PHARMACISTS MUTUAL INSURANCE COMPANY

SECURITY ALARM WHITE PAPER

This paper is prepared in the interest of assisting our policyholders spend their alarm dollars for the most effective systems available. Our claims experience has illustrated to us that many customers are spending their hard earned dollars on varying degrees of ineffective equipment and systems. With that in mind, the Risk Management Department of Pharmacists Mutual has prepared this brief synopsis of the elements of an effective system. Any system must be viewed on the whole; cutting corners on one facet of the system can negate the effectiveness of the whole.

Components of effective systems:

- **Master Control Panel** - the brains of the system. The MCP controls the detection, communication and annunciation capabilities of the system. Must have a battery backup to be effective in a power outage situation. The MCP will almost always have a digital keypad (or a key switch device) for arming / disarming the system and administrative purposes. Included in this will be an exit / entry delay feature to allow authorized persons to set the system appropriately within a certain time period upon entering. (This feature can also allow a system to be compromised because of the need for the MCP to be placed near an entrance likely to be used in a break-in.)
- **Sensing Devices** - sensing devices are connected to the MCP by protective loops or zones. The signals between the sensors and the MCP can be accomplished by hard-wired circuits or transmitted. Many types of sensors are available. Most effective systems use some combination of the following:
  Magnetic door contacts - used on doors and windows. Sends signal when contact is broken.
  Motion Detectors - detect movement using many different technologies. passive infrared, ultrasonic, microwave, infrared beam (continuous, visible), or the most effective, “dual technology” detectors that combine more than one of the above.
  Foil tape - usually applied to the interior surfaces of glass windows or doors. If the glass breaks, the circuit is opened and an alarm signal is sent.
  Audio Glass Break detectors - the best these days are designed to send a signal only when the low pitched thump of the blow is followed by the high pitched crash of breaking glass.
  Vibration Detectors - closely related to the glass break detectors, these sensors can be adjusted to detect abnormal vibrations in a certain zone.
  Safe alarms - any of a group of alarm sensors specifically designed to sense attacks on safes, including drilling sounds, heavy vibrations, torching, changes in capacitance, and/or tool attacks on safes.
- **Communication modules** - today these are usually digital technology connected to a Central Station alarm service which monitors the signals of many clients. The primary connection is usually over phone lines. Obviously, phone lines can be easily located and cut. That probability makes the following **extremely important** in today’s systems:

1. Inclusion of a line seizing device (such as a RJ-31X jack) which seizes an available phone line in an alarm situation even if the line is otherwise busy (or purposely being jammed by the burglars),
2. Phone line continuity protection which transmits an alarm if the phone line circuit has been interrupted, and
3. a backup communication link to the Central Station, either cellular telephone, or preferably two-way radio transmitter. (One way transmitters are also on the market but they do not provide the back and forth communication necessary to maintain line supervision.)

There are other adjuncts marketed for alarm systems today. Local alarms; sirens, horns, bells, floodlights, etc. which activate on the premises in response to a signal from one or more of the sensors; can be effective in scaring off the nonprofessional thief. Their effectiveness against the pros, however, is highly suspect. End-of-line resistors are installed on most systems. They provide circuit continuity protection if they are installed correctly. Often they are not.

Another promising new technology is the **smoke cannon** adjunct. This smoke generator floods the protected area with a dense harmless white "smoke" when triggered by the alarm system. The theory is that thieves cannot steal what they cannot see!

What should you do about your alarm system if you have a burglary? Many people simply call the alarm company that installed the alarm (which just failed to stop the burglary) to come and fix it. Obviously, it might be better to get an independent, non-biased appraisal of whether the system performed as designed. If it did, what design flaw failed to thwart the theft? If it malfunctioned, was it due to faulty installation or was there a non-performing element in the system. The point is, simply replacing what has proven ineffective is throwing good money after bad.

In conclusion, keep these **two most important aspects of any security system** uppermost in your mind:

1. The configuration, design, and installation of the system for your specific purpose and protection. A good barometer of an effective alarm company would be that they are solicitous of information regarding what needs to be protected in your particular operation, they should not simply try to sell and install their prepackaged "deluxe" model to you (and every other customer.)
2. The method of maintaining the integrity of the communication link between you and the Central Station Monitoring facility and supervised telephone line security.

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