

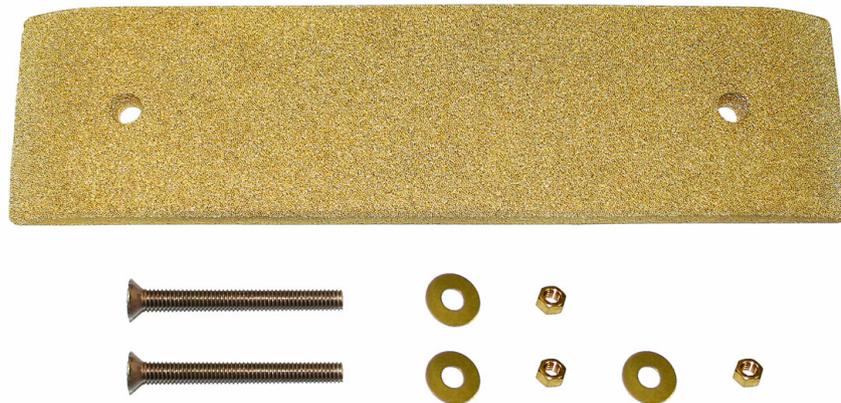


## GROUNDING PLATE

### Installation Instructions

#### Description

The grounding plate is made from spherical spheres in sintered bronze. This porosity makes the Grounding Plate ideal use in electrical bonding systems. It can also be used in RF applications such grounding SSB and LORAN antennas for improved performance.



#### Installing the Grounding Plate

##### A. Choosing a mounting location

Choose a mounting location that will always be submerged, even when the vessel planning or heeling over.

- On a powerboat, the best location is usually any flat area on the aft third of the bottom of the hull near the vessel's centreline ( avoid mounting the grounding plate on the vessel's transom . When underway, it may only have intermittent contact with the water ).
- On a sailboat, a flat location on the aft half of the hull and close to the centreline is best.

Avoid mounting the grounding plate immediately forward of any depth finder or knot meter transducers. The gentle turbulence directly aft of the grounding plate may effect the performance of some devices. Propellers are not affected.

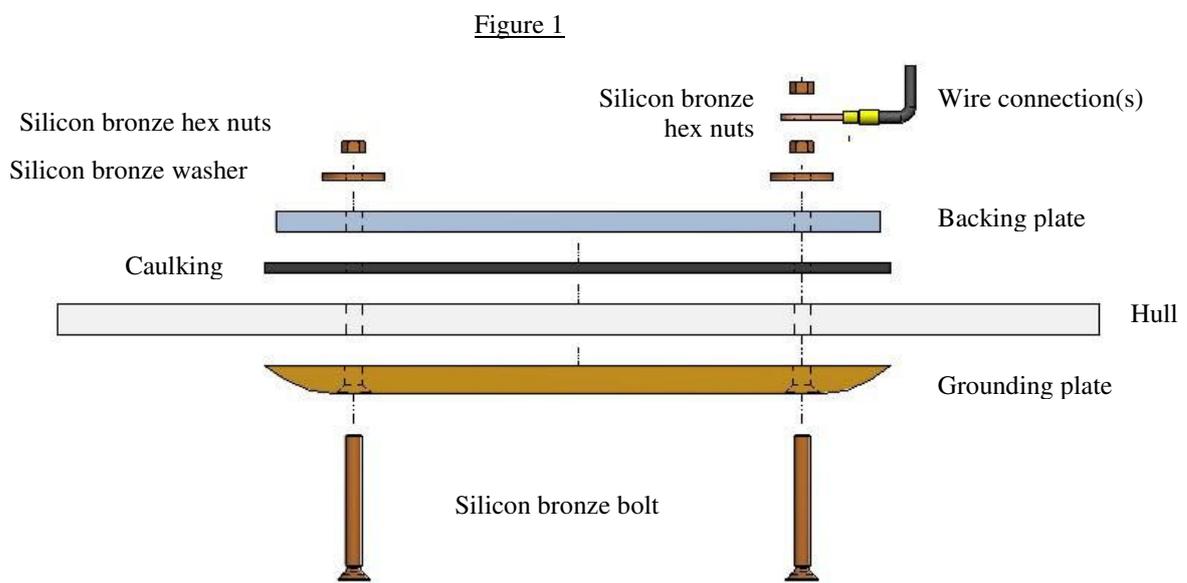
Consider the thickness of the hull when choosing a mounting location. The combined thickness of the hull and a backing plate ( not included ) should not exceed 3,8 cm to allow use of the supplied fastener ( 7,65 cm ).

When choosing a mounting location, be sure you will have access to the inside of the hull in that area to tighten fasteners and make wiring connections. Avoid areas where drilling may damage fuel or water tanks, plumbing, or wiring.

## B. Preparing the mounting location

After you have selected a location for your grounding plate:

1. Prepare a backing plate to mount inside the hull behind the grounding plate. This plate should be no smaller than the grounding plate, and a minimum of 12 mm thick. The backing plate can be made from marine-grade plywood, a hardwood such as mahogany or oak or fibreglass.
2. Use the grounding plate as a template to mark the locations of its mounting holes onto the backing plate, then drill the holes in the backing plate at the marked locations.
3. Hold the grounding plate against the outside of the hull where you plan to mount it. Align the grounding plate parallel with the centreline of your vessel, with its sloped ends pointing fore and aft.
4. Observe the gap between the grounding plate and hull. If any edge of the grounding plate is more than 6 mm from the surface of the hull, select a flatter mounting location.
5. If the mounting location is suitable, use a pencil to mark the centres of the holes in the grounding plate onto the hull.
6. Drill one hole at one marked location on the hull. Before drilling any other holes examine the inside of the hull to confirm that the mounting location is suitable. Then drill the other hole(s) through the hull at the marked location(s).



## C. Mounting the Grounding Plate (see figure 1)

7. Clean and dry the inside surface of the hull around the mounting location. It is important to remove any oil or grease that could prevent the caulking from adhering to the hull.
8. Apply a bead of underwater caulking sealant ( StarBrite TM 83301 or similar ), to the inside of the hull in a circle around each mounting hole. Squeeze a small amount of caulking into each mounting hole ( DO NOT COAT THE BACK OF THE GROUNDING PLATE WITH SEALANT ).

9. Place the backing plate on the caulking, aligning the holes in the backing plate with the mounting holes in the hull. Press down on the backing plate firmly. Allow the caulking to cure for 15 minutes.
10. Align the grounding plate over the mounting holes on the outside of the hull. Mount the grounding plate by passing the bronze bolt(s) through the grounding plate, hull and backing plate. Fasten with flat washer(s) and nut(s) as shown in Figure 1. Tighten the hex nut(s) hand-tight.
11. Use a wrench to tighten the hex nuts inside the hull while someone else uses a large slot head screwdriver to hold the bolts from outside the hull. Do not over tighten.
12. Make the electrical connections using a copper wire with a ring terminal to connect the grounding plate to your LORAN RF ground and/or your DC accessories negative ground. Use a wire equal in size to the negative battery cable to connect the negative post of your battery to the grounding plate.

### **Maintenance**

Do not paint the grounding plate. Paint will prevent proper grounding. It is difficult for barnacles to attach themselves onto its porous surface. Clean with stiff brush and bleach. Inspect annually.