



No. 5

False Burglar Alarms

2nd Edition

Rana Sampson



Problem-Oriented Guides for Police Problem-Specific Guides Series Guide No. 5

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About the Problem-Specific Guide Series

The *Problem-Specific Guides* summarize knowledge about how police can reduce the harm caused by specific crime and disorder problems. They are guides to prevention and to improving the overall response to incidents, not to investigating offenses or handling specific incidents. Neither do they cover all of the technical details about how to implement specific responses. The guides are written for police—of whatever rank or assignment—who must address the specific problem the guides cover. The guides will be most useful to officers who:

- Understand basic problem-oriented policing principles and methods. The guides are not primers in problem-oriented policing. They deal only briefly with the initial decision to focus on a particular problem, methods to analyze the problem, and means to assess the results of a problem-oriented policing project. They are designed to help police decide how best to analyze and address a problem they have already identified. (A companion series of *Problem-Solving Tools* guides has been produced to aid in various aspects of problem analysis and assessment.)
- **Can look at a problem in depth.** Depending on the complexity of the problem, you should be prepared to spend perhaps weeks, or even months, analyzing and responding to it. Carefully studying a problem before responding helps you design the right strategy, one that is most likely to work in your community. You should not blindly adopt the responses others have used; you must decide whether they are appropriate to your local situation. What is true in one place may not be true elsewhere; what works in one place may not work everywhere.
- Are willing to consider new ways of doing police business. The guides describe responses that other police departments have used or that researchers have tested. While not all of these responses will be appropriate to your particular problem, they should help give a broader view of the kinds of things you could do. You may think you cannot implement some of these responses in your jurisdiction, but perhaps you can. In many places, when police have discovered a more effective response, they have succeeded in having laws and policies changed, improving the response to the problem. (A companion series of *Response Guides* has been produced to help you understand how commonly-used police responses work on a variety of problems.)

- Understand the value and the limits of research knowledge. For some types of problems, a lot of useful research is available to the police; for other problems, little is available. Accordingly, some guides in this series summarize existing research whereas other guides illustrate the need for more research on that particular problem. Regardless, research has not provided definitive answers to all the questions you might have about the problem. The research may help get you started in designing your own responses, but it cannot tell you exactly what to do. This will depend greatly on the particular nature of your local problem. In the interest of keeping the guides readable, not every piece of relevant research has been cited, nor has every point been attributed to its sources. To have done so would have overwhelmed and distracted the reader. The references listed at the end of each guide are those drawn on most heavily; they are not a complete bibliography of research on the subject.
- Are willing to work with others to find effective solutions to the problem. The police alone cannot implement many of the responses discussed in the guides. They must frequently implement them in partnership with other responsible private and public bodies including other government agencies, non-governmental organizations, private businesses, public utilities, community groups, and individual citizens. An effective problem-solver must know how to forge genuine partnerships with others and be prepared to invest considerable effort in making these partnerships work. Each guide identifies particular individuals or groups in the community with whom police might work to improve the overall response to that problem. Thorough analysis of problems often reveals that individuals and groups other than the police are in a stronger position to address problems and that police ought to shift some greater responsibility to them to do so. Response Guide No. 3, *Shifting and Sharing Responsibility for Public Safety Problems*, provides further discussion of this topic.

The COPS Office defines community policing as "a philosophy that promotes organizational strategies, which support the systematic use of partnerships and problemsolving techniques, to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime." These guides emphasize *problem-solving* and *police-community partnerships* in the context of addressing specific public safety problems. For the most part, the organizational strategies that can facilitate problem-solving and police-community partnerships vary considerably and discussion of them is beyond the scope of these guides. These guides have drawn on research findings and police practices in the United States, the United Kingdom, Canada, Australia, New Zealand, the Netherlands, and Scandinavia. Even though laws, customs and police practices vary from country to country, it is apparent that the police everywhere experience common problems. In a world that is becoming increasingly interconnected, it is important that police be aware of research and successful practices beyond the borders of their own countries.

Each guide is informed by a thorough review of the research literature and reported police practice, and each guide is anonymously peer-reviewed by a line police officer, a police executive and a researcher prior to publication. The review process is independently managed by the COPS Office, which solicits the reviews.

For more information about problem-oriented policing, visit the Center for Problem-Oriented Policing online at <u>www.popcenter.org</u>. This website offers free online access to:

- The Problem-Specific Guides series
- The companion Response Guides and Problem-Solving Tools series
- · Special publications on crime analysis and on policing terrorism
- · Instructional information about problem-oriented policing and related topics
- · An interactive problem-oriented policing training exercise
- An interactive Problem Analysis Module
- · Online access to important police research and practices
- · Information about problem-oriented policing conferences and award programs

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Members of the San Diego; National City, California; and Savannah, Georgia police departments provided feedback on the guides' format and style in the early stages of the project.

Cynthia E. Pappas oversaw the project for the COPS Office. Research for the guide was conducted at the Criminal Justice Library at Rutgers University under the direction of Phyllis Schultze. Suzanne Fregly edited this guide.

The Problem of False Burglar Alarms What This Guide Does and Does Not Cover

This guide deals with the problem of false burglar alarms. It begins by reviewing factors that increase the risks of false burglar alarms. It then identifies a series of questions that might help you analyze your local problem. Finally, it reviews responses to the problem and what is known about them from evaluative research and police practice.

False burglar alarms is but one aspect of the larger set of problems related to alarms and misuse of police resources. This guide is limited to addressing the particular harms created by false burglar alarms. Related problems not directly addressed in this guide, each of which require separate analysis, include:

- Misuse and abuse of 911
- False fire alarms
- False vehicle alarms
- False robbery alarms
- Noise complaints about audible alarms

Some of these related problems are covered in other guides in this series, all of which are listed at the end of this guide. For the most up-to-date listing of current and future guides, see www.popcenter.org.

General Description of the Problem

In the United States in 2002, police responded to approximately 36 million alarm activations, at an estimated annual cost of \$1.8 billion.¹ Most of these activations were burglar alarms.[†] This guide examines current police responses and presents alternative strategies to address the false alarm dilemma. Purchasers of an alarm system are told to expect a police response to an alarm activation, even though they bought the system from a private alarm company with no link to a police department. The vast majority of alarm calls—between 94 and 98 percent (higher in some jurisdictions)—are false.[‡] In other words, alarms' *reliability*, which can be

[†] In some cities, police also respond to fire alarms. It is typical for burglar alarm calls to substantially outnumber fire alarm calls to police departments.

For example, in Dallas, Texas, of the 62,000 alarm calls in 2004, only 2.8 percent were valid (Security Sales and Integration 2005). In Salt Lake City, Utah, of the thousands of alarm calls responded to in 1999, only 0.3 percent resulted from crime (*Salt Lake Tribune* 2000). In Eugene, Oregon, from the 5,944 alarm calls in 2001, police made only 10 arrests (Salem Police Department, Burglar Alarm Task Force 2004).

measured by these rates of false activations, is generally between 2 and 6 percent. Nationwide, false alarms account for somewhere between 10 and 25 percent of *all* calls to police.² For many U.S. police agencies, false burglar alarms constitute the highest-volume type of call for service. In the United States alone, "solving the problem of false alarms would, by itself, relieve 35,000 officers from providing an essentially private service."³

During the 1990s, consolidation within the alarm industry changed the way alarm companies delivered services. Larger companies purchased smaller ones, and a number of alarm monitoring companies moved, sometimes out of state, to achieve economies of scale. For example, a company in Texas might monitor the alarms of tens of thousands of customers in Utah or other distant states.[†] When an alarm goes off, the monitoring company calls the owner. If no one answers or the person who answers gives the wrong prearranged code, the monitoring company calls the police, expecting them to respond.[‡]

An estimated 32 million security alarm systems have been installed in the United States,⁴ and most of these are monitored. The industry adds roughly 3 million new systems each year.[§] Sixty percent of those are in residences, the rest in commercial and institutional properties.⁵ Alarm industry statistics indicate that the average security system costs between \$100 and \$1,200, depending on its complexity, and monitoring fees average about \$35 per month. Some security companies offer free alarm systems because the monthly monitoring fee alone produces strong profits for the industry. At least one of every seven U.S. businesses and one of every five U.S. residences have alarms.⁶ The recent trend of wiring new residential construction with alarm capacity has the potential to significantly increase the number of alarm calls in the coming decade. Consequently, even those police agencies with recently enacted false alarm policies and ordinances should revisit their approach; otherwise, their workload may be further consumed with false alarm calls.[¶]

[†] The mergers also mean that alarm systems originally installed and serviced by one company may now be serviced by another. Many politicians, fearful of alienating their local security industry, often initially support police response to all alarms. However, the monitoring companies they are supporting may not be local at all.

[‡] A few alarm companies still respond as part of their contract with customers, but this is rare.

S Estimates of the number of new alarms installed differ (see Hakim and Blackstone 1997; Spivey and Cobb 1997; Blackstone, Hakim, and Spiegel 2000; and National Burglar & Fire Alarm Association 2005).

[¶] Arlington, Texas, between 1985 and 2001, the number of police responses to residential alarm calls increased 494 percent, and commercial alarm calls increased 186 percent, with 99 percent proving false. In 2001, alarm calls accounted for 19 percent of all dispatched calls for service (White 2002).

Alarm associations suggest that false burglar alarms are not evenly distributed: some alarm systems experience no false alarms, and others, many. In some jurisdictions, the pattern of false alarms is much more widely distributed.[†] Whether concentrated across locations or not, the aggregate number of false alarm calls among all alarmed premises places a high demand on limited police resources.

The Causes of False Burglar Alarms

Research suggests that false burglar alarms result from three main causes:

- User errors, such as using incorrect keypad codes, leaving a door or window open when activating the alarm, roaming pets or helium balloons, and errors arising from inadequate employee training, such as entering and exiting alarmed premises incorrectly^{7,‡}
- Faulty or inappropriately selected equipment
- Poor installation, including failing to install motion detectors in sensible areas or at appropriate heights[§]

These are not the sole causes. Bad weather, alarm monitoring-center mistakes, and alarm line errors also falsely signal a burglar's presence.⁸

Commercial properties tend to have even higher false alarm rates than residential properties because more people tend to share responsibility for activating and deactivating the alarm systems, and the systems tend to be more complex. The rate of false alarms for commercial alarm users may be as much as three times higher than the rate of false alarms among residential alarm users.⁹ Chronic false alarm activations are often due to inadequate employee training or inferior systems that have not been upgraded.

[†] While false alarm calls may be clustered among a relatively small number of premises in some jurisdictions, other jurisdictions have found a much broader distribution. For example, one study of a Midwestern capital city showed that 70 percent of all alarm permit holders had one or two false alarm calls (Gilbertson 2005). The Salem (Oregon) Police Department also found that a large number of locations accounted for the volume of alarm calls: 2,643 separate locations accounted for 5,688 alarm calls (Salem Police Department, Burglar Alarm Task Force 2004).

[‡] One U.K. study found that user error caused about 50 percent of alarm activations (Gill and Hemming 2003).

S The alarm industry suggests user error accounts for the largest portion of false calls, poor installation is on the decline, and faulty equipment is less of a problem given recent technological advances [International Association of Chiefs of Police n.d.(a)].

The Effectiveness of Burglar Alarms

Burglar alarms are intended to prevent burglary and to help police apprehend burglars, which, if done reliably and efficiently, benefits the public at large. If, however, burglar alarms are unreliable or inefficient, the drain on police resources from responding to them may outweigh their benefits. Here we review the evidence of burglar alarms' contribution to these two worthwhile objectives.

Studies from both the United States and the United Kingdom have shown burglar alarms to be among the most effective burglary-deterrence measures.¹⁰ However, a number of other measures that do not impose a substantial burden on police are also effective at preventing burglary. Occupancy, or signs of occupancy, is the biggest deterrent. In addition, closed-circuit television, window bars, barking dogs, nosy neighbors, and motion-activated lights have also been shown to be effective.[†] For the most part, burglars avoid alarmed premises because easier choices are usually available.¹¹ Given the availability of non-alarmed premises and similarly unprotected targets (such as houses with open garage doors or windows), burglars may be deterred by the mere presence of an alarm company's window sticker or yard sign.¹²

Do burglar alarms account for burglary declines in the United States? The U.S. burglary rate has declined steadily and substantially since the early 1980s.¹³ During the same time, the number of premises with alarms rose, but there is no evidence of a link between the two. During the 1990s through 2004, when alarm ownership experienced a steep rise, other types of crime declined just as sharply as burglary, suggesting that factors other than an increase in the number of alarm systems fueled the burglary decline.



Proper installation of alarm systems is essential to prevent false alarms.

[†] See the POP guides titled *Burglary of Single-Family Houses* and *Burglary of Retail Establishments* for more complete coverage of burglary prevention measures.

Are alarms an efficient and effective way to catch burglars? Although burglary remains one of the most frequently reported crimes, the clearance rate for U.S. burglaries has remained below 15 percent for many years.¹⁴ Clearly, whatever contribution burglar alarms are making to solving burglary cases is modest, at best.

The available research does not provide much support for alarms' value in catching burglars. One study found that police were more likely to catch burglars in the act on premises without alarms than those with alarm systems.¹⁵ Police responses to burglary calls at locations without alarms are typically the result of an eyewitness, such as a neighbor, which is more reliable than an alarm.

The Costs of False Burglar Alarms

Each false alarm requires approximately 20 minutes of police time, usually for two officers. This costs the public hundreds of millions of dollars. In the vast majority of jurisdictions, the cost of responding to false alarms is not recouped through fines. Jurisdictions trying to recoup costs generally omit the lost-opportunity costs, a potentially significant part of the equation.[†] Typical costs include:

- Personnel costs of police call-takers and dispatchers
- · Personnel, equipment, and costs related to backup personnel
- · Personnel costs associated with analyzing false alarms
- · Software, hardware, office space, and equipment costs for false alarm management
- Administrative and staff costs of notifications, permitting, billing, and education programs
- Costs of developing, printing, and distributing publications to educate the public and alarm companies about false alarms
- Lost-opportunity costs, when police are unavailable to work on actual crime problems
- Costs associated with call displacement, because the response to other 911 calls takes longer

In addition, in some jurisdictions, officers have sustained injuries or their vehicles have been damaged as the result of traffic accidents while responding to false alarm calls.

[†] Lost-opportunity costs might include time that police could have spent conducting problem-solving efforts to reduce documented crime and disorder, reducing repeat calls at crime hot spots, and engaging the community in public safety initiatives. These all compete with time spent on chronic false-alarm response.

As an inducement to buy an alarm system, a number of companies offer "free monitoring services" for the first few months. Many insurance companies offer discounts on insurance premiums to customers with operable alarm systems. These discounts may be as much as 20 percent for commercial customers, and slightly less for residential owners.¹⁶ In addition, many police departments offer several "free" false alarms before imposing any fine, even though the cost to respond is significant right from the start. The offers of free monitoring services by alarm companies and discounts from insurers call into question the appropriateness of the current trend in U.S. policing of allowing three or four free false alarms per calendar year, because they provide no up-front incentives to encourage owners to prevent false alarms.

Certain burglary prevention measures have costs only to the owner. Lights, locks, and bars installed by a property owner (if within the fire code) are cost-free to the rest of the community. The individual purchaser bears these costs. On the other hand, alarm systems are not cost-free to the community, especially if up to 98 percent of alarms are false but still require the time and resources of a police response.[†]

Another social cost of burglar alarms is the noise neighbors endure when audible alarms sound, fueling noise complaint calls to the police. Some callers seek to alert the police that a neighboring alarm has been activated. Others merely want the police to stop the noise. In many jurisdictions, legislators have passed time restrictions for audible alarms, limiting them to 15 or 20 minutes and prohibiting extra sounding cycles.[‡]

One of the hidden costs of false burglar alarms is that they can distort the proper geographic distribution of police. False burglar alarms do not necessarily concentrate in the same places where crime in general, or burglary in particular, concentrates. Burglary rates are typically much higher in urban areas than in either suburban or rural areas,[§] and residential burglaries tend to concentrate in and around low-income areas. Yet more affluent areas tend to have burglar alarms.¹⁷ In 2004, those at highest risk for burglary had household incomes below \$25,000. Those with incomes below \$7,500 were at the greatest risk, having twice the risk of households with incomes of \$75,000 or more.¹⁸ In the United Kingdom, the risk of burglary among those with household income less than £5,000 was

[†] In 2004, 86 percent of Dallas, Texas, households and businesses (representing the percent of unalarmed premises in the City) subsidized the police alarm response to the 14 percent of households and businesses that have alarms (Dallas City Council 2005).

[‡] In New South Wales, Australia, the Environmental Protection Authority prohibits the sale of building-intruder alarms produced after September 1997 that sound for more than five minutes or that can automatically reset and sound again, since police and insurance groups have reported that most burglaries are over within five minutes. See www.environment.nsw.gov.au/noise/alarms.htm.

^{\$} In 2004, the burglary rate for urban areas was higher than rural or suburban areas: 41.9 burglaries per 1,000 urban households; 27.8 per 1,000 rural households; and 23.2 per suburban households (Catalano 2005).

twice the national average.¹⁹ To the extent that calls-for-service data (which can be heavily skewed by alarm calls) are used to allocate police personnel to different areas, more officers might be assigned where there are a lot of false burglar alarms rather than where there is a lot of crime. No matter where they are assigned, officers spending time responding to false burglar alarms have less time available to attend to other crime problems.

So, while alarm systems may have some benefit for alarm owners as part of an overall security package, the question remains whether non-alarm owners in the community should shoulder a share of the cost. If alarm use resulted in enhanced public safety—that is, alarms led to much higher burglar apprehension rates or, ideally, fewer burglaries across an entire jurisdiction—its public value would be more evident. However, the fact that alarm calls are overwhelmingly false and do not contribute substantially to police ability to apprehend burglars makes the underwriting of alarm response by police and entire communities (all taxpayers subsidize police response to alarmed properties) an expensive and inefficient approach to burglary reduction across an entire jurisdiction.



User errors account for a high percentage of false burglar alarms.

Understanding Your Local Problem

Stakeholders

The following groups have an interest in the false burglar alarms problem and ought to be considered for the contribution they might make to gathering information about the problem and responding to it:

- · Community members who do not own alarms
- Alarm owners
- Private security companies
- Local government finance officials
- Public building managers
- Private alarm companies

Asking the Right Questions

The information provided above is only a generalized description of false alarms. The first step to address your community's false alarm problem is to analyze it. You must combine the basic facts with a more specific understanding of your community's problem. Careful analysis will help you design a more effective response strategy.[†] This analysis should, at a minimum, answer the following questions:

- What proportion of your department's call-for-service workload involves responding to alarms?
- What proportion of the department's alarm calls is false?
- What proportion of the department's alarm calls are burglar alarms, and what proportion of those are false?
- What proportion of the department's noise calls relate to alarms,[‡] and what are the calltaking costs for these?
- What is the department's true cost of responding to alarms (police departments should locally determine the average time spent responding to alarm calls; see "The Costs of False Burglar Alarms," on page 11)?

[†] For an example of how one city analyzed and responded to its false burglar-alarm problem, see Salt Lake City Police Department (2001), at www.popcenter.org/Library/Goldstein/2001/01-55(F), at www.popcenter.org/Library/Goldstein/2001/01-55(F). pdf.

[‡] Do not include vehicle alarms, as they are a different alarm problem requiring separate analysis.

- How many residential and commercial alarm systems are operable in your jurisdiction, and what is the anticipated growth rate for alarm installation?
- At what rate do police catch burglars at alarm calls?
- What are the numbers of false alarm calls from businesses, residences, and governmental, public, or semipublic premises (such as schools, city labs, museums, and city storage yards)?
- Are there any identifiable patterns for commercial alarm calls, such as at opening and closing times or during the holidays? (This indicates that alarm companies must educate specific groups of alarm owners.)
- Are there any identifiable patterns for residential alarm calls, such as the frequency of alarm calls that are cancelled by the owner (or alarm company) within 15 minutes of the initial activation? (This indicates the alarm company's responsibility for educating owners about proper alarm operation.)
- Do some alarm companies have higher false alarm rates than others?
- What does a review of websites for alarm companies in your area suggest about the accuracy of their claims when trying to gain new customers?
- What does a review of alarm company policies and contracts suggest about alarm companies' obligations to alarm owners?
- Has your department identified jurisdictions that have successfully reduced their total number of false alarms, not just their rates per system (see "Responses to the Problem of False Burglar Alarms," on page 19, for examples)?
- Has the department interviewed alarm company personnel to determine their perspectives on the false alarm problem, and their openness to new solutions? Has the alarm industry done an analysis to determine the most failure-prone parts of the systems installed in the area, or why so many alarm users make mistakes in activating and deactivating their alarms?
- Has the department interviewed groups of property owners (with and without alarms) to determine their perspectives on the false alarm problem, and their openness to new solutions?
- Has the department met with police union or police association leaders to determine their perspectives on the false alarm problem, their openness to new solutions, and their willingness to support a new approach?

Measuring Your Effectiveness

You should take measures of the false alarm problem *before* implementing responses, to determine how serious the problem is, and *after* implementing them, to determine whether the responses have been effective. Measurement allows you to determine to what degree your efforts have succeeded, and suggests how you might modify your responses if they are not producing the desired results. For more detailed guidance on measuring effectiveness, see the companion guide to this series, *Assessing Responses to Problems: An Introductory Guide for Police Problem-Solvers.* The following are potentially useful measures of the effectiveness of responses to false alarms:

- Reduced number of alarm calls
- Reduced false alarm numbers for various types of premises—commercial, residential, and governmental (such as schools, city labs, museums, and city storage yards)
- Reduced number of false alarm calls at high-risk times, such as at business opening and closing times, during stormy weather, or during the holiday seasons
- · Reduced number of personnel hours devoted to handling false alarm calls
- · Reduced percentage of the police department's call load devoted to false alarms
- Increased percentage of uncommitted time for officers to engage in problem-solving concerning actual crime and disorder problems
- Reduced costs of handling false alarm calls
- · Reduced false alarm rates of individual alarm companies
- Increased rate at which police catch burglars at alarm calls (if false calls are minimized and response times are improved, burglar apprehension rates should rise)

Responses to the Problem of False Burglar Alarms

Your analysis of your local problem should give you a better understanding of the factors contributing to it. Once you have analyzed your local problem and established a baseline for measuring effectiveness, you should consider possible responses to address the problem.

The following response strategies provide a foundation of ideas for addressing your particular problem. These strategies are drawn from a variety of research studies, police reports, and news articles. Several of these strategies may apply to your community's problem. It is critical that you tailor responses to local circumstances, and that you can justify each response based on reliable analysis. In most cases, an effective strategy will involve implementing several different responses. Law enforcement responses alone are seldom effective in reducing or solving the problem. Do not limit yourself to considering what police can do: carefully consider who else in your community shares responsibility for the problem and can help police better respond to it. The responsibility of responding, in some cases, may need to be shifted toward those who have the capacity to implement more effective responses. (For more detailed information on shifting and sharing responsibility, see Response Guide No. 3, *Shifting and Sharing Responsibility for Public Safety Problems.*)

This guide assumes that the alarm industry has the responsibility to improve the quality of its equipment, install devices more accurately, improve its advice to consumers about the suitability of different types of systems for different types of homes and businesses, and increase user knowledge of its products. The responses described next have some potential to reduce false alarm calls. Police policies that stimulate the alarm industry to improve its products' overall reliability are strongly preferred so as to minimize the burden on police in the effort to reduce the incidence of false burglar alarms.

Specific Responses to Reduce False Burglar Alarms

1. Requiring alarm companies to verify alarm legitimacy before calling the police (commonly called "verified response"). Under this approach, alarm monitoring companies must verify the legitimacy of alarms (except holdup, duress, and panic alarms) before calling the police. Verified response typically involves visual on-scene verification of a break-in. Verification may also be established by remote video surveillance. Audio intrusion detection technology is also available.[†] However, it is not nearly as effective as visual on-scene or video verification at this point.[‡] As for in-person verification, it is usually conducted by private security personnel who travel to the location, assess the situation, and if necessary, contact police.[§] By requiring alarm monitoring companies to screen alarm activations, police response is reserved for true break-ins, actual attempts and holdup, duress, and panic alarms. Under this approach, only holdup, duress, and panic alarms require permits, whereas burglar alarms do not, reducing the administrative costs associated with a police-staffed false alarm program.²⁰

Cities adopting verified response have found enormous decreases in the number of alarm calls, typically around 90 percent, which improves police response times to other types of calls. In 2000, Salt Lake City, Utah, adopted verified response using visual verification. By significantly reducing the number of calls to which officers needed to respond, the Salt Lake City Police Department gained an equivalent of five full-time officers, decreased the workload of call-takers and dispatchers, and decreased the response time to other calls for service. Area alarm industry representatives cited increased revenues (as a result of the service charge applied for verification) and similar sales levels to those before the verified response policy.²¹

[†] Audio intrusion detection technology relies on sensors that, when activated, transmit a signal to the alarm company whereby an operator listens to live audio from the location and decides whether to notify the police.

London's Metropolitan Police Service (2006) found that audio verification false alarm rates were 80 percent. Several cities in the United States, including Fremont (California), Salt Lake City, and Burien (Washington), have also examined audio verification versus visual/video verification and found significant false alarm rates for audio monitoring. The Fremont Police Department (2006) found a 96 percent false rate with audio monitoring in an analysis of one year's worth of audio alarms. The Salt Lake City Police Department (2006) found an 82 percent false rate on audio monitoring over several years, although the number of audio alarms calls was modest. The Burien Police Department (2006) found a 92 percent false rate on audio alarms in its review of nearly seven years of audio calls that were made from the unincorporated areas of King County, Washington, and 13 contract cities in King County.

S Private security forces in the United States outnumber sworn police officers by about four to one (Betten and Mervosh 2005). The Private Sector Liaison Committee of the International Association of Chiefs of Police, collaborating with alarm industry organizations, published guidelines for private security response but noted, "the alarm industry does not support response by other than sworn police officers, except as a final step in an escalating series of sanctions for alarm system abusers or as a supplement to response service provided by local police." [International Association of Chiefs of Police n.d.(c)].

This approach may be most feasible in more populous areas: jurisdictions with few alarm customers scattered over a large area may have difficulty securing a private resource that can deliver satisfactory and cost-effective response times.²² However, in all likelihood, police in those jurisdictions have long response times to these alarm calls. In cities adopting verified response, insurance companies continue to provide discounts to alarm owners, as it is the monitoring itself, not whether it is done by police or private security, that appears to matter.²³ Over the past few years, between 20 and 25 U.S. cities have adopted this approach, and several police agencies in Canada have done so as well.

The International Association of Chiefs of Police (supported by the National Burglar & Fire Alarm Association and the Central Station Alarm Association) recommends an approach to reducing false alarms that includes, among other things, telephone (or other electronic) verification by alarm companies and notification to alarm owners every time their alarm activates.²⁴ The difference between this approach and verified response is that the latter requires the alarm company to make visual or video verification, eliminating the police response to almost all false alarms. Common arguments against using alarm company personnel to verify alarms are that the public expects a police response and police are better trained than private security to respond to such situations.²⁵ In addition, some mass media reports of verified response policies are characterized in a light unfavorable to police, creating the impression that police are providing less effective service.

The majority of police agencies that adopted verified response had to withstand significant resistance from the alarm industry. The alarm industry has defeated verified response proposals in many other cities. Adopting a verified response policy requires an investment in educating political leaders, the public, and interested parties (alarm companies, police unions, and the media) about the costs and benefits of a modified response. It also requires alarm companies' availability for initial response to alarms.

- 2. Charging a fee for service for all false holdup, duress, and panic alarms. When an alarm is personally activated (as in a holdup, duress, or panic alarm), gaining additional verification before dispatching a police officer is unrealistic. Even though these calls would seem the most likely to be true, many will also be false. As a result, a fee for service is charged for false holdup, duress, and panic alarm calls both so that police do not have to absorb the costs of false calls and to encourage responsible handling of these alarms. Salt Lake City, Utah, has adopted a fining approach to reduce the number of false holdup, duress, and panic alarms. In the United Kingdom, a combined approach of fines, eventual loss of police service, and device reengineering is used to reduce technology-related false alarms.²⁶ Each department should conduct a separate analysis of holdup, duress, and panic alarms to identify the size and scope of the local problem.
- **3.** Responding to holdup, duress, and panic alarms only if they come from a building. This approach is intended to stem the burgeoning use of mobile personal alarms and should be used in addition to the strategies discussed above.[†] New technology has prompted entrepreneurs to market mobile alarms: some handheld, some worn on clothing, others in automobiles. If police response is promised as part of these advances, the volume of false alarm calls could increase dramatically. To combat this potential problem, police agencies can adopt policies providing for police response only when an alarm originates from a building. Salt Lake City's ordinance includes a section to address this problem, but again, a separate analysis of this problem is recommended.[‡]

[†] Those panic devices police provide to victims of ongoing crimes, such as stalking, may be exempted.

[‡] False duress calls from cell phones are similar to the problem of false mobile personal-alarm calls. With the advent of E911 Phase 2, which reveals the location of cell phone users calling 911, police agencies will face the dilemma of whether to respond to cell phone hang-up calls to 911. Most of these hang-ups are the result of unintentionally dialing 911. The 911 operator hears no caller and has to decide whether to dispatch an officer. In essence, these are the equivalent of false burglar alarms. For more information about this particular problem, see the POP guide titled *Misuse and Abuse of 911*.

Responses With Limited Effectiveness

- 4. Establishing an ordinance requiring owners to obtain alarm permits and to pay escalating fines for false alarms. Many police agencies rely on a local alarm ordinance to guide policy and establish false alarm fines.[†] Some ordinances provide for fixed fines, others include escalating fines against repeat abusers, and a few apply a cost-recovery system. Typically, fines are allocated to the general fund and not to the police budget. Invariably, alarm owners are not fined until they have several false alarms (usually three or four). Many ordinances also require alarm owners to obtain a permit. In theory, alarm permits help police departments to track and fine alarm abusers and to notify the most chronic abusers of the suspension of police response. However, some jurisdictions have found that some alarm companies do not make their customers aware of the permit requirement, and many alarm owners do not apply for required permits, which severely compromises this response's effectiveness.²⁷ This approach is administratively costly and requires continued officer dispatch (except in the most chronic cases).[‡] Some residents resent police fines for services, as they mistakenly believe their taxes cover them. As a result, it may be difficult to collect fines; collection rates can be as low as 60 percent without significant followup.²⁸ Finally, some jurisdictions have experienced initial reductions in the number of false alarms after an ordinance has been passed, but in general, these initial decreases do not endure over the long term.²⁹
- 5. Setting a cost recovery-based fee for all false alarm calls. A fee for service would cover all costs associated with responding to false alarms. These include lost-opportunity costs for officers responding to false alarms rather than proactively working on reducing crime and disorder problems.[§] A fee for service differs from a fine in that it is not punitive; it is meant only to recover costs. It is unclear whether a fee for service reduces false alarms, though it does reimburse the city for providing a police response to calls that are almost always false. Any cost-recovery policy would need to incorporate follow-up action against nonpayers.

[†] The National Burglar & Fire Alarm Association and the False Alarm Reduction Association offer guidance for jurisdictions wishing to draft an ordinance providing sample language, including definitions; registration requirements; duties of users, installers, and monitors; fines; notifications; suspensions; appeals; and reinstatement. Further, the guidance includes checklists for installers and users, and guidelines for setting fines and fees (National Burglar & Fire Alarm Association and the False Alarm Reduction Association 2001).

[‡] In 2004, the city of Dallas, Texas, spent upwards of \$650,000 administering its false alarm-reduction program involving fines and collections (Dallas City Council 2005).

S Calculating lost-opportunity costs might be less difficult for departments engaged in problem-oriented policing. Line officers in these departments proactively address specific crime and disorder problems.

- 6. Charging permit fees and fines directly to alarm companies. To lessen the administrative burden inherent in strategies requiring alarm users to obtain permits and to pay fines in the event of a false alarm, some jurisdictions charge these fees directly to the alarm installation or monitoring company. Not only does this practice ensure that all new alarms are registered with police, but it also greatly reduces the number of contacts that police alarm administrators must make. Rather than contacting thousands of alarm owners, alarm administrators make contact with a much smaller number of installers and monitoring companies.
- 7. Outsourcing the administration of permits, fines, and fees. Administering permits, fines, and fees can be cumbersome and, if not implemented properly, the deterrent value of an ordinance is lost. Automation is essential to reduce the alarm administrator's workload.[†] These administrative duties can be outsourced to a private firm in exchange for a portion of the fees.[‡] Even with outsourcing, collection rates may be only about 60 or 70 percent.³⁰ However, it is important to recognize that this response only manages, but will not solve, the problem.
- 8. Requiring alarm monitoring companies to make two calls to owners of activated systems before calling police. Most jurisdictions require alarm monitoring companies to make a single contact with the owner of an activated alarm system to learn whether the alarm was inadvertently set off during routine operations (e.g., arming or disarming the system). A practice labeled "enhanced call verification" requires monitoring companies to attempt contact using two or more phone numbers (for example, an owner's home phone and cell phone) before calling police. Jurisdictions adopting this strategy have noted modest reductions (around 25 to 40 percent) in the number of false alarm calls to police.³¹ Customer satisfaction may increase because fines for police response to false alarms are avoided. However, because alarm monitoring companies generally handle customers from many jurisdictions, they may have difficulty applying multiple policies correctly. Furthermore, not all alarm companies comply with these directives, fearing liability if police are not called to the scene when a crime is in fact occurring. It is important to note that these efforts to contact the alarm owner are not

[†] The Central Station Alarm Association developed a software package, False Alarm Analysis Program, to assist jurisdictions with the cumbersome task of administration. The software creates invoices and bills, tracks payment delinquency, and provides reports that analyze individual alarm users' false alarm rates and those of customers of individual monitoring companies. The software package also has online training. See www.csaaul.org/faap.htm. However, "off the shelf" software packages may not suit every jurisdiction's needs (Kanable 2001).

[‡] The Charlotte-Mecklenburg (North Carolina) Police Department outsourced the administration and tracking of ordinance enforcement to a private company (Mowrey n.d.). The company launched a media campaign to encourage users to register alarms and also set up a toll-free telephone number to answer questions about the local ordinance (Kanable 2001).

the equivalent of verification. The person called may be out of town or away from the location and would have no idea if their premise was being burgled. Finally, police cannot verify or enforce the "enhanced call verification" approach.

- **9.** Accepting dispatch cancellations. Some police agencies will cancel a dispatch upon request by an alarm company. The alarm company cancellation is usually based on telephone, not visual, verification. This approach can lead to decreases in the number of alarm calls, but it also inadvertently increases the number of incoming calls to dispatchers, because cancellation calls must be fielded and dispatched.[†]
- 10. Alerting alarm companies about false-alarm abusers. Some police agencies contact alarm companies with the names of customers who are false-alarm abusers. This practice can reduce false alarms if alarm companies work with alarm owners to remedy the abuse.³² This approach depends on the alarm company's willingness to follow up with its customers, and its capacity to bring abusers into line. It works best if both the alarm companies and the abusers are charged for costs. Alerting alarm companies requires police administrative staffing and police response to all alarm calls, and it may necessitate additional police resources as the number of alarm systems rises. In addition, some alarm companies may not be willing to share customer lists with police.
- 11. Setting criteria for temporarily suspending police response. After a predetermined number of false alarms, some jurisdictions withhold police response to subsequent alarm activations.[‡] Other jurisdictions will not dispatch police to locations that do not have a valid alarm permit on file. Proper implementation requires quick access to the number of prior false alarms and the permit status of the location, adding responsibilities to police call dispatchers. This response can be combined with a modified verified response policy so that either the police or a private security company respond to all alarms. Alarm owners should be warned of the intent to

[†] An evaluation of Memphis, Tennessee's, Alarm Office found that, while some alarm companies did indeed cancel alarm calls before dispatch, the practice did not have a measurable impact on the overall number of false alarms to which police were required to respond (Forde and Hellman 2004). Similarly, since Montgomery County, Maryland, enacted its alarm ordinance in 1995, alarm monitoring companies cancelled 24 percent of all requests for dispatch. While this reduced the number of false alarms to which police responded, it also increased dispatchers' workload (Montgomery County Police Department 2004).

In 2004, the Los Angeles (California) Police Department restructured its response to burglar alarms by 1) increasing fines, 2) suspending service after two false alarms in a rolling 12-month period, and 3) requiring alarm verification for all calls after suspension. In 2005, these changes reduced the number of alarm calls by about half, led to approximately the same cancellation rate, and required approximately half the number of alarm dispatches (Los Angeles Police Department 2005). The approach requires a significant amount of administrative work, including alarm permitting, false alarm classes, appeals processes, and use of a collection agency for past-due accounts [Los Angeles Police Commission, Alarms Section, Board of Police Commissioners (n.d.)].

suspend police response and should receive official notification of the suspension of services. Many jurisdictions allow owners to appeal the suspension decision and to "earn back" police response after some time. This approach can involve significant financial costs for the police in accommodating the administrative and appeal work this approach requires.

- **12.** Publishing alarm companies' false alarm rates on websites or elsewhere. Police can calculate and publish the false alarm rates of individual alarm companies to help potential buyers make informed decisions. This could prompt companies with higher false alarm rates to improve their practices, but requires significant police administrative work.
- 13. Conducting alarm users' education classes. Some police agencies hold false-alarm classes for abusers, usually with some success. These classes typically offer information on the scope of the false alarm problem in the local area and the basic functions of alarm systems, along with maintenance procedures and other practices that can help to reduce false alarm activations.[†] Many jurisdictions waive the fine incurred for a false alarm if the alarm owner attends the class. While some jurisdictions such as Phoenix, Arizona, and Bellevue, Washington, claim that as few as 10 percent of attendees have a subsequent false alarm, other jurisdictions such as Memphis, Tennessee, and Fort Lauderdale, Florida, have not experienced the same success level of success.³³ The most effective alarm education efforts are done by alarm monitoring and installation companies providing on-premises instruction so that users receive hand-on training with their own equipment.³⁴ Most often, however, police teach the alarm reduction classes offered. Representatives from alarm companies, arguably the group most knowledgeable about reducing false alarm calls, sometimes choose not to even attend. In general, alarm users' classes must lead to a dramatic reduction in the total number of false alarms in a given jurisdiction to pay for the personnel and administrative costs of operating the program.³⁵ Further, it is debatable whether police should bear the responsibility for alarm education efforts required for using a private consumer product.³⁶

[†] The False Alarm Reduction Association and National Burglar & Fire Alarm Association created guidelines for establishing an alarm users' awareness school (False Alarm Reduction Association and National Burglar & Fire Alarm Association 2000).

14. Lowering the call priority of alarms. Avoiding the political issues involved in disagreeing with the alarm industry or in battling with city or county legislators, some police agencies have simply lowered the call priority for alarms (other than holdup, duress, and panic alarms). Other jurisdictions simply issue a general alert, allowing officers on patrol to respond at their discretion. This does not reduce the number of false alarms, nor does it reduce the number of alarm calls coming into a police dispatch center.

Response Not Recommended

15. Providing an emergency police response to unverified burglar alarm calls. A number of police agencies still respond to alarm calls with their highest priority, often referred to as "priority one," authorizing the swiftest response to the call. The research does not support this level of response due to the high rate of false alarms. In addition, this approach does nothing to address the underlying causes of false alarms.

Appendix: Summary of Responses to False Burglar Alarms

The table below summarizes the responses to false burglar alarms, the mechanism by which they are intended to work, the conditions under which they ought to work best, and some factors you should consider before implementing a particular response. It is critical that you tailor responses to local circumstances, and that you can justify each response based on reliable analysis. In most cases, an effective strategy will involve implementing several different responses. Law enforcement responses alone are seldom effective in reducing or solving the problem.

Response	Page	Response	How It Works	Works Best If	Considerations
INO.	INO.				
Effective Re	esponses				
1.	20	Requiring alarm companies to verify alarm legitimacy before calling the police (commonly called "verified response")	The alarm company responds to the scene of an alarm and calls the police only if a crime has occurred or been attempted. If the alarm company is in visual contact with the alarm site, such as through CCTV, and can verify a crime or an attempt, police will respond	holdup, panic, and duress alarms are exempted; alarm companies are prohibited from classifying an alarm call as duress when it isn't; and combined with responses 2 and 3 below	Requires educating the public, police union, and media to enable police leaders to establish departmental policy, or to encourage local (and sometimes state) legislators to enact ordinances
2.	22	Charging a fee for service for all false holdup, duress, and panic alarms	Used in combination with response 1, keeps these types of alarm calls from becoming unmanageable	the alarm industry is prohibited from classifying ordinary burglar alarms as "duress" alarms, and combined with responses 1 and 3	Requires permits for holdup, duress, and panic alarms, as well as false alarm-reduction management to monitor trends in such calls

Response No.	Page No.	Response	How It Works	Works Best If	Considerations
3.	22	Responding to holdup, duress, and panic alarms only if they come from a building	For an example, see the Salt Lake City ordinance at www. slcgov.com/police. Police may make exceptions for panic alarms given to high-risk domestic violence and stalking victims	publicized so that mobile-alarm manufacturers know the police will not respond	Requires outreach to mobile-alarm manufacturers
Responses W	Vith Lim	ited Effectiveness			
4.	23	Establishing an ordinance requiring owners to obtain alarm permits and to pay escalating fines for false alarms	Requires permits for alarm owners and escalating fines for false alarms	all alarmed premises obtain required permits, the community has an extremely low number of false alarms, and officers have sufficient free time so that responding to false alarm calls does not impede their ability to work on actual crime problems	Involves significant administrative resources; collection rates may be low; may involve taking legal action against nonpayers
5.	23	Setting a cost recovery-based fee for all false-alarm calls	The city calculates the true cost of false-alarm response, including the lost- opportunity costs for police	the political climate is more supportive of fees for service than "verified response"	Involves billing and follow-up with customers who fail to pay; may involve taking legal action against nonpayers

Response No.	Page No.	Response	How It Works	Works Best If	Considerations
6.	24	Charging permit fees and fines directly to alarm companies	Reduces the number of contacts police must make to recover costs, and ensures all new alarm system owners obtain permits	alarm companies recognize the value of reduced administrative workload for police	Requires cooperation from alarm companies
7.	24	Outsourcing the administration of permits, fines, and fees	Private companies are contracted to manage the administrative burden of permitting, tracking down, and collecting fines and fees from nonpayers	permitting, fine, and fee transactions are automated	Manages, but does not solve, the false alarm problem
8.	24	Requiring alarm monitoring companies to make two calls to owners of activated systems before calling police	Provides an additional opportunity to verify the validity of an alarm by contacting owners who are not on the alarmed premises when alarm activates	alarm monitoring companies are diligent in applying policy, and alarm owners have multiple contact numbers	Monitoring companies serving multiple jurisdictions may have difficulty applying multiple policies correctly; some alarm companies fear liability if police are not called immediately
9.	25	Accepting dispatch cancellations	The alarm company verifies (usually by telephone) that the alarm was false, and then calls police, who cancel their response	established by ordinance, and alarm companies follow through	Increases the number of incoming calls dispatchers must handle

Response	Page	Response	How It Works	Works Best If	Considerations
No.	No.				
10.	25	Alerting alarm companies about false-alarm abusers	Police sort records of false-alarm abusers by company, and notify the companies	accompanied by sanctions for noncompliance; or alarm companies, along with individual alarm owners, are charged for costs	Requires police staff time to sort records, and alarm company cooperation in dealing with alarm owners
11.	25	Setting criteria for temporarily suspending police response	Police response is withheld for properties with chronic false alarms or for those premises without a valid alarm permit, and can be combined with a modified "verified response" policy	police have quick access to database containing the number of prior false alarms and permit status, and alarm owners are notified of the intent to suspend police response	Requires significant administrative effort to maintain current records of prior false alarms and permit status
12.	26	Publishing alarm companies' false alarm rates on websites or elsewhere	Police post alarm companies' false alarm rates on department websites or elsewhere	police alert alarm companies that they are going to do so, and give them time to reduce their false alarm rates before publication	Requires accurate and regular updating, perhaps quarterly. In the United Kingdom, an inspectorate monitors companies' false alarm rates. For those companies unwilling to reduce high rates, the police do not respond to alarms without evidence of a crime in progress ³⁷

Response No.	Page No.	Response	How It Works	Works Best If	Considerations
13.	26	Conducting alarm users' education classes	Police hold classes for alarm abusers to reduce the number of errors made activating and deactivating the system	classes are taught by the alarm installation and monitoring companies, and provide on-premises instruction so users receive hands-on training	If police lead classes, they must develop expertise in typical alarm systems and their false-trigger patterns; must lead to a dramatic reduction in the number of false alarms to be cost- effective; unclear what responsibility police should have for educating users of a private consumer product
14.	27	Lowering the call priority of alarms	Police code alarm calls as "low priority" for dispatch purposes	police have sufficient resources to respond to alarm calls, and local legislators are unwilling to address the problem in any other way	Does not address the underlying causes of false alarms; does not reduce the number of incoming calls to police dispatchers
Response N	ot Recom	mended			
15.	27	Providing a high priority emergency police response to unverified burglar alarm calls	Police treat alarm calls as actual emergencies, despite extensive research findings to the contrary	the community has few crime problems, and police have sufficient resources to do so	Assumes police desire full responsibility for false alarms, or the community and legislature are unwilling to accept extensive research concerning the percentage of false alarms

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Rana Sampson is a national problem-oriented policing consultant and the former director of public safety for the University of San Diego. She was previously a White House Fellow; National Institute of Justice Fellow; senior researcher and trainer at the Police Executive Research Forum; attorney; and patrol officer, undercover narcotics officer and patrol sergeant with the New York City Police Department, where she was awarded several commendations of merit and won the National Improvement of Justice Award. She is the coauthor (with Michael Scott) of *Tackling Crime and Other Public-Safety Problems: Case Studies in Problem-Solving*, which documents high-quality crime control efforts from around the United States, Canada and Europe. She is a judge for the Herman Goldstein Award for Excellence in Problem-Oriented Policing, a former judge for the police Fulbright awards, and a commissioner with California's Commission on Peace Officer Standards and Training. Sampson holds a law degree from Harvard and a bachelor's degree from Barnard College, Columbia University.

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