

# Waterproof Housings for Marine Electronics

# Installation Instructions

for StarPod System SPS3000

As a supplement to these written instructions, you can watch a video walkthrough showing some (not all) of the installation process by going to <u>www.youtube.com/watch?v=XXJjbFKIOAw</u> or by scanning the QR code on the right...



Before beginning installation or drilling any holes for Starlink cables or StarPod mounting fasteners, double check to confirm that there is enough space to fit the StarPod in the intended installation area, and that your Starlink dish model matches your StarPod housing model.

**NAVPOD SURFACE CARE:** The exterior surface of your NavPod is made from UV resistant acrylic plastic material. It will not chip or oxidize and never needs waxing to maintain its gelcoat-like appearance. Although the material is structurally resistant to impact, its smooth surface can be scratched, so care should be taken during installation to avoid abrasion. The NavPod finish resists stains and cleans easily with mild soap. Do not use acetone or harsh chemical cleaners with ammonia. Do not apply Loctite or similar thread-locking compounds to any NavPod hardware. These substances can react chemically with the NavPod material.

# **REQUIRED TOOLS / ITEMS (NOT INCLUDED):**

- Phillips head screwdriver
- 1/2" wrench (socket, open-end, box-end, or adjustable)
- **Deck fill wrench** (Groco model SW-2531 or similar): This tool is used to tighten a large nut with holes pre-drilled to match the wrench. Although the nut can be tightened by hand, it is easier to properly tighten with a deck fill wrench.
- Hardware for mounting the Tower to the chosen installation area: The holes in the base of the Tower are 1/2" diameter, so recommended hardware would be 7/16" bolts (or slightly smaller) with matching washers and nuts. Ideal bolt length will vary depending on the thickness of your mounting surface.

#### **INCLUDED COMPONENTS:**

- **StarPod Upper Housing:** white plastic housing with flat exterior surface; screws, lock washers, and white plastic tabs pre-installed
- **StarPod Lower Housing:** white plastic housing with raised circular platform on exterior surface
- **10° Wedge:** black plastic wedge; threaded white thruhull with rubber gasket & set screw, 3x black hex bolts, 3x angled white plastic spacers, 3x black plastic washers, and 3x nylon lock nuts pre-installed
- **Tower:** white powder coated aluminum base
- Hardware Kit: 10x tamper resistant screws, 10x black nylon washers, 1x tamper resistant wrench, 1x 3/16" hex wrench

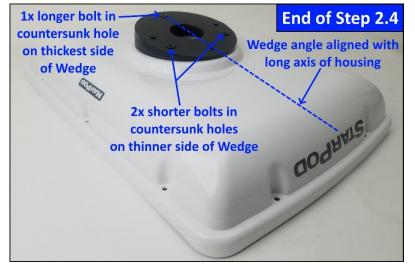
**NOTE:** Some components come with corresponding hardware pre-installed to help illustrate its eventual installation location. Some of this hardware will need to be removed to complete intermediate installation steps, then reinstalled later.

#### **STEP 1: RUN STARLINK CABLE**

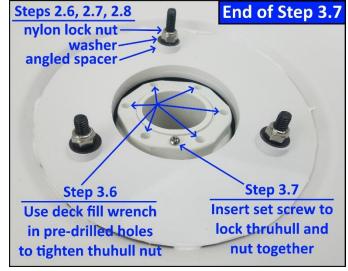
- 1.1: Before beginning any installation or assembly, check to confirm that there is enough space to accommodate the StarPod in the intended installation area.
- 1.2: Position the white aluminum StarPod Tower in the intended installation area and use the holes in the Tower base to mark the locations for mounting hardware and a cable hole in the center.
- 1.3: Drill the hole for the Starlink cable. Optionally, you can also drill the holes for mounting hardware at this time.
- 1.4: Run the Starlink cable so that it reaches from the intended router location to the intended StarPod/dish location. Leave the dish end of the cable unplugged.

#### STEP 2: ATTACH THE 10° WEDGE TO THE STARPOD LOWER HOUSING

- 2.1: Disassemble the pre-installed white thruhull and other hardware from the Wedge, but take note of the positions of these items for re-installation later on. The single screw (#6 x 3/4" long, Phillips head) inserted into the thruhull nut will be used later as a locking set screw.
- 2.2: Place the StarPod Lower Housing on a flat work surface with the exterior surface facing up.
- 2.3: Hold the 10° Wedge with the flat side facing up and the side with the circular indentation facing down. Insert the 3x black hex bolts into the three countersunk holes as follows:



- Insert the longest hex bolt (5/16 x 3" long) into the countersunk hole on the thickest side of the Wedge.
- Insert the 2x shorter hex bolts (5/16 x 2" long) into the two other countersunk holes.
- The three non-countersunk (flat) holes in the wedge will not be used for this installation type.
- 2.4: Lower the 10° Wedge onto the Lower Housing so that the 3x black hex bolts pass through the 3x holes in the Lower Housing. The Wedge should be aligned so that its angle runs parallel to the long axis of the Lower Housing (see photo above).
- 2.5: Taking care to hold the 3x hex bolts in place, flip the entire Wedge/Housing assembly so that the interior of the Lower Housing faces up, with the threaded ends of the bolts now sticking up through the housing.
- 2.6: Slide the 3x angled white plastic spacers (angled side facing down) over the ends of the 3x hex bolts.
- 2.7: Slide the 3x washers over the ends of the 3x hex bolts.
- 2.8: Using a 1/2" wrench, install the 3x nylon lock nuts onto the 3x hex bolts. As the nuts are tightened, make sure the angled white plastic spacers are rotated to counter the angle of the interior surface of the Lower Housing, so that the housing, spacer, washer, and nut connect in a flat, flush stack (see photo on the right).

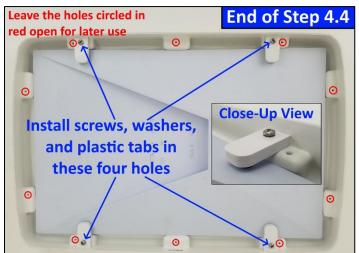


#### STEP 3: ATTACH THE ASSEMBLED WEDGE & LOWER HOUSING TO THE WHITE ALUMINUM TOWER

- 3.1: Place the Tower on a work surface with the square plate on the bottom and the circular plate on top.
- 3.2: Remove the paper backing from the rubber gasket pre-installed on the white threaded thruhull.
- 3.3: Pick up the Tower and insert the threaded end of the white plastic thruhull (with the nut removed) through the hole in the white aluminum Tower from underneath, so that the threaded end sticks up through the circular plate of the Tower.
- 3.4: While still holding the thruhull with one hand (inside the Tower), place the Wedge/Lower Housing assembly on top of the Tower so that the threaded end of the thruhull passes through matching holes in the Wedge and Lower Housing.
- 3.5: While still holding the threaded thruhull with one hand (inside the Tower), use your other hand to partially tighten the white plastic nut onto the threaded end.
- 3.6: Use a deck fill wrench to fully tighten the nut. The nut should be tight enough that the housing remains secure and stationary atop the Tower while underway (no free rotation), but you should also be able to rotate the housing when intentional force is applied. Adjust the tightness of the nut accordingly.
- 3.7: Using a Phillips head screwdriver, install the set screw (#6 x 3/4" long, Phillips head) into the pre-drilled angled hole in the top of the white thruhull nut. The screw should be fully tightened until the head touches the surface of the nut. The last few rotations of the screw may require a bit more force, since the sharp end of the machine screw is cutting into the undrilled thruhull. It is necessary for the set screw to penetrate the thruhull to lock the thruhull and nut together (see photo at bottom of Page 2).

#### STEP 4: INSTALL THE STARLINK DISH IN THE STARPOD UPPER HOUSING

- 4.1: Place the StarPod Upper Housing on a flat work surface with the interior surface facing up.
- 4.2: Remove the pre-installed screws (#12 x 1" long, Phillips Head), lock washers, and plastic tabs, but note their positions and orientations since they will be reinstalled later.
- 4.3: Insert the Starlink dish facedown into the StarPod Upper Housing until the face of the dish touches the rubber pads inside the Upper Housing.
- 4.4: Using a Phillips head screwdriver, install the screws, lock washers, and plastic tabs in the holes indicated in the photo to the right. The rubber pads on the plastic tabs should contact the Starlink dish to hold it in place, and the lock washers should go between the plastic tabs and the screw heads.



# STEP 5: FASTEN THE LOWER HOUSING AND UPPER HOUSING TOGETHER

- 5.1: With the StarPod Upper Housing still facedown on a flat work surface, run the Starlink cable end through the bottom of the Tower, out the top of the Tower, and connect it to the Starlink dish.
- 5.2: Pick up the Tower/Wedge/Lower Housing assembly and slide it onto the Upper Housing. The inner lip of the Upper Housing (resting on the work surface) should slide just
- inside the outer edge of the Lower Housing assembly. The fit of the parts may be tight and may require some maneuvering as the housings slide together. Once the two housings are fitted together, there may still be a small gap between them due to opposing pressure from the foam gasket inside the housing. This is fine, and the gap will be closed in the next step.
- 5.3: Open the hardware kit in the plastic zip bag. Insert one screw/washer into each hole all around the edge of the housing as shown in the photo on the right. Use the included NavPod wrench with the blue handle to gradually tighten each screw as follows:



- Take care not to overtighten the screws, as this can
  cause the housing to crack. Once the gray rubber gasket is touching both sides of the housing all the way around the edge (no visible gap), the seal is sufficient. The gasket does not need to be compressed much beyond initial contact with the housing edges.
- o Only manual HAND TIGHTENING is recommended. Do not attempt to use a drill.

#### STEP 6: SECURE THE TOWER TO THE CHOSEN INSTALLATION SURFACE

- 6.1: If you have not already drilled the holes for mounting hardware (in Step 1.3), do so now.
- 6.2: Position the fully assembled StarPod in the chosen installation area.
- 6.2: Install your chosen mounting hardware.
  - REMINDER: Mounting hardware for the Tower is not included (since the ideal bolt length will vary depending on the thickness of your mounting surface). The holes in the base of the Tower have a diameter of 1/2", so recommended hardware would be 7/16" diameter bolts (or slightly smaller) with matching washers and nuts.

# **CONTACT INFORMATION / ADDITIONAL SUPPORT:**

If you have any questions during the installation process, please contact us at <a href="mailto:support@oceanequipment.com">support@oceanequipment.com</a> or 541-318-1272.



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