

## How to Lock Out Crime: Home Security—Alarms

If you are like most Canadians, you are concerned about the safety of your home and your community. One particular type of crime that worries Canadians is breaking and entering or burglary. Recent statistics show that burglary accounts for 22 per cent of all property crime.

The **How To Lock Out Crime** series, jointly prepared by Canada Mortgage and Housing Corporation (CMHC) and the Royal Canadian Mounted Police (RCMP), will make you more aware of burglary and its dynamics and show you how to minimize the likelihood that this crime will happen to you.

The **How To Lock Out Crime** series promotes a **proactive** approach to safety and security. By knowing the conditions favourable to burglars and taking steps to eliminate those conditions, you can greatly reduce the chances that your home will be burgled. Being proactive and implementing a well-thought-out plan can:

- significantly reduce the opportunity for a crime to be committed; and

- minimize the consequences—both personal and property damages—if a crime does occur.

In **Home Security 101**, you were asked to do a visual assessment of your yard and home. **Home Security—Alarms** suggests ways you can improve security around your house.

### Who needs an alarm?

A carefully selected and properly installed burglar alarm can be a worthwhile investment in security. But not everybody needs one. A burglar alarm might be a good choice if:

- You live in a remote location or where normal surveillance by neighbours is impossible.
- You have valuable or irreplaceable possessions.
- You spend prolonged periods away from home on business trips, at the cottage and so on.
- You want the additional peace of mind an alarm system can provide.

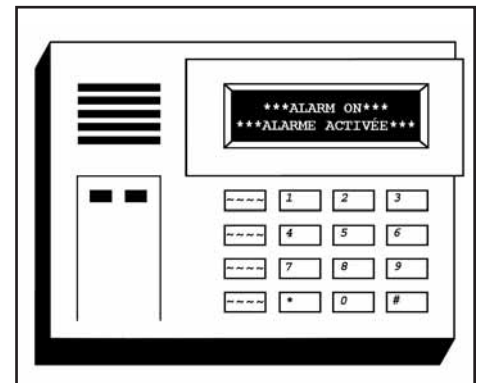


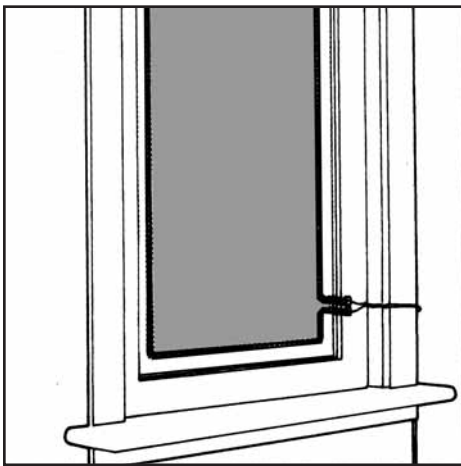
Figure 1 Alarm keypad

An alarm system is not a substitute for good physical security. In most situations, exterior lighting, sturdy doors and windows and quality locks provide better and more cost-effective protection against burglars. If you live in an “average” neighbourhood where your home is much like those around it, if your house has well-secured doors and windows and you take basic security precautions, you probably don’t need an alarm.

### Types of alarms

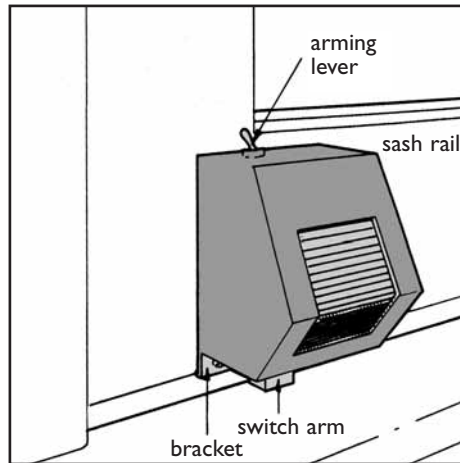
There are two types of alarms: those designed to protect doors and windows (perimeter alarms) and those that protect interior spaces (area alarms).

A *perimeter alarm system* provides protection through a network of sensors on doors and windows. A “sensor” can be a magnetic contact, strip of foil tape or a vibration detector that triggers an alarm when a door or window is opened or broken.



**Figure 2** A type of perimeter alarm will activate when the window is broken. When that happens, the foil tape tears, which breaks a circuit and sounds an alarm

Gaining in popularity are small, plastic, disc-shaped sensors that stick in the corner of a window. They sense the sound waves transmitted when the glass breaks.



**Figure 3** A battery-operated window alarm

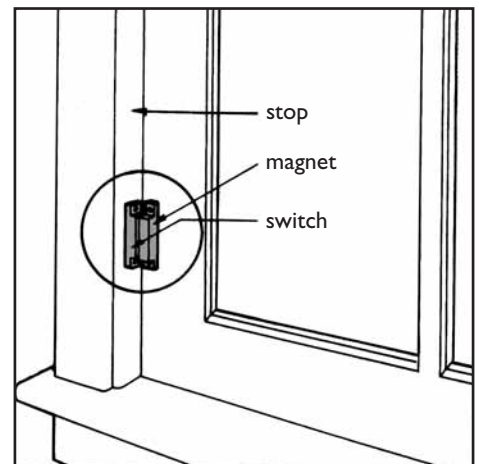
Should a burglar attempt to gain access by prying open a door or window or by smashing the glass, the alarm will be activated before the burglar can enter the home. This type of system allows residents to move freely throughout their home while ensuring a high level of protection.

Motion detectors can effectively be used in conjunction with this type of system. They act as secondary measures to ensure maximum protection when the house is empty.

An *area alarm system* relies on sophisticated electronic sensors to “sweep” a portion of a room or hallway. Sensors come in many forms with varying functions. They are all designed to respond to either changes in light, pressure, temperature, sound or movement.

- Photoelectric “eyes” trigger an alarm when a light beam is interrupted.

- Ultrasonic devices fill a room with inaudible sound waves when the sensor detects changes in the wave pattern caused when an object enters the area.
- Infrared detectors are sensitive to body heat.
- Microwave devices use high-frequency radio waves to detect motion.
- Sound sensors react to noises commonly made during a break-in.
- Proximity detectors, which sound an alarm when approached, are used to protect specific objects, such as wall safes or paintings.



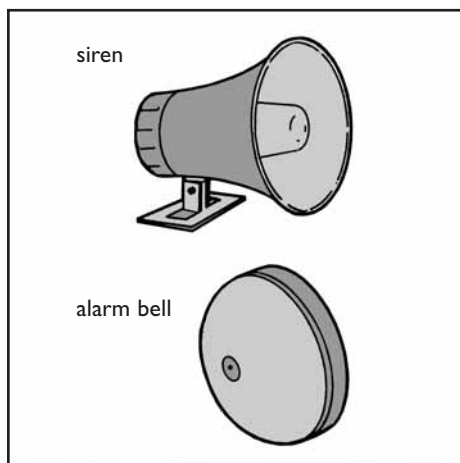
**Figure 4** Magnetic sensors are commonly used in perimeter alarm systems

In both perimeter and area alarm systems, sensors are connected, either by wires or miniature radio transmitters, to a central control panel. Wireless systems are easier

to install, but replacing the batteries that power the transmitters can be time-consuming and costly. Wireless systems are also harder to test for correct operation.

### Reporting systems

Detecting an intruder is just one function of an alarm. Making sure someone knows about it is the other part. A reporting system can be a bell, siren or horn located on the premises (local alarm), or a telephone hookup to a central monitoring station (“silent” alarm) or both.



**Figure 5** A local alarm may sound a siren or a bell

To be effective, a local alarm must be loud enough to frighten the intruder and to be heard by occupants and neighbours. Underwriter’s Laboratories of Canada (ULC) recommends a minimum of 105 decibels. Check local bylaws, which may restrict the loudness of such equipment. There is usually a delay—from 15

to 30 seconds—between the time the alarm is activated and the time the alarm sounds.

For extra protection, the alarm should also trigger the outside house and yard lighting, drawing visual attention to your home from neighbours and police.

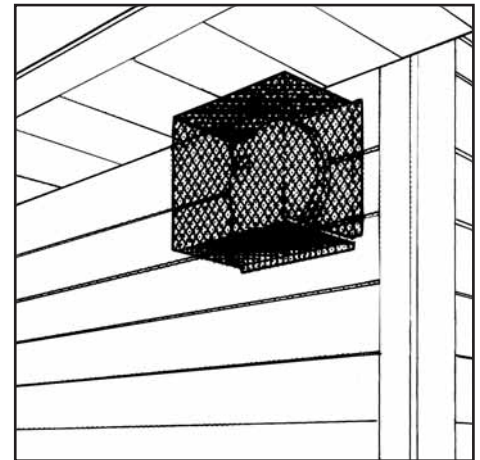
Noise-making devices should be mounted well out of reach, both inside and outside the home. They should also be housed in a steel, tamper-proof box. The alarm system should have its own protected power supply so that it functions even when power to the home is cut, accidentally or otherwise.

Carefully consider how you will respond to the alarm when it sounds. If you are at home, you might choose to investigate the disturbance yourself. If so, you risk confronting the intruder and creating a potentially dangerous situation. The best policy is to call the police from the safety of your bedroom.

When you are away, never assume that your clanging alarm will be investigated. Most people are so used to hearing sirens and horns that they will ignore them, assume that something is already being done or just pass by because they don’t want to get involved.

If you install an alarm:

- Tell your neighbours that you have an alarm and demonstrate what it sounds like.



**Figure 6** Mount alarm well out of reach and provide protection from tampering

- Obtain their agreement to phone your home if they hear the alarm to verify that the emergency is real. Tell them to call the police if there is no answer, or if the answer they receive suggests that something is amiss. It is better for the police to receive calls from several neighbours than none at all because everybody assumes that someone else has made the call.
- Consider giving your most trustworthy neighbour a key to your home. This person could accompany the police on their investigation, turn off the alarm (if it does not shut off automatically), and take charge of your home until you return.

People who are deaf or hard of hearing, who have a burglar alarm, require some method of modification when an alarm is set off. Technology exists which notifies people who are

deaf or hard of hearing with flashing alarms or a vibration device under the pillow or mattress.

Some systems include an automatic dialing device. When the alarm sounds, the device automatically dials one or more phone numbers until help is summoned. These are especially useful in remote locations where a noise-maker is unlikely to be heard. Because of the frequency of false alarms, dialers should not be programmed to call the police directly. Program them to call a neighbour, relative or friend who will in turn call the police after verifying that the emergency is real.

A “silent” alarm reports an intrusion to a central monitoring station through a secured telephone line or radio transmitter. The effectiveness of the system depends on the speed and reliability of the response. If the responding agency is located across town and it takes an investigator 20 minutes to arrive at your home, this system is of limited value.

Some systems provide both a local and silent alarm.

### False alarms

False alarms are the single biggest drawback of an alarm system. They can be caused by defective equipment, improper use, faulty installation or poor adjustment. Some alarms can be triggered by a passing truck, household pets, the draft from a hot air register or fan, or changes in temperature or humidity. Others can be set off

by an interruption in the power supply, a ringing doorbell or phone, or the neighbour’s burglar alarm. If you forget to turn the system off before entering your home, you could trigger the alarm yourself. There are as many ways for an alarm to malfunction as there are different alarms.

Every false alarm diminishes the system’s credibility. Neighbours soon become indifferent, and even police and private security agencies can become less than enthusiastic in their response. Before you decide to purchase an alarm, check with your municipality or police department about the repercussions of false alarms. In some cities, the incidence of false alarms approaches 98 per cent. Police forces have been known to impose fines on homeowners and permanently suspend service to homes with a history of false alarms.

To keep false alarms to a minimum:

- buy only good-quality equipment;
- have it installed by someone who knows how to install it; and
- use it only in ways for which it was intended.

Ensure that everyone in your household knows how the alarm functions and how it is to be used.

### Choosing an alarm system

Once you have decided that an alarm system is what you need, you must then decide which type of alarm is right for you.

Remember that a perimeter alarm acts like an early warning system, detecting an intruder who is still outside your home.

One major drawback of the area alarm is that it will alert you only after the intruder has broken in. In fact, unless you have a sensing device in every room and hallway, the intruder may spend considerable time in your home before actually setting off an alarm.

On the other hand, because of their greater sensitivity, area protectors are generally more difficult to bypass or disable. The most versatile alarm systems use motion and heat detectors in key locations to enhance a good perimeter alarm.

There is no perfect alarm system and certainly none that is right for every situation. The alarm you choose should be tailored to your specific security needs, your lifestyle and the design characteristics of your home. Some contact-type window alarms, for example, cannot be installed in older homes where window frames have warped with age. Area alarms are not suitable if they might be triggered by a pet or by a child who gets up in the night to use the bathroom. However, most systems allow for the area alarm system to be bypassed at night with the perimeter alarm remaining active.

The quality of the equipment and its installation should outweigh initial purchase price as a factor in determining which system to buy.

Buy from a dealer or agency with a verifiable record of quality installations, and one that will maintain and guarantee the equipment it sells. The Better Business Bureau, your local Chamber of Commerce, provincial licensing authorities, reputable locksmiths and people you know who have alarm systems are good sources of information about the security companies in your area.

Alarm systems can cost from less than \$50 to several thousand dollars. The old adage “buyer beware” holds—you get what you pay for. The cost of batteries, maintenance and monitoring services can also be substantial.

Consider only *what you can afford* to buy as opposed to *what you want* to buy. If you are like most people, you will no doubt have to compromise.

Before you buy, take the time to find out what the different alarm systems can and cannot do. Every system has its strengths and weaknesses. For example, area protectors are more expensive than perimeter devices, but they are much easier to install. Some need only be plugged in. However, area protectors must be carefully adjusted and aligned to ensure correct functioning and to prevent false alarms.

Ask about what features are built into the system to guard against, wire cutting and false alarms and to ensure the system works in a power outage. Here are some useful features to look for:

- exit and entry delay;
- ease of installation, adjustment and testing;

- tamper-proof control unit, noise-makers, key switch (or push-button pad) and wiring;
- manual override that lets you abort a false alarm before it sounds;
- automatic shut-off and reset;
- battery backup;
- low-battery warning;
- comprehensive instructions on use, installation and maintenance; and
- written guarantee on parts and labour.

## About Your House

How to Lock Out Crime: Home Security—Alarms

The fact sheets in the **How To Lock Out Crime** series describe various specific actions you can take to make your home less vulnerable.

**To find more About Your House fact sheets plus a wide variety of information products, visit our website at [www.cmhc.ca](http://www.cmhc.ca). You can also reach us by telephone at 1-800-668-2642 or by fax at 1-800-245-9274.**

### **Free Publications About Your House** *fact sheets*

<i>Home Security 101</i>	<i>Order No. 65527</i>
<i>Home Security—Exterior</i>	<i>Order No. 65529</i>
<i>Home Security—Doors</i>	<i>Order No. 65533</i>
<i>Home Security—Windows</i>	<i>Order No. 65535</i>
<i>Home Security—Patio Doors</i>	<i>Order No. 65537</i>
<i>Home Security—Common Sense</i>	<i>Order No. 65539</i>

### **Other publications from CMHC**

<i>Hiring a Contractor</i>	<i>Order No. 62277</i>
<i>Before You Start Your Renovation – Windows and Doors</i>	<i>Order No. 62256</i>
<i>About Your Apartment: Improving Your Security and Safety</i>	<i>Order No. 65041</i>

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