

Weather related alarm trips, fact or fiction?



Empirical Evidence that the alarm industry has a problem with alarm trips during extreme weather conditions is readily available in any monitoring station during such an event. *In fact the problem is so bad that many law enforcement agencies won't even respond to alarm calls during these events.*



The cause of weather related alarm trips has been debated for years. If one looks at the equipment being distributed today the manufacturers have universally addressed this by producing equipment that is as immune as possible from transient voltage spikes. Of course that does not say that direct lightning strikes or extended power outages don't cause their share of problems. This document will briefly explore voltage issues to see how much of this may be strictly battery related.

Historically, if one goes back to the early 80's, an alarm system consisted primarily of hard points of protection such as contacts, foil or window screens and a key switch for turning the system on and off. *If these systems lost power for one second or one hour the alarm system would not trip on power restoral unless there was an open door or window.*

Today the average system is comprised of glass break sensors, motion detectors and keypads, all voltage hungry equipment. *With all of these devices if the power fluctuates and drops below the acceptable voltage for just a brief moment and the battery doesn't hold if the system is on it is going to trip.*



There is a growing line of thought that a great many of the systems experiencing alarm triggers during bad weather may actually be the result of voltage issues related to batteries and not transient voltage as was previously suspected.

In an industry that commonly does voltage calculations on fire alarm systems, rarely does anyone duplicate this basic engineering task on burglar alarm systems. A "small" system with a few motion detectors, two keypads and a few contacts

could easily be underpowered if an inadequately sized battery is installed.

To further complicate this problem in the course of servicing systems in the field technicians rarely do "load tests" on batteries, even though they could easily be the cause of phantom trip that initiated the very need for service.

There are roughly 35 million alarm systems in the US. If the recommended battery life of the system battery is even five years, this means that roughly 7 million batteries should be replaced annually just to keep up with the problem.

For the first time in the history of our industry we now have an equipment standard for panels based solely on false alarm reduction. To meet this ANSI-SIA- CP-01 Standard, panels must provide a one minute "settling out" period any time that the power drops below this threshold.



There are at least two manufacturers of battery load testers available to the alarm industry. These devices allow a service technician to quickly (within a few seconds) load test batteries in the field without the cumbersome process required to conduct similar tests with a multi-meter.

SIAC encourages you to:

- Develop a program that encourages customers to replace batteries on a scheduled basis and promote this program.
- During the course of regular service all system batteries should be fully "load" tested.
- Install only those panels that carry the UL SIA-CP-01 Listing **and** a properly sized backup battery.



"One Voice for the Alarm Industry on Alarm Management Issues"
Representing CANASA, CSAA, NBF AA & SIA

SAMPLE SERVICE EVALUATION FORM

Customer Name:

Account #

Customer Address:

Phone:

Attach central station activity to this document.

Reason for service call:

All possible reasons for false alarms:

User Error:

Control Panel:

Backup Battery:

Load Test, Results: _____

Battery Date Code: _____

Wiring:

Ohm Reading with devices: _____

Ohm reading without devices: _____

Devices on offending Zone:

1: _____

2: _____

3: _____

4: _____

5: _____

6: _____

7: _____

List corrective action taken:

Service Tech Name

Date