

↗ DOMETIC

POWER & CONTROL

SEAWAYS



SEAWAYS AND SEAWAYS GO

EN

Integrated Autopilot System

Installation and User's Manual — Book 67

⚠ WARNING

Cancer and Reproductive Harm
www.P65Warnings.ca.gov

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Thank you for choosing SeaWays/SeaWays GO integrated autopilot system. You have chosen a state of the art control system that will provide years of effortless and trouble free steering performance.

About this Book

This book contains:

- the user's manual for the SeaWays integrated autopilot system.
- installation instructions for the SeaWays integrated autopilot system.
- installation instructions for the SeaWays GO integrated autopilot system.

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California

Proposition 65 Warning

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm.

Wash hands after handling.

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Abbreviations

The following abbreviations are used in this manual:

ABYC	American Boat & Yacht Council
CAN	Controller Area Network
EPS	Electronic Power Steering
GPS	Global Positioning System
NMEA	National Marine Electronics Association
NMEA 2000®	A protocol for digital communication on a CAN Bus
PCM	Pump Control Module
RPM	Revolutions Per Minute
SBAS	Satellite-Based Augmentation System
STBD	Starboard (right)



NOTE

Some abbreviations not listed here may be found in their respective sections.

1 Important Safety Information

Safe operation of the SeaWays and SeaWays GO integrated autopilot depends on proper installation and maintenance of the system, as well as the operator's safe judgment, boating knowledge, and expertise.

The installer and operator must read and understand the safety requirements in this section before installing or using the steering system. If you have any questions about safe installation or operation of this system, contact Dometic Marine. Please don't guess.

1.1 Explanation of symbols

The symbols below are used throughout this publication to alert you to potential hazards involved with the operation and installation of this product. Observe these warnings and notices carefully. The safety alerts alone cannot eliminate hazards; strict compliance with any special instructions during installation, operation, and maintenance, along with common sense operation, are important measures to prevent hazardous situations.



DANGER!

Safety instruction: Indicates a hazardous situation that, if not avoided, will result in death or serious injury.



WARNING!

Safety instruction: Indicates a hazardous situation that, if not avoided, could result in death or serious injury.



CAUTION!

Safety instruction: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.



NOTICE!

Indicates a situation that, if not avoided, can result in property damage.



NOTE

Supplementary information for operating the product.

1.2 Safe operation



WARNING!

The safety information below is intended to inform you of hazards that may be present when operating a boat equipped with electronic controls. Read and understand this information.

General

- Read and understand this manual, the Quick Reference Guide, and any other documentation provided with your steering system.
- Know and obey all applicable federal, state, and municipal laws and regulations that govern boating in your area. Dometic recommends all boat operators take a boating safety course.
- Never operate a boat while under the influence of drugs or alcohol.

Before every use

- Perform the system inspection as described in section 3.1.
- Make sure your Quick Reference Guide and/or this manual is on your boat. Both contain important safety information that you may need in the event of a system fault while on the water.



WARNING!

Do not operate the boat if any component is not in proper working order. It may result in a loss of steering control, which could lead to a collision and/or ejection from the boat, causing property damage, personal injury, and/or death.

During use

- Wear a Coast Guard-approved personal flotation device (PFD).
- Attach the engine shut-off lanyard to your PFD.
- Do not allow anyone not familiar with the controls (steering, shift/throttle) to operate the boat.

After use

- Rinse off the steering Actuators/Cylinders thoroughly, using only fresh, clean water at low pressure. Never use high-pressure water from a hose nozzle or pressure washer.
- Do not use acetone, or cleaners containing ammonia, acids, or any other corrosive ingredients, on any Optimus components.
- Some products formulated for cleaning fiberglass hulls are known to aggressively corrode stainless steel shafts. If using a hull cleaner, avoid overspray on to the steering Actuators/Cylinders. Rinse off any overspray immediately with fresh, clean water.

1.3 Safety considerations for installers



WARNING!

The i7X00 System must only be installed by an authorized dealer or OEM boat builder.

Before installation

- Read and understand this manual, and any other manuals supplied with this system.
- Ensure you have all the required components on hand before you start.
- Do not use a wheel-mounted trim switch with coiled cord. The cord can wrap around the steering wheel shaft and inhibit steering.

During installation

- Install components as instructed in this manual. Some component parts and kits may contain additional installation instructions – refer also to those instructions.
- Do not substitute any component of the system. Dometic parts are rigorously engineered and tested to ensure system integrity. Substitution of components may compromise safety, performance, and reliability.
- If an instruction is unclear, contradictory, or you are otherwise unsure how to proceed, do not guess. Contact Dometic Marine technical support.

After installation

- Perform the system inspection checks described in section 3.1.
- Correct any interference issues before handing the boat to the owner.



WARNING!

Failure to comply with these instructions may result in a loss of steering control, which could lead to a collision and/or ejection from the boat, causing property damage, personal injury, and/or death.

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2 Installation

2.1 Overview

SeaWays and SeaWays GO are integrated autopilot systems. SeaWays builds off of an Optimus EPS or Optimus 360 system by adding a GPS and heading sensor. The system uses position and heading data to steer the vessel automatically.

The SeaWays GPS sensor allows Heading, Track, and Route modes whereas the SeaWays GO compass allows Heading mode. For more information on the three modes of operation, please refer to section 3.

Once your Optimus EPS or Optimus 360 system is installed, adding SeaWays is simple:

1. Install the SeaWays or SeaWays GO sensor
2. Route network cable from sensor to Optimus network backbone
3. Apply Sensor license provided with kit (captured on back cover of this booklet)
4. SeaWays commissioning

2.2 Before you begin

Before installing sensor:

1. Optimus EPS or Optimus 360 must be fully installed and commissioned
2. All software must be up to date – See book 65 for instructions on updating software

2.3 Installing the SeaWays GPS sensor

2.3.1 Mounting location

This section provides information on determining the best location for the sensor.



NOTICE!

The sensor should be mounted as low as possible while still maintaining good sky visibility. This will reduce false movement due to the boat rocking back and forth.

GPS Reception

When considering where to mount the sensor, consider the following GPS reception recommendations:

- Ensure there is a clear view of the sky available to the sensor so the GPS and SBAS satellites are not masked by obstructions that may reduce system performance.
- Mount the sensor as close to the center of the vessel as possible. This includes both the fore-aft direction and the port-starboard direction.
- Locate any transmitting antennas away from the sensor by at least several feet to ensure tracking performance is not compromised, giving you the best performance possible.
- Make sure there is enough cable length to tie into the Optimus CAN2 or CAN3 backbone of the vessel.
- Do not locate the antenna where environmental conditions exceed those specified in the table 2-1 Environmental Conditions below.

Environmental considerations

The sensor is designed to withstand harsh environmental conditions; however, adhere to the following limits when storing and using the sensor:

Item	Specification
Operating Temperature	-30°C to +70°C (-22°F to +158°F)
Storage Temperature	-40°C to +85°C (-40°F to +185°F)
Humidity	100% non-condensing

Table 2-1. Environmental Conditions.

VHF interference

VHF interference from devices such as cellular phones and radio transmitters may interfere with GPS operation. For example, if installing the sensor near marine radios consider the following:

- VHF radios can interfere with GPS signals.
- Follow VHF radio manufacturers' recommendations on how to mount their radios and what devices to keep a safe distance away.

Before installing the sensor use the following diagram to ensure there are no nearby devices that may cause VHF interference.

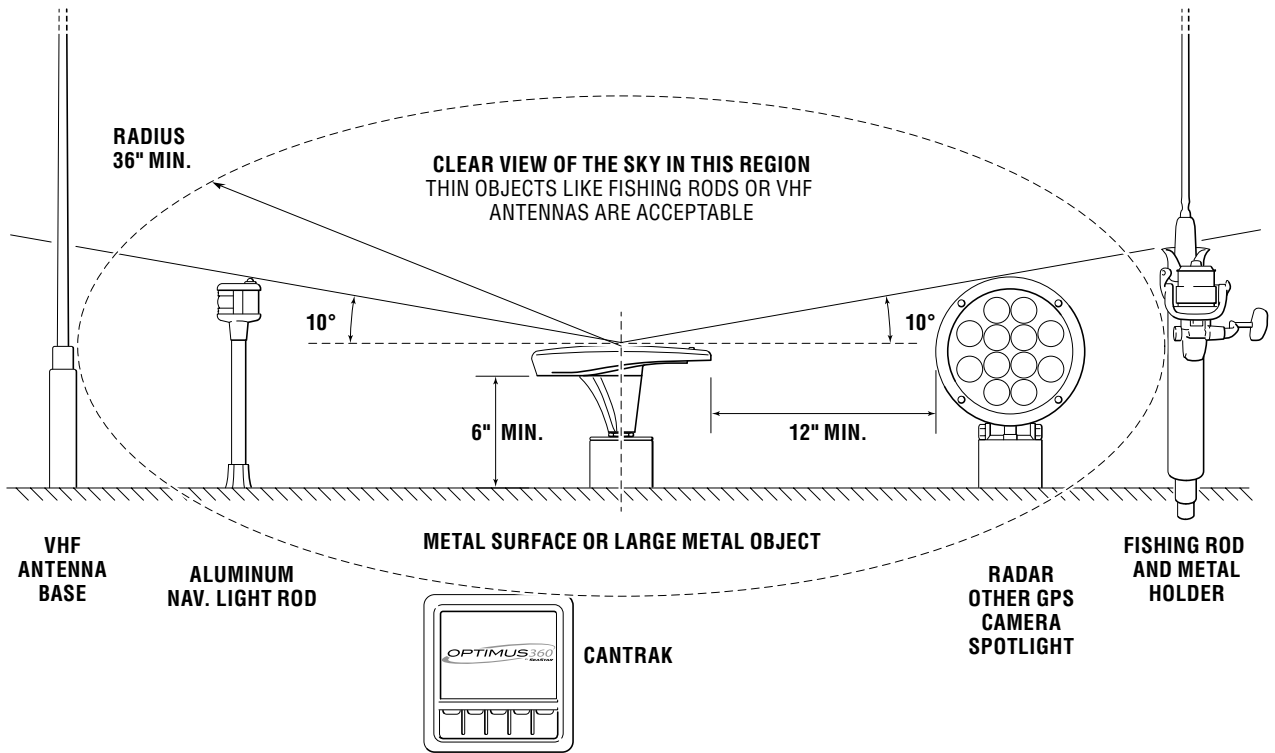


Figure 2-1. Sensor mounting distance from nearby VHF antennas and other equipment.

2.3.2 Mounting alignment

The SeaWays sensor should be mounted parallel to, and along the centerline of, the axis of the boat. The bottom of the sensor has an arrow – the arrow must point forward.

The top of the sensor enclosure incorporates sight design features to help align the sensor with respect to a centered feature on your vessel, such as the bow.

The antenna is recommended to be mounted along the centerline of the vessel.

2.4 Mounting options

2.4.1 Mounting options

This section provides information on determining the best location for the SeaWays sensor.

The SeaWays kit that is purchased determines the mounting style; either surface mount or pole mount. The sensor allows for both pole or surface mounting. Follow directions below for detailed mounting directions.



NOTE

Dometic recommends a mounting kit is utilized. Surface mounting hardware is not provided with the mounting kits shown.

2.4.2 SeaWays sensor dimensions

Figure 2-2 illustrates the physical dimensions of the sensor.

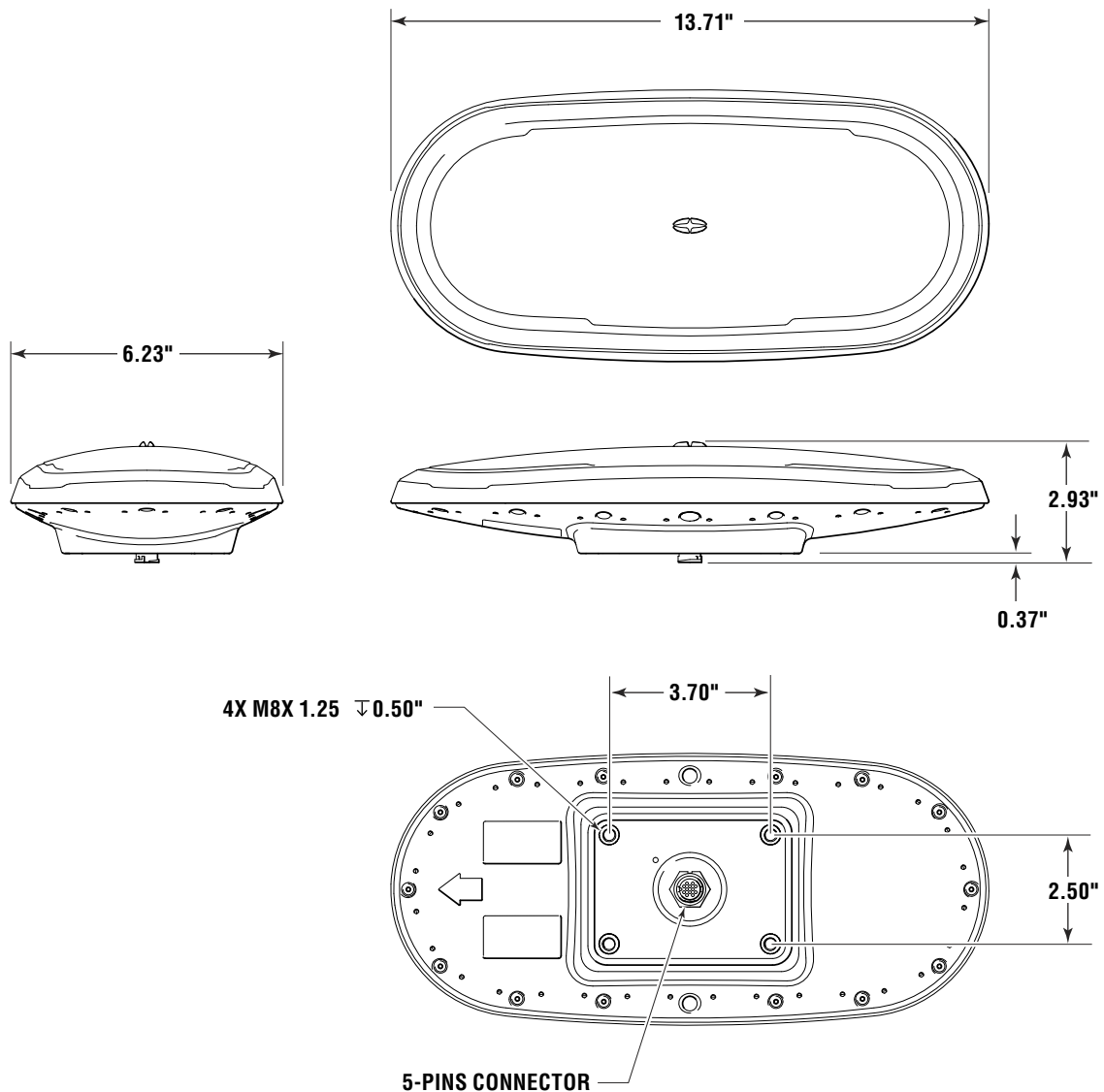


Figure 2-2. Sensor dimensions without mounting hardware.

2.4.3 Surface mount dimensions

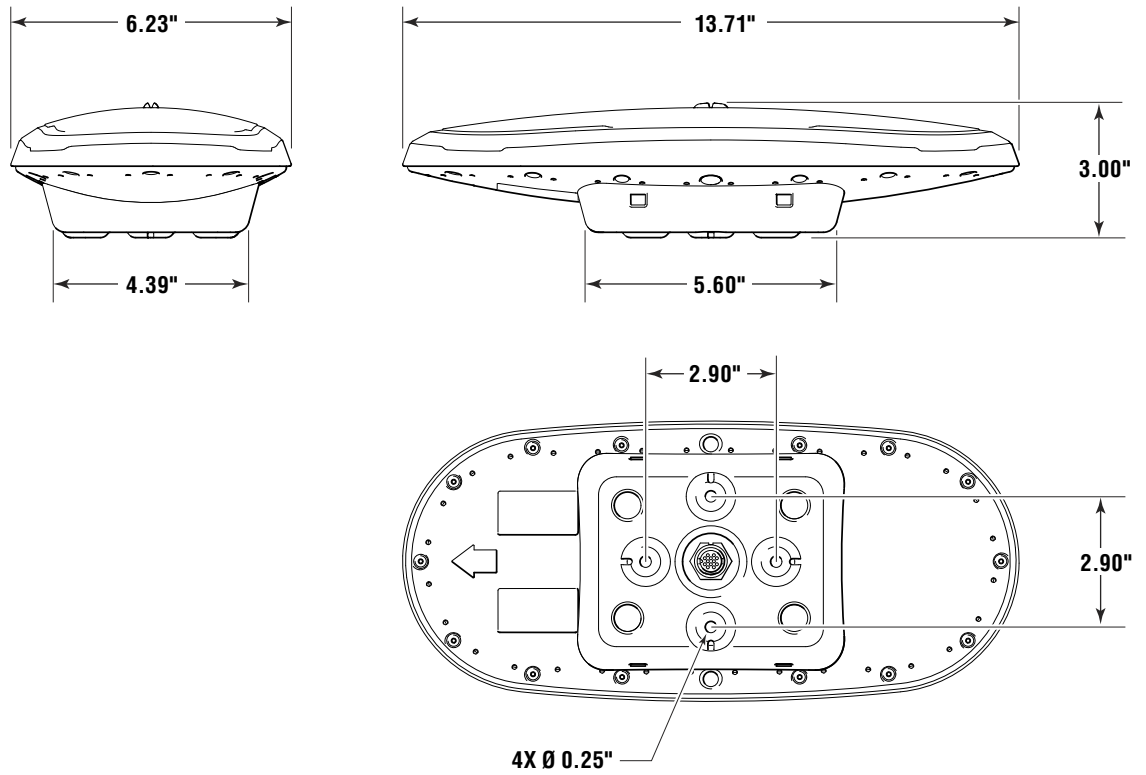


Figure 2-3. Sensor with low profile mount accessory dimensions.

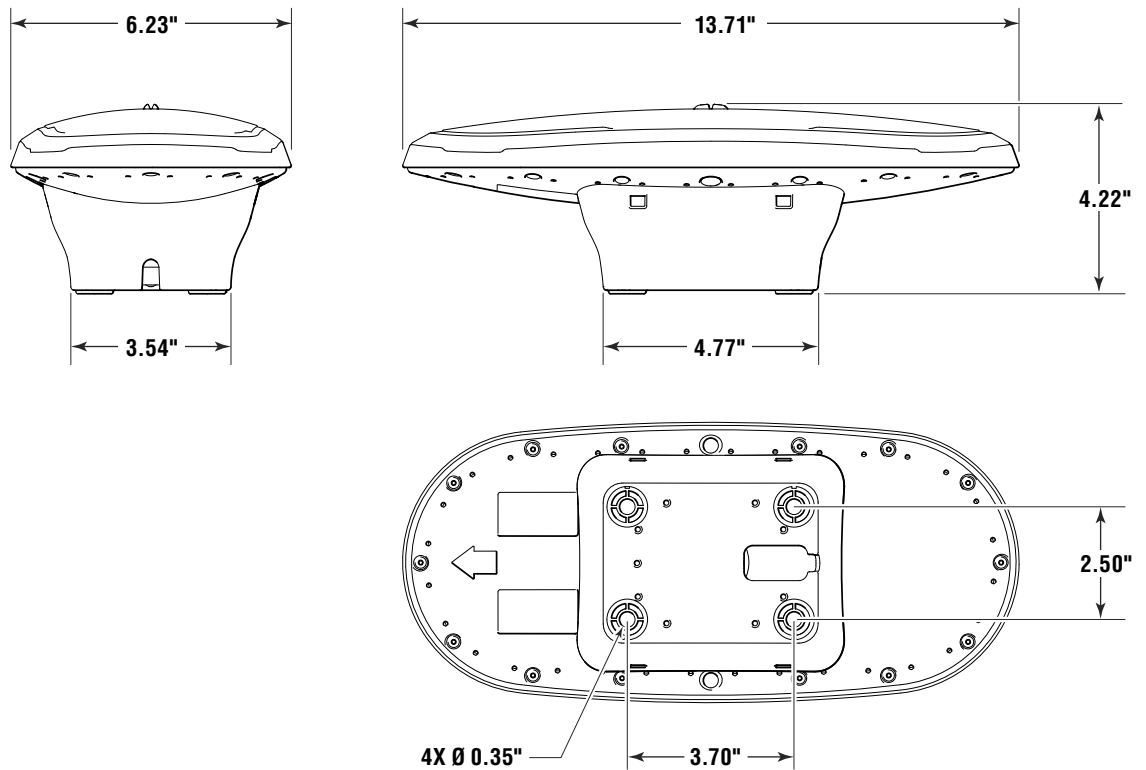


Figure 2-4. Sensor with high profile mount accessory dimensions.

2.4.4 Pole mount dimensions

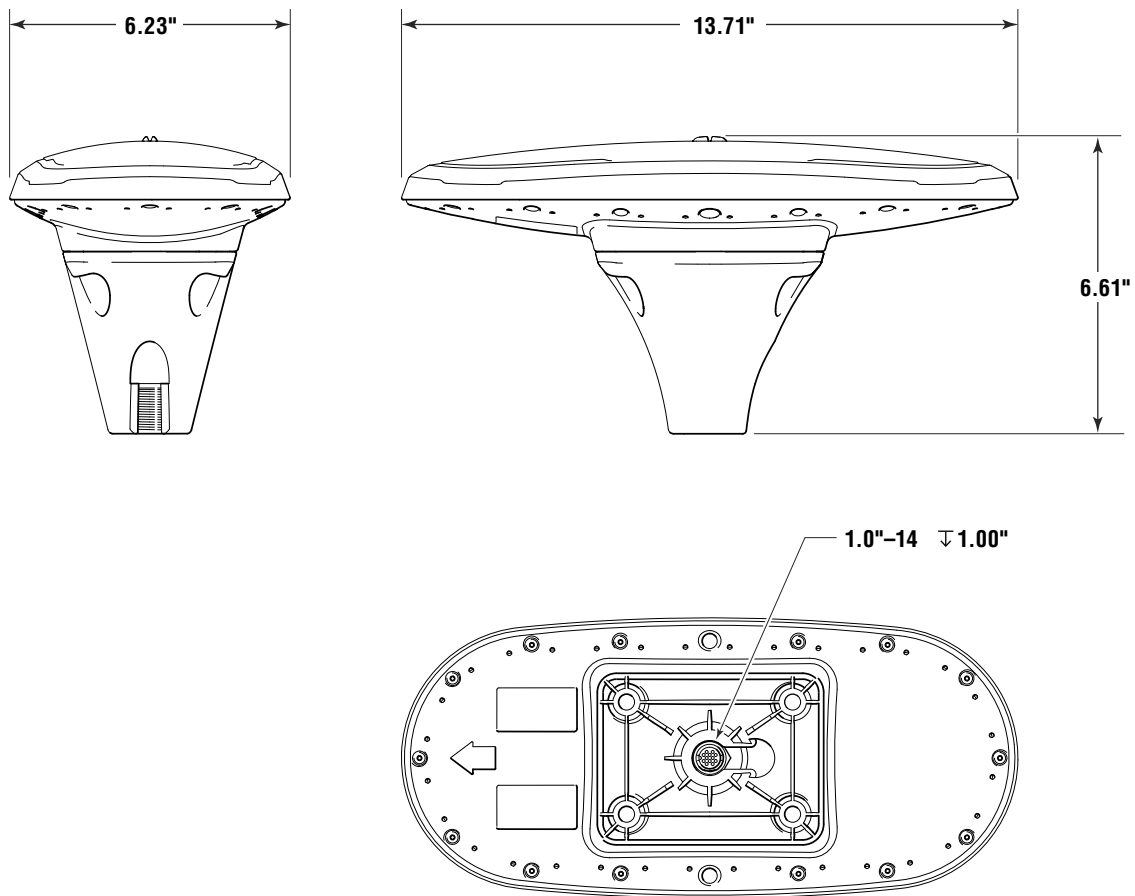


Figure 2-5 : Sensor with pole mount accessory dimensions.

2.4.5 Cable considerations

Before mounting the sensor, consider the following regarding cable routing:

- Avoid running the cable in areas of excessive heat
- Keep cable away from corrosive chemicals
- Do not run the cable through door or window jams
- Keep cable away from rotating machinery
- Do not crimp or excessively bend the cable
- Avoid placing tension on the cable
- Remove unwanted slack from the cable at the sensor end
- Secure along the cable route using plastic tie wraps



WARNING!

Improperly installed cable near machinery can be dangerous.

2.4.6 Surface mount

Two options exist for surface mounting the SeaWays antenna, low profile and high profile mount (figure 2-6). A flat surface is required and the flat surface may be something you fabricate per your installation, an off-the-shelf item (such as a radar mounting plate), or an existing surface on your vessel.



NOTICE!

Dometic does not supply the mounting surface hardware. You must supply the appropriate fastening hardware required to complete the installation of the sensor.

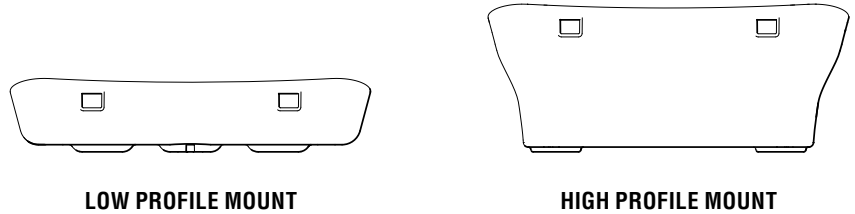


Figure 2-6. Surface mount baseplate options.



NOTE

The high profile mount allows the communication harness to exit the mount without drilling a hole if desired.



NOTICE!

When using the high profile base plate a 90° DeviceNet fitting must be used for the communication cable.

Surface mounting the sensor

1. Choose a location that meets the mounting location requirements.
2. Using the selected base plate as a template, mark and drill the mounting holes as necessary for the mounting surface.



NOTE

The low profile and high profile have different drill patterns for the mounting hardware and communication harness as shown in figure 2-7.

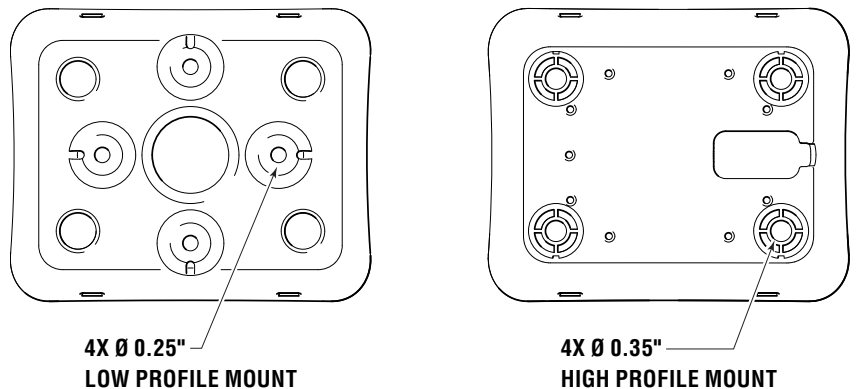


Figure 2-7. Surface mount drill patterns.

3. Secure the mount to the installation surface. Tighten to a maximum torque of 10 lbs-ft.
4. Secure the surface mount adapter to the SeaWays sensor using the supplied hardware. Tighten to a torque of 8–10 lbs-ft with no more than 0.5 in thread depth engagement.

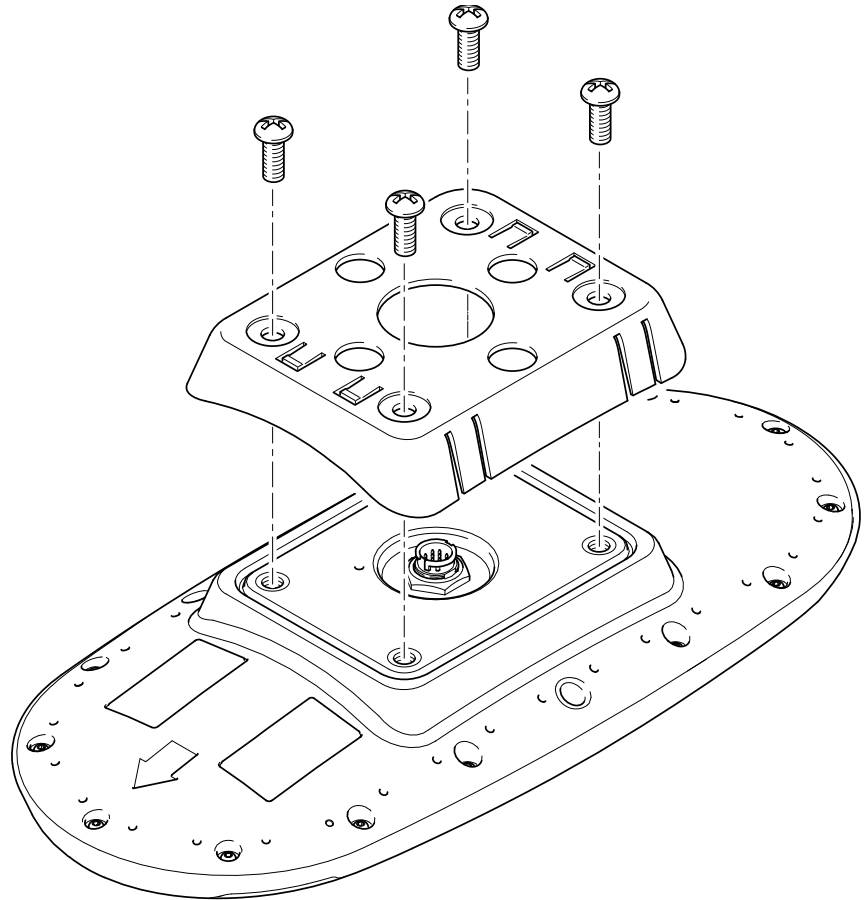


Figure 2-8: Surface mount adapter installation.

5. Thread the cable through the mounted baseplate and connect the communication cable to the sensor.
6. Carefully secure the SeaWays sensor by placing it into the baseplate until the four latches snap in place, first on one side then the other.



WARNING!

When installing the sensor, hand tighten only. Damage resulting from over-tightening is not covered by the warranty.

2.4.7 Pole mount

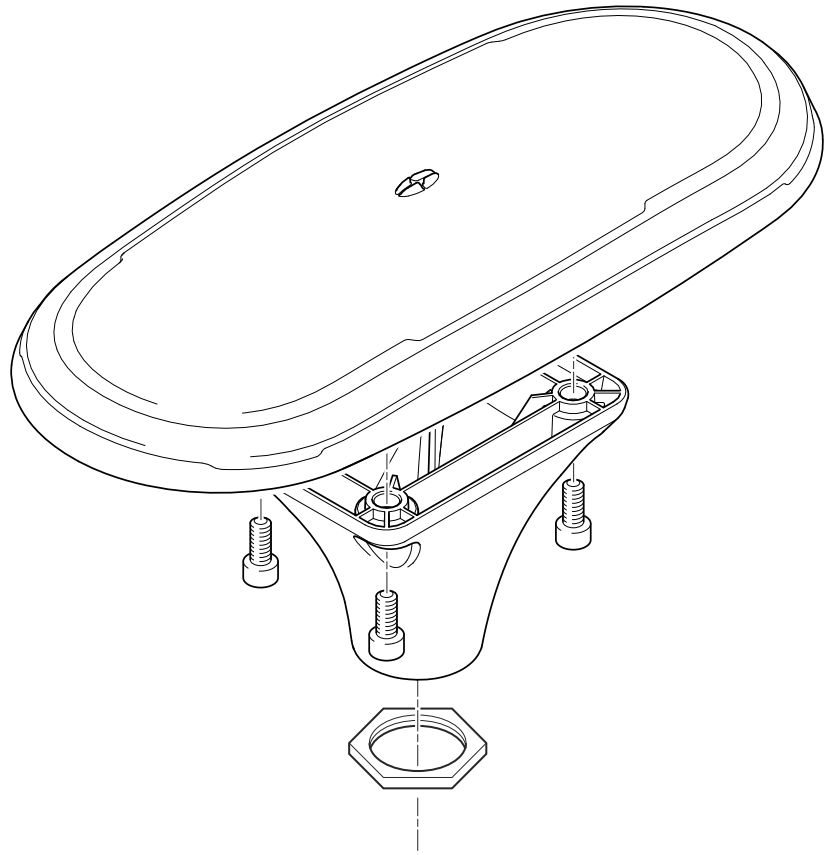


Figure 2-9: Sensor, with pole mount adapter.

Pole mounting the sensor

1. Choose a location that meets the mounting location requirements.
2. Mark and drill the mounting holes as necessary for the threaded pole.
3. Thread the jam nut loosely onto the 1 inch pole, then thread the pole mount.
4. Thread the communication cable through the hollow pole or through the opening in the pole mount and connect to the SeaWays sensor.
5. Secure the pole mount to the SeaWays sensor using the supplied mounting hardware. Tighten to a torque of 8–10 lbs-ft. The maximum thread depth must be no more than .5 in.
6. Verify the orientation of the unit, then tighten the jam nut to the bottom of the pole mount to a torque of 8–19 lbs-ft.



WARNING!

Over-tightening may damage the system. Do not tighten the pole mount to more than 4 lbs-ft.

2.5 Installing the SeaWays GO sensor

2.5.1 Mounting options



NOTE

In the event of a discrepancy between the SeaWays GO compass documentation and Dometic manual, the compass manufacturer will take precedence.



NOTE

SeaWays GO is a heading only integrated autopilot when used with Optimus EPS systems. The sensor must be purchased from Dometic in order to be licensed as such.

The SeaWays GO compass sensor can be mounted on a flat surface or bulkhead, athwart ship or along ship. Select a location that provides a solid mounting place free from vibration (as much as possible), and as close to the vessel's centre of roll and pitch as possible, i.e. close to the water line. It should be as far as possible away from disturbing magnetic interferences e.g. engines [min. 6 ft. (2 meters)], ignition cables, other large metal objects and particularly the autopilot drive unit. On steel hull boats, it can be mounted 2.5 – 3.3 ft. (0.75–1 m) above the wheel house on a non-magnetic stand, if no other options are available.

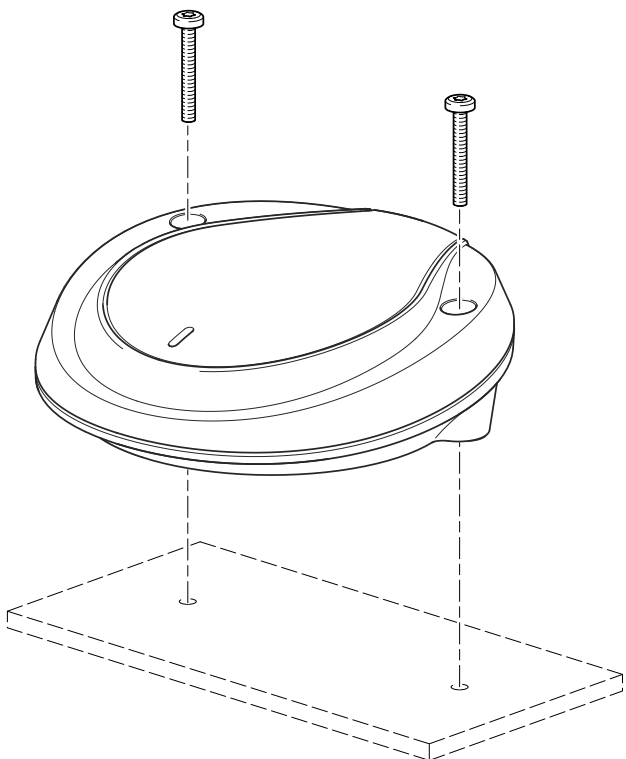


Figure 2-10.

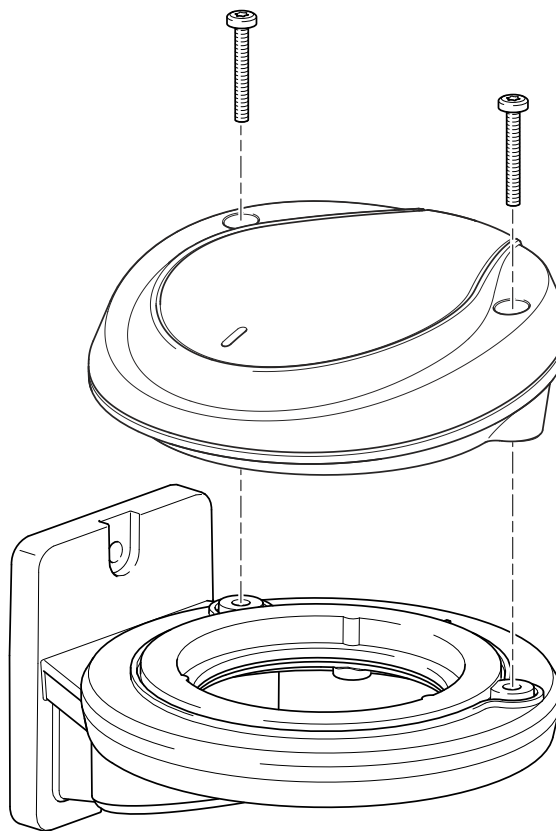


Figure 2-11.

The compass can be mounted directly to a flat surface, or by using a wall bracket.

1. When the compass is in fitted in place, the mounting screws should only be tightened loosely (half way) at first.
2. Mechanically adjust compass orientation to be parallel to boat's center line as shown in figure 2-12 and figure 2-13.

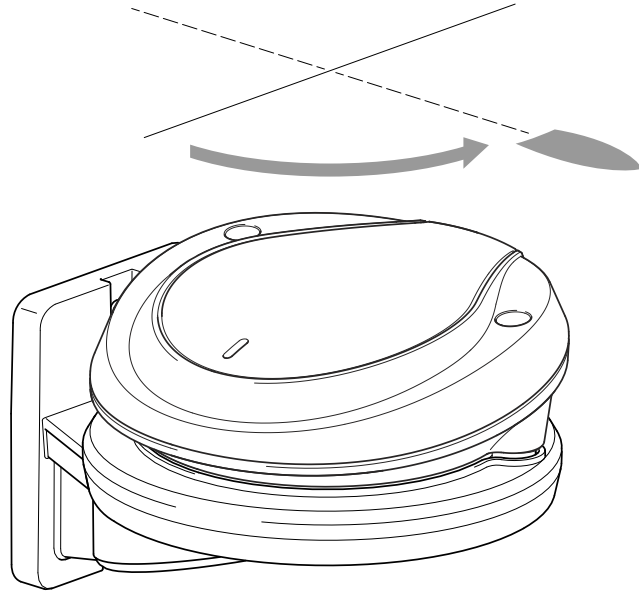


Figure 2-12.

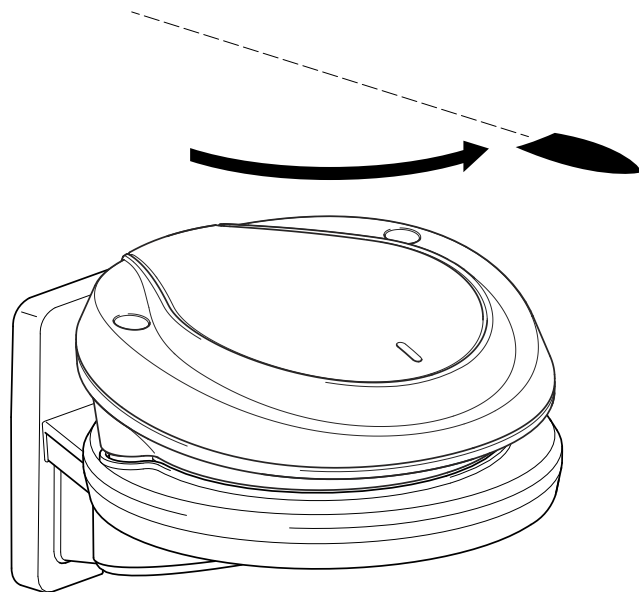


Figure 2-13.

3. Finish the tightening of the mounting screws to secure compass.

Use the supplied mounting kit, including the mounting template, and drill holes.



NOTICE!

Never mount the compass upside down! Level the sensor as close to horizontal as possible.

Sensor Dimensions

Figure 2-14 illustrates the physical dimensions of the SeaWays GO sensor.

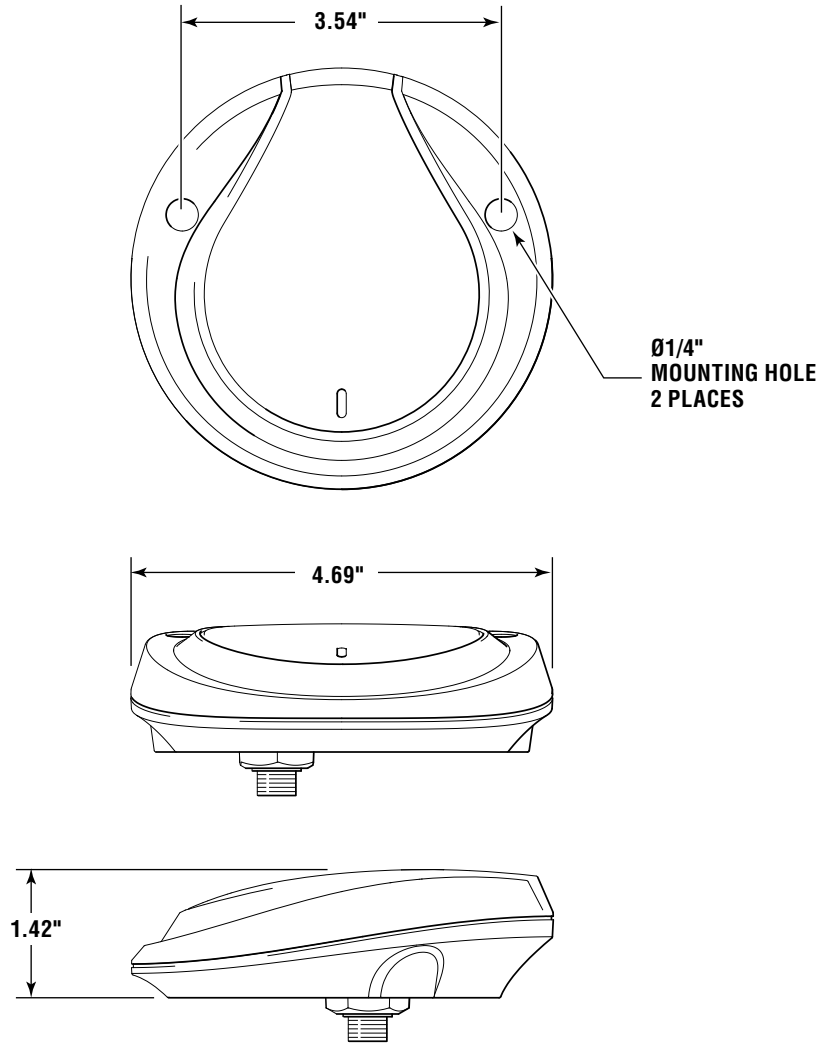


Figure 2-14. SeaWays GO Precision 9 sensor dimensions.

2.5.2 Calibrating the SeaWays GO sensor

The compass calibrates itself automatically while the boat is turning in a circle. Dometic recommends that a calibration procedure is completed during the sea trial manually by performing 2 consecutive 360° turns within 5 minutes after power is applied to the compass.

It is also possible, but not required, to perform a calibration with an approved Simrad multi-function display. Using this method please refer to Navico/ Simrad documentation.

2.6 Electrical connection

Electrical connection is the same for SeaWays and SeaWays GO.

The SeaWays sensor connects to the Optimus CAN2 or CAN3 network. CAN3 (public N2K network) is the preferred connection if an approved chartplotter is used. If the sensor is installed on public network, it can replace any other GPS or compasses.

For the SeaWays sensor:

The installation kit for SeaWays comes with a 20 foot network cable, a 1 foot network cable and a tee connector. If the 6-way hub in the Optimus 360 installation is full, remove the terminator and connect the 1 foot network cable in its place. Install the tee connector at the opposite end of the 1 foot cable and reinstall the terminator on the tee. The 20 foot cable can now be routed from the tee connector up to the GPS sensor. If the 20 foot network cable is not long enough to reach from the network backbone to the GPS sensor, the backbone should be extended to accommodate this.

For the SeaWays GO sensor:

The installation kit for SeaWays GO comes with a 15 foot network cable and a tee connector. If the hub in the Optimus EPS or 360 installation is full, remove the terminator and install the tee connector and then reinstall the terminator on the newly added tee. The 15 foot network cable can now be routed from the tee connector to the compass sensor. If the 15 foot network cable is not long enough to reach from the network backbone to the heading sensor, the backbone should be extended to accommodate this.

2.7 Enabling SeaWays & SeaWays GO

SeaWays and SeaWays Go require requires a license code that is specific to each installation. A copy of the license is fixed to the back of your original manual as well as to the bottom of your SeaWays sensor.



NOTE

The license key is shared with SeaStation and will be the same on SeaWays installations.

The license key must be entered in the CANtrak display to enable SeaWays. Follow these steps:

1. Using the CANtrak, navigate to **Dealer Menu > Initial Setup > GPS and Compass License > Enter New License Code.**



Figure 2-15.

2. Enter the license code (captured on back cover of this booklet).
3. Make sure the new license code is correct and press OK to confirm.

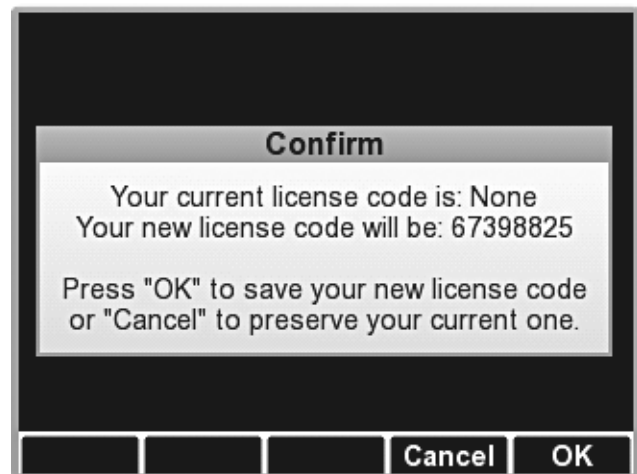
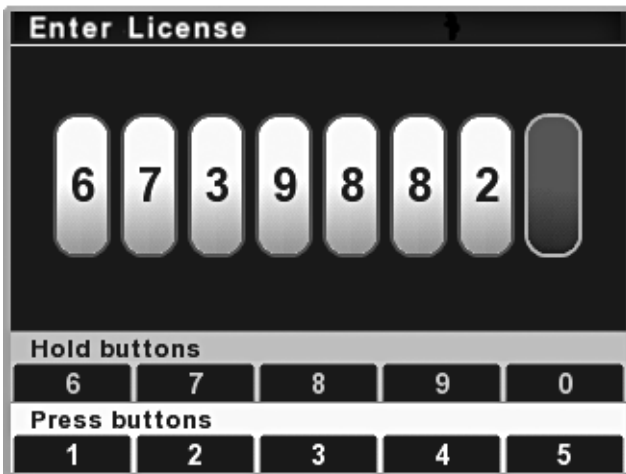


Figure 2-16.

4. Check that the **Sensor Status** has changed to **Licensed**. If it has not, retry entering the license code.



Figure 2-17.

2.8 Commissioning

2.8.1 Autopilot parameters

The autopilot uses the following values for optimal performance:

Engine speed at • Idle • Planing • WOT
AP sensitivity • Low Speed • High Speed



NOTE

SeaWays and SeaWays GO has to be enabled and commissioned before use.



NOTE

Some of the Autopilot parameters do not need to be tuned for the SeaWays GO system.



WARNING!

Some parts of SeaWays commissioning can be performed at dock with the boat securely restrained, but others will require deep open water with adequate operating space.

ALWAYS wear a PFD and connect the engine lanyard(s) to the operator during commissioning.

DO NOT perform commissioning:

- At extreme speed
- In heavy traffic areas or in narrow waters
- In poor visibility or extreme sea conditions
- When in areas where use of autopilot is prohibited by law

The Autopilot parameters can be accessed using the CANtrak display:

1. Using the CANtrak, navigate to **Dealer Menu > Initial Setup > SeaWays**.



Figure 2-18.

SeaWays and SeaWays GO autopilots must be enabled before use. If SeaWays is not used it can be disabled. Default is disabled.



Figure 2-19.

2. For the SeaWays GO compass, the Compass Offset menu will not be available. The heading sensor output can be deviating slightly from the boat's center line and not impact the performance of the system. However if desired, the heading offset can be adjusted by manually adjusting the mounting orientation of the sensor.



WARNING!

Do not manually adjust the heading sensor while underway. Only conduct this adjustment while secured at dock.

For the SeaWays GPS sensor, the Compass Offset parameter must be adjusted via software. Adjust GPS-Compass offset to compensate for sensor misalignment. Drive the boat at high speed until the autopilot confirms the sensor is adjusted.

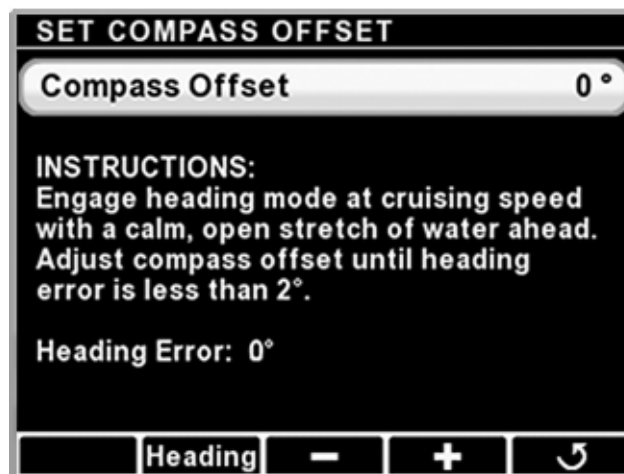


Figure 2-20.

3. Define idle, planing and maximum engine RPM's.

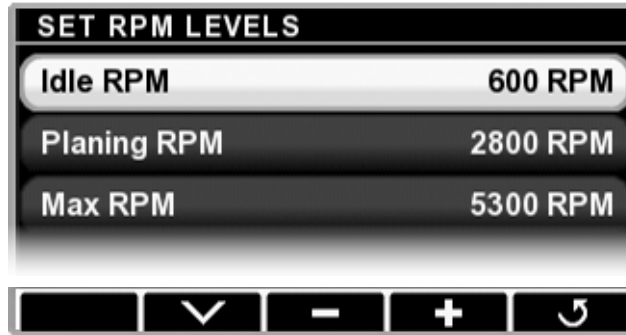


Figure 2-21.

4. Drive boat at 5–6 knots, engage heading mode, jog target heading by 10°. Reduce sensitivity if boat turns too aggressively or overshoots. Increase sensitivity if autopilot is too lazy.

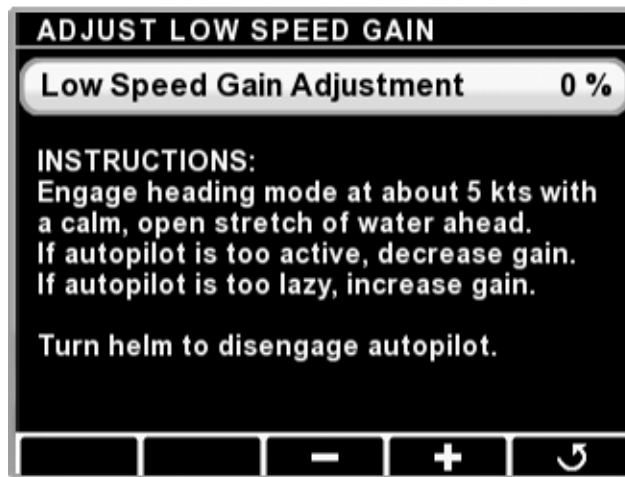


Figure 2-22.

5. Drive at cruising speed. Repeat step 4.

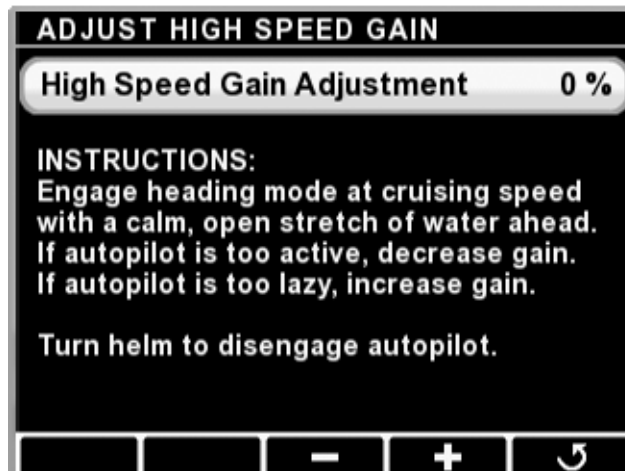


Figure 2-23.

2.8.2 Settings

General user settings can be accessed using the CANtrak display. To access these settings press the MENU button and then SETTINGS.

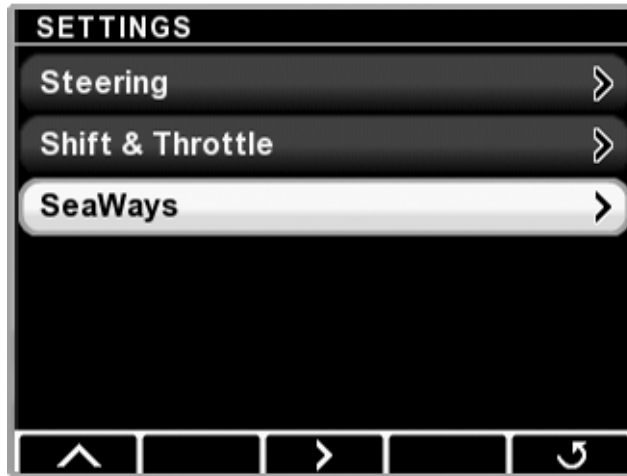


Figure 2-24.

User level sensitivity adjustments can be made from this menu as well as waypoint alarm options.

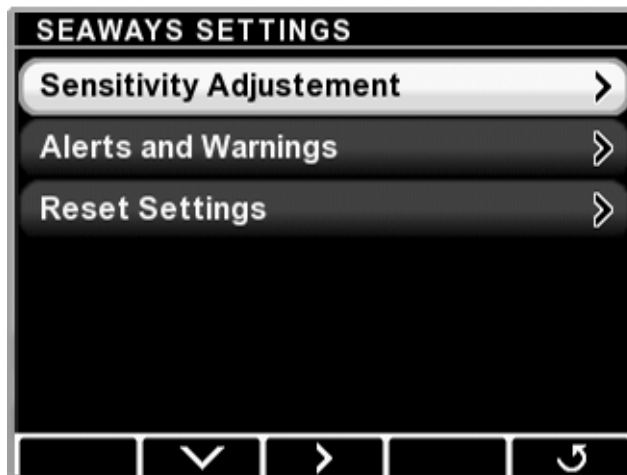


Figure 2-25.

1. Global sensitivity adjustment.

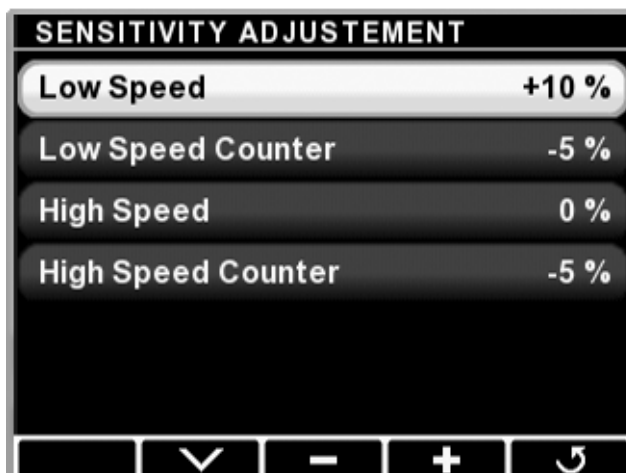


Figure 2-26.

Commissioning Parameter	Sub Parameter	Settable Range	Default Value	Procedure/Description
Sensitivity Adjustment	Low Speed	-40 to 40%	0%	Autopilot gain adjustment at low speed: Decrease if boat turns too aggressively when jogging heading Increase if response is too lazy
	Low Speed Counter	-40 to 40%	0%	Autopilot reaction adjustment at low speed: Decrease if heading is unstable at low speed
	High Speed	-40 to 40%	0%	Autopilot gain adjustment at high speed: Decrease if boat turns too aggressively when jogging heading. Increase if response is too lazy
	High Speed Counter	-40 to 40%	0%	Autopilot reaction adjustment at high speed: Decrease if heading is unstable at high speed

Table 2-2.

2. Waypoint arrival alarm options.

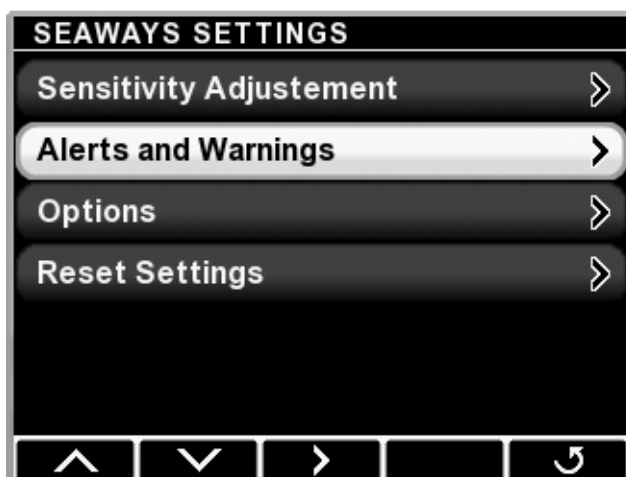


Figure 2-27.

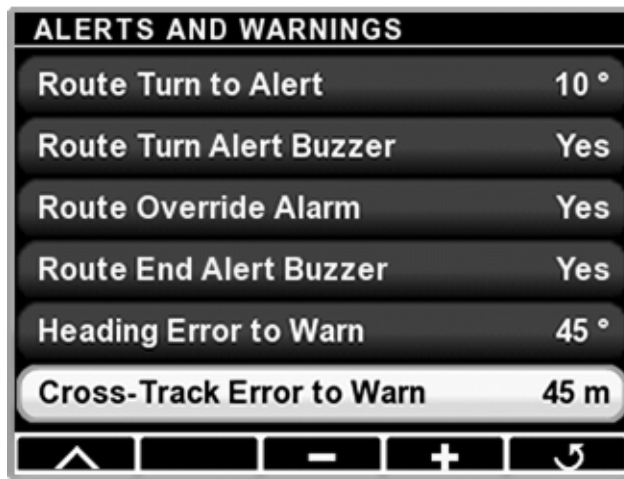


Figure 2-28.

Commissioning Parameter	Sub Parameter	Settable Range	Default Value	Procedure/Description
Alerts and Warnings	Route Turn to Alert	0 to 45°	10°	Route turn alert screen is shown only for turns greater than this setting
	Route Turn Alert Buzzer	Yes/No	0%	Determines if buzzer sounds when Route Turn Alert screen is shown
	Route Override Alert	Yes/No	0%	Determines if Override Alert Screen is shown when autopilot route mode is overridden by helm movements
	Route End Alert Buzzer	Yes/No	0%	Determines if buzzer will sound when Route End Alert screen is shown
	Heading Error to Warn	10 to 180°	Yes	If target and current heading difference is greater than this parameter, then fault 0x7F1A0 is triggered (Significant heading error detected)
	Cross-Track Error to Warn	10 to 300 m	Yes	If cross-track error is greater than this parameter, then fault 0x7F1A1 is triggered (Significant cross-track error detected)

Table 2-3.



NOTE

Only Heading Error to Warn parameter is applicable for the SeaWays GO system.

3. An option also exist to reset SeaWays user options to default.

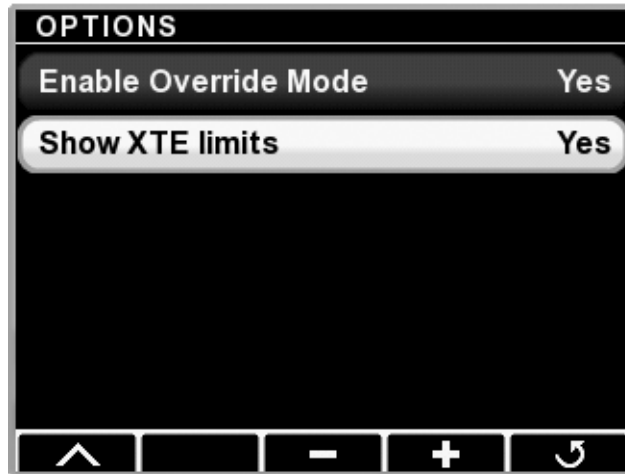


Figure 2-29.

Commissioning Parameter	Sub Parameter	Settable Range	Default Value	Procedure/Description
Options	Enable Override Mode	Yes/No	Yes	When set to "No", turning the helm in heading or track modes causes the autopilot to disengage. When set to "Yes", Override mode is entered when helm is turned
	Show XTE Limits	Yes/No	Yes	When set to "Yes", XTE limits are displayed on track and route screens

Table 2-4.



NOTE

Only Enable Override Mode parameter is applicable for SeaWays GO system.

2.8.3 Sea trial

When using an autopilot:

- Do not leave the helm unattended
- Verify the course and position of the vessel at regular intervals
- Always switch to Standby mode, and reduce speed in sufficient time to avoid hazardous situations



WARNING!

Always wear a PFD and connect the engine lanyard(s) to the operator during sea trial.

An autopilot is a useful navigational aid, but DOES NOT under any circumstances replace a human navigator.



WARNING!

Do not use automatic steering when:

- At extreme speed
- In heavy traffic areas or in narrow waters
- In poor visibility or extreme sea conditions
- When in areas where use of autopilot is prohibited by law

2.9 Troubleshooting guide

Optimus SeaWays will provide years of safe reliable performance with a minimum of service if properly commissioned.

Most faults occur when the installation instructions are not followed and usually show up immediately. Listed below are the most common faults encountered and their likely cause and solution.



WARNING!

Whenever, in the following text, a solution calls for removal from vessel and/or dismantling of steering system components, such work must ONLY be carried out by a qualified marine mechanic. Dometic offers the following as a guide only and is not responsible for any consequences resulting from incorrect dismantling OR repairs.

FAULT	CAUSE	SOLUTION
1. Nav data communication loss	GPS-Compass is not communicating.	Confirm all connections are in place. Confirm GPS is connected to correct network.
	License is incorrect.	Confirm license is correct. See section 2.7 for details.
2. Nav data unstable	GPS-Compass is not communicating.	Wait for GPS to acquire satellites. Move away from tall buildings and bridges. Mount GPS with good sky visibility (Refer to page 2-3).
3. GPS data invalid	No GPS-Compass position fix.	Wait for GPS to acquire satellites. Move away from tall buildings and bridges. Mount GPS with good sky visibility.
	GPS-Compass is malfunctioning.	Contact Dometic technical support.
4. Heading data invalid	No GPS-Compass position fix.	Wait for GPS to acquire satellites. Move away from tall buildings and bridges. Mount GPS with good sky visibility.
	GPS-Compass is malfunctioning.	Contact Dometic technical support.
5. Significant XTE change detected	Conditions are too strong.	Some conditions may be too strong for autopilot operation.
6. Significant heading change detected	Conditions are too strong.	Some conditions may be too strong for autopilot operation.

3 User

3.1 Before each use

SeaWays and SeaWays GO are feature rich autopilots that is integrated into Optimus 360 systems.

An autopilot is a useful navigational aid, but DOES NOT under any circumstances replace a human navigator.

When using an autopilot:

- Do not leave the helm unattended
- Verify the course and position of the vessel at regular intervals
- Always switch to Standby mode, and reduce speed in sufficient time to avoid hazardous situations



WARNING!

Do not use automatic steering when:

- At extreme speed
- In heavy traffic areas or in narrow waters
- In poor visibility or extreme sea conditions
- When in areas where use of autopilot is prohibited by law.

3.2 SeaWays operation

3.2.1 SeaWays modes

Seaways features three ways to operate the autopilot. Seaways is controlled by the CANtrak display.

1. Heading mode

- Autopilot holds a desired heading
- Boat may drift with wind and current



Figure 3-1.

**NOTE**

Track and route mode are not available using SeaWays GO.

2. Track mode

- Autopilot holds a desired course over ground.
- Boat heading may be changed by the autopilot to hold the desired course.



Figure 3-2.

3. Route mode

- Autopilot follows waypoints provided by third party chartplotter.
- Boat heading will be changed by the autopilot to follow the waypoints.
- Route mode will not follow Garmin Auto Guidance.



Figure 3-3.

3.2.2 How to engage and disengage SeaWays



WARNING!

Engaging SeaWays causes the boat to steer without input from driver. When using SeaWays all persons on the vessel should be secured. The operator should never leave the helm station.



NOTE

SeaWays requires a GPS fix. In some conditions, this may require a few minutes after power on.

A single button press is all that's required to engage SeaWays:

- From the run screen (shown below) you have the option of Heading, Track, or Route.
- Route will only be available if a route has been setup and activated in the chartplotter
- Press the desired autopilot mode.



Figure 3-4.

Figure 3-4 shows a screen while pilot is engaged. SeaWays can be disengaged by pressing the **STBY** button.

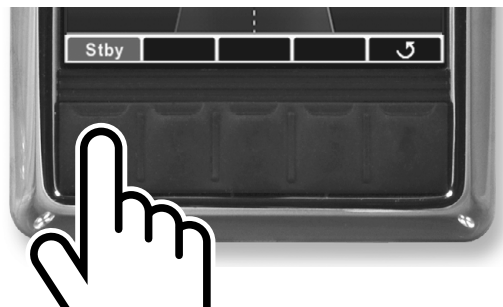


Figure 3-5.

3.2.3 Override mode

Autopilot is temporarily disabled when the helm is turned. For Heading and Track mode the autopilot re-engages automatically when the helm is no longer turned and the boat heading is stable. When the autopilot re-engages, the current heading becomes the new desired heading. When using Route mode the autopilot will not re-engage automatically if steering override is used. It will have to be re-engaged by pressing the Route button.

3.2.4 Heading bump

While SeaWays is engaged, changes to your heading can be made by:

1. Using the jog buttons on CANtrak display.
Momentarily press for 1° change.
Press and hold for 10° change.

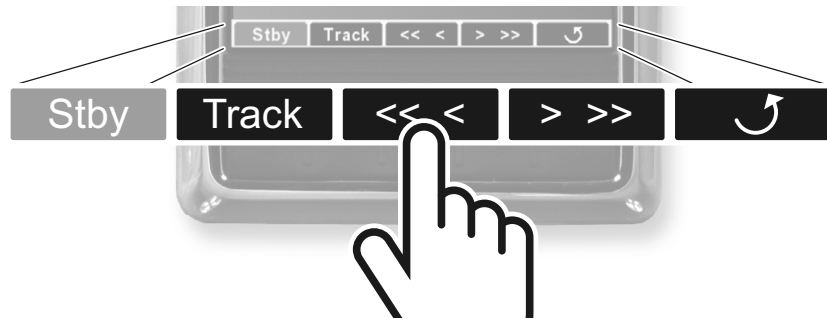


Figure 3-6.

2. Move joystick momentarily sideways for 1°.
Move joystick and hold sideways for 10°.

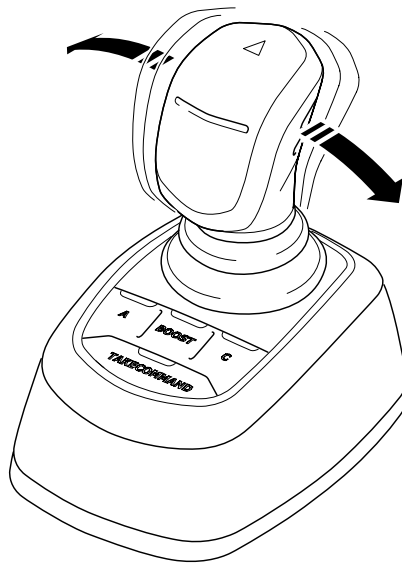


Figure 3-7. Joystick.

3.2.5 Route mode considerations

Depending on the chartplotter used in conjunction with SeaWays; not all behave the same when initiating a turn while reaching a waypoint.

In addition, the waypoint arrival alarm may behave differently or even be turned off in the chartplotter.

It is important to understand the functionality of the chartplotter being used:

The CANtrak display has a waypoint arrival alarm that can be toggled on or off.



Figure 3-8.



Figure 3-9.

These arrival alarms pop up automatically when a way point is reached and a 10° or more course change is required.

The screen disappears when the user presses the OK button or automatically after 10 seconds. The CANtrak display will provide audible beep when the screen is displayed.

The vessel will initiate turning regardless if the arrival alarm OK is pressed.

When the screen is up, the green arrow blinks at 2 Hz and the 10 second timer counts down.

3.3 3rd party autopilots

When a 3rd party autopilot is engaged, the SeaWays buttons on the CANtrak are disabled, so you cannot engage SeaWays.

If SeaWays is engaged and you engage a 3rd party autopilot, SeaWays will dis-engage and give priority to the 3rd party autopilot.

3.4 SeaWays faults

3.4.1 Cross track error (XTE)

XTE faults are usually resultant from strong wind or water currents biasing the vessel laterally from the desired track.



Figure 3-10. Cross Track Error (XTE).



Figure 3-11. Heading Error 7F1A0.

3.4.2 GPS – Compass faults

There are two types of GPS faults:

1. Communication fault

If a communication fault occurs, contact technical support for assistance.

2. Signal fault

Often a signal fault is due to the GPS-Compass having no signal or a poor quality signal. Try moving to an area with better sky visibility, or give the system more time to track and acquire satellites.

3.5 Maintenance & replacement parts

Following the routine maintenance schedules outlined below will ensure years of service from your Optimus SeaWays System, as well as keep you and your passengers safe from the dangers that are present on and off the water.



NOTICE!

Follow all maintenance procedures in Book 65.

3.5.1 Owner(s) (end users)

Prior to every use:

1. Inspect all electrical cables for wear.
2. Verify that no alarms or warnings are shown on the CANtrak display.



WARNING!

Do not operate boat if any component is not in proper working condition.

3.5.2 Qualified marine mechanic

After the first 20 hours, then every 100 hours or 6 months thereafter (whichever comes first).

1. All points noted above.
2. Check for signs of corrosion. If corrosion is present contact your dealer or Dometic.
3. Check all electrical cables for chafing and wear.

3.5.3 Replacement parts

See Book 65 for details on replacement parts within your steering and joystick systems.

EPSK1700 – Heading Sensor Kit

EPSK1630 – GPS Compass Kit Surface Mount

EPSK1625 – GPS Compass Kit Pole Mount

A new SeaWays Go license key will be provided with the kit — the system must be updated with this new license. See section 2.7.

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3.6 Mounting templates

3.6.1 SeaWays low profile mount



NOTICE!

If this template has been downloaded electronically or copied from another document, please verify all template dimensions prior to cutting. Print/copy reproductions may be scaled differently.

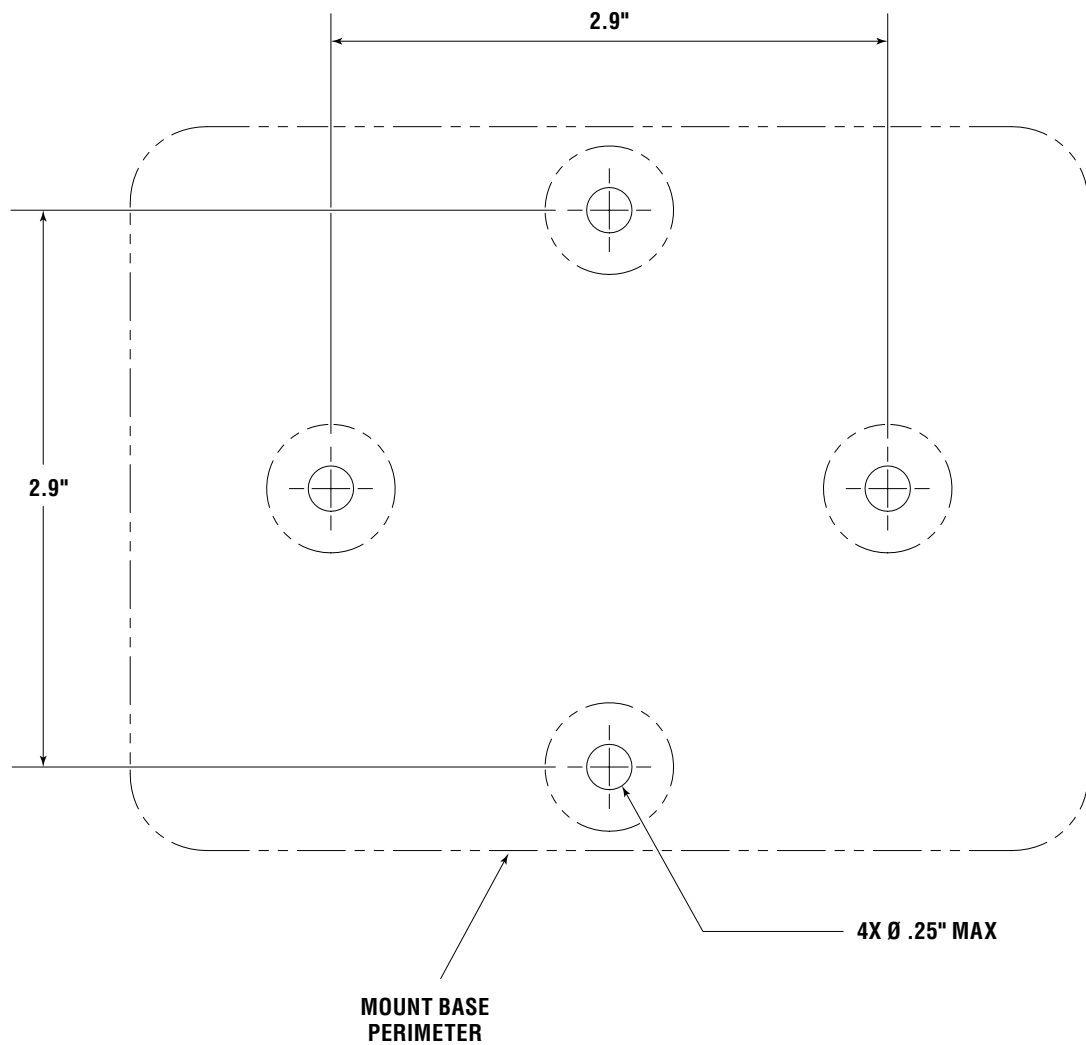


Figure 3-5. Low profile mounting template.

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3.6.2 SeaWays high profile mount



NOTICE!

If this template has been downloaded electronically or copied from another document, please verify all template dimensions prior to cutting. Print/copy reproductions may be scaled differently.

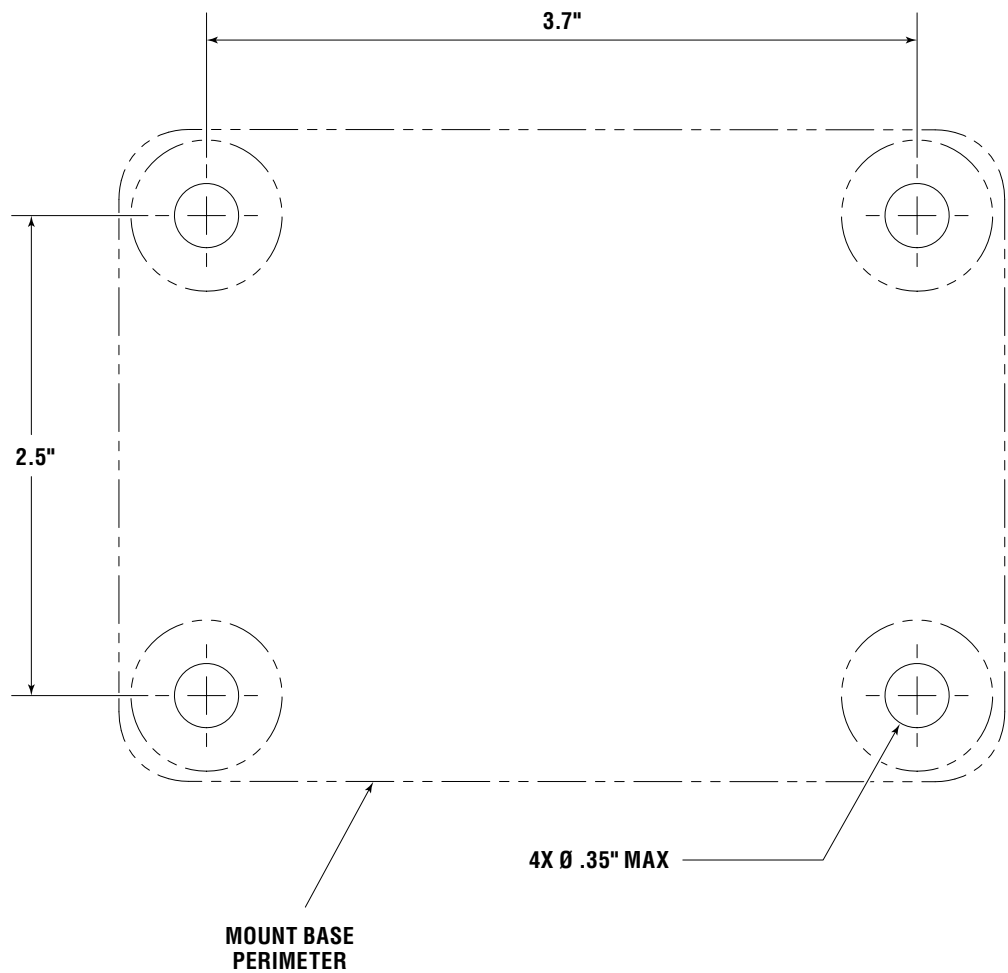


Figure 3-6. High profile mounting template.



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3.6.3 SeaWays GO direct mount



NOTICE!

If this template has been downloaded electronically or copied from another document, please verify all template dimensions prior to cutting. Print/copy reproductions may be scaled differently.

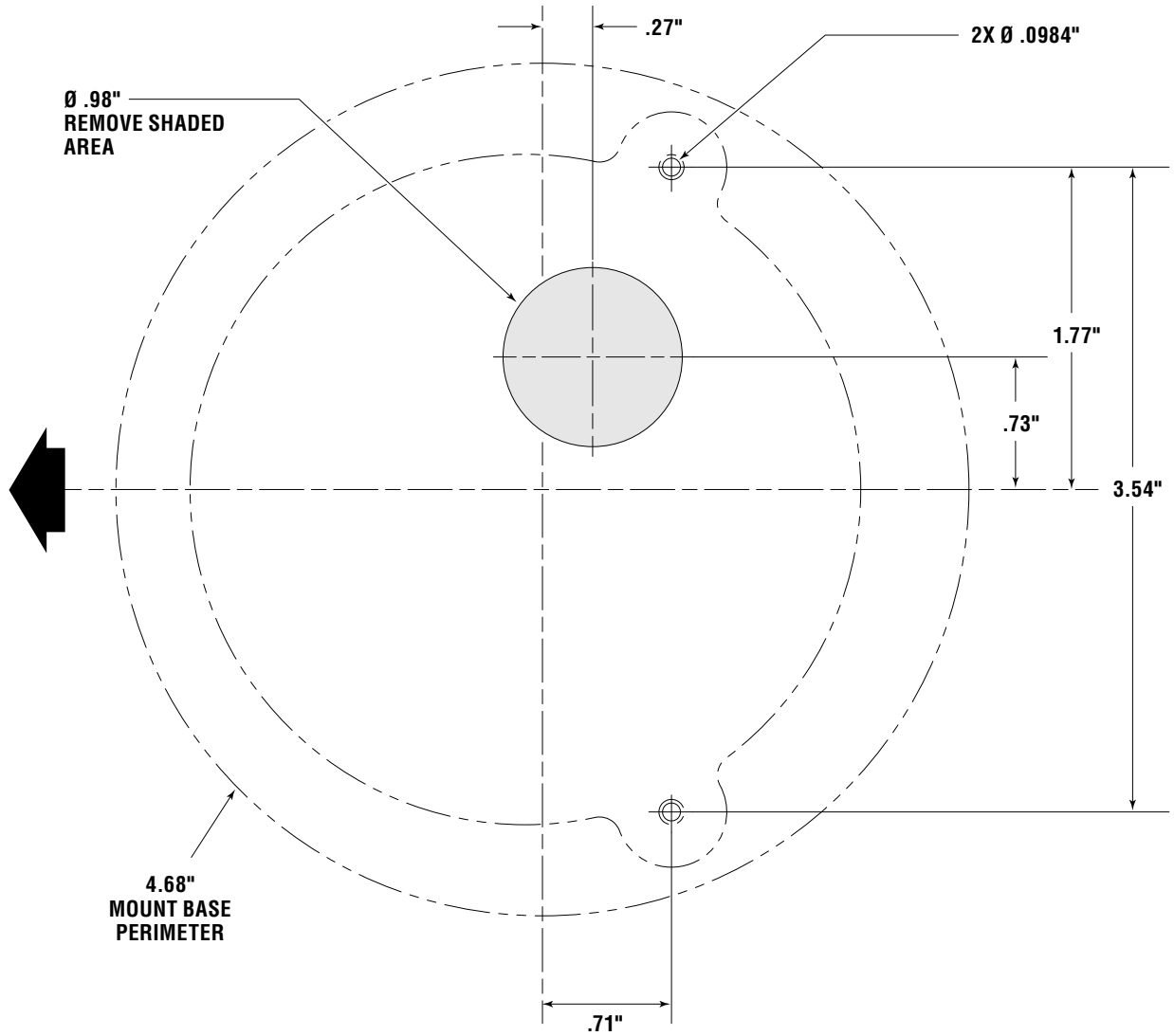


Figure 3-7. SeaWays GO direct mount template.

3.6.3 SeaWays GO bracket mount



NOTICE!

If this template has been downloaded electronically or copied from another document, please verify all template dimensions prior to cutting. Print/copy reproductions may be scaled differently.

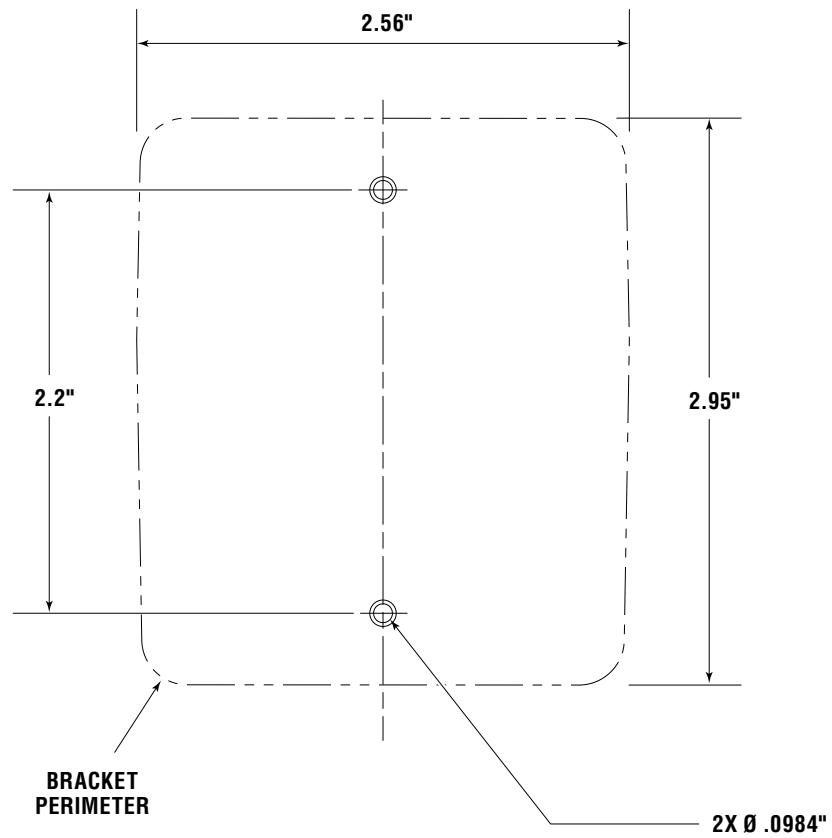


Figure 3-8. SeaWays GO bracket mount template.



4 Warranty

Statement of limited warranty

We warrant to the original retail purchaser that **Marine Canada Acquisition Inc. DBA SEASTAR SOLUTIONS** (herein forward referred to as SeaStar Solutions) products have been manufactured free from defects in materials and workmanship. This warranty is effective for two years from date of purchase, excepting that where **SeaStar Solutions** products are used commercially or in any rental or income producing activity, then this warranty is limited to one year from the date of purchase.

We will provide replacement product without charge, for any **SeaStar Solutions** product meeting this warranty, which is returned (freight prepaid) within the warranty period to the dealer from whom such product were purchased, or to us at the appropriate address. In such a case **SeaStar Solutions** products found to be defective and covered by this warranty, will be replaced at **SeaStar Solutions'** option, and returned to the customer.

The above quoted statement is an extract from the complete **SeaStar Solutions** products warranty statement. A complete warranty policy is available in our **SeaStar Solutions** products catalogue.

For more information please visit our website:

www.seastarsolutions.com/support-2/warranty-2/seastar-solutions-warranty

Return goods procedure

Contact our warranty department at Marine.Warranty@dometic.com for instructions.

Technical support

Phone: 604.248.3858

email: seastar@dometic.com

Hours: Monday to Friday 05:00 – 15:30 PST

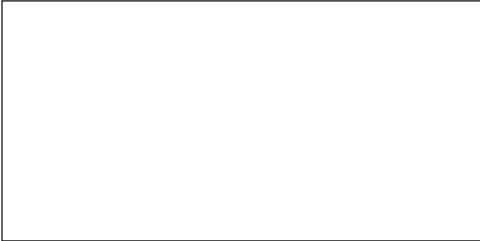
Authorized service centers & distributors

For a current listing of all our authorized service centers and distributors please visit our website: www.dometic.com

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IMPORTANT: License key to activate
SeaWays. DO NOT LOSE.



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