



Thor Guard Response to Weather Bug's

"Total Lightning Detection vs. Prediction"

Thor Guard has a long tradition of concentrating on the sales, research and development of our lightning prediction systems. We do not attack our competitors, but we will defend our technology when misleading competitive studies are published to further their sales. We have survived and grown for 40 years by conducting our business in an ethical and honest manner. We will continue this tradition.

Weather Bug recently released a report on their website, now being distributed to current and prospective customers, questioning Thor Guards' prediction technology. Weather Bug presents a misleading "comparative" study without relaying factually relevant and correct elements of this club in question.

Please download this study from the Weather Bug website, or use what you have been sent by the company as a guide to our response.

We know you don't want to spend hours reading through technical literature especially when it comes to "fact-correction" on studies like this. Therefore, we will correct the record by bullet points directly taken from their study and you can decide if the Weather Bug facts are real or meant to mislead you.

Sea Pines Country Club- Hilton Head (the club in question)

- L150R- RF Remote system purchased in 2001. (obviously not new as claimed By Weather Bug)
- Extensive Thor Guard service and phone call records dispute the contention that their system was deficient.
- The club ordered an additional remote horn in 2012.
- The club never asked for an increase or decrease in their system warning ranges
- Sea Pines did not have Thor Guard software products so there is no archived data on the energy levels of storms or caution, warning and red alert times.
- Comparison seems to have been preformed from a Weather Bug remote site, not equipment installed at the club.

Comparative Analysis

- A 10 mile radius of detection does not apply to Thor Guard prediction technology. It is like comparing apples to oranges.
- National weather service 10 mile “recommended distance” applies only to detection and not prediction. This range was selected because lightning can strike from 8 or more miles away. (Holle/Lopez 1998)
- Storms producing lightning 6 to 15 miles from a specific location may or may not impact that location.
- Waiting for a storm to exit an area 10 to 30 miles from the site has absolutely no bearing on a possible danger, or lack of danger at that site.
- The only true and accurate assessment of a lightning danger at any location is the size and dynamics of the lightning-producing electrostatic energy, in this case within 2 miles of the Thor Guard sensor.

Summary

- In Thor Guard’s comparative analysis, the Weather Bug network “defines” a correct alert whenever lightning strikes within 10 miles of their sensor. In these 49 storms, we contend that Thor Guard based on the limited data supplied in this study, was correct 49 times and Weather Bug only 25 times. (Notice there was no data provided on whether the lightning from each storm actually hit the Golf Course property.
- Utilizing Weather Bugs “all clear” definition of the 10 mile range, Thor Guard safely returned golfers to their game more quickly and safely in 7 storms.
- Again, the 10 mile radius applies only to detection systems.
- Many, informed National Weather Service professionals with direct knowledge of Thor Guard, recommend the Thor Guard system.
- Thor Guard “claims” are based on 40 years of continuous operations in one specific business, lightning warning, at more than 6,500 individual warning nodes around the world. Our “claims” are backed by millions of hours of documented prediction events.

The Weather Bug Total Solution Advantage

Network Approach:

- Because any single Weather Bug sensor reportedly can't work as a stand-alone system (and Thor Guard), disruption in your internet service will leave the customer vulnerable to a strike event.

Detects Total Lightning:

- The old ESID, and Weather Bug detection devices can't always accurately discriminate between cloud to cloud and cloud to ground strikes. ESID began the myth that cloud to cloud strikes always precede cloud to ground strikes. This is a totally absurd position. Sometimes they do and sometimes they do not.
- With proper AC Line protection and back-up battery supplies, a single-site system is more reliable, more accurate, and timelier than any network solution.
- Thor Guard, Thor Mobile, and Thor PCX solutions provide pre-storm alerts to anyone with FREE access to any Thor Guard running this software. Because we are prediction, this service can be described as super real time!

Know the "Facts" about Lightning Prediction

"Most Lightning Experts Agree, etc.:"

Thor Guard does not claim to predict exactly when and where a lightning strike will occur; our system will predict any lightning event within the customer-determined range of prediction.

Our Experts/ Customer Short List:

US Navy, Army, DOD, USGA, PGA, Most Major Airlines, Major Mining Facilities, NFL, not to mention thousands of golf courses, Universities, Schools, and Park Districts world wide,. Thor Guard customers are educated and informed.

National Lightning Safety Institute

This safety group was financed in the early 1990's by Global Atmospheric and its board staffed by individuals supportive of lightning detection technology. Mr. Kithill, NLSI's Director, has always taken the position, even after some of his friends "tried" to convince him otherwise, and without actual supportive data, that Thor Guard does not predict lightning.

Listed below is a summary of positions taken by the NLSI over the years. Their credibility in my opinion, with my more than 20 years in the lightning warning industry, is dubious. You be the judge and decide if any position taken by the NLSI is worth embracing.

- Mr. Kithill often claimed that the ESID detection system, manufactured by Global Atmospheric and distributed by TORO was "the best system for lightning warning available." ESID was discontinued in the mid nineties.
- Mr. Kithill has always supported, and continues to support, the 30-30 rule for lightning safety, even after the National Weather Service abandoned the practice because it was dangerous.
- The NLSI provides classes for lightning protection system installation, but is not a member of the TRUE Lightning Safety Organization, the Lightning Protection Institution. Thor Guard has been a member for over 20 years. A strange position is that the NLSI has advised some homeowners that lightning protection systems (lightning rods, etc.) will not help to protect the structure from lightning and not worth installing.
- A most ridiculous piece of safety advice is to crouch down on the balls of your feet, cover your ears with your hands, and stay there until an unexpected storm leaves your area. Try that out and see how long you can maintain that position. If you do this in an open field, YOU are the highest point and more likely to be struck than if you ran to safety.
- If Weather Bug had been in the lightning business for more than a few years, they would know better than to use any position from the NLSI to support their product offerings.

A Thor Guard Closing Note

Over the years, Weather Bug has contacted us directly two times in an effort to purchase our company. (I guess we aren't that bad after all)

Thor Guard has over 100 Colleges and Universities, and nearly 1,000 schools, all employing members of The National Athletic Trainer's Association. They all not only appreciate and rely on our technology, but also recommend us to other trainers. I have also received an award from NATA and spoken on the subject of lightning safety at a National Conference. We prove year in and year out to NATA and its members that Thor Guard delivers as claimed.

If there was ever a raging debate on prediction and detection over the last 20 years, then there is only one fact that stands upon its own merit.

One and only one company has been actively in this business over this 20-year period of discussion in the integrated lightning warning industry. Only one company has grown significantly over the last 20 years and even more so over the last 40 years!

That company is Thor Guard, only Thor Guard! I guess Thor Guard and our proprietary lightning prediction technology won the debate after all!

Read the following article on lightning in the latest issue of "Private University Products and News." I hope the article sheds some additional light on this subject.

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