GEONAV 5

E

User and Installation Guide

NAVIONICS®
THE LEADER IN ELECTRONIC CHARTS

READ THIS WARNING BEFORE USING THE GEONAV 5

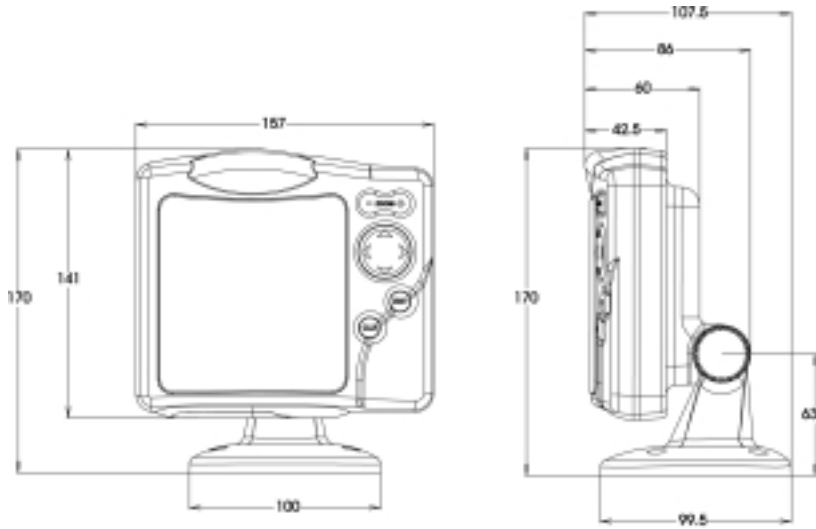
WARNING !

THE ELECTRONIC CHART IS AN AID TO NAVIGATION DESIGNED TO FACILITATE THE USE OF AUTHORIZED GOVERNMENT CHARTS, NOT TO REPLACE THEM.
ONLY OFFICIAL GOVERNMENT CHARTS AND NOTICES TO MARINERS CONTAIN ALL INFORMATION NEEDED FOR THE SAFETY OF NAVIGATION AND, AS ALWAYS, THE CAPTAIN IS RESPONSIBLE FOR THEIR PROPER USE.

The use of the GEONAV 5 implies knowledge and acceptance of this warning by the user.

CHARACTERISTICS

- New compact design
- Self contained GPS Plotter system (Plotter + GPS receiver + Antenna)
- Built-in world map
- 32 bit RISC processor
- Upgradable software
- Monochrome transflective Liquid Crystal Display (LCD) 5" with high visibility under sunlight
- Compatible with NAVIONICS Nav-Chart™ cartridges
- Input voltage: from 9.8 to 18 VDC, with reverse polarity and overvoltage protection
- Splash-proof, specifically designed for open boats
- Low power consumption: 2.5 W
- Weight: approx. 0.7 kg
- Size: 141 x 157 x 42.5 mm



- Operating temperature: 0 to 60 °C, humidity 93%
- Storage temperature: -20 to 70 °C, humidity 93%
- High sensitivity GPS receiver
- Satellite acquisition time 2 minutes (cold)
  15 minutes (first fix)
- GPS position accuracy: 15 m (with S.A. disabled)
- CE standard compliant
- Quick-locking bracket

Accessories

- Mounting bracket for fixed installation on boat
- Rubber gasket and drilling template for panel mounting
- Removable bracket with high strength suction cup for installation on cars
- Power supply cable and car lighter plug
- User guide
- Carrying case
- Protective cover

Memory

- 1 route
- 5 waypoints

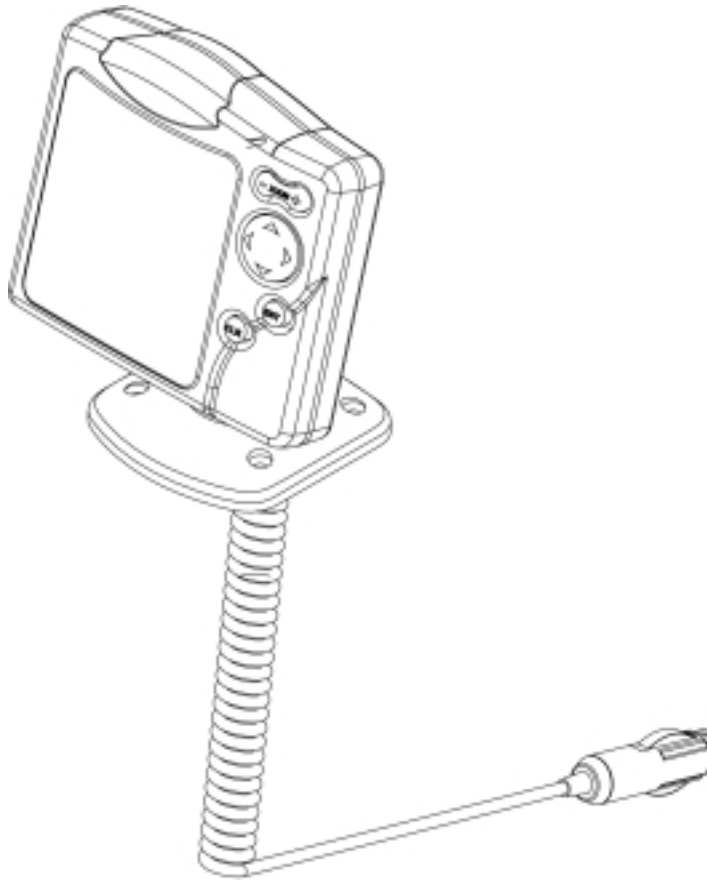
INTRODUCTION

The GEONAV 5 is a graphic GPS plotter that displays your boat's current position with respect to an electronic chart. The GEONAV 5 can use up to 12 satellites simultaneously. By using a GEONAV 5 and a NAVIONICS electronic chart you will never get lost even in bad weather conditions such as fog or rain because your plotter will always display where you are and where your are heading to!

The ROUTE function will allow you to plan a trip. NAVIONICS chart cartridges are available for all busy boating areas around the world and can be used in addition to your official paper charts. NAVIONICS chart cartridges are available from NAVIONICS authorized dealers and outlets around the world. See your local marine electronics dealer for more information.

The GEONAV 5 unit is equipped with accessories for installation in your boat and car.

The GEONAV 5 can be used also for land applications: the GPS receiver and the new NAVIONICS land charts will allow displaying easily your position with respect to the most popular roads and city names. The installation of the GEONAV 5 in your car takes only a few seconds: just position the plotter on the dashboard with the proper bracket and fix the suction cup to the front window, then connect the power cable to the lighter. Enjoy your trip!



Should any new function be available in the future, the software of your GEONAV 5 can be updated in a very short time. See your local marine electronics dealer for more information.

INSTALLATION AND PRECAUTIONS

When installed on a boat, in order to avoid electromagnetic interference, the GEONAV unit must be positioned at least 0.35 m away from a magnetic compass or a flux-gate sensor, such as those used on autopilots and remote electronic compasses.

The GEONAV is water resistant, but not waterproof. It is essential that the rubber cover on the lower side of the unit is firmly inserted in the cartridge slot; the rubber cover should be removed only when the Nav-Chart™ has to be inserted or replaced and, in this case, the unit must be perfectly dry. To avoid continuous exposure to water, a protective cover is supplied with the GEONAV: the cover should always be used when the unit is turned off, in order to protect the unit from direct sunlight and water.

For best satellites reception, mount your unit outside in an open area to allow the best sky visibility to the built-in antenna located on the upper side of the instrument. If the instrument is installed so as to permit full horizon visibility, the best performance will be ensured.

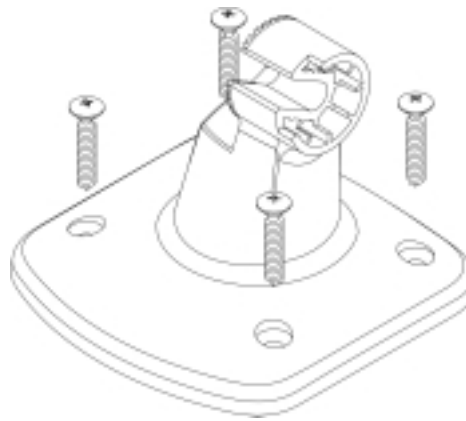
Panel mounting

A drilling template is supplied with the plotter to properly locate holes and areas that have to be cut out of the instrument panel.
A neoprene adhesive gasket is supplied with the unit and must be applied to the rear of the plotter to avoid moisture penetration and to reduce vibrations.
Mounting screws must be 4 mm in diameter and maximum 5 mm in length, plus the thickness of the instrument panel.

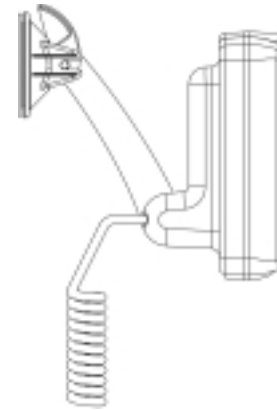
We advise you against tightening the screws too much, in order not to break the screw seats.

Fixed installation

The plotter may be mounted on any surface using the mounting bracket provided with the unit (see figure below). Use the 4 flat-head screws (5mm in diameter) to fix the bracket on to the desired mounting surface. The bracket does not allow any left or right rotation, therefore make sure that the unit is properly installed for the best viewing angle.
If you wish to connect the power cable directly to the boat's battery, cut the car lighter adapter off; we recommend that you install a 1A fuse between the power source and the plotter to protect the instruments against overvoltage and/or overcurrent.
Since the unit has no start pushbutton, make sure that the unit is supplied by a line controlled from the switchboard or separate switch. If you make use of the car lighter plug, remember to unplug the adapter after use so as to switch the unit off.



Car installation



To allow an easy installation on your car, the GEONAV is supplied with an additional bracket that ends with a suction cup. When the unit is installed, make sure that your car front window has enough space to allow proper road visibility.

Installation procedure is the following:

1. Locate a flat surface on the window that allows you to position the bracket base on the dashboard as well as allows the internal GPS to have the best sky visibility (the GPS needs to track satellites, hence needs to be able to see the sky).
2. Clean the entire front window area you wish to use for unit installation. Use a good window cleaner and paper towels and dry the area completely.
3. Verify that the GEONAV does not interfere with levers, airbags and other car facilities.
4. Push the lever back on the suction cup.
5. Place the suction cup firmly on the clean, flat glass surface and push the lever forward to adhere to the glass.
6. Make sure that the unit is firmly secured and correctly positioned and that it will not fall off the window. This step is very important to ensure safe operation while driving. Test the connection between the unit and the window several times after installation and during use.
7. Place the mounting bracket on top of the dashboard and orientate the plotter to the best position for the internal GPS antenna.
8. Plug the power cord into the lighter adapter.

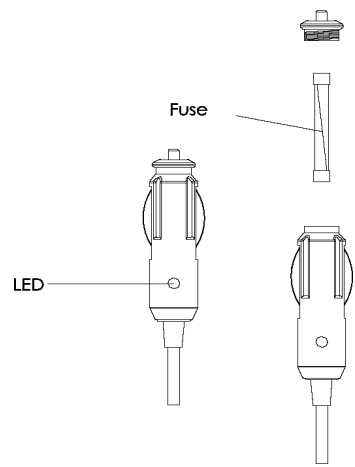
CONNECTIONS

The figure shows colors and polarity of the car lighter adapter. The adapter has a little lamp (LED) that turns on if the car is correctly providing the bracket with power.
If the lamp is off:

- verify that 12V voltage is available from the lighter plug;
- verify that the adapter internal fuse works; open the adapter and check the fuse.

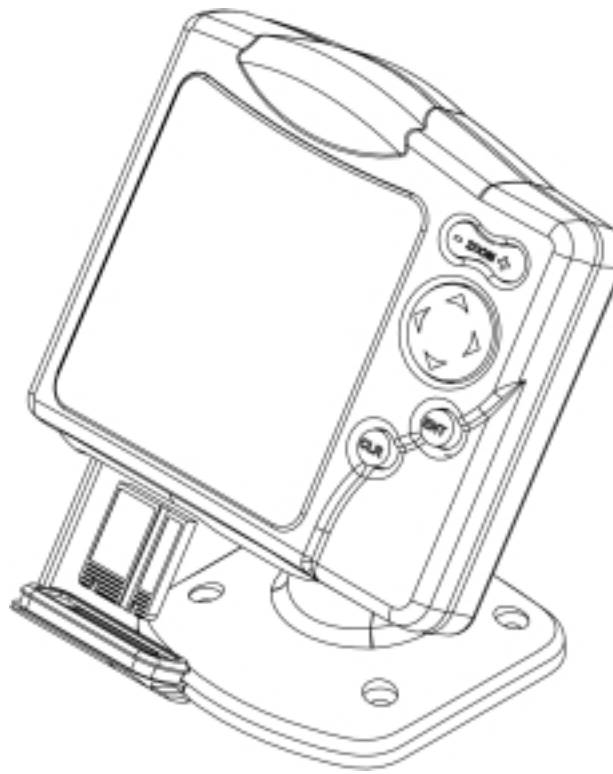
If the fuse is broken, replace it with a fuse with the same electrical features. DO NOT USE ANY BY-PASS CIRCUIT.
The fuse guarantees that the special protection circuit inside the plotter works properly under accidental short circuits, polarity inversion and overvoltage.
If you have to remove the lighter adapter, the internal connections are the following:

red (or white)	+ (+ 12V)
black	- (ground)



CARTRIDGE INSTALLATION

Remove the rubber cover located in the unit's lower side and slide the Nav-Chart™ cartridge into the slot.
Install the cartridge into the plotter.
Replace the rubber cover with a light pressure and check that it is inserted correctly to avoid any water infiltration.

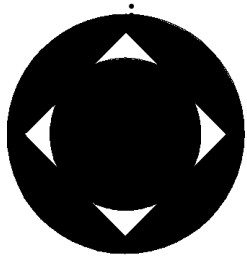


KEYBOARD

ZOOM +/ZOOM -

- Increases/decreases the chart range

CURSOR



- Moves the manual cursor across the screen.
- Switches from Navigation mode to Manual mode.
- Selects the options from menus and submenus.
- At start-up, adjusts the screen contrast.

ENT

- When a setup/edit window is shown, confirms the operation.
- **Navigation mode**: accesses the menu.
- **Cursor mode**: inserts a waypoint

CLR

- **Navigation mode**: deletes the whole route.
- **Cursor mode**: deletes the waypoint pointed by the cursor or enters the Navigation mode if no waypoint is pointed by the cursor.

DIAGNOSTIC

The GEONAV has a diagnostic program to verify its correct performance, once the installation has been made, and detect problems that may occur during the use of the unit. To access this program, turn the unit on by keeping any key pressed excepting **CLR**.

The GEONAV will perform automatically a test of the entire system; as soon as the memory test has been performed, the program allows verifying whether each key works properly. Keep the **CLR** key pressed for 3 seconds to exit, otherwise go on with testing keys.

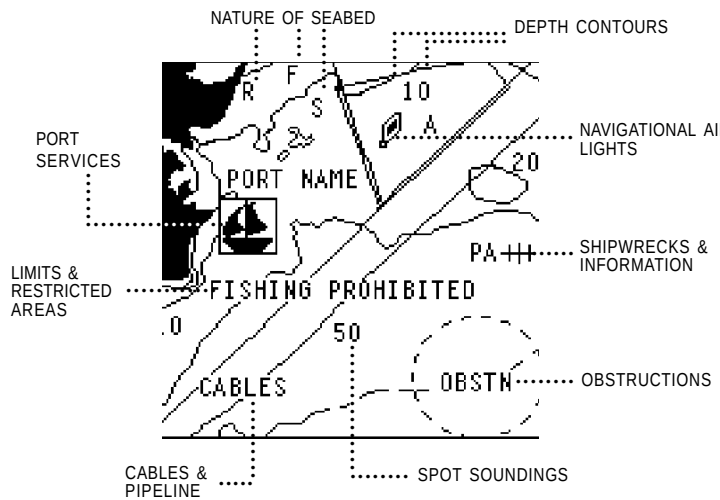
The diagnostic program allows verifying the correct connection between the GPS receiver and the unit. The position sensor should be operating and should transmit NMEA 0183 messages. If the receiver is working, a string of NMEA messages will be dispayed; this indicates that the entire system is working correctly.
Press **ENT** to freeze the messages on the screen.
Press **CLR** to exit the diagnostic program.

ATTENTION: to perform a memory reset, switch the unit on holding the **CLR** key pressed.
This operation allows deleting all the data saved by the GEONAV so far and resetting it.

NAVIONICS ELECTRONIC CHARTS

The GEONAV includes a built-in world map that allows zooming from 4,096 down to 512 NM.
Additional cartographic details relevant to the specific area of navigation are available by NAVIONICS Seamless Nav-Chart™ cartridges.
When a cartridge is present, a small square will show the area covered by the chart. Positioning the cursor inside the square and then decreasing the range with the **ZOOM+** key, the details of the area covered by the chart will be displayed.
Generally the maximum detail level is obtained in the port plans and can reach 1/8 nautical mile (the smallest point on screen is equivalent to 1 m approx.) depending on cartridge type and coverage.

NAVIONICS charts contain the following main symbols:



To increase the map detail, press **ZOOM+**.
To decrease the map detail, press **ZOOM-**.

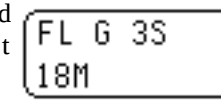
How to display bathymetric lines

Enter the Navigation mode (see next chapter), then press **ENT** until the menu bar is displayed, select SET, then enable the options desired using the **CURSOR** key.

PORT NEAR ◑	SET
Chart Rotat.	ON OFF
Depth <= 5M	ON OFF
Depth >=10M	ON OFF
Track	ON OFF
Set Time	LOC GMT
Dist. Unit	NM KM MI
Depth Unit	M FT FA
Language	EN FR ES DE IT DK
↑↓ SELECT	⇄ CHANGE	ENT/CLR EXIT

How to display navaids

Positioning the manual cursor on the navaid symbol , a window will display the relevant characteristic.



ABBREVIATIONS FOR LIGHT		ABBREVIATIONS FOR COLOUR	
AL	alternating	AM	amber
F	fixed	B	black
FLL	fixed and flashing	BL	blue
FL (...)	group flashing	G	green
FL	single flashing	OR	orange
IQ	interrupted quick	R	red
OC	single-occulting	VL	violet
OC (...)	composite group occulting	W	white
Q	continuous group	Y	yellow
ABBREVIATIONS FOR PERIOD		**ABBREVIATIONS FOR RANGE**	
..S	xx seconds	..M	xx nautical miles

How to display port services

Position the manual cursor on the icon relevant to the selected marina; when pressing **ENT**, a window will list all the services available in that port. Select the service desired from the list by pressing the **CURSOR** key.

Port services are identified by the following icons:

Health and first aid services

Customer services

Fuel

Tourist services and shops

Water

Information and authorities

Engine, boat, electronic and other repairs

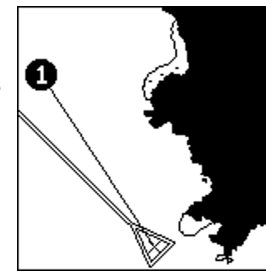
FUNCTIONAL CHARACTERISTICS

This chapter summarizes the most commonly used functions of the GEONAV and also gives a brief description of the terms that will appear in the following pages. Additional terms and acronyms can be found in the Glossary section at the end of this manual.

Navigation mode (Automatic, AUTO)
The GEONAV goes to Navigation mode as soon as the internal GPS receiver sends a valid fix; when in Navigation mode, the manual cursor is not displayed.
This mode is also referenced to as "automatic" because the unit automatically updates the boat's position on the screen.

Cursor mode (Manual, MAN)
When in Cursor mode, the manual cursor is displayed. It is possible to edit a route, display navaid information, access the menu, etc.
By pressing the **CURSOR** key, the unit switches from Cursor mode to Navigation mode and the screen will be centered with respect to the manual cursor.
To return to Navigation mode, press **CLR**.

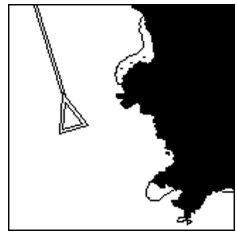
Autozoom
With the Autozoom function always enabled, the GEONAV will always display automatically the boat's position and the target waypoint at the best available chart range. Therefore, this function is enabled only if at least one waypoint is present.



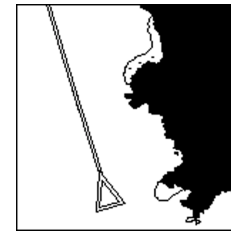
Screen amplifier

This function, always enabled, redraws the chart if the boat's speed is greater than 3 knots so as to maintain 2/3rds of the screen ahead of the boat.

This function is enabled only if no waypoint is present.



without screen amplifier

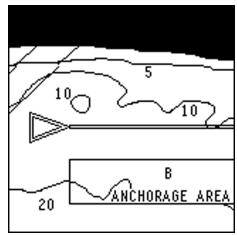


with screen amplifier

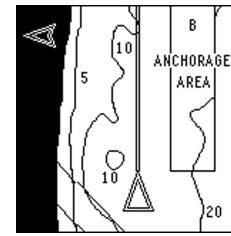
Chart rotation

Charts are traditionally displayed in north-up mode. This, however, does not correspond to reality. For example, when traveling southwards, the chart shows, on the right side of the boat, what is on the left side in reality and vice versa.

The Chart Rotation function allows rotating the electronic chart displayed according to the plotted route (COG - Course Over Ground) as detected by the GPS receiver. Since the COG value varies continuously, a filter has been inserted to prevent the chart from bouncing.



not rotated



rotated

To activate the Chart Rotation function, enter the Navigation mode, press **ENT** to display the menu, select SET, then CHART ROTATION and ON. A message will prompt the user to select the requested maximum range before activating the chart rotation.

Local time

By this function the user can enter local time instead of Greenwich time (GMT) supplied by the GPS receiver.
To enter local time, enter the Navigation mode, then press **ENT** till the main menu bar is displayed; by using the **CURSOR** key, select SET, TIME and then LOC.
A window will allow entering local time by the **CURSOR** key.
Press **ENT** to confirm the operation. To cancel the visualization of local time, enter the Navigation mode, then press **ENT** till the main menu bar is displayed; select SET, TIME and then GMT.

Contrast

Enter the Navigation mode and press **ENT** till the menu bar is displayed, then select CONTRAST and adjust the contrast with the **CURSOR** key.
The contrast can be adjusted at start-up (when the initial WARNING message is shown) or when the satellite window is displayed; press the **CURSOR** key and adjust the contrast by the arrows.

Track

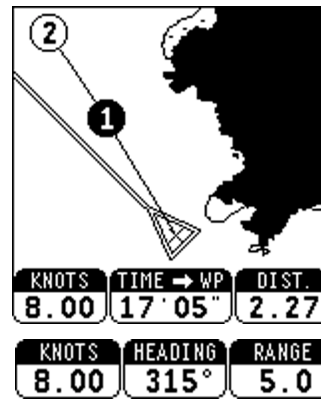
The Track function allows displaying the route actually followed by the boat (during the latest hour approximately); the route is represented by a dashed line.
To enable or disable the Track, press **ENT** repeatedly until the menu bar is shown. Press **CURSOR** to select the SET option, and the TRACK item, then to enable or disable the function.
Press **ENT** or **CLR** to confirm the operation and exit.

OPERATION

At start-up the GEONAV will display one page containing a message warning the user that the electronic chart is an aid to navigation designed to facilitate the use of authorized government charts, not to replace them.
Adjust the contrast by pressing the **CURSOR** key.
Press **ENT** to continue; the GEONAV will display the GPS information window until a valid fix is received, then switch automatically to cartography visualization.

NAVIGATION WINDOW

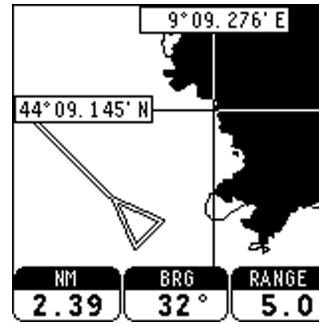
This window is activated automatically as soon as the GPS receiver has computed the boat's position.
Speed, course and chart range are displayed at the bottom of the screen. The screen scale indicates the rounded off distance between the instrument's center and top side.
By using the **ZOOM** key, the chart detail level can be increased, thus accessing the NAVIONICS cartography data.
To switch from Cursor mode to Navigation mode, press the **CLR** key.



If a route is plotted on the screen, the window will display the following information:
• speed
• time to arrive to the target waypoint
• range to the target waypoint
In this case, the current route leg is displayed by a thicker line and the target waypoint highlighted by a dark circle.

MANUAL MODE

By pressing the **CURSOR** key, the GEONAV switches to Cursor mode where the user is allowed to move freely around the "seamless" world of NAVIONICS cartography.



In Cursor mode, the screen will always be centered with respect to the manual cursor; the window at the bottom of the screen displays the following data:

- distance from boat's position to manual cursor
- bearing from boat's position to manual cursor
- chart range

About 1 minute after the last key has been pressed, the GEONAV goes back automatically to Navigation mode.

MENU

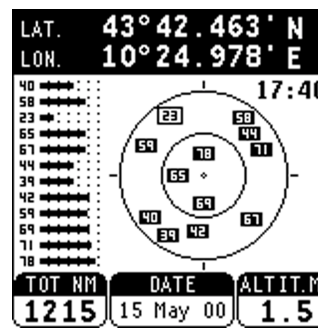
To access the menu bar, enter the Navigation mode and press **ENT**.
The bar allows selecting from the following functions:

PORT: to select a port where to insert a waypoint.
NEAR: to select a class of port services, to search for the nearest services at a given moment.
CONTRAST: to adjust the screen contrast.
SET: to activate/deactivate/modify the plotter's setup.

- CHART ROTAT. (ON/OFF)
  Enables/disables the chart rotation function.
- DEPTH <= 5m (ON/OFF)
  Enables/disables the display of depth contours below or equal to 5 meters.
- DEPTH >= 10m (ON/OFF)
  Enables/disables the display of depth contours above or equal to 10 meters.
- TRACK (ON/OFF)
  Enables/disables the Track function.
- SET TIME (LOC/GMT)
  Allows setting local time.
- DIST. UNIT (NM/KM/MI)
  Allows selecting distance units (nautical miles, kilometers or statutory miles).
- DEPTH UNIT (M/FT/FA)
  Allows selecting depth units (meters, feet or fathoms).
- LANGUAGE (EN/FR/ES/DE/IT/DK/SV/NL/SU/NO)
  Allows selecting the language (English, French, Spanish, German, Italian, Danish, Swedish, Dutch, Finnish or Norwegian).

SATELLITE WINDOW

This window is displayed at start-up and can be recalled by pressing repeatedly the **ENT** key; the satellite window displays how many and which satellites are being tracked by the GEONAV built-in GPS receiver.
The outer circle represents the horizon, the inner one identifies a 45° elevation in relation to the horizon and the central circle points to the zenith.
The numbers within small squares indicate the satellite. As soon as a satellite is tracked by the GPS receiver, the number within the square is displayed in reverse. The bar indicators on the left identify the signal quality (the longer the bar, the higher the signal quality).



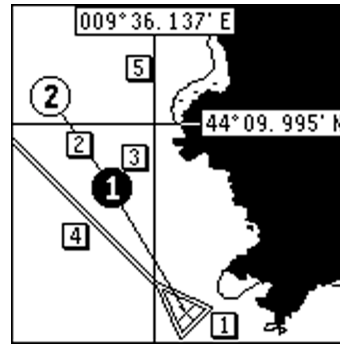
Additional information:
- Day, month, year and local time (at first start-up the GEONAV is initialized to the Greenwich Time)
- Boat's position (or latest valid fix if the GPS is still searching for satellites)
- Data on current satellite situation (number and fix)
- Odometer and altitude

Satellite Window

Latitude and longitude relevant to the boat's position are displayed as soon as three satellites are tracked and a 2D fix is available.
The altitude value is available only if four satellites are tracked and a 3D fix is performed. As soon as a valid fix is available, the GEONAV will automatically switch to Navigation mode and display the boat's position at the best chart range available; the window at the bottom of the screen will indicate the boat's course and speed as well as the chart range.
Since the GPS receiver is initialized in Italy, the time to get the first fix will depend on the areas you want to navigate; within the Mediterranean Sea the GEONAV is supposed to get the first fix in less than 12 minutes, in other areas of the world it can take up to 30 minutes.
Once the unit gets the first fix, the time for the following fixes is a few minutes.

ROUTE

The GEONAV can manage navigation along a planned route. The figure shows a route displayed by the GEONAV.



1 - **Boat's position**
The boat's position is displayed according to the data received from the GPS receiver.

2 - **Leg**
Route segment between 2 waypoints.

3 - **Waypoint**
The waypoint is identified by a circle and a number. The GEONAV will display the "Proximity to Waypoint" message to warn the user that in about 25 seconds he is about to approach the next target waypoint. The message "End of Trip" is displayed when the user is about to reach the last waypoint of the route.
The first waypoint is identified by the symbol "X". The target waypoint (the next point the boat is navigating to) is identified by a black circle with the relevant number shown in reverse.

4 - **Heading Vector**
This vector displays the boat's current route.

5 - **Cursor**
It allows moving the manual cursor across the screen; the relevant geographical coordinates (latitude and longitude) are displayed in two small windows. When the GEONAV switches to Navigation mode, the manual cursor disappears.

How to create a route

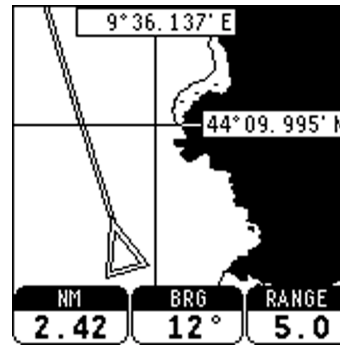
To create a route, insert at least one waypoint taking the boat's current position as a starting point.
To insert the waypoint at any time, press the **CURSOR** key and position the cursor at the desired coordinates, or use the search options available from the menu (see the following pages). The route will be initially composed by a leg that connects the boat's position to the target waypoint selected. If you wish to enter additional waypoints, repeat the operation; once the selection is made, the new waypoint will be added to the existing route. To insert, move or delete waypoints (e.g. to go round obstacles or change the route plan), activate the route editing function (see the following pages).

NOTE: when turned off, the GEONAV saves automatically the current route and retrieves it as it is turned on again.

Route to the manual cursor position

Press the **CURSOR** key to switch to Manual mode, position the cursor where a waypoint is to be inserted and then press the **ENT** key.

The GEONAV will insert a new waypoint in the cursor position and a new leg will be added to the existing route; if no waypoint had been previously entered, the leg will be connected to the boat's position. The GEONAV will automatically activate the Autozoom function as soon as it switches to Navigation mode.



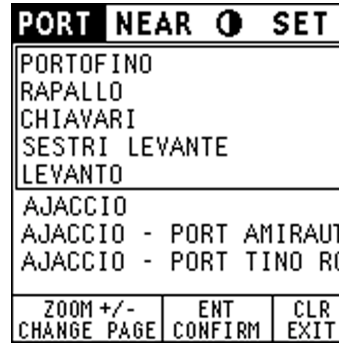
Route to a port

Enter the Navigation mode (by pressing the **CLR** key if in Cursor mode), then press the **ENT** key and select the PORT option with the **CURSOR** key.

The GEONAV will display the port catalog (the latest 6 ports used will be highlighted at the top of the screen) and allow selecting the port.

Select a port by the **CURSOR** key and confirm by **ENT**.

The GEONAV will insert a waypoint in the port position, append the new leg to the existing route (if no route is present, the leg will connect the waypoint to the boat's position) and move to Navigation mode, automatically activating the Autozoom function.

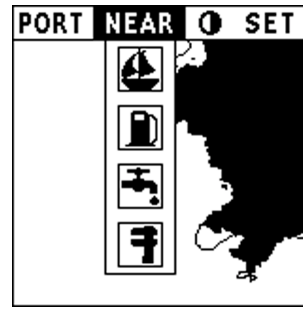


Route to the nearest service

NOTE: this option is available only with NAVIONICS cartridges that include the Port Service feature.

Enter the Navigation mode (by pressing the **CLR** key if in Cursor mode), press the **ENT** key and select NEAR by the **CURSOR** key; the GEONAV will display the port service catalog and allow selecting the service.
Select the desired service, then press **ENT** to confirm or **CLR** to exit.
The GEONAV will display the 3 ports with the selected service, nearest to the boat's position; by using the **CURSOR** key, highlight one port at a time and check the relevant distance and time to arrive (estimated on the current boat's speed). Press **ENT** to confirm the selection.

The GEONAV will insert a waypoint in the port position and delete automatically the existing route, then go back to Navigation mode activating automatically the Autozoom function.



How to delete the whole route

In Navigation mode, it is possible to delete the whole route by pressing the **CLR** key. Press **ENT** to confirm or **CLR** to abort the operation.

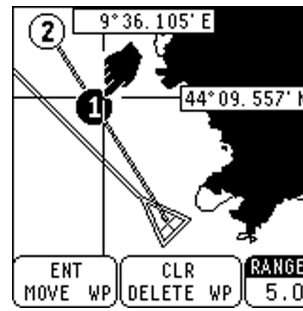
In Cursor mode, it is necessary to keep the **CLR** key pressed for more than 3 seconds (if the key is kept pressed for a shorter time, the GEONAV will go back to Navigation mode).

How to edit a route in Cursor mode

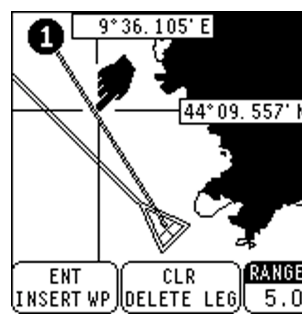
It is often necessary to delete a single waypoint or modify its position; the GEONAV allows performing these operations in a very simple way and by way of few keys.

- Deleting a route segment
  Position the cursor exactly on the segment to delete with the **CURSOR** key, then press **CLR** to confirm.
- Deleting a waypoint in a plotted route
  Position the cursor exactly on the waypoint to delete with the **CURSOR** key, then press **CLR** to confirm.

- Moving a waypoint in the plotted route
  Position the cursor on the waypoint to move with the **CURSOR** key, press **ENT** to pick the waypoint up, drag the cursor to the new position and press **ENT** to drop the waypoint.



- Inserting a new waypoint in the plotted route
  Position the cursor exactly on the route segment to edit, then press **ENT** to insert the waypoint.
  Now drag the new waypoint exactly where desired with the **CURSOR** key, then press **ENT** to confirm.



READ THIS WARNING BEFORE USING THE GEONAV 5

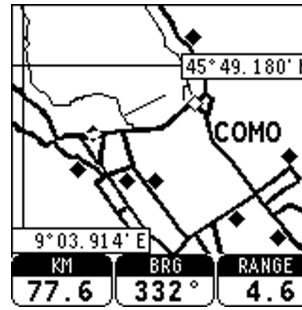
WARNING !

THE CHART PLOTTER, WHEN INSTALLED IN A VEHICLE, MUST NOT OBSTRUCT THE DRIVER'S VIEW, AND THE UNIT MUST NOT BE USED BY THE DRIVER, OR DISTRACT THE DRIVER'S ATTENTION, WHILE THE VEHICLE IS IN MOTION.

The use of the GEONAV 5 implies the knowledge and acceptance of this warning by the user.

USE WITH LAND CARTOGRAPHY

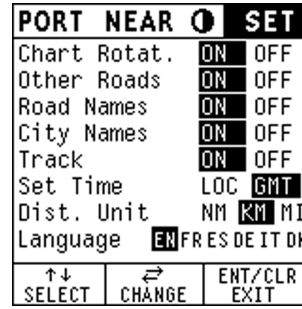
The GEONAV is now a valuable instrument also when used and installed in a car: the GPS receiver and the new NAVIONICS land charts will allow displaying easily your position with respect to the most popular roads and city.
The installation of the GEONAV in your car will take you only a few seconds: just position the plotter on the dashboard with the proper bracket and fix the suction cup to the front window, then connect the power cable to the lighter.
Enjoy your trip!
When a land cartridge is inserted into the unit, the GEONAV will automatically set in land mode: all the major functions will not change with respect to the marine mode and you can still plot a route and activate all the functions as in marine mode.



SETUP menu

The SETUP menu will display some new options:

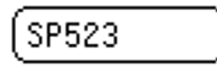
- OTHER ROADS (ON/OFF)
  Enables/disables the display of secondary roads.
- ROAD NAMES (ON/OFF)
  Enables/disables the display of road names.
- CITY NAMES (ON/OFF)
  Enables/disables the display of city names.
- DIST. UNIT (NM/KM/MI)
  Allows selecting the distance unit; the unit selected in land mode is independent of the one selected in marine mode.



How to display road names

This function is equivalent to the display of navaid characteristics when the GEONAV is used with nautical charts.

To display a road name, position the manual cursor on the road symbol (a small diamond): a window will display the relevant name.



How to search for a city

This function, equivalent to the port search, is enabled by the CITY option in the main menu.

It allows finding the geographical position of any city, town or village belonging to the area covered by the land chart.

TROUBLESHOOTING

The GEONAV does not turn on
Make sure that the unit is powered with voltage between 10 and 18 VDC. Check the polarity of power supply.

The GEONAV does not get any valid satellite fix
Make sure that no metal obstacle is positioned around the unit acting as a shield for the GEONAV antenna. If after 40 minutes the GEONAV does not get a valid fix, then turn the unit off and on again.

The GEONAV screen gets dark after a long exposure to direct sunlight
Adjust the contrast.

The GEONAV does not respond to any key
Turn the unit off, then on again; if the problem continues, erase the memory by turning the unit on while keeping the **CLR** key pressed. This operation will delete all the data (route and setting) previously saved in memory.

GLOSSARY

Azimuth - The angle from the horizon to a satellite or other object.

Bearing (BRG) - Compass direction (0°÷360°) from the boat's position to destination.

COG - Course Over Ground Direction of movement relative to the ground.

Coordinates - Description of position in terms of latitude and longitude.

Fix - Geographical position computed by the GPS.

GMT - Greenwich Mean Time (GMT) (Universal Time).

GPS - Global Positioning System
The constellation of navigation satellites that orbit the earth transmit precise time and position information. A GPS receiver uses this information to triangulate a position fix. Each GPS satellite transmits its precise location and the time when the transmission started. A GPS receiver acquires the signal and measures the interval between transmission and reception to determine the distance between the receiver and the satellite. Once the receiver has computed the range for at least 3 satellites, the boat's position can be determined.

Heading - The direction the boat is moving to.

Leg - A segment of a route between waypoints.

SOG - Speed Over Ground Boat's speed with respect to the earth.

Waypoint - A significant position in the route (often where a turn is made).

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