

## Double Knocks & Cross Zoning

*Former DSC employee spearheading company that is developing technology to eliminate a major cause of false alarms: PIR detectors* **By Paul Grossinger**

**W**hen it comes to false alarms, everyone has an opinion on what causes them.

Some people point their fingers at end users and their improper use of alarm systems, some target alarm companies for not educating end users and/or improper installation of equipment, while others lay the blame at central stations whose operators simply dispatch without deploying any verification process.

For Jim Parker, the root cause of most false alarms is PIR motion detectors, and after spending 18 years at DSC, most recently as vice-president of engineering, he probably knows a thing or two about the technology.

"[PIRs] have some inherent flaws in them," he says, adding the slightest change in environmental conditions caused by air conditioners, heaters, lightning, sunlight or insects can trigger a PIR from tripping.

With this belief in hand, and after his days at DSC ended, Parker partnered with Randall Wang, owner of E&E Electronics Research, who developed a module that would prevent false alarms triggered from the security systems his

own alarm company in California had installed.

Parker, with the assistance of several other former DSC engineers, took Wang's invention and "engineered it up" to create the eFAR100 false alarm reduction module. Based on Digital Verification Control (DVC) technology, the eFAR uses digital single-zone and multiple-zone verification processes to block a false alarm at the PIR.

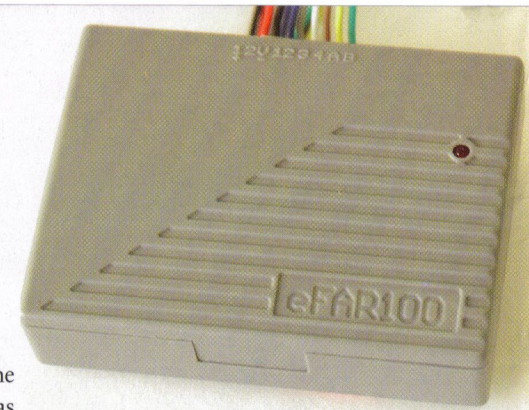
"We took the concept and made it much more simpler to install. It works with every control panel we can get our hands on or envisioned," adds Parker, a partner in E&E Systems Group, which has an office in Richmond Hill, Ont. "The module takes advantage of the fact that the chance of [certain] things occurring, in a short period of time, is extremely remote. It also takes advantage of the fact that it is highly unlikely that a true intrusion wouldn't trip a detector at least twice or two detectors at least once.

"When you add it into alarm systems, it has the ability to suppress the regular alarm signals from a PIR," he notes. "So if a PIR goes off, it knows

that, but it can fool the panel and tell the panel, there is no alarm. Because it has this capability, it can monitor PIRs independently and make separate decisions of what it considers an alarm and then tell the panel after the fact."

Through this process, eFAR, when installed, looks for a double knock (i.e., two trips on the same PIR within a 40 second period) and cross zoning (i.e., two trips on two different zones within a five minute period) before sending a signal to the control panel. It also features a lightning block capability that is based on the theory that a strong lightning strike will trip all of the PIRs on a system at the same time, which a burglar doesn't usually do. Thus, the module will not send the triggered signal to the panel.

Although it can be used in new



installations, eFAR is designed for retrofit projects, primarily because it can take a problematic site, says Parker, and solve the false alarm occurrences.

eFAR is currently available at all ADI locations, with Parker expecting additional distribution agreements completed sometime in the near future. He also foresees developing more technology that will help the industry continue to reduce false alarms.

"We want to talk about innovation — not copying, not doing me-too's," claims Parker. "We want to do something different, something that changes the yardsticks." ☺