



HAWKEYE
SEAHAWKE MARINE





INTRODUCTION

Whether on a mooring, at anchor, dockside, or afloat, watercrafts are a prime target for lightning strikes. It doesn't take a seasoned sailor to know that storms are especially dangerous on the open water. A vessel struck by lightning is often likely to sink, causing even greater damage than that occurring from the lightning strike itself. Even if a strike does not sink a vessel, the hazards posed can injure crew members and leave them with no form of communication. Seahawke Marine has the solution. Protect your family, loved ones, pets and investments and see why we are leaving a mark on the boating industry that mother nature can't!



Seahawke Rigging is South Florida's premiere yacht rigging company. Seahawke Rigging was founded by Tony and Leslie Hawker in 2011. Tony has turned his vast knowledge and 30+ years of sailing experience into a dedicated team, tackling the needs of the super-yacht community. Throughout the years, Seahawke Rigging has seen just how frequent and destructive a direct lightning strike is. It is with that and the need for a solution, Seahawke Marine was formed.

Seahawke Marine has collaborated with EMP Solutions to develop a much needed product for the Yachting and Recreational boating community. EMP Solutions first developed their "CMCE" for use in the commercial and industrial environments. During that time the product has proven to be a success. Seahawke Marine began developing a design specific for the Super Yacht and Recreational vessel needs.



LIGHTNING IS MY BOAT SAFE?

You may be surprised at how frequently lightning finds its way to a boat. In the last five years, one insurance groups boat clients had 71 lightning claims, resulting in over \$1,300,000 in lightning related damages. On average, each claim totaled nearly \$20,000. Sailboat strikes outnumbered powerboat strikes by a 3:1 ratio; however the largest claim came from a powerboat which sustained almost \$100,000 in damages from a direct hit.

Boats are especially at risk from being struck by lightning because they are often the tallest object in a large open space. A direct lightning hit can damage or destroy the boat, overload navigational and electronic equipment, and/or electrocute the people on the boat. Lightning claims range from the small (a few electronics needing replacement) to the enormous (a constructive total loss). Often times a boat owner won't know he has had a lightning strike until he goes aboard and finds his electronics are not working. Closer examination might reveal parts of the antenna scattered on the deck.

Lightning strikes create huge problems on today's boats due to all the integrated systems, black boxes and fly-by-wire technology. With all of the multifunction equipment, your navigation, radar and echo-sounder capabilities can be wiped out in one shot. Lightning strikes are not to be taken lightly and can be incredibly expensive.



Lightning occurs with every thunderstorm and, on average, Florida sees around 70-100 days a year with at least one thunderstorm in the state.

Source: TMCNET newsletter, 2006 Because of Florida's vulnerability to thunderstorms and lightning, lightning is one of the most deadly weather hazards in the Sunshine State.

Data from NOAA and the National Lightning Detection Network shows that over the continental U.S. alone, an average of 20,000,000 cloud-to-ground flashes occur every year. And worldwide, lightning strikes the ground about 100 times each second, or 8 million times a day!

Florida is the lightning capital of the United States.

The Captain of the Fortius displays the conventional lightning rod which, after two consecutive lightning strikes resulting in the loss of navigation and other electrical equipment, failed to protect the yacht from direct lightning strikes. These strikes cost this Captain well over \$12,000 in vessel & electronics damage.



WHAT IS HAWKEYE?

Since the invention of the lightning rod over 260 years ago by Benjamin Franklin in then mid 1700's, it's adoption as a means of protection against destructive from atmospheric discharges such as lightning bolts, has been practically universal.

Franklin began to advocate lightning rods that had sharp points and his rods would soon be found protecting many buildings and homes for many years to come, until now!

It wasn't until 1918 that Nikola Tesla's experiments, would turn the world upside down proving that Franklin's design was mostly ineffective and provided the properties that actually attracted lighting to a high degree. First, on the account of it's shape and secondly, because it ionizes the surrounding air.

By contrast, Tesla's lightning protector design is founded on principles that are diametrically opposite.



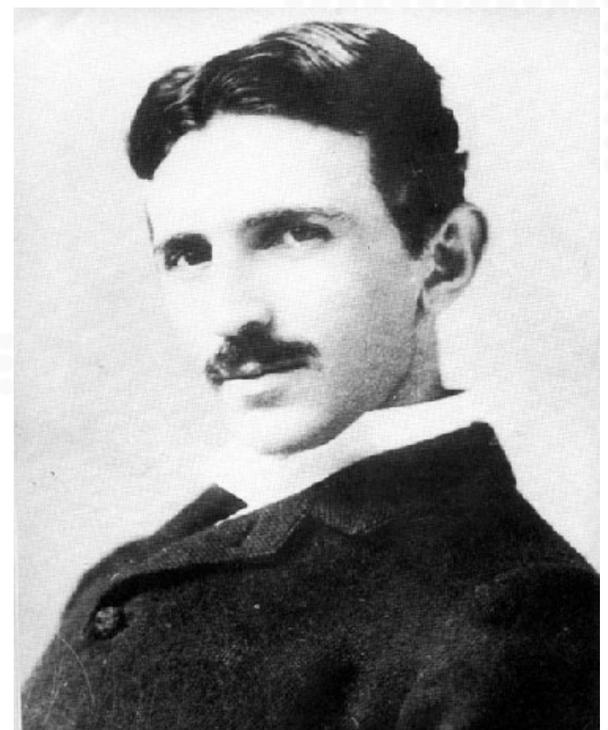
HAWKEYE is specifically designed to prevent a lightning strike from terminating where it is not wanted—in a designated area of protection. This is the only system in which lightning strikes are actively discouraged, rather than encouraged, through a process known as de-ionization. Our technology is based on existing physics and mathematical principles. As noted by IEEE engineer, Donald Zips:

“Proof of lightning rods effectiveness lies mainly in empirical and anecdotal evidence.” **HAWKEYE** technology, however, is based on existing electrical and physical formulas and mathematics based on the designs of Nikola Tesla's research and development.

Today, Seahawke Marine passes similar technology on to you!



Benjamin Franklin, circa 1752.



Nikola Tesla, circa 1890



FUNCTION & THEORY

HOW DOES IT WORK?

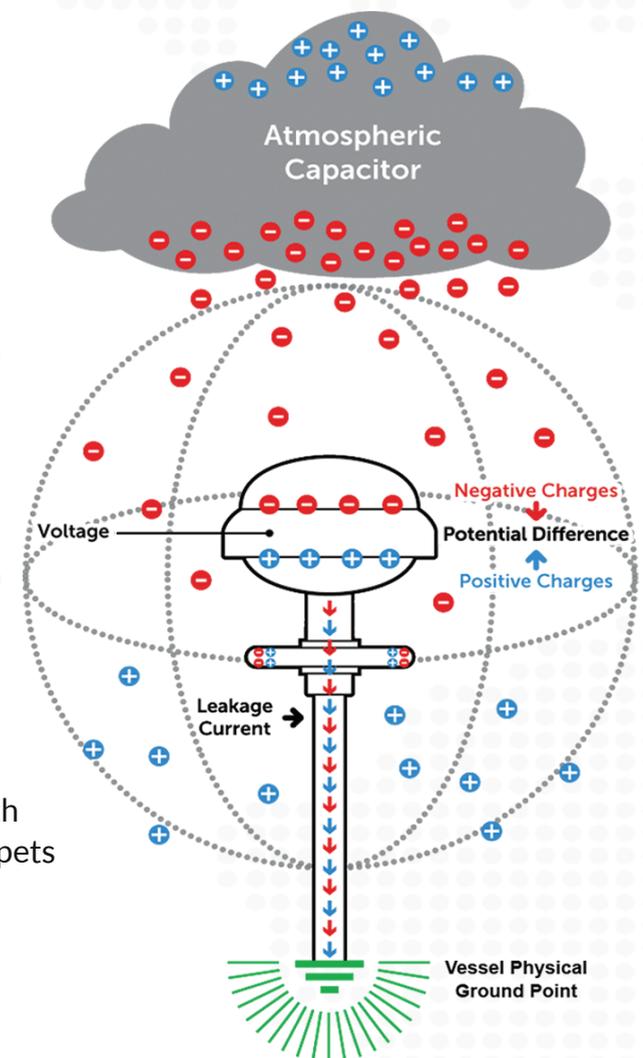
As an electrostatic current PASSIVE CAPTURING SYSTEM, **HAWKEYE** absorbs charges that appear in the surrounding electromagnetic field, arranges charges internally based on their natural form.

HAWKEYE reacts by absorbing and draining excess charges into the ground point of your vessel. This process eliminates upward streamers and prevents the development of lightning within the devices coverage radius.

To prevent lightning from striking within a specified zone, **HAWKEYE** collects the induced charge from thunderstorm clouds within this area and transfers it to the ground, thus balancing the electric field strength in the protected zone.

The resulting reduced electrical potential difference between the site and the cloud suppresses the formation of an upward streamer. With no leader-streamer connection, the strike is prevented. Our exclusive line of products have been formulated to have two main functions; one to drain the ground of its negative electricity, the other to neutralize the positive electricity of the clouds.

Lightning is a two-step process. Both steps must occur for lightning to strike. The energy in storm clouds build as it passes over the earth. Eventually the energy builds so much that it must discharge. This is known as “potential differences” as the cloud’s potential exceeds the Earth’s potential. When this happens, the cloud sends down negatively charged “leaders.” At the same time, an opposite reaction occurs on earth and positively charged items can be on boats, homes, buildings, towers, pets and people. Virtually anything can emit Upward Streamers.



- The multi-compensator design of the **HAWKEYE** enables it to dissipate the electrical field at a rate that exceeds 640,000 volts/microsecond.

- Combined with an efficient grounding system of 5 ohms or less, the **HAWKEYE** can effectively neutralize the potential difference from a building storm where lightning cannot directly strike.

- The **HAWKEYE** devices work to balance the electrical field. They constantly drain current from the field, both positive and negative and reduce the Potential Difference of building during a storm.

- This process eliminates the Upward Streamers and effectively camouflages or hides a protected structure from the Stepped Leaders that are descending from the clouds and attempting to connect to the ground.



SEAHAWKE MARINE HAWKEYE

LIGHTNING PROTECTION FOR YOUR BOAT

Protect your fixed electronics, communications, navigations systems. Hawkeye is like having an extra insurance policy for your vessel. Commercial businesses can also enjoy an extra layer of protection from mother nature. Your friends, family and pets will have a peace of mind knowing your boat is protected from deadly electrical storms.

- ✓ **AVAILABLE IN 3 SIZES**
- ✓ **REQUIRES NO POWER**
- ✓ **PASSIVE DESIGN**
- ✓ **FOR ALL VESSEL TYPES**
- ✓ **NIKOLA TESLA TECHNOLOGY**
- ✓ **STRIKE MITIGATION**
- ✓ **VIRTUALLY INDESTRUCABLE**



Super Yachts • Motor Yachts • Sailing Yachts • Sail Boats • Center Consoles



Make no mistake. Avoiding a storm by going around it or heading for shelter immediately is by far, the best method of protection. However, **HAWKEYE** is a second layer of protection that will mitigate the danger and do so without fail. You owe it yourself to invest in **HAWKEYE** and protect the things you hold most dear.

Call Seahawke Marine and discover why this remarkable and revolutionary passive lightning protection system is the latest standard in weather suppression technology.



RIGGING INSTALLATION

A typical installation requires the [HAWKEYE](#) to be mounted to a support pole fabricated from aluminum or carbon fiber. The [HAWKEYE](#) must be the highest point on the vessel, at a minimum of 3' in height.

[HAWKEYE](#) should be grounded using a #2 copper wire. Higher grade wire should be used in lightning heavy areas. The ground wire should take most direct and downward path to ground as possible and any bends in the wire should not exceed 90 degrees.

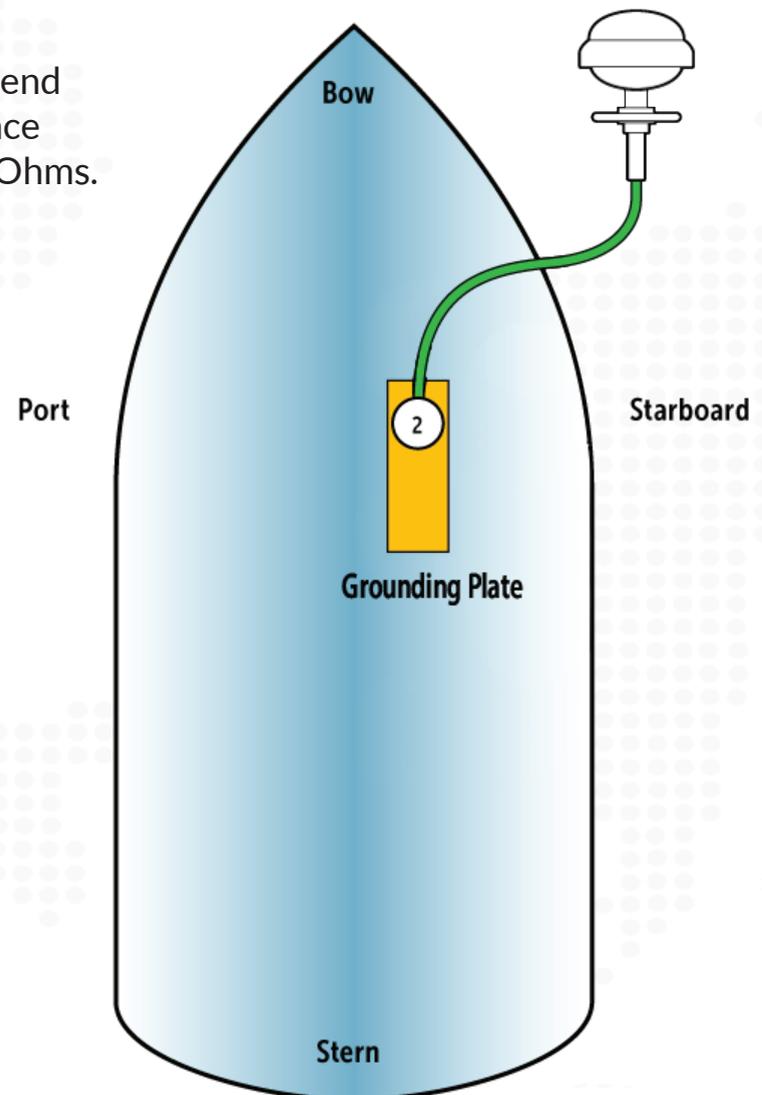
Once earthed or grounded, the ground wire should extend to grounding system/ground plate. The overall resistance of the completed ground system should be less than 5 Ohms.

Seahawke Marine is the only certified [HAWKEYE](#) installation facility. Our team sells and installs all our [HAWKEYE](#) products exclusively. We have thousands of hours of combined experience for all your rigging needs and [HAWKEYE](#) installations is no exception.



We offer on-site mobile rigging services. Whether your vessel is dry-docked or moored, we can accommodate most situations. We are heavy duty Super Yacht rigging specialist. No job too big or too small.

Seahawke Marine
4711 N Australian Ave., #15
West Palm Beach, Florida 33407
561-779-1251





OUR PRODUCT LINE

HAWKEYE MODELS

HAWKEYE requires no power so it is able to be installed on boats where the induction of power can become problematic such as oil and gas.

Cost effective and virtually indestructible, **HAWKEYE** is positioned to be the future of lightning protection. We are taking the Marine Industry by storm, offering our products to manufacturers, state, local and federal government, industry, military, oil rig platforms, cargo ships, cruise lines and more.



HAWKEYE 25

Dimensions: 6"H X 4"W
Weight: 2.2 lbs
Coverage Radius: 65ft (20m)
Coverage Area: 13,273 sq. ft.

Designed for boats up to 49 ft.
Motor Yachts, Sailing Yachts,
Center Consoles



HAWKEYE 50

Dimensions: 9"H X 6"W
Weight: 5.1 lbs
Coverage Radius: 164ft (50m)
Coverage Area: 84,496 sq. ft.

Designed for boats from 50-99 ft.
Motor Yachts, Sailing Yachts,
Center Consoles.



HAWKEYE 100

Dimensions: 15"H X 9"W
Weight: 17.1 lbs
Coverage Radius: 328ft (100m)
Coverage Area: 337,985 sq. ft.

Boats from 100 foot and up. Super
Yachts up to 350 ft. Stackable for
larger vessels.

ABOUT US



Tony Hawker, director and co-founder of Seahawke Rigging, is world renowned and highly respected due to his extensive racing experience and expertise with Superyacht Rigging. Tony and his superb team at Seahawke Rigging travel worldwide and have a great understanding of the Superyacht rigs.

Seahawke Rigging, in partnership with Rybovich Boat Company, has performed mast and rigging services on many of Perini Navi's sailing yachts, including Felicita West, Helios, Barracuda, Atmosphere, Antara, and Rosehearty's sistership Asahi.

Tony possesses over 30 years of sailing and rigging experience, focusing on the superyacht industry. As Project Manager, he has directed over 24 full refits from 30M to 56M. He has also serviced over 18 of the Perini Navi Fleet and is still actively racing onboard P-2.

Mr. Hawker has worked for several of the premier Yacht Riggers including BSI Inc/Global Rigging Service, Inc. OYS Service, Inc. and Rigging Systems International. In an attempt to expand BSI's Service offering, Tony ventured into the Motoryacht industry establishing a reputation as a premier installer of the Safety Rail/External Access Systems.

At Seahawke Rigging, our team install such systems both as new installations and as replacements to meet CE certified requirements. In 2019 we are proud to offer the worlds first Electric Field Compensator for the marine industry. A state-of-the-art lightning mitigation and passive strike prevention system - [HAWKEYE](#).



Seahawke Marine is the only supplier to carry the [HAWKEYE](#) for recreational vessels. Because of Florida's vulnerability to thunderstorms and lightning, lightning is one of the most deadly weather hazards in the Sunshine State.

Florida on average receives an estimated 1,500,000 cloud to ground strikes per year. The odds are 1 and 1000 that your boat will be hit by lightning. We offer you [HAWKEYE](#)! A strike mitigation system to protect your loved ones and investment.

We are so excited and proud of the proven technology of [HAWKEYE](#), that we are offering up to \$500,000 Guarantee. We are that confident in our products!

Sincerely,

Tony Hawker

Tony Hawker, Co-Founder Seahawke Rigging.



Seahawke Marine
4711 N Australian Ave., #15
West Palm Beach, Florida 33407
561-779-1251
www.seahawkerigging.com