texts and voices of the system from this section.

**Note:** The conversion of the voices may take more than one minute.

### 3.7.4 Calibration tools

Some system gadgets need to be calibrated to work correctly:

- Touch screen: try to calibrate touch screen if you experience inaccuracy when pressing on it.
- Compass: Digital compass is very sensitive to environment conditions. Calibrate compass at the beginning of every trip.
- Barometer: automatically calibrated by default.

All calibration tools can be found at 'menu > settings > system'.

Just press on the option and follow on-screen instructions.

### 3.7.5 Units

You may determine which type of measurement unit to use in TwoNav:

- Distances: in kilometres, miles, nautical miles, metres or feet.
- Altitudes in: metres or feet.
- Speed in: kilometres/hour, miles/hour, nautical miles or minutes/kilometre.
- Short distances in: kilometres/hour, miles, nautical miles, metres or feet.
- Acceleration in: metres/second<sup>2</sup>, gravity or kilometres/hour/second.
- Vertical speed in: metres/second, feet/minute, metres/minute or metres/hour.
- Areas in: m<sup>2</sup>, hectares or km<sup>2</sup>.

### 3.7.6 Coordinates

You may choose the type of coordinates (UTM, Latitude/Longitude, BGN...) and datum (WGS 84, European 1950, Geodetic Datum 1949, etc.) with which you wish to work in TwoNav.

This setting will be the one used when introducing any coordinate into the program or when creating elements the kind of waypoints routes or tracks.

Besides, from this option, you may configure the order in which the degrees will be displayed.

By default, TwoNav Works with Lat / Long and Datum WGS84 Coordinates.

### 3.7.7 Time zone

TwoNav lets you choose the time it is according to the Universal Time Coordinates (UTC) that will appear by default with the time-zone corresponding to the Central European Time (CET).

You may also set the Summer Time automatically if you wish, so TwoNav carries out the seasonal time change.

**Note:** TwoNav keeps the time updated as long as the device receives a GPS signal. Usually, inside the buildings, the signal from the satellites is not received unless there is a repeater, so the time and also the, [night vision](#), will be affected.

### 3.7.8 Default settings

This option lets you re-establish all the settable parameters to its initial status. All the options that have been manipulated will be modified, time zone, volume, folders and other tools that you may have previously established.

### 3.7.9 Device ID

The 'Device ID' is an alphanumeric identifier exclusive to your device. This identifier is necessary in order to activate TwoNav and any map you want to use in the device.

### 3.7.10 About

'About' shows you which TwoNav version the device is working with. It will be displayed on the top left hand corner of the screen.

To know the version of the TwoNav program installed in your device, it is very important to check out doubts or software updating.

## 4 "Navigate..." button



The most widely used function to select destination is the 'navigate...' button which is found in the main menu and contains the following options:

- **Home:** You can go home directly if you have determined your position from the favourites management.
- **Address:** Enter any address (country/city/street/number) as destination.
  - You can enter ZIP code instead of city name.
  - You can enter a crossing street name instead of number. Just press on 'Intersection - choose' button and enter its name or choose it from the list.
- **POI:** The V-maps contain an enormous data base of Points of interest (gas stations, hospitals, cash dispensers...). You may search POIs according to various criteria:
  - Place: The device will consider POIs close to:
    - Your present position
    - Your present destination
    - To the address introduced
    - The location you choose on the map.
    - To a waypoint
  - Name: Select the category that you are searching for, introduce the wished POI name and it will be searched in all the available ones from the loaded cartography.
  - Parking: Creates a list of parkings available near from current position.
  - Gas station: Creates a list of gasoline stations available near from current position.
- **Itinerary:** Create a route with one or more intermediate points.

- Press  to add points to the itinerary.

- Press  to remove a point.

-  buttons at right of the point allow to change order

-  button will show that point on screen

-  button will start navigation to the first point. When first point is reached, next one will be set as destination.

For each point, an estimation of distance and time to arrive will be displayed.



You can modify itinerary after starting it. Just enter again in 'menu > Navigate > Itinerary' and apply changes.

- **Favourites:** You may create your own list of favourite places to be able to enter them quickly. To manage this list, press the 'edit' button. ([+info](#))
- **History:** The recently selected destinations are stored here.
- **By map:** Select the exact spot and press OK.
- **Coordinates:** Introduce the exact coordinates for your destination.
- **Man Over Board:** It will set current position at that moment as destination. It will permit to return to that place.

To stop any type of navigation (On-road or Off-road) running, you must press on the '**Stop Navigation**' option.



You may enter it from the main menu or by opening the [contextual menu on map](#).

## 5 Following indications

### 5.1.1 Visual information



1. **Distance to next event:** Distance left to next event (roundabout, waypoint, exit...).
2. **Next manoeuvre:** When navigating On-road, the 'next event' space will display a representation of the next manoeuvre to be done (right turn, left turn, roundabout, diversion, etc.).
3. **Next Street:** Indicates the next street to be taken following navigation.
4. **POI:** V- map point of interest (petrol station, hotel, cash point, etc).
5. **Calculated Route:** Shows the automatically calculated route to be followed.
6. **Manoeuvre indication:** Illustrates the manoeuvres to be carried out on the map and more accurately.
7. **Speed limit of present road:** Indicates the legal speed limit of the road on which we are.
8. **Present Street:** Name of the street where you are.

When pressing on an element of the map (for instance a Chemist's) a yellow square will appear indicating the name of this element plus some other interesting information. This way, you may also check the names of the streets in the area.

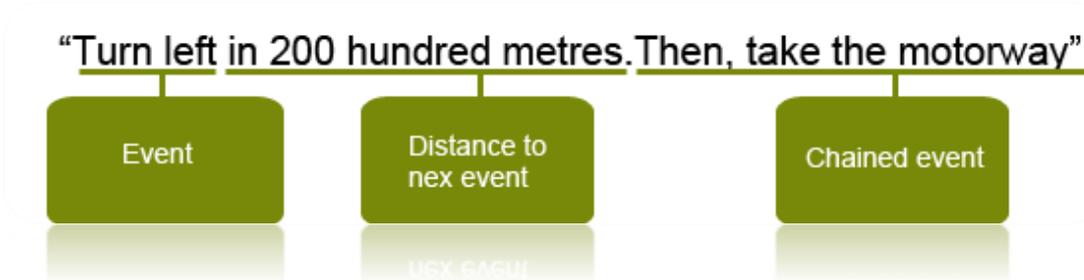


See the [On screen](#) section for complete information on the elements present on the navigation screen.

### 5.1.2 Audible information

In addition to the visual indications, TwoNav has a second channel to give the user indications: the sound channel.

Throughout your On-road journey, the program will issue voice instructions, indicating the next manoeuvres you need to make. For example:



Depending on the circumstances, one or other type of sound information will be given. The indications may include the following information:

- **Distance to next event:** This is how far you have to go before the next event or manoeuvre.  
 If it is a long way, you may not be given an exact distance (e.g.: in 200 metres), but “in over...” a certain distance (e.g.: “in over 3 kilometres”).  
 When you are **very close to the event, no distance will be indicated**, just the event, and so you should carry it out right then.
- **Event:** Manoeuvre to be made (or information of interest) – e.g.: “turn right”.  
 If it is not preceded by information on the distance, you will need to carry it out any time now.  
 The nature of events can vary greatly, but they are normally manoeuvres to be carried out. Two different kinds of events can be distinguished:
  - Simple events: Direct indication is given of the action to be taken (e.g.: “turn right”)
- **Chained event:** It is possible that you need to perform two manoeuvres in a very short space of time. In this case, TwoNav will add the second event to the first (e.g.: and then take the highway).

## 6 Radar warnings / POIs

During your navigation, TwoNav may alert you when you get close to certain points of special interest.

### 6.1.1 Radars

One special case of these types of points is the radars that control traffic speed.

TwoNav will consider the points introduced in the 'TwoNavData\Radars' folder as radars and will alert you with a sound and an image when you get close to one of them (see section [Speed limit](#) to get to know the setting options of these warnings).

The system includes a radars data base from the AlerteGPS company that may be updated from their web page, [www.alertegps.com](http://www.alertegps.com). In it you will find a section devoted to TwoNav products.

If you wish to update this information, all you have to do is substitute the original files by the updated ones (in GPX, WPT or BWPT formats) into the 'radars' folder kept in the 'TwoNavData\Radars' data folder.

### 6.1.2 POIs

You may also be alerted of other general interest points (POIs) that you may customize yourself.

TwoNav will load automatically the waypoints (in GPX, WPT or BWPT format) that you place inside the 'TwoNavData\POI' folder when starting up the system. These waypoints will not be displayed in the [waypoints list](#), but they will be drawn on the map.

You can hide these files on map from [active personal POIs](#) tool.

BWPT format is recommended, allowing a much quicker access to information. Files in other formats can be converted to BWPT from CompeGPS Land PC software.

If you want to be alerted when reaching one of these POIs, each one of them will have to be associated to a sound or image file, which will be reproduced when getting close to the point.

You may associate images or sounds in WAV format to the waypoints from the [properties of the waypoint](#) window.

**Warning:** Using BWPT files with more than 5000 points may cause system slow down. GPX or WPT files may cause such slow down even with much smaller files.

## 7 “Simulation” and “Zoom to...”

### 7.1 Simulation

TwoNav lets you see a representation of the itinerary you are going to follow. It will be displayed with the position icon in green to distinguish it from the 'present position' icon in red.

When simulation is running, some tools to manage it will appear in the tool bar:



- Pause: click on it to pause and again to resume
- FF/RW: click on it again to accelerate and again to return to normal speed
- FF to next/RW to prev: Jump to next event (waypoint or On-Road manoeuver)



To stop the simulation, you may go to 'Main menu > Discover > Stop sim.'

## 7.2 Zoom to...

The option 'Zoom to...' allows you to carry out a quick pre-visualization of the element you wish to see on the map\*. There are a great number of elements to visualize:

- **Address:** if you have loaded a routable map, with this tool you will be able to see the address chosen by you and it will appear centred on the screen.
- **POI:** if you have loaded a routable map, you will be able to carry out a quick visualization of the Points of Interest (POIs), such as petrol stations theatres, etc.
- **Favourites:** you may establish places on the map as favourite points, as for example your home. If you have saved places as favourites, you will be able to zoom on them in order to see them centred on the map.
- **Data:** **You will also be able to see** waypoints, routes and tracks on the map. Although you do not need to have loaded the map on which this data was created, as pre-visualization is based on the geographical coordinates, it is interesting to 'zoom to...' these element on the map for you to see the details of the ground where they were made.
- **Coordinates:** TwoNav allows you to quickly visualize concrete coordinates introduced by you. **Remember** that to visualize what these coordinates correspond to, you must have loaded a map of that area.

**\*Note:** the option 'Zoom to' shows you the element that you want to see in a window solely for this purpose that is not the same as the navigation window. However, when you carry out a 'Zoom to...' an element, when returning to the navigation window, the focus will still be on this element. To re-centre the focus on its present position you may use the '[Re-centre](#)' tools.

## 8 Appendix 1 – Data fields

Next is a list of the items that you can find in the Data page or in the Data bar if it has been set.

By default, only fields of frequent use will be shown, alphabetically ordered. If 'infinite'  button is pressed, full list of data fields will be shown.

### More frequent:

- **Accumulated Climb:** Total amount climbed from departure to the present position
- **Altitude:** Altitude over the sea level
- **Ascent to destination:** Difference between the altitude of destination and present altitude
- **Ascent to next:** Difference between the altitude of the next waypoint and the present one
- **Bearing**
- **Bearing to the next:** Course towards which the next waypoint is
- **Chronometer**
- **Compass:** Address that is followed on the horizontal level (0 = N, 90 =E, 180 = S, 270 = O)
- **Coordinates**
- **Deviation from route:** Distance to active route
- **Dist. to destination:** Distance to destination (last waypoint of the route)
- **Distance to the next:** Distance to the to the next waypoint
- **Est. Hour at Dest. :** Estimated time of arrival to destination (last waypoint of the route) at present speed
- **Est. Hour at Next :** Estimated time of arrival to the next waypoint (at present speed)
- **E.T. Dest:** Estimated time to reach destination (last waypoint of the route) (at current speed)
- **E.T. Next:** Estimated time to reach next waypoint (at current speed)
- **E.T. Dest (cruise):** Estimated time to reach destination (last waypoint of the route) (at cruise speed).
- **E.T. Next (cruise):** Estimated time to reach next waypoint (at cruise speed).
- **Goto arrow:** Arrow that indicates the direction to the next waypoint
- **Max. sp.:** Maximum speed in current flight
- **Mean speed:** Mean speed from start to now
- **Odometer Total 1:** Accumulated distance of all your outings. It is not automatically reset when turning off the device
- **Partial CO<sub>2</sub> emission:** CO<sub>2</sub> emission from departure. It is reset every time the device is turned off

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- **Partial distance:** Counter of distance covered from the beginning of departure. It is reset every time the device is turned off
- **Route percentage:** % of the route that has been already done.
- **Route graph:** Shows the graph of the route as it is being covered
- **Speed:** Present speed
- **Slope:** Slope of our present movement
- **Slope in next kilometer:** slope from now in 1 kilometer.
- **Slope to next waypoint:** slope from now to the next waypoint
- **Slope to destination:** remaining slope till destination
  
- **Time:** Present time according to the selected time zone
- **Time stopped:** Time gone without advancing
- **Time moving:** Time gone while moving
- **Track graph:** Shows the track from the data page

### Less frequent:

- **Accumulated Descent:** Total of the descents made from departure to the present position
- **AGL(Air):** Altitude from Ground Level.
- **Alt. at next (Air):** Predicted altitude in next waypoint, if current trajectory is maintained.
- **Atmospheric pressure:** It shows the present atmospheric pressure by means of the barometric altimeter
- **Barometric altitude:** Present altitude that the barometric altimeter captures by atmospheric pressure
- **Battery:** Remaining energy in PC/PDA
- **Differential GPS:** GPS gives differential signal (submetric accuracy)
- **Free Memory:** It shows the free memory of the system
- **GPS Altitude:** Present altitude that the GPS perceives via satellites
- **GPS Bearing:** Direction followed according to the GPS system
- **HDOP:** Horizontal Dilution Of Precision (estimated current accuracy of the GPS)
- **L. Alt. (Air):** Altitude of the land looking at the loaded DEM file
- **L/D Goal (Air):** Minimum glide ratio required to reach the Goal (going through all intermediate waypoints) (distance to goal divided by goal's altitude over ground level).
- **L/D Req. (Air):** Minimum glide ratio required to reach next waypoint (distance to waypoint divided by waypoint's altitude over ground level).

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- **L/D (glide ratio) (Air):** Glide ratio, dividing horizontal distance by vertical (descending). A high glide ratio means a good gliding, while a low one means a fast descent.
- **Magnetic bearing:** Direction followed according to the inner compass
- **Maximum altitude:** Reached in this outing
- **Name of the track file**
- **Next WPT:** Name of the waypoint you are going to
- **Norm. Acc:** Normal acceleration (perpendicular to movement, in circular movements)
- **Number of points:** Track points saved up to this moment
- **Number of satellites in use:** Satellites fixed in that moment
- **Place:** When a vector map is loaded with information about the zone, this will show the name of the element which fits with our current position
- **Precision:** GPS error margin
- **Speed limit:** It shows the speed limit established for the road
- **Sunrise:** Indicates the time of sunrise, considering parameters such as time zone and season of the year
- **Sunset:** It tells the time it will get dark considering parameters such as time zone and season of the year
- **Tangential acceleration**
- **Total CO<sub>2</sub> emission:** CO<sub>2</sub> emission of all your outings. It does not automatically reset when the device is turned off
- **Total Odom.2:** Secondary counter of aggregate distance of all your trips. It is not reseted automatically when device is shutdown
- **Turning radius**
- **Velocity made good (VMG):** That's the right direction's velocity component of a ship to the following mark.
- **Vertical speed**

## 9 Appendix 2 – Equivalences of peculiar signs

When having to introduce an address into the TwoNav system for searching cities and streets, you may find that you have to introduce signs that do not appear in the system keypad.

Next follows a table of equivalences for you to know which sign to introduce to be considered as the 'peculiar' sign.

'A'	'À', 'Á', 'Ä', 'Â', 'Å', 'Ã', 'Æ'
'C'	'Ç'
'D'	'Ð'
'E'	'É', 'È', 'Ë', 'Ê'
'I'	'Í', 'Ì', 'Ï', 'Î'
'N'	'Ñ'
'O'	'Ó', 'Ò', 'Ö', 'Ô', 'Ø', 'Õ', 'Œ'
'S'	'Š', 'ß'
'T'	'Þ'
'U'	'Ú', 'Ù', 'Ü', 'Û'
'Y'	'Ý', 'ÿ'
'Z'	'Ž'
' ', ' ', '\'	' ' (space)

Therefore, if you have to introduce 'LidlStraße' you will have to press 'S' instead of ß.