



OUR COMPANY PROFILE

The **THOR GUARD** Lightning Prediction System has been manufactured in South Florida since 1976. Over the ensuing years, representing literally millions of hours of accurate and safe operations, **THOR GUARD** has consistently proven its reliability. **THOR GUARD** uses a highly sophisticated sensor and computer to measure and analyze the electrostatic field in the atmosphere. Lightning originates within this field, thus allowing **THOR GUARD** to make calculations predicting its occurrence, even though there may be no visible evidence of lightning. Lightning "detection" systems require the occurrence of an actual lightning strike before a warning is given. Many times this is just too late. Many airlines, explosive companies, government agencies, and other industrial users are utilizing **THOR GUARD** for this very reason.

THOR GUARD is the only stand alone lightning warning device used at all National Championships conducted by the United States Golf Association, the Canadian and European Golf Tours and many local sections of the PGA of America. We are the choice of Marriott Golf, the PGA Tournament Players Clubs, ABC Television Sports, and the Atlanta Summer Olympics. The flexibility of our system not only accommodates private golf facilities needing plenty of advance warning (20 or more minutes), but also public facilities looking at only 8 to 18 minutes of warning to insure revenue flow.

THOR GUARD is also highly regarded and utilized by many non-golf industries as well. Some of our significant customers include American Airlines, Delta Airlines, Air Canada, United, Fed Ex, Freeport McMoRan Mining, BHP Billiton Mining, Motorola, AT&T, and over 700 universities, schools and municipalities. From airports and ski areas to the NFL and Zoos, **THOR GUARD** can be found providing on-site, real-time lightning prediction and warning to perfection!

THOR GUARD's PREDICTION capability also minimizes false alarms, a significant departure from detection systems that are prone to unnecessary and costly shutdowns! Municipalities have also recognized the need for our early warning prediction system. Parks, pools, playgrounds, schools, and other public facilities are now relying on our system .

THOR GUARD predicts the probability of a lightning hazard in an area up to 25 square miles. More importantly, it also provides a specific reading of the risk in your immediate area. Couple the PREDICTION capability of a **THOR GUARD** with the Voice of THOR, our interactive horn warning system, and you have a true automatic advance warning package second to none!

OUR PRODUCT DEVELOPMENT HISTORY

THOR GUARD stands alone in the market as the most effective predictor of lightning within a defined area of risk. This is the result of the founders' decision, in the late 1960's, to focus research efforts on the study of the electrostatic field (the energy field of which thunderstorms are composed). The more conventional study of the electromagnetic field (the field that is affected as a result of a lightning discharge), has continued to be the focus of lightning detection systems.

THOR GUARD effectively reads the activity within the electrostatic field through a proprietary program developed after hundreds of hours of thunderstorm monitoring, and will predict the probability of a lightning strike within a predetermined area of concern. This program can also project the potential for deadly "bolts out of the blue," which are strikes that seem to come from nowhere and cause a high percentage of lightning fatalities. These are the significant technical advantages that have allowed **THOR GUARD** to become the most accurate and meaningful advance warning system of lightning potential.

Patents on the basic technology employed in the system are based on developments produced originally from 1968 to 1985 by Electrofields, Inc., the forerunner in the field of lightning prediction. Electrosensors, Inc. (now **THOR GUARD**, Inc.) purchased all trademarks and patents and an aggressive program of research and development was initiated. During the ensuing years **THOR GUARD**, Inc. has continued to upgrade the system in both practical field applications, and the science of modern day computer technology.

THOR GUARD has provided accurate and dependable lightning prediction for a broad base of clients since 1974. This represents literally millions of hours of safe operations.

HOW THOR GUARD WORKS...WHY THOR GUARD IS THE BEST...THE ANSWER IS PROACTIVE, NOT REACTIVE

SCENARIO #1 - A Heavy Shower with NO History of Lightning...

Only **THOR GUARD** is capable of predicting the DEADLY first strike! If a heavy shower approaches your location without any lightning, only a PREDICTION system can warn you if lightning is about to strike!

SCENARIO #2 - A Weakening Storm is Falling Apart Over You...

Only **THOR GUARD** is capable of predicting a DEADLY leftover strike! If another heavy shower approaches your location and it used to have lightning, but has not had lightning for the last 20 minutes or 20 miles, only a PREDICTION system can warn you if lightning is still capable of striking!

SCENARIO #3 - A Storm is Bearing Down on You...

Only **THOR GUARD** is capable of providing a warning 8-20 minutes BEFORE lightning from an approaching thunderstorm impacts your area! We do not base our warning on waiting for a strike to occur within some arbitrary distance.

SCENARIO #4 - A Storm is Just Barely Passing you by...

Only **THOR GUARD** is capable of warning you before the storm missing you throws out a side strike! Additionally, a prediction system is capable of telling you when a storm is safely passing you by...in other words, NO FALSE ALERTS!

SCENARIO #5 - The Storm is Finally Over...

Only **THOR GUARD** is capable of giving you a TRUE All Clear when it is safe to go back outside! Over 80% of Lightning Related Fatalities come from a Back Strike after the storm. Since **THOR GUARD** predicts lightning, we are the only system that can warn you of an impending Back Strike.

FREQUENTLY ASKED QUESTIONS

HOW ELSE DOES LIGHTNING "PREDICTION" DIFFER FROM LIGHTNING "DETECTION"?

Lightning "detection" systems detect the electromagnetic signatures that are the by-product of actual lightning strikes. Lightning "prediction" senses and evaluates the shifts and changes in the electrostatic field that precede the occurrence of an actual lightning strike. This is the reason why our unique lightning prediction technology has always been able to provide warning before the first strike. According to a leading lightning detection manufacturer's specification sheet, they need three strikes within 10 miles before they achieve peak operation. What if the first strike is right on top of you?

IS THERE A MINIMUM ACCEPTABLE RANGE FOR HOW CLOSE A LIGHTNING STRIKE HAS OCCURRED BEFORE SHUTTING DOWN OPERATIONS?

This is not an issue when using a THOR GUARD system because we are predicting strike probabilities for your immediate area of concern and updating the data 50 times a second.

For lightning detection systems, however, the choice of the correct range is critical. The most recent data from a 1998 study by Messrs. Holle & Lopez (Severe Storm Center) would indicate that the minimum acceptable range from the last strike should be no less than 6-8 miles. This obviously would indicate that waiting for lightning to reach the previous standard of a 0-5 mile range, is dangerous. The new data also challenges the popular "Flash to Bang" theory because lightning can rarely be seen and/or thunder heard, as far away as 6-8 miles

EXACTLY WHAT IS THOR GUARD'S ROLE WITH PROFESSIONAL AND AMATEUR GOLF AS WELL AS THE 1996 ATLANTA OLYMPICS?

THOR GUARD is the only stand-alone lightning warning system used by the USGA, Canadian and European Tours, Golden Bear Tour, Lone Star Tour, and all PGA major championships. THOR GUARD can be found at 75 USGA sections, 9 PGA sections, at all USGA National Championships, and was at every Atlanta Olympic venue except Sailing. Our system has been "tournament tested" through thousand's of hours of operation - NO False alerts - NO late notices. Don't take our word for it, check it out!

HOW MUCH ADVANCE WARNING CAN I EXPECT FROM A THOR GUARD LIGHTNING PREDICTION TO FIND APPROPRIATE SHELTER?

The THOR GUARD system has been designed to offer various sensitivity levels in order to satisfy a diverse range of client needs and geophysical locations. In a typical user-selected range (12 mile/2 miles) the system would provide 8 to 20 minutes advance warning. It is important to note that lightning does not need to be visible before a warning is given. Our unique "Field Collapse Counter" is the most accurate lightning detection method in existence today and will respond to subtle migrations of potentially dangerous energy.

INTERNET SEARCHES HAVE REVEALED A FEW ORGANIZATIONS THAT GIVE THE APPEARANCE OF BEING AUTHORITIES ON LIGHTNING. WHY DO THESE ORGANIZATIONS PROMOTE ONLY LIGHTNING DETECTION AND NOT LIGHTNING PREDICTION?

While appearing to be independent and objective, many of these associations have in fact been created to further the best interests of one company. If you look closely at the makeup of these groups, you will notice many of the same names listed as Board Members, employees and advisors. Further scrutiny will reveal an association with a dominant lightning detection manufacturer. While offering some pertinent advice on lightning, most of these organizations are critical of our products because it is in their financial best interest to do so.

IS IT TRUE THAT THERE IS NO STATISTICAL OR DATA BASED EVIDENCE THAT THOR GUARD PREDICTS LIGHTNING?

No it is not true! Actually there are several patents on the system dating back to the 1970's proving its unique abilities and adherence to a strict database system. The, further enhancement of this science is proprietary and therefore not available for publication.

WHAT IS THE DIFFERENCE BETWEEN LIGHTNING "PROTECTION" AND LIGHTNING "WARNING" DEVICES?

If you should hear that the THOR GUARD product is not a "protection" device or system, that would be correct. We offer lightning "warning" systems, not "protection" systems. According to the "Lightning Protection Institute" a lightning "protection" device provides actual protection against a strike. In this category are surge suppressors, lightning rods, grounding systems, large buildings, etc. THOR GUARD WARNS PEOPLE, BEFORE A STRIKE WILL HIT, TO GO AND SEEK "PROTECTION"! Any company that represents that a lightning detector or horn warning system is lightning "protection" does not understand the facts.

DOES YOUR SYSTEM SHUT DOWN DUE TO CLOUD TO CLOUD DISCHARGES LIKE DETECTION SYSTEMS OR IS PRONE TO GIVING FALSE ALERTS ("FALSE POSITIVES")?

No, our system does not shut down due to cloud to cloud discharges. Because we monitor the electrostatic atmosphere and compare all readings to a finite database, we seldom issue false warnings that result in out horns being activated. Do you think that all the professional golf tours and other clients would continue to utilize our products after-years of experience if we gave false-readings?

WHAT IS THE AUDIBILITY RANGE OF ONE VOICE OF THOR HORN WARNING REMOTE?

The normal range of one "horn cluster" (six, air-horns) is 700-800 yards, in a 360° pattern. Topography, tree density, air moisture content and ambient noise are all factors that will affect performance, (Example: A normal 18-hole golf layout will need (1) Base Transmitter/Horn Cluster and (2) Remote Receiver/Horn Cluster locations.

IS THE VOICE OF THOR HORN WARNING REMOTE CAPABLE OF OPERATING SOLELY ON SOLAR POWER (NO WIRES)?

More than 95% of all new installations now utilize solar power as the primary power source (not just as a backup like competitive systems). We actually prefer the solar option because access to external power is expensive and unreliable. We have also discovered that battery life (12 volt) may also be extended.