



P&S Marine Repair & Supply, Inc.

Nautical Times

Monthly Newsletter - January 2025

We have a surprise!

We will now be offering items for sale on OUR website!

<https://www.p-smarine.com>



by **Stephen D. Surowitz** on January 01, 2025

For starters, Paul & I wish you a very happy new year to all of you and may it be filled with good health, safety and prosperity!

As the new year has arrived we all should look at our boats and see just how much pleasure they have brought us the past year. We need to think of them like a family member and take care of them the same way! So don't forget to provide them with a bi-annual service so they can perform for you like they did last year.

With that all said Paul and I are very proud to announce that we were just granted dealerships for Garmin, Furuno, FLIR, Power Pole, and ICOM to mention just a few! We will not just be able to offer their products for sale but we will be installing and (electrically) trouble shooting them for our clients. So before you buy from a big box store buy from us instead! All of the above mentioned manufacturers have a minimum allowable sales price which is what we will be selling at. So PLEASE think of using us first! We are currently working on providing them for sale on our website!



For this month I have chosen a subject that affects us all here in Florida and that is lightning!

As I was in the irrigation field for over 35 years I got very educated about lighting damage that was prolific in the irrigation industry. Well, unfortunately the Marine industry seems to be worse!

Florida is the lightning capital of the world and to say the least it damages everything it touches!

I have personally witnessed a irrigation controller face embedded into a piece of 3/4" plywood from a lightning strike. Likewise I have seen entire boats burnt to the water level by the same thing.

What most people don't realize is that when lightning strikes your vessel it creates hotspots in the fiberglass and softens the fiberglass like a piece of Swiss cheese, creating mini holes throughout the structure.

It is a myth that lightning never strikes the same place twice! In fact, it can strike the same place (like a boat's antenna) repeatedly!

According to the National Weather Service (NWS), in the U.S. there are about 25 million lightning flashes every year; the Centers for Disease Control and Prevention (CDC) says the odds of a person being struck by one of them are about 1 in 500,000. It's more dangerous for boats: Based on data compiled from BoatUS® Marine Insurance claims, boats have about a 1 in 1,000 chance. The CDC says Florida is the "lightning capital" of the U.S.; BoatUS® says about one third of all lightning-related marine insurance claims come from Florida.

The majority of lightning strikes happen on sailboats, adds BoatUS, as an aluminum mast makes a great lightning rod (or "air terminal" in today's parlance). In the powerboat world, trawlers, most of which also have masts, are the primary targets, about four times more likely to be hit than powerboats in general. But a sportfisherman's aluminum outriggers and lofty tuna tower bristling with antennas



constitute the cherry on a sundae for a roving bolt of lightning. In some lightning-protection systems, they take the place of air terminal.

The NWS says a typical lightning flash carries up to 300 million volts and 30,000 amps, enough juice to cook any and all electronics—almost every modern onboard system has some electronic component—and maybe even blast a hole in the hull. Lightning can travel up to 10 miles, cloud to boat, so when it sniffs a nearby ground, not much will stop it, certainly not a few layers of fiberglass. Rather than the charge exiting completely through an underwater ground plate or, in some strike-protection systems, the vessel's propeller, it can shoot off side flashes that destroy electronics and wiring before exiting directly through the hull into the sea. Experts advise if your boat's struck, have it hauled and the underbody checked, even if there's no apparent damage. The electrical discharge can degrade a fiberglass laminate without actually punching a hole in it.



So, let's face it. You can't prevent lightning from striking your boat, but the next best thing is a well-designed and engineered lightning protection system.

So is lightning protection important? You bet it is! It is something overlooked by pretty much all manufacturers because it is an expensive installation, and when a boat manufacturer is looking at the bottom line on what they are going to make it costs too much to add on so they just leave it for the client to deal with and purchase! Is this fair, NO, but that is what is done!

Lightning protection isn't cheap but if you value your investment, well, add it to it!

First step! DETECT IT!

We offer a solution to protect you and your boat called TALOS. It is a remote lightning detector to let you know when lightning is in your vicinity in 25 miles, 16 miles and 6 miles. Knowing is half the battle!

The TALOS® Remote Lightning Detector for boats and watercraft is a ready-to-install design solution that provides both visual and audible alerts when lightning is up to 25 miles away and closer. The TALOS® remote system is the answer to enhancing lightning awareness on boats and personal watercraft.

Lightning Detection Alerts: **GREEN** with 1 beep: 25 miles away · **BLUE** with 2 beeps: 16 miles away · **RED** with 3 beeps: 6 miles away



Indicator Lights, Remote Housing & Cable



And the newest is the SFD-1000-N2K the NEMA2000 that shows the location on your NEMA2000 display

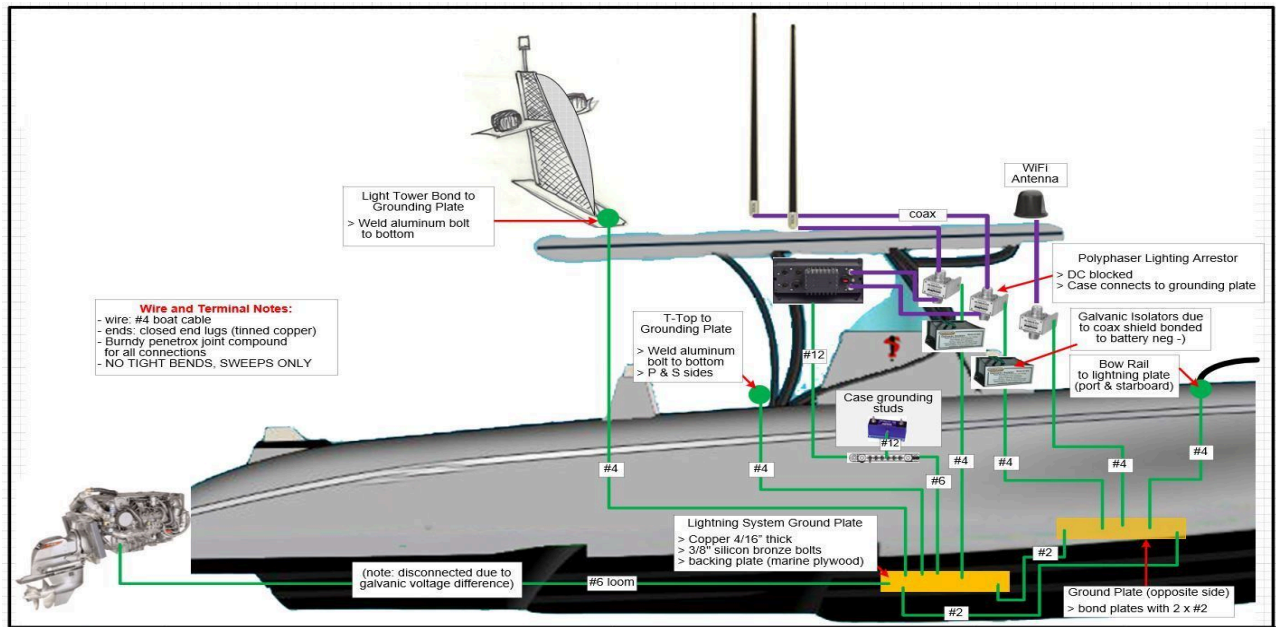


Second step! Protect it! “PROTECT A BOAT LIKE A BUILDING!”

There is a phenomenal article written by Dr. Ewen M. Thompson, Ph.D. That goes in dept on this issue. It was published in 2007 in the edition of Exchange.

[That article can be found here](#)

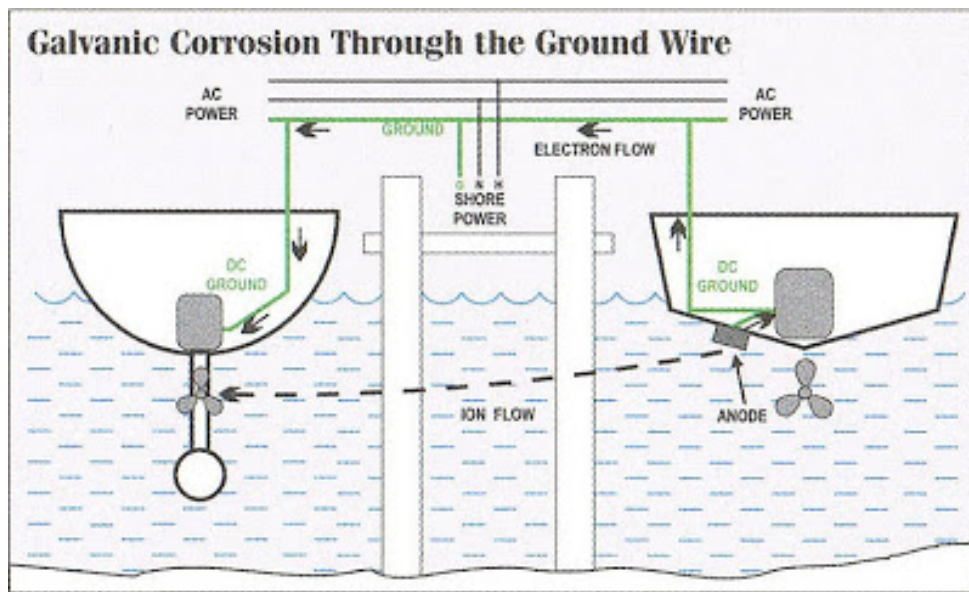
Well, unfortunately this isn't the cheap part!



Galvanic Isolator:



This protects your boat's antennas from lightning, we use the ProSafe brand as they have never failed us! ProSafe FS (Fail Safe) Galvanic Isolators maximize anode life and protect metal parts on boats against galvanic corrosion. Installation is simplified by the fact that they do not require a dedicated monitor to verify operational status as required by non-fail-safe-certified designs. 30 Amp models are built on robust flat-pack semiconductor platforms to ensure that your boat's AC ground will continue to work in the unlikely event the isolator fails. Terminals are gold-plated for long life. The ProSafe FS Series of FailSafe 30 Amp Galvanic Isolators will interrupt galvanic current flow with other boats at a marina when installed on a boat which is connected to AC Shore Power. This technology maintains AC safety ground and solves the most common forms of corrosion and premature zinc loss within a boat's bonding system.





Ground plates:

Bronze grounding plates replace yards of copper foil. Looks like a solid bronze plate, but actually a porous matrix of bronze spheres, presenting the same effective electrical surface as a much larger expanse of copper foil. Use as electronic ground for SSBs, and ham transceivers, or as a ground reference in bonding systems. Includes gold-plated bronze flathead fasteners. Plates have tapered ends and rounded edges for reduced turbulence.



So with all of that said it is without doubt that lightning protection is needed for your boat! We provide these products and services and strongly recommend using them! If you are interested just let us know and we can make some recommendations for your vessel!

~ Paul & Stephen ~