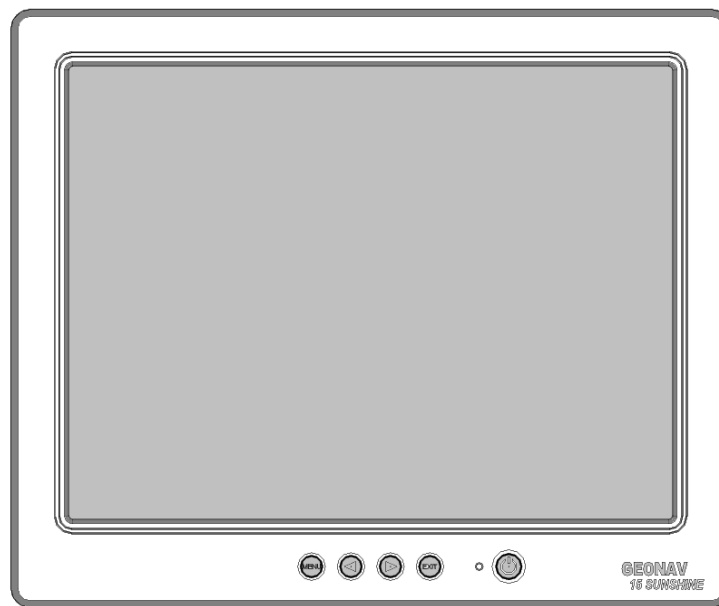


GEONAV 15 **SUNSHINE**



User and Installation Guide

INTRODUCTION

The GEONAV 15 SUNSHINE is the new GEONAV monitor designed to display the video signal coming from any device compatible with XGA or PAL/NTSC.

Equipped with a TFT 15" color LCD, sunlight visible, the GEONAV 15 SUNSHINE guarantees perfect image quality under all environmental conditions, even under the sun.

Featuring elegant design, both flush and bracket mounting, the GEONAV 15 SUNSHINE is the ideal solution for displaying images on all types of boats.

Your GEONAV 15 SUNSHINE is the ideal companion of the GEONAV MULTY; in combination, they create an advanced electronic charting system. The GEONAV 15 SUNSHINE can also be used together with the GEONAV 4CXS, or with any chart plotter featuring VGA output. Moreover, its compatibility with PAL/NTSC standards makes it suitable for displaying images coming from videocameras, DVD, video recorders or digital cameras.

The GEONAV 15 SUNSHINE belongs to the GEONAV product line and is guaranteed and supported worldwide by the GEONAV sales network.

NOTE: The technical characteristics and functions described in this manual are subject to change as a result of improvements or changes to the product.

CHARACTERISTICS

General characteristics

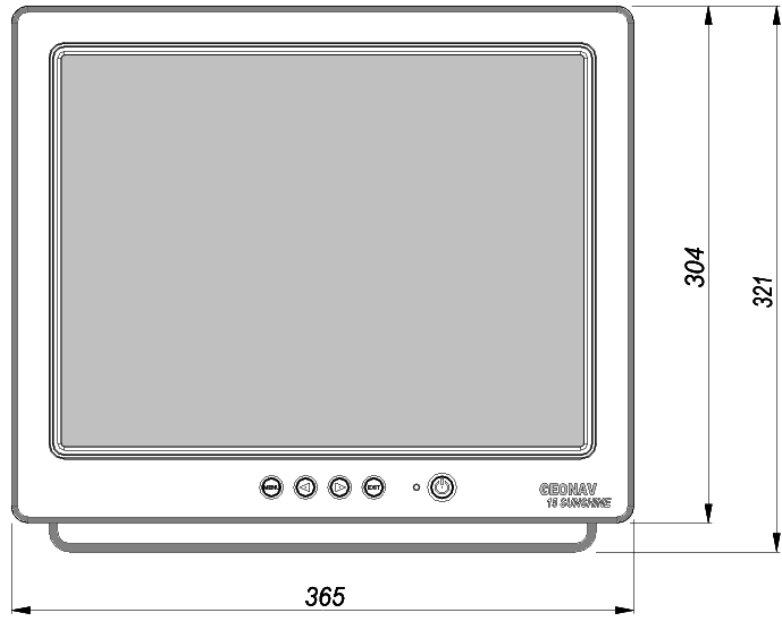
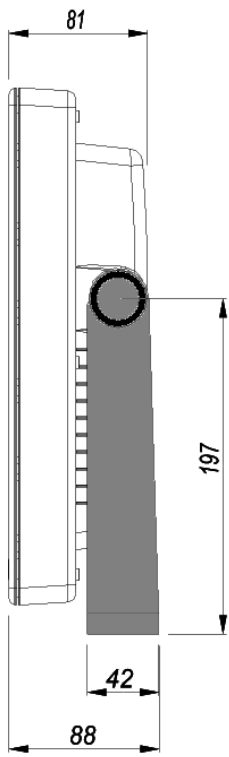
- Display: color LCD, 15" TFT, sunlight visible
- Resolution: XGA 1024x768 pixels
- Adjustable backlight level
- Bracket or flush mounting
- Adjustment by built-in menu (OSD) and 5 push-buttons located on the unit's front bezel
- Quick adjustment for brightness and contrast level
- Size (LxHxW): 365x305x80 mm
- Weight: 4.9 kg
- EMC certified according to IEC60945; CE mark

Electrical and operating characteristics

- Power supply: 9 to 36 VDC
- Power consumption: max. 38 W
- Protection against current overload by fuse on the power supply cable
- Operating temperature: 0°C to +50°C
- Storage temperature: -20°C to +60°C
- Humidity: max. 95% at 40°C
- Waterproof: IP56
- Inputs: analog VGA, composite PAL/NTSC

Accessories

- Bracket for detachable installation
- Spacers for flush mounting with rear fastening
- Power supply cable
- VGA video cable
- Composite video cable
- User and installation guide
- Protection cap



INSTALLATION AND PRECAUTIONS

Precautions

To avoid electromagnetic interference, the GEONAV must be positioned at least 0.70 m away from the magnetic compass.

The GEONAV is water resistant and splashproof, but should not be immersed totally in water. The rear connectors, when not in use, should always be protected by the appropriate rubber covers located on the rear side.

Cleaning

It is recommended the use of nonalcoholic products to clean the GEONAV glass, since alcoholic products may damage the glass surface or make it opaque.

Bracket mounting

Fix the bracket to the boat's dashboard, then mount the GEONAV on the bracket, adjust its inclination and lock it by tightening the two knobs supplied into the holes.

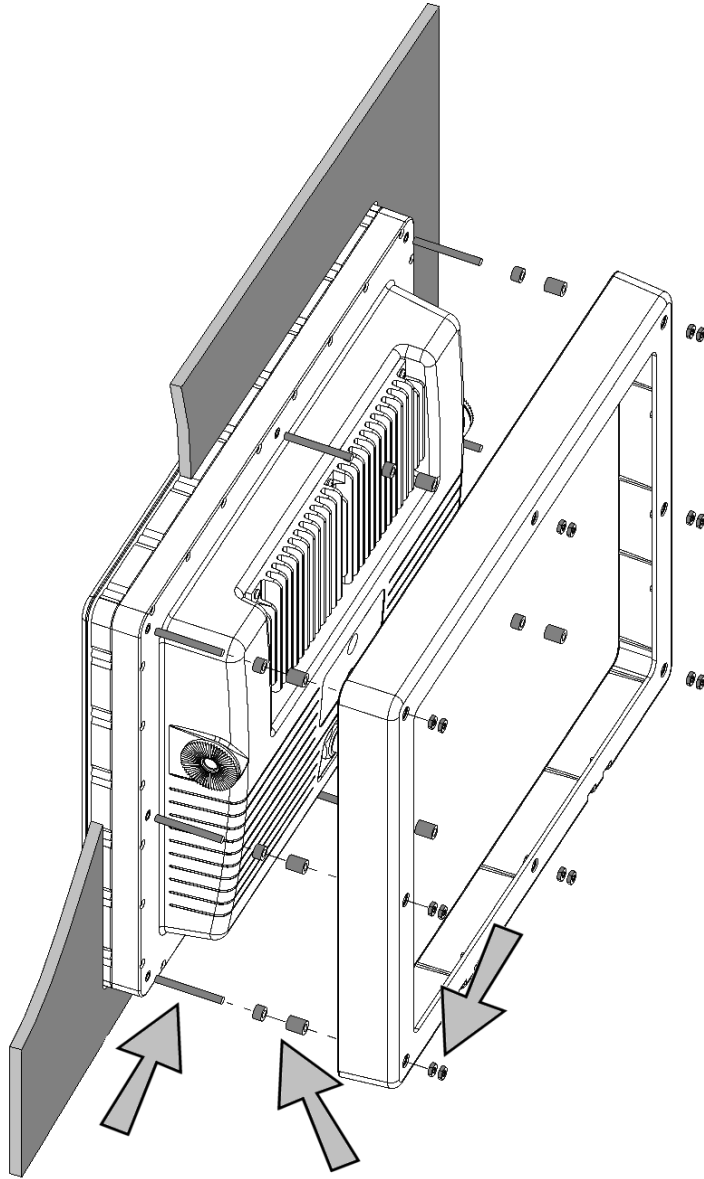
Flush mounting with rear fastening

Locate the area where the GEONAV is to be installed, then cut the panel using the cutting template supplied with the unit.

Dismount the rear frame by removing the screws, then replace them with the stud bolts supplied.

Insert one or more plastic spacers into each stud bolt to obtain a thickness slightly smaller (1-2 mm) than the panel. The spacers supplied are different in thickness so that they can combine to obtain the thickness desired.

Put the unit inside the panel, then insert the rear frame matching the holes with the stud bolts. Mount the appropriate nuts supplied on the stud bolts. Tighten the nuts and install the lock nuts in order to properly fix the unit.



CONNECTIONS

Power supply connector (3 pins)

Use the cable supplied to connect the instrument to the onboard power supply source, 12VDC or 24VDC.

Connect the wire labeled with + to the positive terminal and the wire labeled with - to the negative terminal. Be careful not to swap the power supply connections.

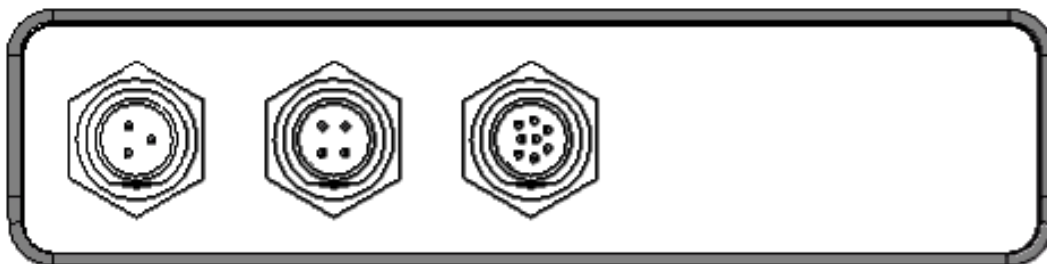
NOTE: The power supply cable is equipped with a 10A cylindrical glass fuse, 5x20mm, for protection against current overloads. If the unit does not switch on, make sure that the fuse is not damaged. If the fuse is broken, replace it with a fuse having the same electrical features. NEVER USE ANY BYPASS CIRCUIT IN PLACE OF THE FUSE.

VGA video connector (8 pins)

This connector allows connecting the unit to any device equipped with VGA compatible output (GEONAV Multy, GEONAV 4CXS, PC and other chart plotters). Use the connecting cable supplied inserting, if necessary the male/female adapter.

Composite video connector (4 pins)

This connector allows connecting the unit to any device featuring a composite video output, either PAL or NTSC.



KEYBOARD

MENU

- Enables the OSD (On Screen Display) mode showing the menu on the display
- Accesses submenus
- In quick-adjusting mode, switches from brightness level to contrast level

LEFT ARROW

With OSD mode disabled:

- Enables the brightness/contrast quick-adjusting mode

With OSD mode enabled:

- Selects the several options from the menu and submenu windows
- Edits the parameter values shown in the menu and submenu windows

RIGHT ARROW

With OSD mode disabled:

- Enables the brightness/contrast quick-adjusting mode

With OSD mode enabled:

- Selects the several options from the menu and submenu windows
- Edits the parameter values shown in the menu and submenu windows

EXIT

- Exits from a submenu or main menu, disabling the OSD mode

PWR

- Switches the unit on
- Switches the unit off



FUNCTIONAL CHARACTERISTICS

Switching on/Switching off the unit

Press the PWR key to switch the GEONAV on. Press the PWR key again to switch it off.

Selecting the video source

At start-up, the unit enables the same video input previously active. To change the video source selected, use the OSD menu. After resetting the unit, the VGA input becomes the active input.

Adjusting contrast / brightness levels

The contrast / brightness levels can be adjusted by selecting the relevant items from the OSD menu or, in quick-adjusting mode, by pressing one of the arrow keys. The latest parameter adjusted will show: press MENU to switch from brightness level to contrast level, then use the arrow keys to adjust the parameters as desired. After a few seconds the quick-adjusting menu will disappear from the screen.

NOTE: At start-up, the default brightness level will be set near to the maximum, regardless of the level previously set. This allows the user to see the image regardless of the current light conditions.

Image resolution

The GEONAV display resolution is 1024x768 pixels (XGA). When the unit is used with VGA compatible devices (PC, etc.), to improve the image quality it is recommended to set the same 1024x768 resolution for the device connected. Connecting the unit to devices having different resolutions may cause poor image quality.

When displaying signals coming from PAL or NTSC video sources, the resolution will automatically change.

OSD MENU

By pressing the MENU key, the OSD (On Screen Display) menu will show on screen. Use the OSD menu to adjust the unit's operating parameters.

Browsing through the menu

After enabling the OSD menu by pressing the MENU key, select the options by means of the arrow keys.

Press MENU again to enter a submenu, or to enter the adjusting mode, once a parameter has been selected.

Use the arrow keys to adjust the parameters, .

Press EXIT repeatedly to exit the menus and disable the OSD menu.

The menu items, their options and relevant descriptions are listed below.

MAIN MENU

- **IMAGE menu**
Allows accessing the image adjustment options commonly used.
- **ADVANCED menu**
Allows accessing the image adjustment advanced options.

IMAGE MENU

- **SOURCE (RGB/CVBS/SVIDEO)**
Selects the video source to display. Select RGB for displaying VGA-type signals, or COMPOSITE or SVIDEO for composite PAL/NTSC video signals.
- **BRIGHTNESS**
Use the arrow keys to adjust the brightness level.
- **CONTRAST**
Use the arrow keys to adjust the contrast level.

- **AUTO ADJUST**
Adjusts automatically the display according to the signal received.

ADVANCED MENU

- **LANGUAGE**
Selects the language from the OSD menu.
- **HORIZONTAL POSITION**
Adjusts the horizontal positioning of the image displayed.
- **VERTICAL POSITION**
Adjusts the vertical positioning of the image displayed.
- **PHASE**
Adjusts the phase of the image displayed.
- **FREQUENCY**
Adjusts the refresh frequency of the image displayed.
- **RESET**
Sets the adjustment parameters to standard values.

NOTE: The image resolution and refresh frequency currently set are shown in the bottom lines of the menu.

TABLE OF CONTENTS

INTRODUCTION	3
CHARACTERISTICS	4
INSTALLATION AND PRECAUTIONS	6
CONNECTIONS	8
KEYBOARD	9
FUNCTIONAL CHARACTERISTICS	10
OSD MENU	11