

↗ DOMETIC POWER & CONTROL SEASTATION



EN **GPS Anchor Positioning System**
Installation and User's Manual — Book 66

⚠ WARNING

Cancer and Reproductive Harm
www.P65Warnings.ca.gov

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Thank you for choosing SeaStation GPS anchor positioning 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 SeaStation GPS anchor positioning system.
- installation instructions for the SeaStation GPS anchor positioning 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.

Table of Contents

Abbreviations	iv
1 Important Safety Information	1-1
1.1 Explanation of symbols	1-1
1.2 Safe operation	1-2
1.3 Safety considerations for installers	1-3
1.4 Safety labels	1-4
2 Installation	2-1
2.1 Overview	2-1
2.2 Before you begin	2-1
2.3 Installing the GPS	2-1
2.3.1 Mounting location	2-1
2.3.2 Mounting guidelines	2-2
2.3.3 Mounting alignment	2-3
2.4 Mounting options	2-4
2.4.1 Mounting options	2-4
2.4.2 SeaStation sensor dimensions	2-4
2.4.3 Surface mount dimensions	2-5
2.4.4 Pole mount dimensions	2-6
2.4.5 Cable considerations	2-6
2.4.6 Surface mount	2-7
2.4.7 Pole mount	2-9
2.5 Electrical connection	2-10
2.6 Enabling SeaStation	2-10
2.7 Commissioning	2-12
2.7.1 Tuning	2-12
2.7.2 Settings	2-14
2.7.3 Sea trial	2-15
2.8 Troubleshooting guide	2-16
3 User	3-1
3.1 Overview	3-1
3.2 SeaStation operation	3-1
3.2.1 SeaStation modes	3-1
3.2.2 How to engage and disengage SeaStation	3-2
3.2.3 Standby mode	3-3
3.2.4 Heading bump	3-4
3.3 Station transfer	3-4
3.4 SeaStation tips	3-4
3.5 SeaStation faults	3-5
3.5.1 Drift faults	3-5
3.5.2 GPS-Compass faults	3-5
3.6 Maintenance and replacement parts	3-6
3.6.1 Owner(s) (End users)	3-6
3.6.2 Qualified marine mechanic	3-6
3.6.3 Replacement parts	3-6
3.7 Mounting templates	3-7
3.7.1 Low profile mount	3-7
3.7.2 High profile mount	3-9
4 Warranty	4-1

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 SeaStation GPS anchor positioning system 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 Book 50.1 and Book 54.
- 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 SeaStation GPS anchor positioning 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.


1.4 Safety labels



WARNING!

Failure to install decals at all boarding points may lead to propeller injuries causing severe bodily injury and/or death.

⚠ WARNING PROPELLER INJURY HAZARD!
ONLY ENTER THE WATER WITH THE CAPTAIN'S PERMISSION
Failure to adhere to this warning may result in severe bodily injury and/or death.



This boat is equipped with **SeaStation**, an automatic boat positioning system.

When **SeaStation** is engaged:

- **PROPELLERS TURN AUTOMATICALLY**
This could injure someone in the water
- The boat will suddenly move in any direction
- It is **NOT SAFE** to be in the water near the boat
- **DO NOT** enter the water or position yourself where you could fall in to the water due to sudden boat movement

929500

Figure 1-1. Decal PID# 929500.

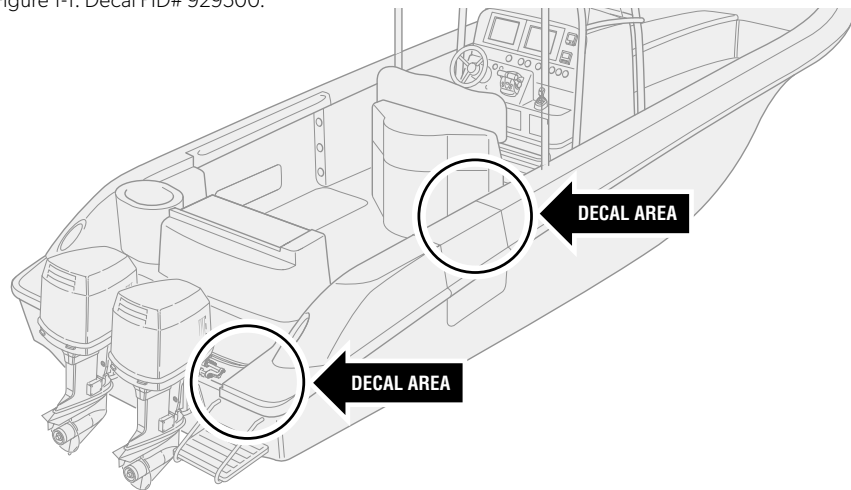


Figure 1-2. Example of decal placement on vessel.



WARNING!

If a decal is missing or becomes illegible, it must be replaced before engaging SeaStation. Contact Dometic technical support for more copies free of charge.

This kit contains three copies of a decal alerting swimmers that this boat is equipped with an automatic boat positioning system and that propellers will turn without warning. **A decal must be placed in a clearly visible area at EVERY boarding access point to the vessel.** This includes the transom swim-grid as well as any side doors or alternative boarding points.

If you have any questions or if you require additional decals, please contact Dometic technical support by:

Email: seastar@dometic.com

Phone: 604-248-3858

Web: www.dometic.com

2 Installation

2.1 Overview

SeaStation is an automatic vessel positioning system. SeaStation builds off of an Optimus 360 system by adding a GPS and heading sensor. The system uses position and heading data to automatically position the vessel through shift, throttle, and rudder controls.

Once your Optimus 360 system is installed, adding SeaStation is simple:

1. Place warning decal(s)
2. Install the SeaStation Sensor
3. Route communication cable from sensor to Optimus CAN2 or CAN3 backbone
4. Apply SeaStation license provided with kit (captured on back cover of this booklet)
5. Tuning for best performance

2.2 Before you begin

Before installing SeaStation:

1. 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 GPS

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.

2.3.2 Mounting guidelines

Dometic recognizes that every boat is unique and that there are potential installation limitations for mounting the sensor. For the best performance of the SeaStation system, Dometic recommends the following when selecting a mounting location for the GPS sensor:

1. The sensor should be mounted:
 - a. 6" above metal surfaces (such as the roof of an aluminum hull vessel) or large metal objects
 - b. 12" away from adjacent objects mounted to the same surface
 - c. 36" away from VHF antenna base
 - d. 36" away from a Optimus CANtrak display
2. The sensor must have a clear view of the sky down to 10° above the horizon (refer to figure 2-1).
 - a. Thin objects like fishing rods or VHF antennas are an exception.

If the recommended mounting guideline of 36" between the CANtrak and GPS Sensor cannot be met, contact Dometic technical support to evaluate boat specific alternative mounting solutions.



NOTICE!

In the event that interference between the GPS sensor and its mounting environment occurs, the SeaStation system will automatically detect this and notify the user via the CANtrak display and audible buzzer.

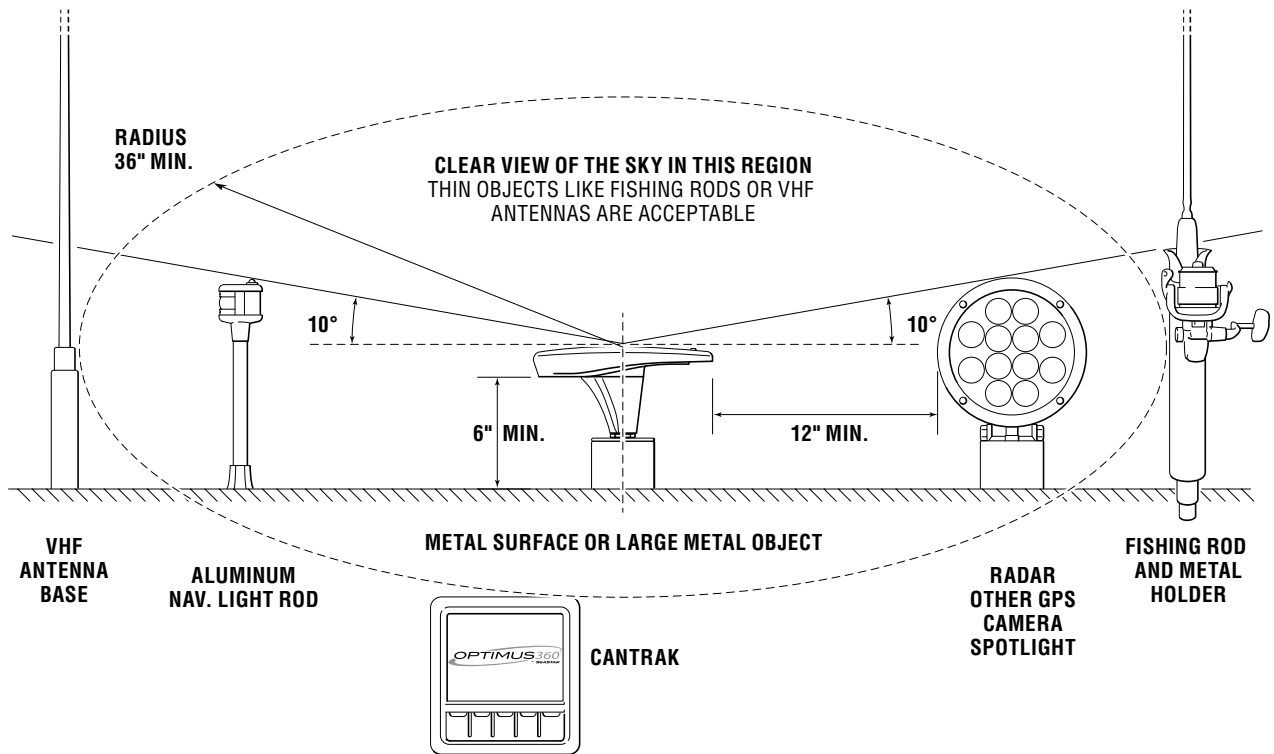


Figure 2-1. Sensor mounting distances.

2.3.3 Mounting alignment

The SeaStation 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 SeaStation sensor.

The SeaStation 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 SeaStation sensor dimensions

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

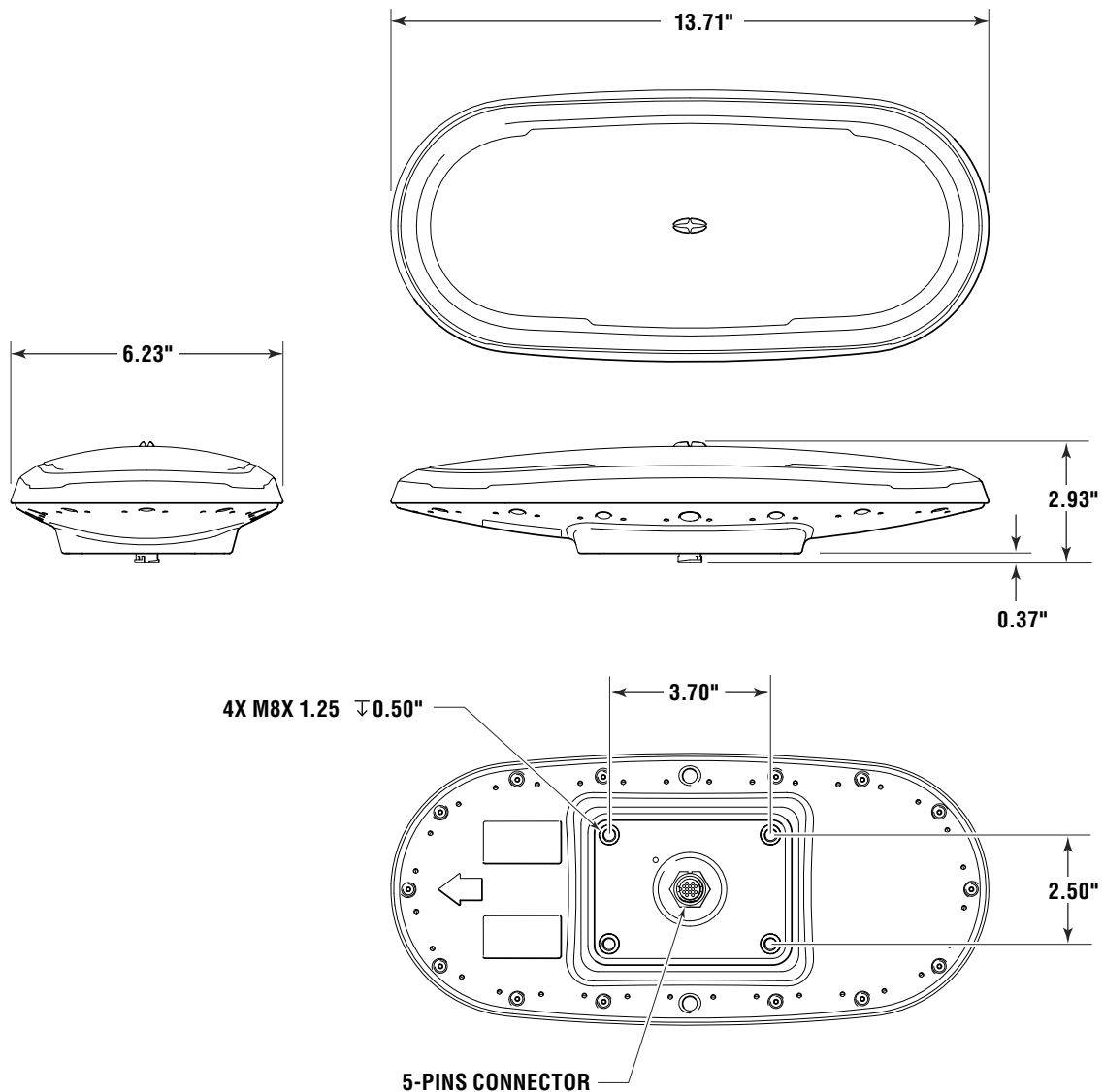


Figure 2-2. Sensor dimensions without mounting hardware.

2.4.3 Surface mount dimensions

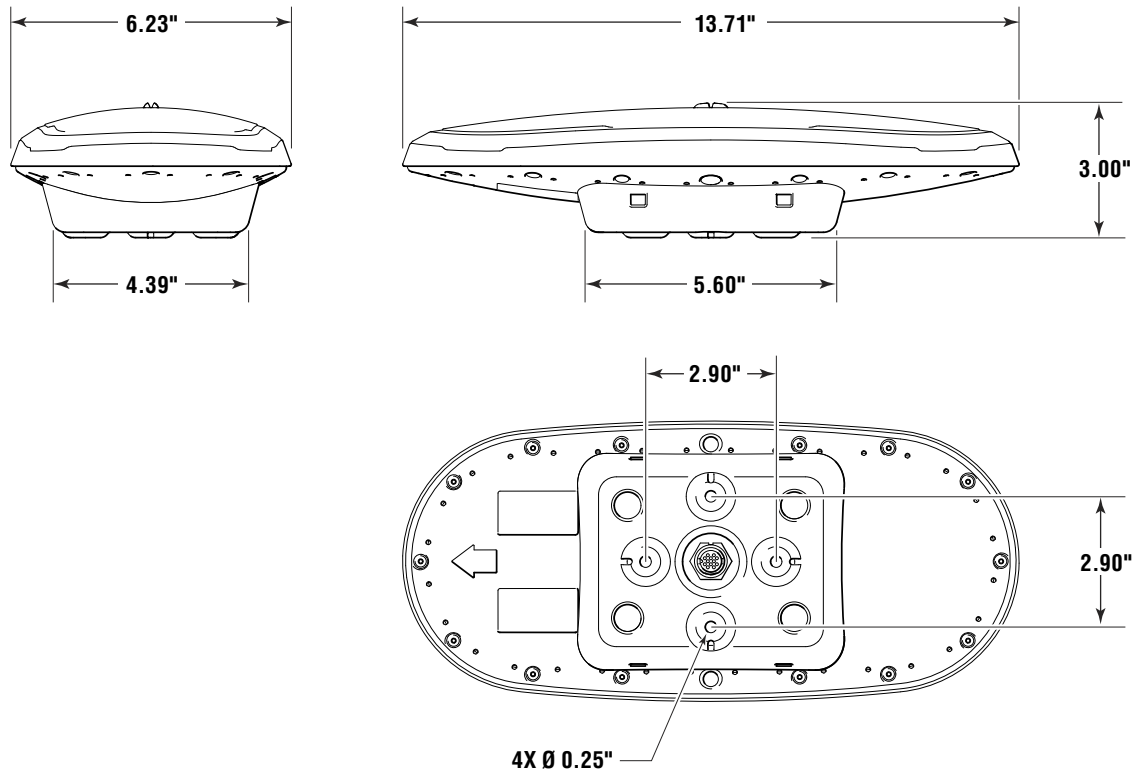


Figure 2-3. Sensor with low profile mount accessory dimensions.

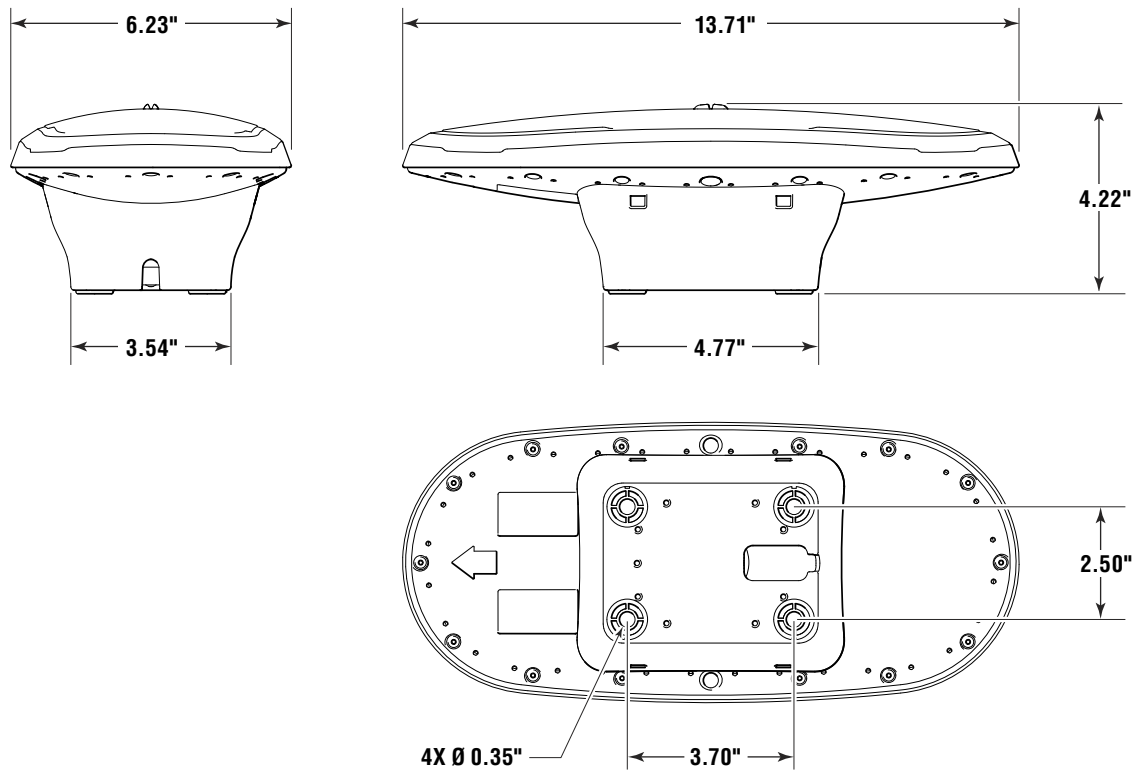


Figure 2-4. Sensor with high profile mount accessory dimensions.

2.4.4 Pole mount dimensions

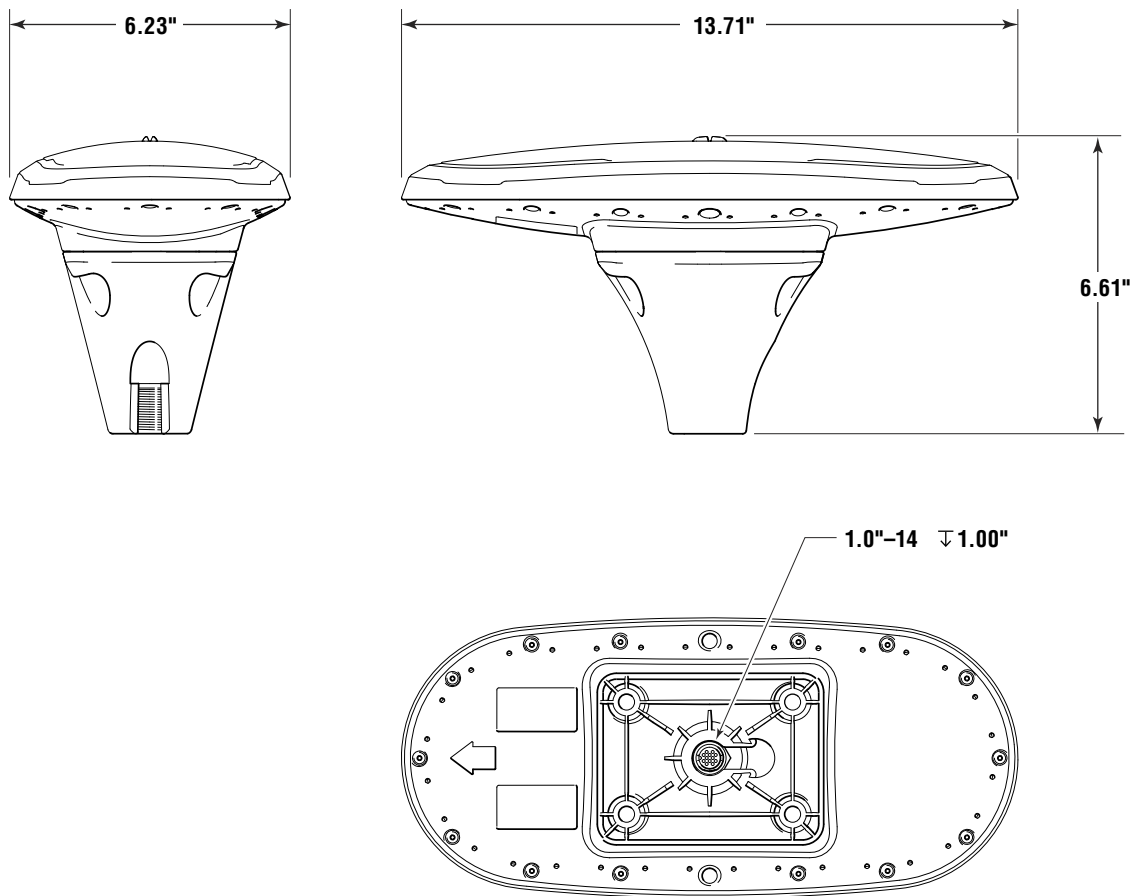


Figure 2-5 : Sensor with pole mount accessory dimensions.

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 SeaStation 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.

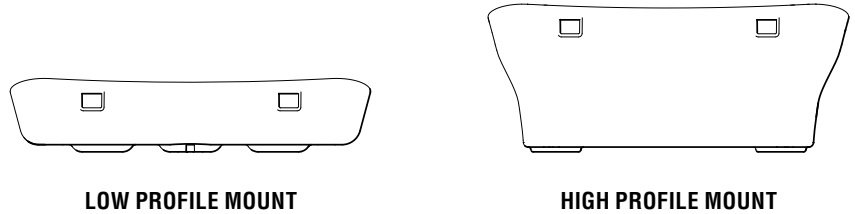


Figure 2-6. Surface mount baseplate options.



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.

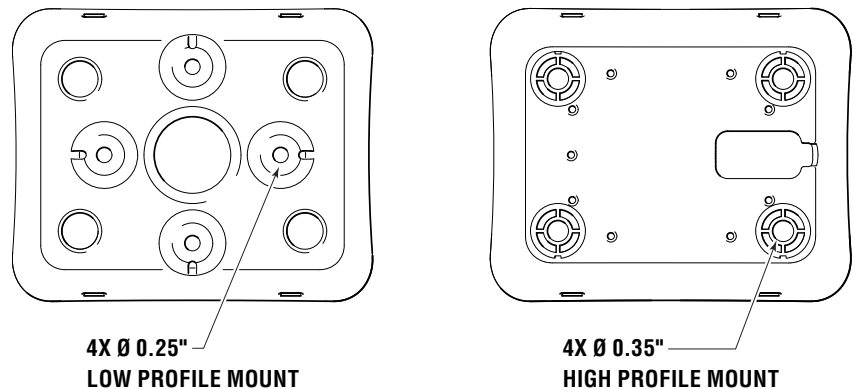


Figure 2-7. Surface mount drill patterns.

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 SeaStation sensor using the supplied hardware. Tighten to a torque of 8–10 lbs-ft with no more than 0.5 in thread depth engagement.

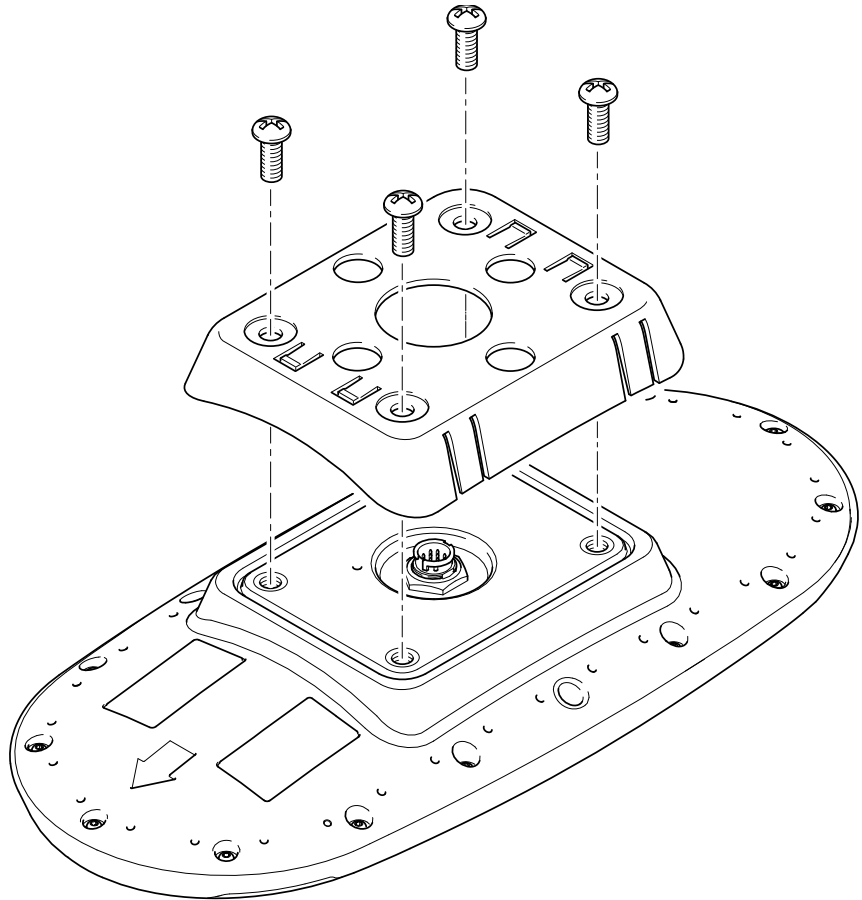


Figure 2-8: Surface mount adapter installation.

5. Thread the cable through the mounted baseplate and connect the communication cable to the sensor.
6. Carefully secure the SeaStation 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

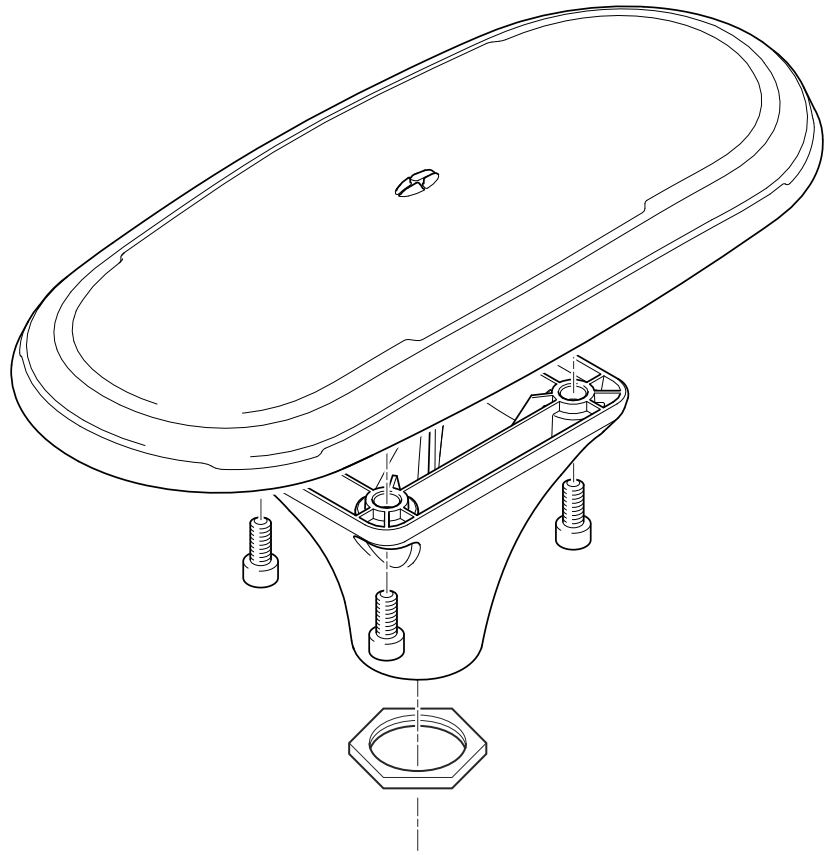


Figure 2-9: Sensor, with pole mount adapter.

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 SeaStation sensor.
5. Secure the pole mount to the SeaStation 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 Electrical connection

The SeaStation 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.

If the 20 foot communication cable is not long enough to reach from the CAN2 or CAN3 hub to the SeaStation sensor the network backbone should be extended to accommodate this. In the case a six port hub is rigged in the vessel and all the ports are used, remove the terminator off the hub and use the one foot harness to add a tee for connection to the SeaStation sensor and terminator.

If the network backbone needs to be extended the one foot harness could be replaced by a longer one.

2.6 Enabling SeaStation

SeaStation 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 SeaStation sensor.

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

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

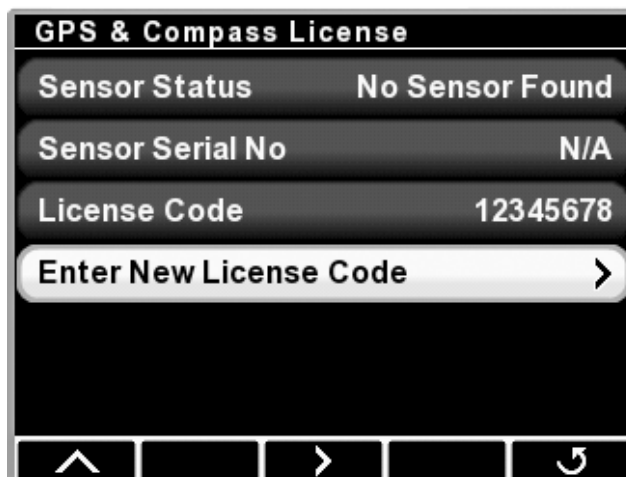


Figure 2-10.

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.

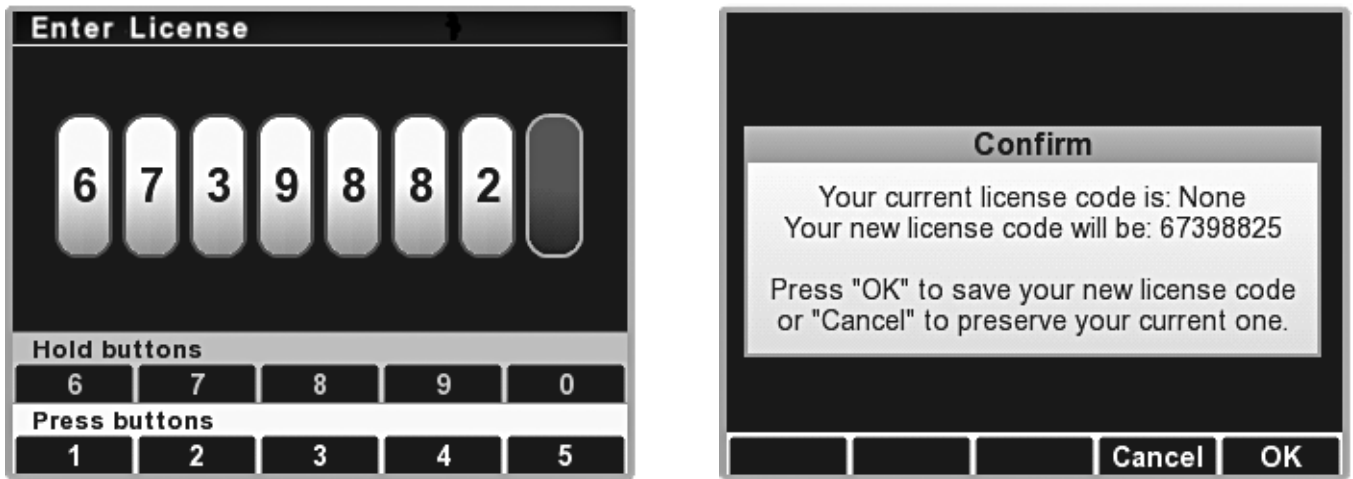


Figure 2-11.

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



Figure 2-12.

2.7 Commissioning

2.7.1 Tuning

The key to good SeaStation performance is a well tuned joystick. SeaStation usually operates at low RPMs so emphasis needs to be put on tuning the joystick at its “Off-Idle” position. There are three steps:

1. Balance rotation power **Off-Idle REV/FWD Ratio**.
2. Tune **Off-Idle Rudder Angle**.
3. Balance sideways power **Off-Idle REV/FWD Ratio**.



NOTICE!

These steps are optional in Book 65 (Joystick tuning section) but are required for all SeaStation systems, and must be re-tuned when upgrading an existing Optimus 360 system from Rev J CANtrak software (Spring 2016) or earlier.

STEP 1

1. Bring the boat to a stop with boost mode off.
2. Navigate to **Dealer Menu > Initial Setup > Joystick > Balance Rotation Power**.
3. Select **Off-Idle REV/FWD Ratio**.

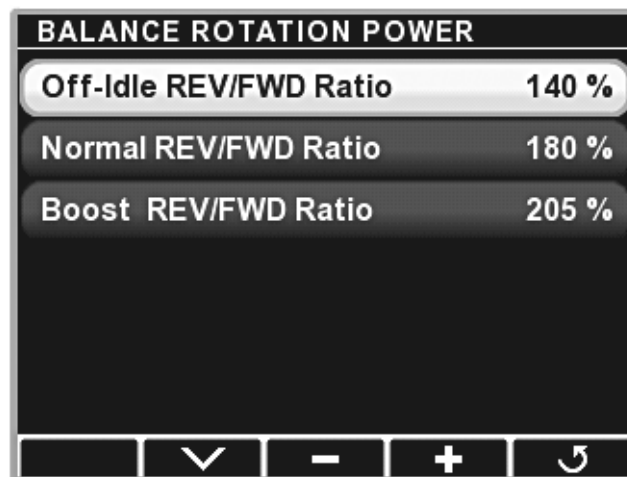


Figure 2-13.



NOTICE!

The **Normal** and **Boost** tuning values seen right and on the following pages do not need to be re-tuned – only the **Off-Idle** values.

4. Rotate the joystick clockwise only enough to engage gears.
 - a. If the boat moves aft while rotating, press **-** to decrease the ratio. If it moves forward, press **+** to increase the ratio.
 - b. Press **Save**.
 - c. Repeat until the boat rotates on the spot with no fore/aft movement. The final value should lie between 100% and the **Normal Rev/FWD Ratio** value.

STEP 2

1. Bring the boat to a stop with boost mode off.
2. Navigate to **Dealer Menu > Initial Setup > Joystick > Sideways Rudder Angle..**
3. Select **Off-Idle Rudder Angle**.

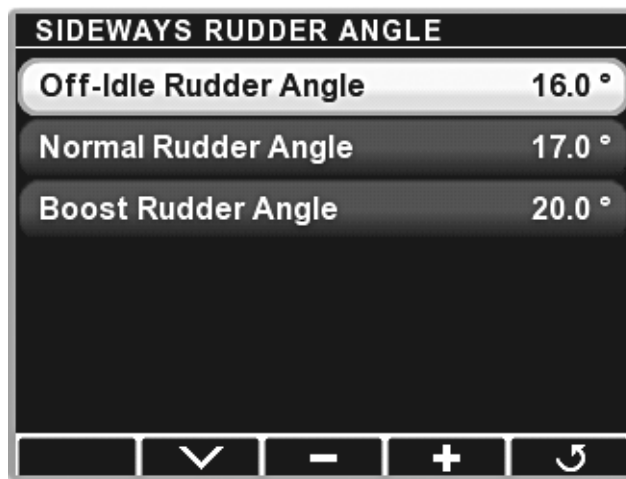


Figure 2-14.

4. Move the joystick sideways to port only enough to engage gears.
 - a. If the boat rotates clockwise as it starts to move, press **-** to decrease the angle. If it rotates counterclockwise, press **+** to increase the angle.



NOTE

The boat will rotate counterclockwise as it gains speed. This is normal - our objective is to remove rotation during initial movement.

- b. Press **Save**.
- c. Repeat until the boats initial movement is directly sideways.

STEP 3

1. Bring the boat to a stop with boost mode off.
2. Navigate to **Dealer Menu > Initial Setup > Joystick > Balance Sideways Power**.
3. Select **Off-Idle REV/FWD Ratio**.

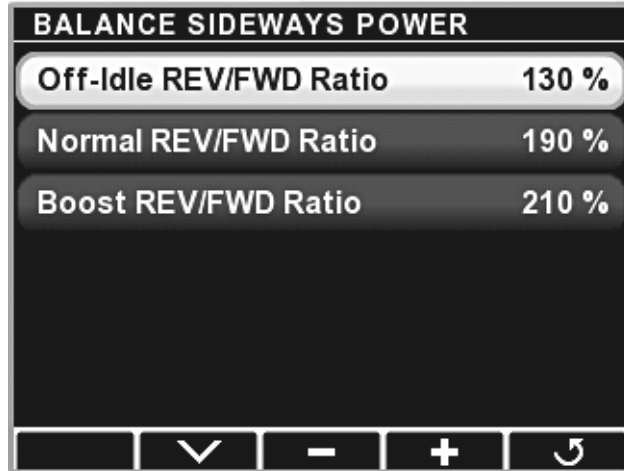


Figure 2-15.

4. Move the joystick sideways to port only enough to engage gears.
 - a. If the boat moves aft, press **-** to decrease the ratio. If it moves forward, press **+** to increase the ratio.
 - b. Press **Save**.
 - c. Repeat until the boat rotates on the spot with no fore/aft movement. The final value should lie between 100% and the **Normal Rev/FWD Ratio value**.

2.7.2 Settings

There are several SeaStation parameters and they are not intended to be changed in a typical installation – they are available for special cases.

All parameters are accessible through the CANtrak at **Dealer Menu > Devices > Main Joystick > Configuration > SeaStation > General Settings**.

If there are multiple joysticks, parameters must be changed in each of them.

SeaStation Parameters		
Name	Function	Default Value
Shift out of gear RPM	SeaStation will not shift out of gear if engine RPM is above this value	900 RPM
Shift Into of gear RPM	SeaStation will not shift into gear if engine RPM is above this value	900 RPM
Position error for warning	SeaStation will sound an alarm if target position and actual position differ by this value	12 meters
Heading Error For Warning	SeaStation will sound an alarm if target heading and actual heading differ by this value	45°

Table 2-2.

2.7.3 Sea trial

**WARNING!**

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

A basic sea trial of SeaStation is required to confirm good performance. SeaStation has three modes each mode should be trialed.

In light to moderate conditions, engage each mode and confirm:

- 1.** No faults are thrown
If faults are frequently thrown, you may need to increase the error threshold for triggering the fault. See section 2.7.2
- 2.** Engine activity is reasonable
If shifting seems hard, you may need to decrease the shift in / shift out thresholds. See section 2.7.2.
- 3.** POSITION MODE holds position to within roughly 3 meters and 10°
- 4.** HEADING MODE holds heading to within roughly 10°

See section 3.4 for tips on improving SeaStation performance.

If performance issues persist, contact Dometic technical support.

**WARNING!**

Propeller injury hazard. SeaStation turns propellers automatically. This could injure someone in the water. Make sure no one is in or enters the water.

2.8 Troubleshooting guide

Optimus SeaStation 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. Joystick lost communication with GPS receiver

GPS-Compass is not communicating.

Confirm all connections are in place. Confirm GPS is connected to correct network (Optimus CAN2).

License is incorrect.

Confirm license is correct. See section 2.6 for details.

2. Joystick lost communication with heading sensor

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 2-2).

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 position change detected

Joystick is insufficiently tuned.

Re-tune joystick. See Book 65.

Conditions are too strong.

Some conditions may be too strong for position holding

The error threshold to throw this fault can be increased. See section 2.7.2.

6. Significant heading change detected

Joystick is insufficiently tuned.

Re-tune joystick. See Book 65.

Conditions are too strong.

Some conditions may be too strong for position holding

The error threshold to throw this fault can be increased. See section 2.7.2.

3 User

3.1 Overview

SeaStation is an automatic vessel positioning system. SeaStation can control your vessel's position, heading, or both.



WARNING! Propeller injury hazard.

When SeaStation is engaged:

- Propellers turn automatically
- This could injure someone in the water
- The boat will suddenly move in any direction
- It is NOT SAFE to be in the water near the boat
- DO NOT enter the water or position yourself where you could fall in to the water due to sudden boat movement.
- The operator is still responsible for safely manning the vessel. This includes keeping passengers from entering the water as well as watching for oncoming boats, swimmers, or other objects.

3.2 SeaStation operation

3.2.1 SeaStation modes

SeaStation has two modes that can be combined for a third mode. The joystick has a button and LED for the two primary modes.

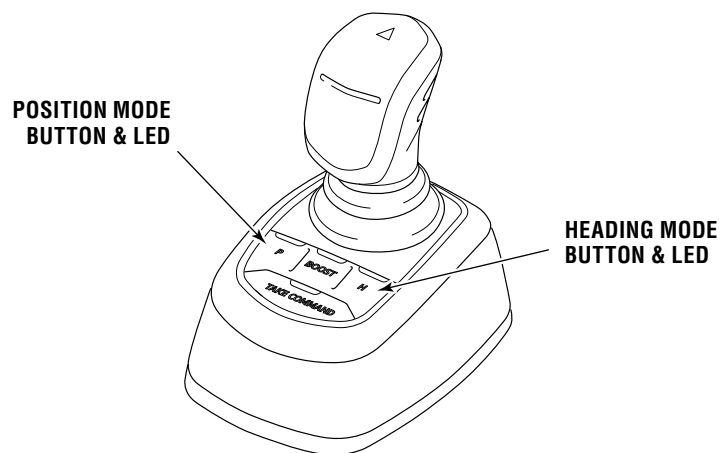


Figure 3-1. Joystick.

The modes function as follows:

1. POSITION MODE

- This mode automatically controls the vessel's position and lets heading drift freely.
- The P button engages/disengages POSITION MODE.
- A flashing LED means engagement needs to be confirmed on the display.
- A solid LED means POSITION MODE is engaged.

2. HEADING MODE

- This mode automatically controls the vessel's heading and lets position drift freely.
- The H button engages/disengages HEADING MODE
- A flashing LED means engagement needs to be confirmed on the display.
- A solid LED means HEADING MODE is engaged.

3. POSITION and HEADING MODE

- POSITION and HEADING modes can be combined for complete vessel control.
- The individual modes can be engaged separately or at the same time.

3.2.2 How to engage and disengage SeaStation



DANGER!

Engaging SeaStation causes propellers to turn automatically. This could injure someone in the water. It is the operator's responsibility to make sure no one is in the water or enters the water. If someone enters the water, pull all engine lanyard(s).



NOTICE!

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

Follow these steps to engage SeaStation:

- 1.** The joystick must be in command of the vessel.
- 2.** Press button(s) corresponding to desired mode(s) – see section 3.2.1.
- 3.** A warning will pop up on the display alerting you to the possible hazards of SeaStation.
- 4.** The LED(s) of selected mode(s) will be flashing.
- 5.** Press Engage on display to confirm the warning and engage the selected mode(s).
- 6.** The LED(s) of the selected mode(s) will be solid.



WARNING!

SeaStation positions the vessel in a general area. Only engage SeaStation if your vessel is a safe distance from surrounding objects such as docks or buoys.



Figure 3-2. SeaStation engagement screen.

Once SeaStation is engaged, POSITION MODE and HEADING MODE can be toggled on and off at any time without deactivating SeaStation.

For example, if you were to engage POSITION MODE, you could later add on HEADING MODE. Target position or heading is captured either when Engage is pressed on the display, or when the respective mode is toggled on while SeaStation is already active.

Only when both modes are off is SeaStation fully disengaged – re-engagement requires confirmation on the display again.

SeaStation is disengaged if:

- Both modes are turned off
- The joystick is moved
- Command is transferred to another joystick or control head

3.2.3 Standby mode

If SeaStation is active, grabbing the joystick enters manual mode and forces SeaStation into standby. SeaStation can be resumed by pressing **Engage** on the CANtrak. Position and heading targets will be re-acquired.

3.2.4 Heading bump

When HEADING MODE is active, the target heading can be adjusted without disengaging SeaStation. Simply press the **Heading** button on the display run screen and follow the screen information.

For large target heading changes (e.g. greater than 45°) it is recommended that you manually adjust the heading using the joystick then re-engage SeaStation.



Figure 3-3. Heading Bump Screen.

3.3 Station transfer

Transferring to another station functions as it does in normal joystick use. SeaStation is disengaged when control is transferred and is not automatically resumed when control returns.



WARNING!

Never leave the active helm while SeaStation is engaged. Always disengage SeaStation prior to station transfer or have another operator take command at the alternate station.

3.4 SeaStation tips



WARNING!

SeaStation positions the vessel in a general area. Only engage SeaStation if your vessel is a safe distance from surrounding objects such as docks or buoys.

The following are tips on how to get best results from SeaStation:

- **Grab the joystick at any time for immediate control (This will disengage SeaStation).**
- SeaStation acquires your target position or heading when **Engage** is pressed on the display.

- POSITION MODE and HEADING MODE can be toggled on and off at any time while SeaStation is active. Targets will be re-acquired upon engagement.
- Align your vessel stern to wind/current to reduce engine activity.
- If you don't know which way to align the boat, use POSITION MODE to let the boat find a stable heading then engage HEADING MODE.
- If engines are working very hard, try bumping the target heading so the boat is closer to parallel with wind/current – see section 3.2.4.
- POSITION MODE on its own requires less engine activity than when combined with HEADING MODE. Vessel heading usually changes minimally in POSITION MODE thus it is recommended for most applications.

3.5 SeaStation faults

3.5.1 Drift faults

If the vessel drifts too far from its target position or heading, the display will alarm:



Figure 3-4. SeaStation Drift Faults.

Drift alarms are usually a result of either:

1. The boat is not positioned well relative to current conditions. Try aligning your boat to be more parallel with wind or current.
2. Conditions are simply too strong for SeaStation. You may need to move to a more sheltered area.

In many cases, drift faults can be prevented by using POSITION MODE on its own. It is more difficult for SeaStation to hold position and heading at the same time. If heading is not truly required, disengage this mode.

3.5.2 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.

3.6 Maintenance & replacement parts

Following the routine maintenance schedules outlined below will ensure years of service from your Optimus SeaStation 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.

3.6.1 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.

3.6.2 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.

3.6.3 Replacement parts

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

EPSK1630 – GPS Compass Kit Surface Mount

EPSK1625 – GPS Compass Kit Pole Mount

A new SeaStation license key will be provided with the kit — the system must be updated with this new license. See section 2.6.

3.7 Mounting templates

3.7.1 Low profile mount



NOTICE!

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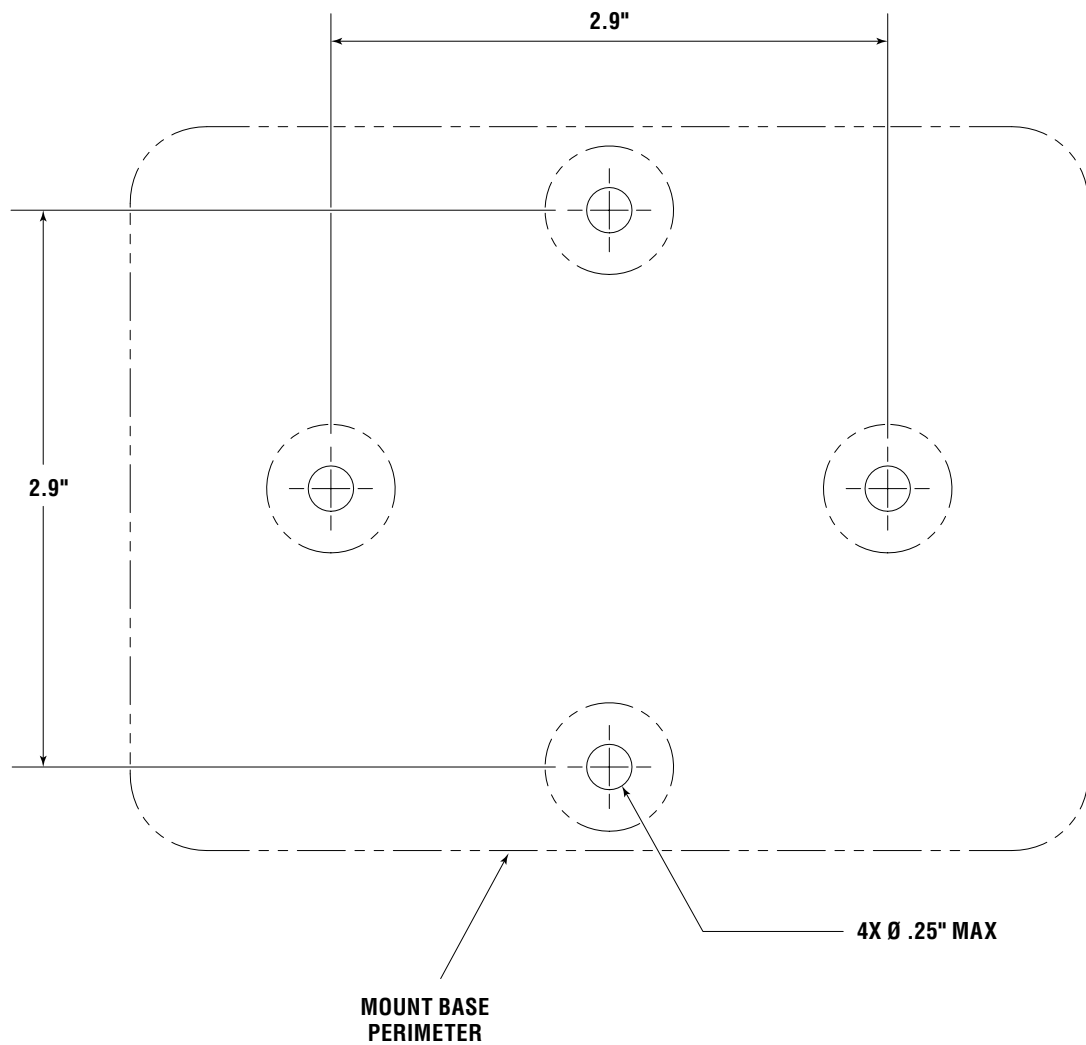


Figure 3-5. Low profile mounting template.

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3.7.2 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.

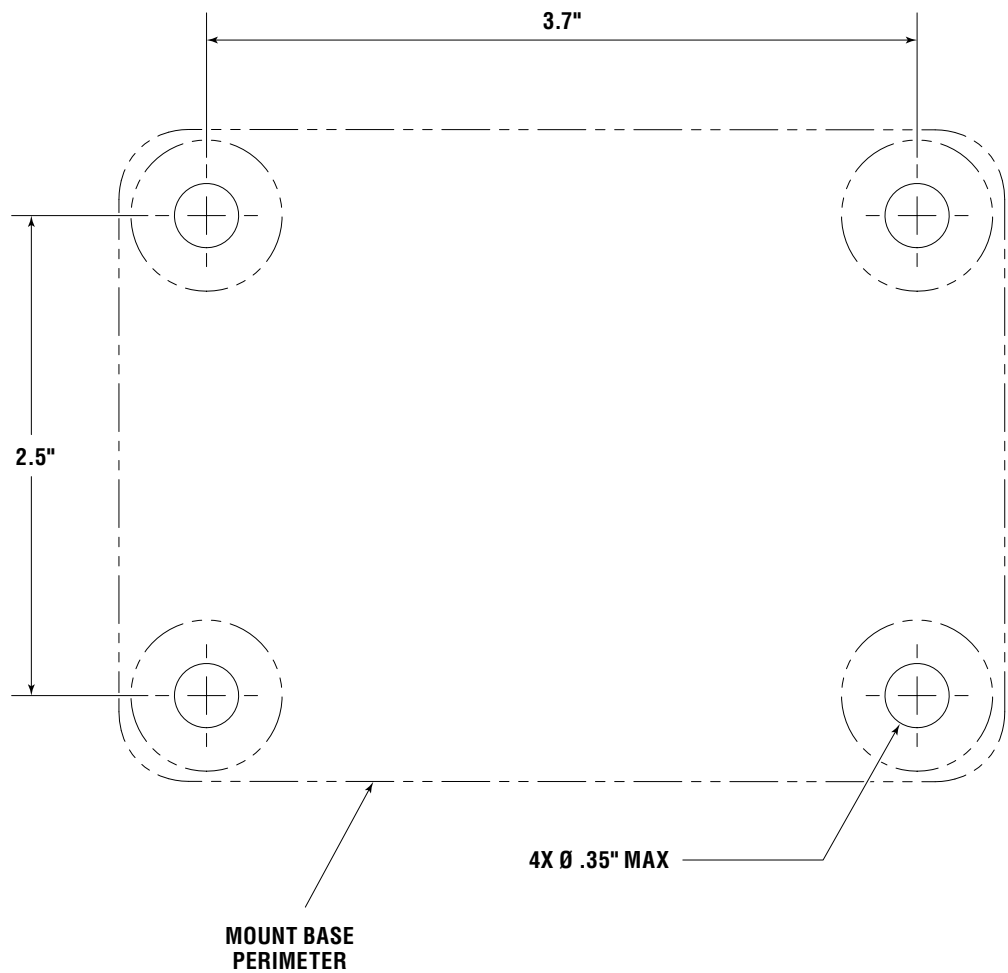


Figure 3-6. High profile mounting template.



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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

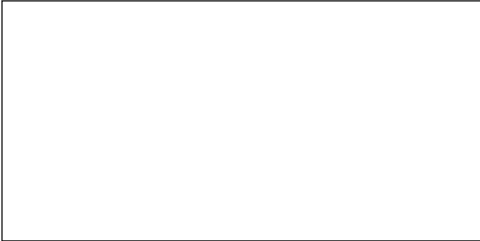
Authorized service centers & distributors

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

Mobile living made easy.



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



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