

Home Security Guidelines

Introduction

Of all the major criminal offenses, residential burglary is perhaps the most common. A burglary is reported every 15 seconds in the United States. Burglars entered more than 2.1 million homes in 1995. Two out of every three burglaries were residential in nature and at least one home in twenty in the United States was burglarized in 1995. Criminalists say that if all break-ins were reported, the number would be more like one in four. The average victim reportedly lost about \$535, but all losses typically are not listed in police reports. Sixty-seven percent of all burglaries involve forcible entry, with over half (52%) occurring during the daylight hours. Fortunately, there has been a decline in burglary rates in recent years. Residential burglary, however, continues to be a serious problem.

The Bureau of Justice Statistics defines household burglary as "unlawful or forcible entry or attempted entry of a residence." This crime usually, but not always, involves theft. The illegal entry may be made by force, such as breaking a window or slashing a screen, or may be without force by entering through an unlocked door or an open window. As long as the person entering has no legal right to be present in the structure a burglary has occurred. Furthermore, the structure need not be the house itself for a burglary to take place; illegal entry of a garage, shed, or any other structure on the premises also constitutes household burglary. If breaking and entering occurs in a hotel or vacation residence, it is still classified as a burglary for the household whose member(s) were staying there at the time the entry occurred.

The majority of residential burglaries — about 85% — are carried out by youthful amateurs, mostly males under 25 years of age, of normal intelligence, with a record of juvenile delinquency and a minimum of education. Most residential burglaries are crimes of opportunities. The burglars devote relatively little time to advance planning. If their advance checking and examination of the potential target reveals a risk greater than anticipated, they often move onto what they perceive to be a safer or easier target. Thus, the more the homeowner does to keep the home from looking like an easy target, the safer the home usually is. This chapter will provide crime prevention tips and recommendations homeowners can adopt to improve the safety and security of their residences.

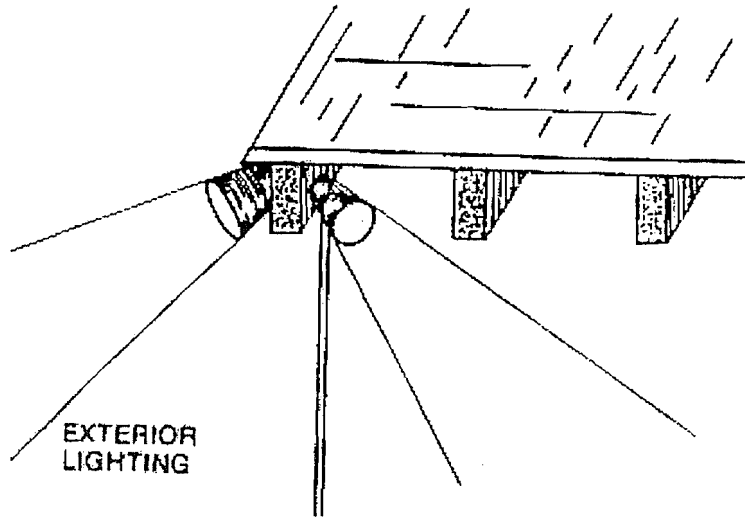
Exterior

- **Lighting**

It is a recognized fact that good lighting is a deterrent to crime. Lighting lets the homeowner see the pathway they take from their vehicle to the house. It permits them to see as they stop at the door to use their house keys. Effective lighting also forces the intruder to work in an area where he may be exposed and reported to the police.

✓ **Around The House**

All sides of the home should be protected by security lighting that is located high out of reach and is vandal resistant. The best possible location for exterior residential



lighting is under the eaves of the house. This makes ground-level assault more difficult. Such lighting should ideally be controlled by photo-electric cells that will activate them during times of darkness.

✓ **Over Entry Doors**

Each door should be equipped with a light that provides quality illumination in the vicinity of the door, including both sides of the door and porch.

✓ **Carports And Garages**

Lighting in carports and garages is critical. For garages, an automatic garage door opener is the best choice. Almost every garage door opener made today has a light that comes on when the opener is activated, lighting the interior of the garage. In carports, it is recommended either to leave the light on, have the light on a timer, or have a light connected to a motion sensor or photo electric cell.

✓ **Light Controls**

Security lighting should be automatically controlled by photocell. Unfortunately, many exterior light fixtures are controlled by an interior switch which can be — and often is — turned off by an occupant or simply never turned on in the first place. Photocell bases which screw into the bulb socket are available at minimal cost. The bulb is screwed into the photocell base. From that point on, the light will illuminate automatically as the sun goes down. To insure the light is not accidentally

extinguished, a cover can be placed over the inside switch or the switch can simply be removed altogether.

✓ **Motion Lighting**

Motion detection lighting is strongly encouraged, particularly in areas where lighting may be considered intrusive to neighbors. Costing less than \$50.00, such units are often direct replacements for existing fixtures and can be selectively aimed to detect motion of an approaching intruder and cause the light to activate. This does two things: first, the sudden presence of the light startles the intruder, leaving him exposed to view; and second, the light provides a friendly means to light pathways as the homeowner returns in the evening.

While there may be a concern that dogs, cats or birds will trigger the sensor and cause the lights to come on, if the resident sets the sensitivity of the sensor correctly, this should not be a problem.

• **Landscaping And Plant Materials**

Bushes, trees and shrubbery can conceal an intruder as he attempts entry into a window or door; or worse yet, as he waits in hiding for the homeowner! A few alterations to the home's landscaping and plant materials can be enough to discourage intruders. To avoid being seen or caught, intruders look for property they can get into and out of quickly. Their ideal target is a house surrounded by large hedges or shrubs, which serve to hamper visibility from the street and neighbor's houses.

Trim shrubbery and trees so doors and windows are visible to neighbors and from the street. Trimmed landscaping should not provide concealment for criminals. If the home has a second floor, prune trees so they can't help a thief climb in second floor windows. Place trellises where they can't be used as ladders to gain entry to upper floors.

- ✓ Ground plants (shrubbery and bushes) within four (4) feet of any sidewalks, driveways, doors or gates, should be maintained at a height of not more than two (2) feet.
- ✓ Ground plants between four (4) feet and eight (8) feet of any sidewalks, driveways, doors or gates, should be maintained at a height of not more than four (4) feet.
- ✓ Ground plants under windows should be maintained at a height that is below the window sill.
- ✓ Trees should be trimmed so that the lower branches are more than six (6) feet off the ground.

Place large gauge gravel on the ground near windows. The noise caused by an

intruder walking on it can be a psychological barrier. *Do not* place large rocks or other items near glass windows or doors. These could provide the burglar with his tools!

Plant spiny (thorny) plants along fences and under windows. Such plants will discourage the possible burglar. Protecting with spiny plants can be almost as effective as using barbed wire, and a lot more attractive. Included is a chart showing a partial list of such plants.

Gooseberry	Thorns	5-3	Sun/shade	White/green	Edible fruit
Pampas grass	Leaves	6-6	Sun	White	Fast Growth
Lisbon Eureka	Thorns	8-5	Sun	White/yellow	Fragrant flowers
Bearss	Thorns	6-5	Sun	White/green	Fragrant flowers
Needle Bush	Leaves	8-8	Sun	White	Drought tolerant
Chinese holly grape	Leaves	6-3	Shade	Yellow/blue	For narrow spaces
Calif. holly grape	Leaves	5-4	Sun/shade	Gold/blue	Drought tolerant
Hybrid holly	Leaves	6-5	Sun/shade	White/red	Self pollinating
Upright juniper	Leaves	12-6	Sun		Hedge or screen
Jerusalem thorn	Thorns	20-25	Sun	Yellow/blue	Hedge or screen
Firethorn	Thorns	15-10	Sun	White/red	Good Espalier
Dwarf firethorn	Thorns	5-5	Sun	Orange/red	Compact growth
Prostrate firethorn	Thorns	4-10	Sun	White/red	Cover for slopes
Fruiting pomegranate	Thorns	10-6	Sun	Orange/red	Edible fruit
Dwarf pomegranate	Thorns	3-3	Sun	Orange	Non-fruiting
Rasberries/blackberries	Thorns	8-8	Sun	Orange/blk/Red	Fast growth
Bush roses	Thorns	6-4	Sun	Many	Good cut flowers
Climbing roses	Thorns	12-6	Sun	Many	Fence protection
Spanish bayonet	Leaves	6-4	Sun		Drought tolerant
Dwarf xylosma	Thorns	5-4	Sun/shade	White	Glossy foliage

- **Limiting Access**

Intruders look for homes that have few or no obstacles blocking a quick exit. Fences can prevent burglars from carrying away large items if the gates are locked. Fence gates should be locked at all times, even when the owner is at home. Ladders and tools should be stored in a garage or a storage shed, and these facilities should be locked.

- **House Numbers**

House or street numbers on a home should be easily visible from the street. Critical time can be saved by emergency responders when the street address for the house is visible from a distance.

✓ **On the House**

- Use numbers made of reflective materials, or black on white, that are 6 inches high.
- Keep numbers looking new and clean and replace when necessary.

-
- The numbers should be placed under a light and near the front door or garage entrance.

- ✓ **Paint the House Number on the Curb**

- Four (4) to six (6) inch high black letters on white background is most effective.
- The numbers painted on the curb should be centered at the end of the driveway or just to the house side of the driveway.
- If the house is located along an alley, the house number should be painted on the fence outside the alley gate.

- **Utility Entry**

- ✓ **Electric Power Entrance**

Exterior electric panels often contain disconnect switches which can totally shut off power to the house. Electrical panels should be checked to insure that they are equipped with a disconnect switch lock or other provision that makes it difficult to extinguish power. The homeowner should be encouraged to install a number of wall mounted rechargeable hand-held flashlight units with base chargers at various locations in the house, including all bedrooms and primary living spaces.

- ✓ **Telephone Entrance**

Accessible lines permit telephone service, and thus the ability to call for help, can be severed by simple wire cutters. Where possible, these lines should enter the home high so as to be less susceptible to tampering. If the telephone line must remain accessible, some protection may be afforded by installing the line in rigid conduit and termination points in lockable containers. The best protection, however, is a cellular telephone that can be used should the telephone lines be taken out of service.

- **Doors**

Doors are usually the burglars first choice of entry into a home. Believe it or not, some residents leave exterior doors unlocked . . . particularly children who may be the last to leave. In other entries, the burglar simply breaks a door or a side light and reaches around to unlock a door.

- ✓ **The Door**

Exterior doors should be of solid core (wood, not composite materials) or steel, 2 3/4" thick is preferred.

Hollow core or wood panel doors can be easily broken. Such doors, however, can be reinforced by attaching at least 20 gauge (approximately 1/32" thick) sheet metal on the exterior side of the door. If this method of strengthening the exterior door is used.

attach the sheet metal with carriage bolts, spacing no further than 16" apart, around the perimeter of the door (see figure 3)

If an exterior door is equipped with glass within arm's length (about 40") of the door lock, break resistant polycarbonate glazing material (similar to plexiglass) attached to the inside of the door around the sides will provide considerable delay(see figure 4).

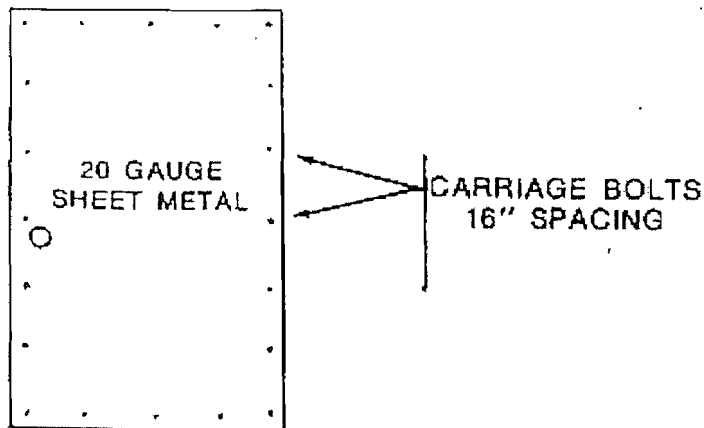
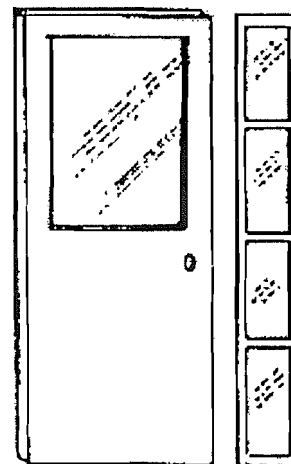


Figure 3

making the door easy to kick open. If possible, the door molding should be removed and these spaces should be filled or "shimmed" prior to mounting any new lock strikes. If the door opens inward, the stop strip should actually be part of the wood frame, not applied. The stop strip is a wood strip installed on or milled into the door jamb (it's the part of the jamb that the door closes on). If the stop has been applied (strip nailed on the jamb), pry it off carefully and coat the surfaces with epoxy cement. Then hammer the stop back in place and further secure it with tapered wood screws installed directly in front of the lock bolts. This will make it difficult for a burglar to pry up the strip and manipulate the lock from the exterior.

Entry doors should fit their frames tightly, with no more than 1/8" clearance between the door and the frame.

Door frames should be solidly anchored to the rough opening. There are often spaces left between the rough opening stud at a point midway up the door jamb. These spaces create a poor anchorage for hardware



Type: Glass in door within 40 inches of the lock.

Figure 4

- **Door Viewer**

Entry doors should have wide angle (180°) door viewers to permit the occupant to see callers without opening the door. Such door viewers are inexpensive and easy to install (see figure 5).

Door-Viewer

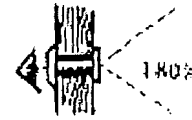


Figure 5

- **Strike Plates**

The strike plate is attached to the door frame. The metal bolt of the door

lock slides into the strike plate to secure the door to the door frame. Heavy duty strike plates, installed with long screws (ideally, at least 3"), offer good resistance against force. Strike plates and boxes should be installed with screws long enough to reach the stud behind the jamb.

Replace weak strike plate with High Security Strike Plate. Fasten with long screws. This will also strengthen the frame system.

Replace weak strike plate on wood frames with High Security Strike Box.

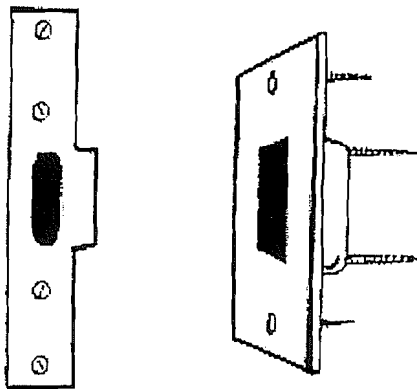


Figure 6

- **Hinges**

If an entry door swings outward, the knuckles of the hinges must be exposed and it may be possible to remove the hinge pins to gain entry. One solution to this problem is to replace hinges that have removable pins with hinges having non-removable pins (available at hardware stores).

Another solution is to remove the two opposing screws (door and frame side) from the top and bottom hinges. Then insert a large finishing nail in the screw hole on the frame side, but do not hammer the nail in all the way; instead leave the head of the nail exposed ¼" to ½" above the surface of the hinge. Close the door slowly and insure the exposed nail meets and extends into the screw hold on the opposite hinge (see figure 7).

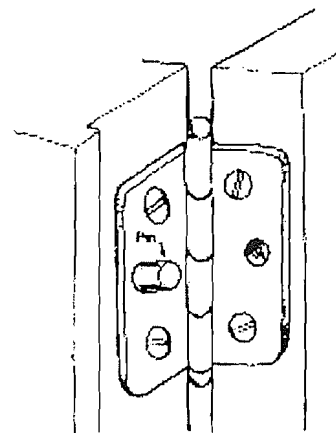


Figure 7

- Sliding Glass Doors

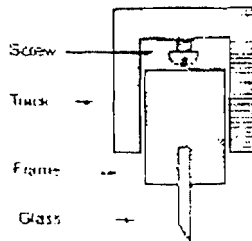


Figure 8

should be stopped by the screws before the door can clear the bottom track (see figure 8).

Sliding glass doors (sometimes referred to as acacia doors) are easy for a burglar to enter if no remedial action is taken. Often, the door panels can simply be lifted out of the tracks. To deal with this problem, open the active door and install a number of wood screws in the track, allowing the screw to project down $\frac{3}{8}$ " to $\frac{1}{2}$ " or so. Slide the door closed, making sure the extended screws pass freely over the top rail of the door. Now try to lift the door from the track; upward movement

Sliding Door

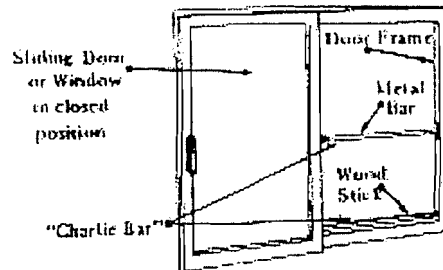
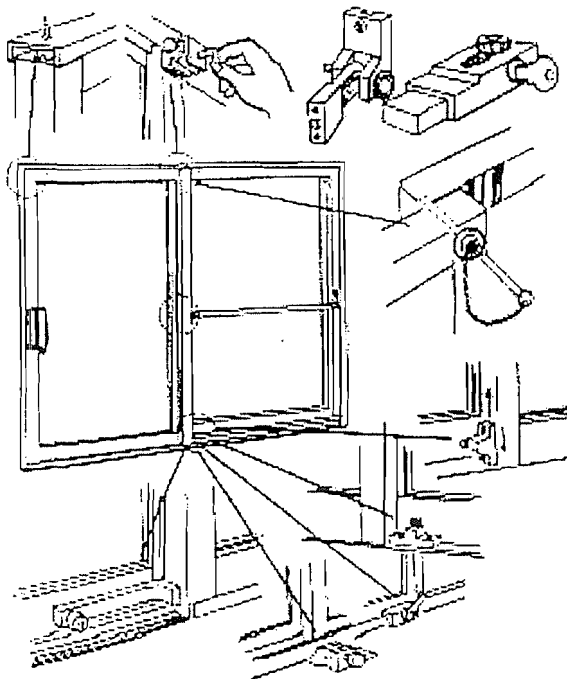


Figure 9



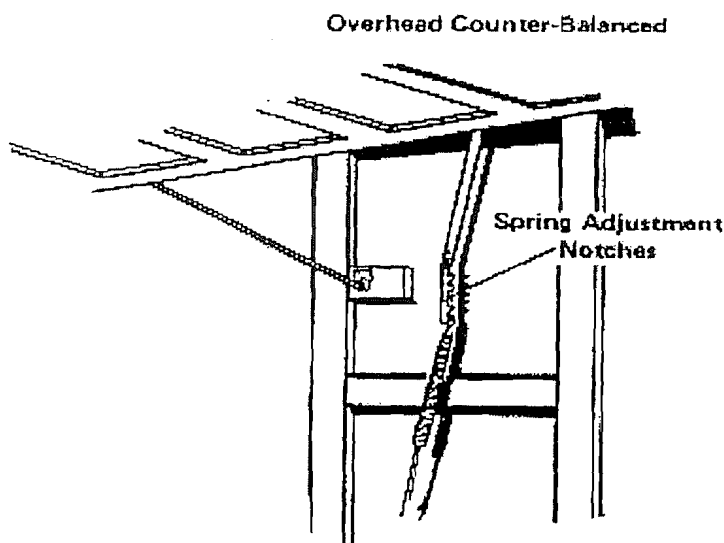
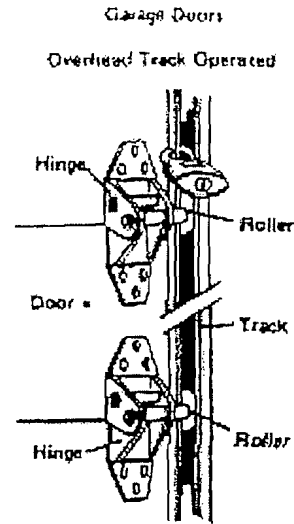
that six (6) inches (see figures 9 and 10). There are also a number of commercially produced locking devices for sliding glass doors. Those operated by keys are recommended for better security.

Once the door has been secured from lifting, an auxiliary lock is needed because more than likely, the standard lock supplied with the door is nothing more than a small hook bolt that can easily be forced open. Locking bars (commonly called the "Charlie Bar") are ideal for this purpose; but a length of dowel — an old broom or mop handle, for example — can also be placed in the bottom track to keep the door from being pushed open. The dowel should be cut to a length so it fits snugly in the track between the wall and the door frame. If ventilation is needed, another dowel could be cut a few inches shorter to permit the sliding door to be opened no greater

- **Garage Doors**

The failure to close and lock the garage door often presents the most serious security problem in the home. This should always be emphasized to the homeowner. The following are a series of recommendations related to garage door security:

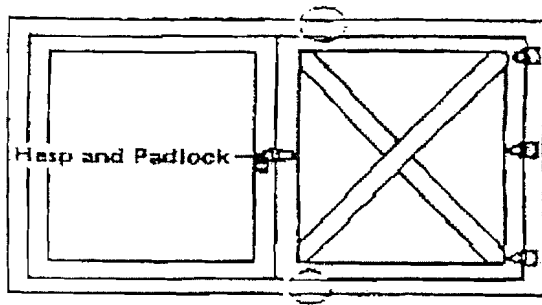
- ✓ The garage door should be locked at all times (even when the occupant is at home);
- ✓ Overhead track operated doors are best secured with electronic door openers. They should be of the type that can be disconnected from inside the garage in the event the home is unoccupied for long periods of time;
- ✓ A good case hardened padlock on which both ends of the shackle engage, should be used to secure the garage door;
- ✓ For garage doors with overhead tracking, drill holes into the track above a roller with a pin or padlock inserted through the slot;
- ✓ For garage doors that are counter-balanced, secure with two case-hardened hasps and padlocks bolted onto both sides of the door;
- ✓ For garage doors that have a double out swing, mount heavy duty slide bolts to the



inside of one door at the top and bottom to make it stationary. A case hardened hasp and padlock can then be bolted on to secure the active door to the inactive door;

- ✓ The door leading from the garage into the home should be a solid wood or metal core door and should have a good quality deadbolt lock on it;

Double Outswing Doors



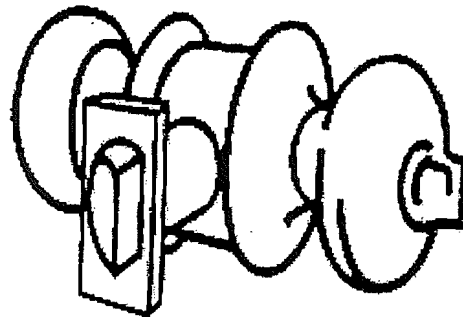
✓ If a garage door has a “doggie door,” this can be a means of access for a burglar;

✓ Homeowners should be cautioned not to leave garage door openers in vehicles parked outside, as they can obviously be used for easy access into the garage.

• Locks

✓ Key-In-Knob Lock

A key-in-knob lock offers privacy and convenience but does not offer security from intruders. They can be easily compromised by wrenching the knob with hands or vice grips, using credit cards or plastic to slip the spring bolt or by simply kicking open the door.



✓ Deadbolt Lock

A deadbolt lock can provide good protection for an entry door. When the key is turned, the lock mechanism slides a strong metal bolt from the door into the frame. When purchasing a lock, the following points should be covered:

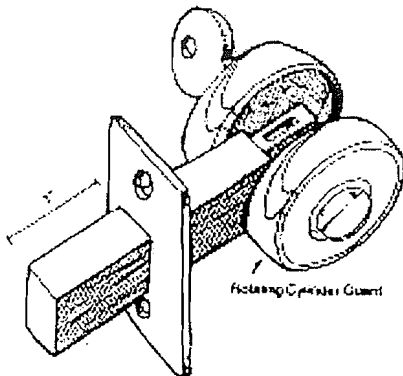
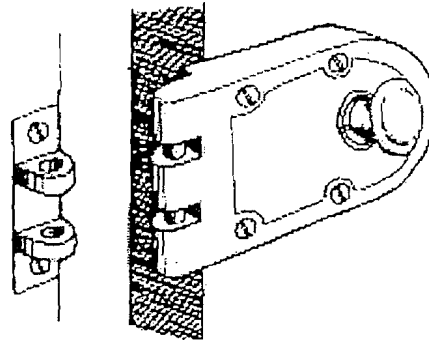


Figure 15

- The bolt should extend at least 1" from the front edge of the door (a 1" throw)
- The connecting screws that hold the lock together should be on the inside of the door.
- The strike plate should be attached to the door frame with screws that measure at least 3" in length.
- The cylinder should have a steel guard — a ring around the key section. The cylinder guard should be tapered or rotate around the key section (if twisted) to prevent wrenching.

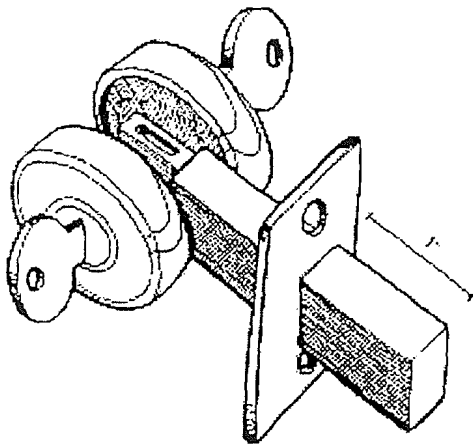
✓ **Auxiliary Rim Mounted Lock With Deadbolt**

This lock can be attached to a door's surface with long sturdy screws. The locking device on the door fits into the plate on the frame. When the key is turned, strong metal bars join the two parts of the lock.



✓ **Double Cylinder Deadbolt Lock**

This lock can be placed on doors with glass panels or on other doors, as well. The locks can be opened only with a key from either side. The key should be kept near the door but not reachable from the glass



panel. Some states and local jurisdictions have, for reasons of fire safety, passed laws or ordinances that prohibit the installation of double cylinder deadbolt locks in residences. The law in each jurisdiction should be review before they are recommended.

✓ **Keys**

Improper attention to the issue of keys can lead to a burglary. The following are suggestions to better insure keys are properly controlled:

– When someone moves into a previously occupied home, all exterior doors should be rekeyed;

- Homeowners should keep their keys secured at all times. They should take their keys with them when they leave the apartment or condominium and keep them in their pocket or purse;
- Keys should never be loaned, particularly where strangers are involved. House keys should be placed on a dual key ring that will permit easy separation from the car key. When keys are surrendered in connection with service or valet parking, only the car keys should be left.
- Keys and key rings should not be marked or identified in such a way so they can be traced to the owner. Some vehicle manufacturers and vehicle credit companies offer a lost key service that utilizes a serialized key tag. When installed on the key

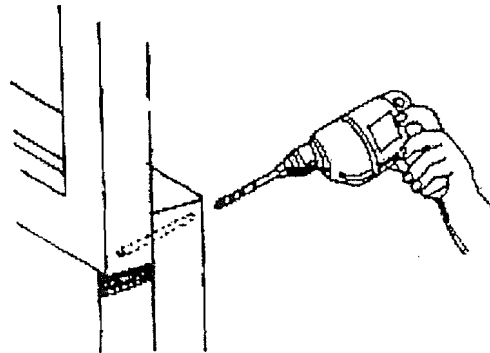
Figure 17

ring, postage cost to the service is guaranteed and upon receipt of the lost keys, the service notifies the owner of the recovery.

- Never hide a key outside. Burglars often know all the hiding places.
- Do not hang keys on hooks within plain view inside the home.
- Finally, lost or stolen keys should be reported to the appropriate law enforcement agency immediately. The affected exterior door locks should be rekeyed as soon as possible — particularly if the keys were stolen.

- **Windows**

Windows can be a way for a burglar to enter a home. The primary interest in securing windows is to eliminate entry by prying open or breaking a small area of glass to reach a single latch.

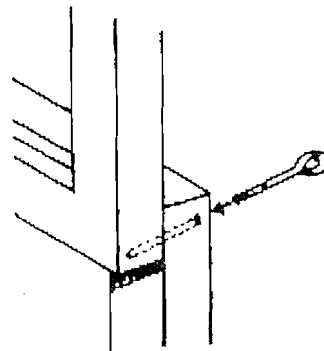


- ✓ **Double Hung Windows**

Double hung windows are the most common type of window found in homes. These units consist of two sashes that slide vertically. Factory supplied locks used on such windows are easily jimmied or pried open. They represent only temporary obstacles of the determined burglar.

A simple method to secure double hung windows is to drill a 3/16" hole from the inside window sash three quarters of the way through the outside sash at a slight downward angle. Then insert a nail or pin into the hole to secure the window. If the sash is wood, the pin can be made of such length as to set flush with the sash. A magnet kept nearby can then be used to remove the pin. It should be remembered, however, that room windows are often used as a means of escape from burning buildings and at least one window in each room should be available for such purposes (i.e. the pin should be *removable* without a magnet or tool).

Figure 18



- ✓ **Horizontal Sliding Glass Windows**

Sliding glass windows are often fabricated from inexpensive and lightweight materials. Usually, locks used to provide security are similar in quality to the

window. Like sliding glass doors, sliding glass window sashes can often be lifted from their track.

Horizontal sliding windows should be treated much the same as sliding glass doors. Header stops in the form of screws can be used to remove the space between the top rail of the sash and the track in a way that prevents the sash from being lifted from

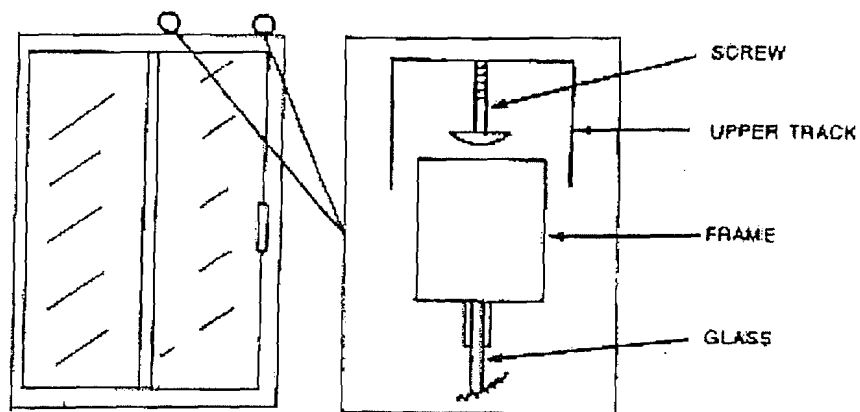


Figure 19

the track. Once this has been accomplished, a length of wood dowel or special blocking lock bar can be installed on the window to prevent the window from sliding.

In some cases, both window sashes slide independently. The outer most sash should be fixed in the track by screws and/or brackets. Once this is accomplished, the actions previously recommended can be implemented.

✓ **Casement, Hopper or Awning Windows**

These window styles generally hinge or pivot at one point and the locks used on such windows may have lever handles that actually pull the windows tightly closed. They may also have cranks located on the frame which, when rotated, extends the windows to the open position.

In most cases, the locks used with these styles are reasonably secure. To improve the security of these

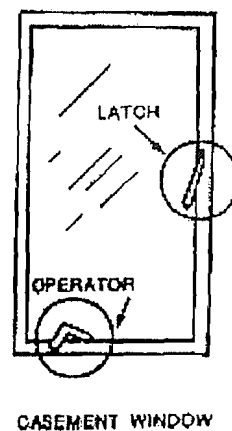


Figure 20

windows, loosen the set screw in the crank handle and remove the crank handle altogether. The evacuation issue, however, should be kept in mind.

✓ “Jalousie” Windows

“Jalousie” windows which are popular in southern climates because they permit good ventilation are generally a poor security risk. They should be replaced with solid glass or other more secure type of ventilating window. An alternative to this approach (although usually more expensive) is to cover or protect the “jalousie” window with a protective grill.

JALOUSIE WINDOWS

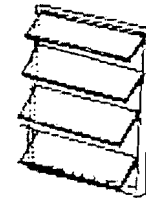
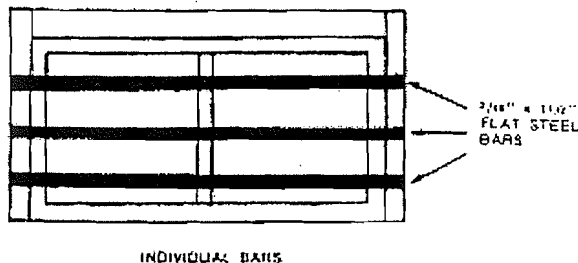


Figure 21



INDIVIDUAL BARS

Figure 22

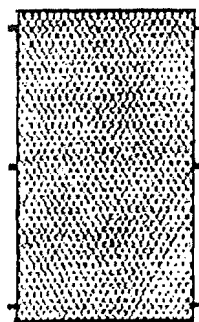
✓ Basement Windows

Basement windows in a house often represent a unique security problem. Basement windows are nearly always located at or below grade. This location makes the window difficult to secure and particularly vulnerable to intrusion. Two or three single steel bars or straps over the windows would do much to improve security; or better yet, window glass can be replaced

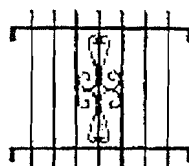
with polycarbonate material giving them extra strength to resist repeated blows while still permitting exit in an emergency.

✓ Security Bars or Grills

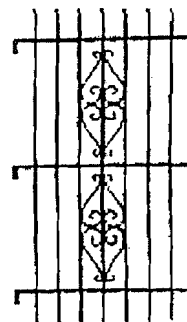
Ornamental security bars or grills covering the inside or outside of windows can be a



SECURITY SCREEN



HALF WINDOW BARS



FULL WINDOW BARS

good way to keep out burglars. If not installed correctly, however, such security precautions could trap the occupant inside during a fire emergency. If security bars or grills are installed on windows, there should be at least one window in each room that can be released or removed from the inside without a key or special tool. They should never be installed on the windows of sleeping rooms.

- **Alarm Systems**

Intrusion alarm systems ("burglar alarms") can provide valuable protection if installed correctly by a reliable vendor and above all, used responsibly. The existence of alarm systems is a major determining factor in the selection of an intruder's targets; most would prefer to go elsewhere when faced with the possibility of an alarm.

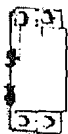
- ✓ **The Alarm System**

An alarm system is composed of three primary elements: sensors, controls and annunciation. Sensors consist of switches, motion detectors, sound or vibration detectors and other devices that are designed to "sense" the presence of an intruder, either the point of entry or when he moves within the home.

- **Sensors**

Generally speaking, a residential perimeter system provides a number of sensing devices attached to various doors and windows leading into the home.

- **Magnetic Contacts**



The most widely used types of perimeter sensing devices are called contacts. These are electromagnetic devices comprised of simple switching mechanisms. Contacts are attached to doors, windows, transoms, and other openings so that when the access is opened, the magnet moves away from the switch, and the alarm sounds.

- **Plunger Contacts**

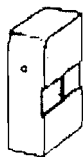


Similar in operation to magnetic contacts, plungers are concealed, recessed contact buttons generally used on doors. They operate in the same way that a hidden light switch functions on automobile and refrigerator doors.

- **Foiling**



Foil, or tape, is a ribbon of metallic material that is attached to various surfaces such as glass, door panels, walls, etc. The foil is designed to break when an attempt is made to gain entry through the surface to which it is attached, thus causing the alarm to sound.



■ Vibration or Shock Detectors

These special sensing devices are set to react to vibrations similar to those that result when an attempt is made to break the surface to which they are attached. They can be used on walls, doors and particularly on windows, but proper attention to design must be exercised for problem free operation in the home.



■ Screens

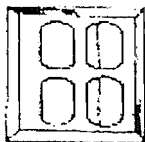
Specially designed "insect" screens are also available to cover windows and other openings. These screens contain inconspicuous, built-in alarm wire to protect against entry through the screen material, and are also installed so an alarm will sound if the screen is removed from the opening while the system is on.

While there are a great variety of interior detection devices available, only a limited number are usually considered suitable for residential use.



■ Pressure Mats

Generally used under rugs or carpets, these mats are really flat "switches" that react to pressure from footsteps. Placed on doorways, hallways, windowed areas and staircases, they can be used ideally to isolate desired areas.



■ Photoelectric Beams

When specifically designed for residential use, these beams are small and unobtrusive, and in some cases, are designed to resemble standard wall outlets. They cast an invisible infrared light beam across hallways, rooms, stairwells, etc., and when the beam is broken, the alarm sounds. Although more costly than pressure mats, the rather considerable length of beam can compensate in some installations by allowing large areas to be protected by a single device.



■ Passive Infrared Systems

This type of device measures the infrared heat generated within the protected area. An individual passing through the area, generating body heat, would be detected by the sensor. This type has proven to be more reliable than other forms of motion detection and is less susceptible to false alarms.



■ Motion Detectors (Ultrasonic, Microwave)

These devices are designed to detect motion within the specific area. They operate by filling an area with ultrasound or microwaves that are "observed" in a specific preset pattern. A person entering the pattern, in sustained motion, changes the pattern. This change triggers the alarm system. Since they are quite sensitive to a wide variety of conditions, care must be exercised in installation in order to avoid frequent false alarms. Therefore, proper attention must be paid to the location of existing air conditioning and heat vents, telephones, loose fitting windows, etc. before a decision to use these devices is made.



■ Proximity Devices

These devices are very effective in protecting specific objects such as safes, file cabinets or works of art.



■ Panic Buttons

These devices are small buttons that may be located at various spots within the home, particularly alongside entrance doors, and next to beds. Portable panic buttons that operate in a manner similar to garage door opener transmitters are also available. Such devices usually have a range between 250 - 350 feet and are most useful when the user moves from room to room within the protected area. They allow the occupant to manually activate the alarm system if they suspect an intruder. Care must be exercised in locating these buttons so they aren't pushed by children or curiosity seekers.

• Controls and Annunciation

Controls for an alarm system consist of a panel and a keypad into which a code number that arms or disarms the system is entered. Controls also perform other functions that allow flexibility in how and when an alarm system is armed or disarmed. The annunciation part of the system is the element that sounds the alert of the intrusion.

• Important Things To Look For In A Residential Alarm System

- ✓ An alarm system must have a reliable power supply. The most dependability is provided by a system that operates on household electric power, with emergency backup power provided by a battery to assure operation during power interruption. A rechargeable means of automatically reporting battery failure should be included. A service and maintenance contract that includes automatic battery replacement is highly desirable.
- ✓ Some visual or audible signal should be provided to notify or alert the homeowner of a malfunction in the system prior to operation.
- ✓ Any components that can turn the system on or off or render it otherwise inoperative or ineffective should be tamper resistant.
- ✓ All components and installation methods should meet the requirements of all applicable local standards, regulations and codes.
- ✓ An installed alarm system should carry a warranty covering parts and labor, from both the manufacturer and installer for a period of no less than one year from the date of installation.
- ✓ The installation company should by contract be required to provide service and repairs on a prompt basis.

- ✓ Upon installation of an alarm system, the homeowner should be thoroughly knowledgeable of what it does and what it does not do. They should be made familiar with all the details of operating the system and receive verbal as well as written instructions covering all possible circumstances involving the alarm system.

- **Selecting The Right Alarm Company**

The alarm installation field is one of the country's fastest growing industries. While there are many experienced, reputable and reliable alarm installation companies, there are also those that are less than reputable and who will take advantage of the homeowner.

An alarm installation company should ideally be well established and have a verifiable record of successful operation. To check on an alarm installation company, the homeowner can possibly contact the local police and fire departments, the Better Business Bureau, the Consumer Protection Agency or the Chamber of Commerce. This background checking should be done *before* the company is invited into the home.

Employees of an alarm installation company who have access to a home should be bonded. It is also advisable to obtain a list of satisfied customers and to contact them directly.

- **Inexpensive Alarm Protection**

There are a number of self-contained alarm systems useful to the homeowner who does not want the benefits of a full-featured, professionally installed system. These small units can be installed on a wall in a corridor or near a protected door or window and sound a loud local alarm if violated. It should be noted, however, that such devices are intended only to alert occupants and to startle an intruder; they should not be used for, nor are they intended to be used to call the police.

- **False Alarms**

A large percentage of electronic alarms reported to police departments are false. For the sake of publication, a "false alarm" is defined as any alarm activation *not* caused by an intruder. False alarms waste police resources, add unnecessary risk to the responding officers and the public in general.

- ✓ **How To Reduce False Alarms**

The following are measures or steps the occupant or tenant can take to reduce false alarms in multi-residential housing:

- If the occupant accidentally activates the alarm, they should advise their alarm monitoring company immediately. They need to memorize their pass code.
- All alarm users should be trained to use the system and know the codes to arm and disarm the system; including how to cancel a false alarm.

-
- All loose fitting doors and windows with sensors should be tightened. A loose fit may break the sensor contact, even without opening the door/window. Hinges and strike plates should be adjusted so the door can move no more than 1/4".
 - Do not have anything that will move (pets, plants, balloons, etc.) or stir the air (fans and heaters) in a room that is protected with a motion detector.
 - Have wide-gap sensors installed on all doors.
 - Have the sensitivity settings on motion detectors and glass-breaking sensors adjusted so unwanted sounds or items do not activate them.
 - If an alarm system is activated by a storm, it should be subsequently checked and adjusted.
 - It can be arranged for an alarm monitoring company not to dispatch the police for interior motion sensor activations without having other sensors activated. This is known as "double sensor" dispatching.
 - If an alarm system is more than five years old, the equipment should be evaluated for upgrading or updating.
 - Finally, after an alarm system has been activated, the occupant should wait a few moments to insure the alarm system activated itself properly.

Biological Alarm

The earliest "alarm systems" used by man to detect intruders were his animals. An alarm, after all, is basically a device to discover the presence of an intruder and sound a warning — a dog may possibly be a good alternative for this purpose. A noisy, little dog can be a very inexpensive, very effective intrusion detection alarm. Food, water and affection can produce an alert, mobile, self contained alarm system which may be as effective as an electronic home alarm.

Security Closet

Each home should ideally have a security closet, for storage of firearms, silver, cameras, coin collections, etc., within it. This closet should have load bearing walls on as many sides as possible. Heavy plywood should be installed on the inside (plasterboard) walls. The security closet should have a solid core door, a heavy duty deadbolt, high security strike and non-removable hinge pins. If the home has an alarm system, the closet door or interior should be alarmed.

Home Safes

If a homeowner utilizes a safe for securing money or valuables, the safe should have a Underwriters Laboratories (UL) burglary resistant label on it. This UL label means that the safe model has been tested to resist attacks of a specific nature for a certain number of minutes,

Fire resistant chests and files also have UL ratings which indicate an endurance to fire in minutes or hours. Many people do not know the difference between fire resistant safes or chests and money safes.

Safe Deposit Boxes

Homeowners should be strongly encouraged to rent a safe deposit box in which to store: 1) compact items of extreme value, such as diamonds or others expensive jewelry, heirlooms, and stamp and coin collections; 2) flammable documents such as legal papers, certificates, stocks and bonds, insurance policies, contracts and inventory and photos of household goods. Depending upon the special needs of the homeowner, the following is a list of the type of documents that should be stored in a rented band safe deposit box:

- | | |
|--|-----------------------------------|
| ✓ Stock and bond certificates | ✓ Income tax records |
| ✓ Mortgages, property titles and deeds | ✓ Health records |
| ✓ Birth, marriage and death certificates | ✓ Insurance policies |
| ✓ Passports Pension plans | ✓ Household inventory |
| ✓ Military discharge papers | ✓ Citizenship and adoption papers |

If There is a Death in the Family

Some burglars read obituaries and know people will be gone from the home during a funeral. If there is a death in the family, arrangements should be made for a house-sitter the day of the funeral.

Operation Identification

The homeowner should participate in Operation Identification (see Chapter Twenty-Seven for more detailed information about Operation Identification), if it is offered by the local police or sheriff's department. If Operation Identification is not locally offered, they should purchase an engraver on their own.

The homeowner should engrave their social security number (preceded by their state abbreviation) on items of value such as TV's, stereos, VCR's, cameras, sporting equipment, tools, etc. They should photograph unmarkable items such as china, silver or jewelry.

The homeowner should make a complete inventory of household goods, including serial numbers of valuables. The inventory and a photo or videotape of the items should be secured in a rented band safe deposit box.

Vacation Crime Prevention Checklist

Burglars look for homes that give the appearance that the homeowner is away for an extended period of time, such as a vacation. The following crime prevention tips or recommendations are designed to allow vacationers to return to a secure residence.

- ✓ Discontinue any deliveries to the home by phone or in person ahead of time. Do not leave notes.
- ✓ Either discontinue mail and newspaper delivery or have a neighbor or friend pick them up *daily*.
- ✓ Inform neighbors of your absence so they can be extra alert for suspicious persons. Leave a key with them so the house can be inspected. Tell them where you will be so you can be contacted in the event of an emergency while you are gone. Possibly ask them to vary the positions of the shades and blinds in the house.
- ✓ If you have a motor vehicle that is not garaged, arrange for it to be moved from time to time while you are gone.
- ✓ A winter vacation tip — arrange to have someone to walk up your front walkway and house steps after a snowfall to make the house appear occupied.
- ✓ Arrange for someone to mow your lawn, rake leaves and maintain the yard to give the home a lived in look.
- ✓ Do not publicize vacation plans before hand. Burglars can read the newspaper, also.
- ✓ If your local police or sheriffs department has a home vacation program, notify them when you plan to be away.
- ✓ Leave your blinds, shades and curtains in a normal position. Don't close them unless that's what you do when you are at home.
- ✓ Have a neighbor place garbage cans at the curb on your normal pickup day(s) and return them after the garbage pickup is made.
- ✓ Plug in timers to turn lights and a radio or television on and off at appropriate times.
- ✓ Turn the bell or ringer on your telephone down low. If a burglar is around, he won't be alerted to an absence by a ringing telephone.
- ✓ If the homeowner has call forwarding on their telephone, they should forward their

If they are available, Operation Identification stickers should be placed on the front door, front window or other clearly visible location *after* the items of value have been engraved.

Neighborhood Watch

Neighborhood Watch (see Chapter Twenty-Six for more detailed information about Neighborhood Watch) is a crime prevention program that uses citizens, in cooperation with law enforcement, to reduce crime in their communities. It involves neighbors getting to know each other, taking the time to watch out for each other, and working together in a program of mutual assistance.

Neighborhood Watch is an effective means of reducing residential burglaries. By participating in Neighborhood Watch, the homeowner will learn:

- ✓ Effective crime prevention techniques for home safety and security.
- ✓ How to become law enforcement's "eyes and ears" and help them provide security to residential areas.
- ✓ How to report a crime: what to look for, how to describe an intruder, vehicle or activity and what additional information to give.

Multiresidential (Apartment & Condos) Security Guidelines

The reduction of crimes committed against persons who live in apartments and condominiums (multiresidential housing) should be a priority for any law enforcement agency responsible for their protection. There are some criminals who prey specifically upon apartments and condominiums. They know, for example, that many female and senior citizen owners and tenants live alone.

Most persons who are arrested for crimes against property are male and between 18-21 years old. They frequently live nearby their target areas and are familiar with the neighborhood. When involved in burglary or theft, they often work the property on foot, unless they need a vehicle to transport stolen merchandise. The property criminal may have lived in the multiresidential community or have a friend who is a current resident.

Most property criminals are moderately or poorly motivated. If they perceive a target multiresidential community to be well protected, they may either be deterred or move on to what they think is an easier target. There are four points to remember concerning the *motivation of property criminals*:

1. The property criminal's motivations to commit a theft is at its lowest level during the first visit to the property;
2. Criminal motivation increases with familiarity of the property.
3. Success in committing crimes on a multiresidential property, will increase the level of motivation to commit more crimes; and
4. It is much more difficult to deter a criminal who has successfully committed crimes on a multiresidential property.

Lines of Defense

There are basically four lines of defense that should be considered in a comprehensive multiresidential security program. These lines of defense are overlapping and complimentary. To be successful in deterring crime, they are dependent upon cooperation and support between the property owners or tenants, the apartment or condominium management and the local law enforcement agency.

- **First Line of Defense**

The first line of defense is represented by the perimeter around the multi-residential complex. If the perimeter is well marked and secured, it sends a clear signal of security

awareness to the would-be criminal.

- ✓ Ideally, a multi-residential complex should be completely surrounded by a fence at least 6' in height. This is to discourage unwanted access to the property and to make it difficult to make off with stolen property or merchandise.
- ✓ The perimeter of the property should have as few entrances as possible. Ideally, there should be only one way in and out of the property. Because they want an escape route, psychologically thieves do not like to prey upon property or areas where there is only one way in and out.
- ✓ The transition onto the property should be clearly marked and well lighted. There should be no doubt where the perimeter or boundary to the property is.
- ✓ Some multi-residential complexes may have a gate guard who checks the identity of those persons entering the property.
- ✓ There are a number of possible security-related signs that can be posted at the entrance to a multi-residential complex for the purpose of deterring possible criminal activity:
 - If an apartment complex participates in a certified Crime Free Multi-Housing Program, they can place signs that indicate they have joined this program.
 - A sign indicating the multi-residential complex participates in a Neighborhood Watch Program.
 - Possibly a sign indicating the complex is patrolled by armed officers or guards or that there are CCTV surveillance cameras located throughout the complex.

- **The Second Line of Defense**

The second line of defense can be referred to as the common areas throughout the multi-residential complex. This includes roadways, walkways, parking lots or areas, recreational areas such as playgrounds, swimming pools or tennis courts, laundry rooms, lobbies and elevators.

- ✓ **Exterior Lighting**

Common sense tells us that lighting is a deterrent to criminal activity and that multi-residential complexes are no exception.

- There should be a verifiable system of reporting lighting malfunctions. This reporting system should provide for formal periodic inspections (weekly, if possible) as well as a method of reporting lighting malfunctions as they are discovered.

-
- At least once a year, during a time when vegetation is at its greatest growth, a comprehensive inspection of the grounds of the complex should be conducted to identify areas where exterior lighting improvements are needed.
 - A system of lighting fixture identification should be developed. The identification system should enable anyone to easily report a malfunctioning fixture to the maintenance staff.
 - Exterior security lighting should be controlled by automatic devices (preferably by photocell).
 - The following standard regarding illumination levels in the exterior areas of multi-residential housing complexes is recommended:
 - For parking lots, 3 - 5 footcandles of illumination.
 - For walking surfaces, 3 footcandles of illumination.
 - For building entryways, 5 footcandles of illumination.
 - Motion detection lighting is recommended for areas of the complex that should not normally have pedestrian traffic or activity. This lighting accomplishes two objectives: first, the sudden presence of the light startles the unwanted intruder, leaving him exposed to the view of building occupants; and it alerts the occupant of some unusual or unwarranted activity.
 - Any exterior electrical boxes should be locked.

✓ **Safe Landscapes**

Bushes, trees and shrubbery can conceal an intruder as he attempts entry into a window or door; or worse as he waits to attack or rob someone. Residents and management should evaluate the buildings and grounds and look for possible concealment opportunities. Particular attention should be given to parking areas, walkways or pathways, recreation areas and building entrances and windows. The following are recommendations related to safe landscapes in multiresidential housing complexes:

- For pathways or walkways, there should be clear views (unimpeded by landscape elements) above ground along the path.
- Plant materials (bushes and shrubbery) should not exceed two feet in height unless such materials are reasonably transparent. Trees should be trimmed so that their lowest hanging branches are no less than six feet from the ground surface.

- Trees should be trimmed if they provide access to buildings by climbing or interfere with exterior lighting.
- Bushes and shrubbery near buildings should be trimmed below first floor window height. Bushes and shrubbery should be trimmed away from buildings so as to create a “clear zone.” Rock or gravel should be installed as ground cover in this “clear zone.”

✓ Addressing

Multi-residential housing complexes can be confusing for authorized guests and visitors, delivery, maintenance or service personnel and providers of emergency services (police, fire, EMS). The following recommendations will help eliminate or reduce this possible confusion (and delay in emergency response).

- The street address, apartment or unit number and building number should be mounted in a permanent, stationary and durable manner that is unobstructed at all times by vines, screens or anything else that would tend to hide or obscure the numbers. The height of the letters/numbers should be of such a size to be readily discernible.
- The color of the numbers should be of a contrasting color to the background to which they are attached.
- Each principle building should display the number or letter assigned to it at or near each end of the building elevation.

✓ Laundry Rooms

Laundry rooms in apartment or condominium complexes can represent special security problems. The following crime prevention recommendations relate to these facilities:

- Ideally, the entrance into laundry rooms should be from the exterior of the building and clearly visible.
- Laundry room door locks should require a tenant or owner key.
- The laundry room door should have a window in it.
- A duress alarm and/or telephone should be available in the laundry room.
- Interior lighting should be wired to remain on permanently during hours of operation.
- Residents should be encouraged *not* to use the laundry facilities alone or during late night hours.

✓ **Exercise Or Workout Rooms**

The same crime prevention or security recommendations applicable to laundry rooms are also applicable to common exercise or workout rooms.

✓ **Elevators And Lobbies**

- Interior lighting in lobbies and corridors should not be on an accessible switch but should instead be controlled by a timer or photocell.
- Elevators and lobbies should be well lit, day and night.
- Possible hiding places under stairwells should be eliminated.
- Mirrors should be placed in elevators so that a user can see if anyone suspicious is already in the elevator.
- Elevators should be equipped with both a telephone and alarm or duress buttons connected to the resident manager's unit and an outside central monitoring station.
- Lobbies should have glass doors, glass in exterior doors and/or side lights.

✓ **Storage Areas**

Multi-residential housing complexes sometimes have common storage rooms or areas. The following recommendations relate to these storage areas:

- Residents should be encouraged not to go into these storage areas alone or during late night hours.
- Doors into the storage room should require a tenant or owner key.
- The storage room door should have a window in it.
- Storage room bins or cages should be constructed as sturdily as possible. A good quality padlock should be used with a well-secured hasp.
- Tenants and owners should be encouraged not to store items of significant value in such storage areas.

• **The Third Line Of Defense**

The third line of defense represents those measures management takes and on a joint basis adopts to make the multi-residential complex safe and secure.

✓ **Key Control**

Particularly for rented apartments, key control by apartment management is an important issue. Large jury awards have been made to victims of crimes in apartments because of negligent key control and use of a master key.

A resident gives up some rights when they move into a multi-residential property. In most cases, the resident, per written agreement, cannot add or replace the lock on their door unless management is given an extra key. By doing this, the management assumes the responsibility of and legal liability for key control.

Key control requires restriction and documentation of those who use back-up and master keys. The following measures help provide for effective key control by multi-residential complex management:

- Always re-key or replace any door lock at turnover of a unit.
- Eliminate or limit the use of a master key.
- Keep back-up keys in a locked keybox.
- Code keys so they do not reflect or identify a unit number.
- Secure the code sheet and keybox key separately.
- Always maintain a log of whoever checks out a back-up key.
- If there is a key cutting machine, be sure it and key blanks are secured.
- Always lock the room that houses the keybox when not occupied.

✓ **Employees**

Multi-residential complexes will usually have office, grounds and maintenance employees. Care should be taken in the employment and supervision of these employees because they have special access to units and often the trust of residents.

- Regular employees of the complex should be required to wear or display a picture type identification card while on duty.
- Non-office staff should wear a distinctive uniform.
- Contract maintenance or grounds personnel should be issued a temporary identification while on the premises. Temporary workers should surrender some valid identification to be held in the complex management office until the temporary ID is returned.

✓ **Security Guards**

Multi-residential complexes will often employ contract security guards to patrol the premises. When this is done, strict and precise performance standards should be part of the written contract. Security guards should be required to actively patrol the property and to document their patrol pattern in detail. In most cases, walking or bicycle patrol is preferable to drive-through patrol.

The following recommendations relate to contracting for security guard service for a multi-residential complex:

- Request a copy of the guard license and evidence of insurance coverage. Request to be named as an additionally insured on the guard agency's insurance policy and indemnity from their negligent acts.
- Attach the performance standards and patrol instructions as a contract addendum.
- Require that detailed written activity logs (of the guards activities) be submitted daily. Management should review these logs, address identified problems as soon as possible and maintain or file the logs for at least two years.
- Require in writing that the security guards must, while on duty, always wear a full uniform, proper identification and weapons that have been agreed upon.
- Require in writing that the contract guard agency will provide necessary background screening, drug screening and all appropriate training for its personnel.
- Supply the security guards with an emergency call list and telephone access.
- Provide for regular communication with the security guard supervisors and report poor performance and inappropriate behavior immediately.

✓ **Courtesy Officers**

Multi-residential complexes will sometimes retain the services of "courtesy officers." These are usually local police officers who reside in the complex and agree to perform certain duties in exchange for pay or rent reduction. Particularly if the officer has a take-home police car, this uniform police presence can be attractive to the complex.

The following is a sample agreement that may be entered into by the complex and a "courtesy officer."

- The officer will respond to on-site problems such as emergencies, solicitors, lock-outs, etc.

- The officer may actually patrol the grounds while off-duty at certain times of the day.
- The officer may have the responsibility for checking exterior lighting weekly.
- The officer may be responsible for locking such areas as the swimming pool, tennis courts or laundry at specified hours of the day.
- The officer may monitor the complex's parking areas checking for expired licenses, abandoned vehicles or unwanted vehicles.
- The officer may accompany office personnel serving eviction and/or warning notices.

✓ **Crime Free Multi-Housing Program**

The Crime Free Multi-Housing Program was developed by the Mesa, Arizona Police Department. The founder and coordinator of the program is Tim Zehring. The program was begun in 1992 and currently has approximately 1,000 cities as participants.

The purpose of the Crime Free Multi-Housing Program is to provide crime prevention training and education for multi-housing or apartment complexes. It is designed to help keep drugs and other illegal activity off residential rental property.

There are three components of the Crime Free Multi-Housing Program. In Phase One, an 8-hour crime prevention seminar is presented to apartment owners and managers. A certificate of completion is awarded at the end of this phase.

Phase Two involves a security evaluation of the multi-housing complex to determine if defined security requirements have been achieved or accomplished. After the completion of Phase Two and any security deficiencies are corrected and documented, a certificate is provided to the management for display as evidence the complex meets minimum safety and security standards.

In Phase Three, the multi-housing complex managers host a tenant crime prevention meeting. During the meeting, multi-housing crime prevention programs are presented and explained to the tenants. Upon successful completion of Phase Three of the program, the apartment complex is granted the use of large metal signs to be prominently displayed on the property that indicate they have joined the Crime Free Multi-Housing Program. They are also granted permission to use the Crime Free Multi-Housing logo for marketing purposes.

To maintain or renew membership in the Crime Free Multi-Housing Program, the apartment management is required to host at least one tenant crime prevention meeting annually.

The Mesa, Arizona Police Department, which holds *strict* copyright control of the Crime Free Multi-Housing Program, provides National Train The Trainer Seminars for instructor certification. This is a 20-hour training program. For more information about the National Train The Trainer Seminar, visit the following Internet website:

<http://www.ci.mesa.az.us/police/national.htm>

Information about the training seminars can also be obtained by calling the Mesa Police Crime Fee Coordinator, Timothy L. Zehring at (602) 644-2090.

- **Fourth Line Of Defense**

The fourth and final line of defense is represented by the multiresidential building or unit itself. This line of defense represents physical and electronic security measures and procedures adopted by the occupant.

- ✓ **Utility Entry**

- **Electric Power Entrance**

Exterior electric panels often contain disconnect switches which can totally shut off power to the building. Electrical panels should be equipped with a disconnect switch lock or other provision that makes it difficult to extinguish power. The resident should be encouraged to install a number of wall mounted rechargeable hand-held flashlight units with base chargers at various locations in the apartment or condominium, including all bedrooms and primary living areas, and make sure they are tested regularly.

- **Telephone Entrance**

Accessible lines permit telephone service, and thus the resident's ability to call for help, can be severed by simple wire cutters. Where possible, these lines should enter the building high so as to be less susceptible to tampering. If the telephone line must remain accessible, some protection may be afforded by installing the line in rigid conduit and termination points in lockable containers. The best protection, however, is a cellular telephone that can be used should the telephone lines be taken out of service.

- ✓ **Entry Doors**

- **Door And Frame**

Doors are the burglars first choice of entry. If a door is not unlocked, a burglar may simply kick in or pry open the door or break a side light and reach around to unlock a door. Most hollow core doors can be easily broken through. Entry doors of solid core (wood, not composite materials) or steel, 2 3/4" thick are

recommended.

If an entry door is equipped with glass within arm's length (about 40") of the door lock, break resistant polycarbonate glazing material (similar to plexiglass) attached to the inside of the door around the sides will provide considerable delay.

Key operated double cylinder deadbolts can present a potential fire escape hazard. If such a lock is used, all members of the family must be thoroughly familiar with its use and a key maintained inside near the door.

Door frames should be solidly anchored to the rough opening. There are often spaces left between the rough opening stud at a point midway up the door jamb. These spaces create a poor anchorage for hardware making the door easy to kick open. If possible, the door molding should be removed and these spaces should be filled or "shimmed" prior to mounting any new lock strikes. If the entry door opens inward, the stop strip should actually be part of the wood frame, not applied. The stop strip is a wood strip installed on or milled into the door jamb (it's the part of the jamb that the door closes on). If the stop has been nailed on the jamb, pry it off slightly and coat the surfaces with epoxy cement. Then hammer the stop back in place and further secure it with tapered wood screws installed directly in front of the lock bolts. This will make it difficult for a burglar to pry up the strip and manipulate the lock from the exterior.

– Locks

A key-in-knob lock by itself makes entry into a residence a simple matter. All entry doors (and possibly some interior doors) should be equipped with some form of deadbolt lock. When purchasing a lock, there are three primary things to look for: 1) a deadbolt with at least a 1" projection — the bolt should extend at least 1" from the front edge of the door; 2) a heavy tapered steel guard ring protecting an outside key cylinder that spins freely around the cylinder — this protects the outside key cylinder from being twisted off with a pair of pliers or other tools; 3) at least two case hardened steel bolts that secure the front of the lock to the back plate, through threaded holes actually in the cylinder.

Another type of lock — a rim deadbolt — that can be mounted to the inside surface of an entry door can also be used. Such locks will perform well under a forced entry attack, if they are properly selected. Some rim lock deadbolts actually interlock with the strike (a strike is the part of the lock installed on the door frame). This, in effect, physically interlocks the door to the frame thereby providing a substantial forced entry resistance, *if* the lock is mounted by carriage bolts (the kind of bolt with a smooth rounded head) and the strike is securely anchored with 3" or greater length screws that penetrate well into the framing stud. Also, make sure the outside cylinder of this lock is protected by a guard ring that makes it difficult to grasp and twist from the mounted position.

Whichever lock is chosen, remember that the two parts of the door most likely to give way under attack are the strike and the door. They simply split apart allowing the bolt to slip past the strike. To help deal with this problem, a wrap around door reinforcer is recommended for the lock — particularly auxiliary deadbolts — and a high security reinforced strike plate should be used instead of the strike that normally comes with the lock (although a number of manufacturers are now including such strikes with their locks). If a high security strike is not used, at least secure the existing strike with 3" (or longer) length screws that will penetrate well into the framing stud.

✓ **Keys**

Improper attention to the issue of keys can lead to a burglary. The following are suggestions to better insure keys are properly controlled:

- 1) When a new tenant or owner moves into an apartment or condominium, all exterior doors should be rekeyed;
- 2) Tenants and owners should keep their keys secured at all times. They should take their keys with them when they leave the apartment or condominium and keep them in their pocket or purse;
- 3) Keys should never be loaned, particularly where strangers are involved. Apartment or condominium keys should be placed on a dual key ring that will permit easy separation from the car key. When keys are surrendered in connection with service or valet parking, only the car keys should be left.
- 4) Keys and key rings should not be marked or identified in such a way so they can be traced to the owner. Some vehicle manufacturers and vehicle credit companies offer a lost key service that utilizes a serialized key tag. When installed on the key ring, postage cost to the service is guaranteed and upon receipt of the lost keys, the service notifies the owner of the recovery.
- 5) Finally, lost or stolen keys should be reported to the appropriate law enforcement agency immediately. The affected exterior door locks should be rekeyed as soon as possible — particularly if the keys were stolen.

✓ **Hinges**

If an exterior door swings outward, the knuckles of the hinges must be exposed and it may be possible to remove the hinge pins to gain entry. There is a simple way to correct this problem. First, remove the two opposing screws (door and frame side) from the top and bottom hinges. Then insert an 8 or 10 penny finishing nail in the screw hole on the frame side, but do not hammer the nail in all the way; instead leave the head of the nail exposed ¼" to ½" above the surface of the hinge. Close the door slowly and insure the exposed nail meets and extends into the screw hold on the opposite hinge.

- **Door Viewer**

Wide angle door viewers are recommended for exterior doors. Such viewers permit the resident to preview someone at the door prior to opening it.

- ✓ **Barricade Devices**

There are a number of commercially manufactured barricade devices that are useful in multiresidential housing. One type wedges under the door threshold. Another is wedged under the door knob. There is also an effective device that requires some minor installation — namely, a hole drilled into the floor into which the device is lowered in place behind the door.

- ✓ **Sliding Glass Doors**

Sliding glass doors are easy for a burglar to enter if no remedial action is taken. Often, the door panels can simply be lifted out of the tracks. To solve this problem, open the active door and install a few screws in the track, allowing the screw to project down 3/8" to 1/2". Use a stack of several metal washers to serve as a spacer so the screws can be firmly set. Slide the door closed, making sure the extended screws pass freely over the top rail of the door. Now try to lift the door from the track; upward movement should be stopped by the screws before the door can clear the bottom track. Add more washers if needed to extend the screw heads downward.

Once the door has been secured from lifting, some sort of auxiliary lock should be provided because more than likely, the standard lock supplied with the door is nothing more than a small hook bolt that can easily be forced open. Locking bars (commonly called the "Charlie Bar") are ideal for this purpose; but a length of dowel — an old broom or mop handle, for example — can also be placed in the bottom track to keep the door from being pushed open. The dowel should be cut to a length so it fits snugly in the track between the wall and the door frame. If ventilation is needed, another dowel could be cut a few inches shorter to permit the sliding door to be opened no greater than six inches.

- ✓ **Garage Doors**

For apartments and condominiums with garages, the garage doors are important because not only do they permit access to the contents of the garage, but they may also provide a concealed place for an intruder to work while forcing entry. The following are a series of recommendations related to garage door security:

- The garage door should be locked at all times (even when the occupant is at home);
- A good case hardened padlock on which both ends of the shackle engage, should be used to secure the garage door;

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- For garage doors with overhead tracking, drill holes into the track above a roller with a pin or padlock inserted through the slot;
 - For garage doors that are counter-balanced, secure with two case-hardened hasps and padlocks bolted onto both sides of the door;
 - For garage doors that have a double out swing, mount heavy duty slide bolts to the inside of one door at the top and bottom to make it stationary. A case hardened hasp and padlock can then be bolted on to secure the active door to the inactive door;
 - The door leading from the garage into an apartment or condo should be a solid wood or metal core door and should have a good quality deadbolt lock on it;
 - If a garage door has a "doggie door," this can be a means of access for a burglar;
 - Do not leave garage door openers in vehicles parked outside, as they can obviously be used for easy access into the garage.

✓ **Windows**

- **Double Hung Windows**

Double hung windows are by far the most common type. These units consist of two sashes that slide vertically. Factory supplied locks used on such windows are easily pried, and for this reason installation of pinning devices are recommended. Not so much as to stop a forced entry, but to force an intruder to break the glass thereby creating a considerable noise in the process.

To install an inexpensive pinning device in a double hung window, drill a 3/16" hole from the inside window sash halfway through the outside sash at a slight downward angle. Then insert a nail or pin into the hole to secure the window. If the sash is wood, the pin can be made of such length as to set flush with the sash. A magnet kept nearby can then be used to remove the pin. The occupant must remember, however, that room windows are often used as a means of escape from burning buildings and at least one window in each room should be available for such purposes (i.e. the pin should be *removable* without a magnet or tool)

- **Horizontal Sliding Glass Windows**

Sliding glass windows are often fabricated from inexpensive and lightweight materials. Locks used to provide security are similar in quality to the window. Like sliding glass doors, sliding glass window sashes can often be lifted from

their track, particularly if left in the unlocked state as would occur if a “vent” lock is used (a vent lock is a special device that allows the window to be kept open slightly for ventilation purposes).

Horizontal sliding windows should be treated much the same as sliding glass doors. Header stops in the form of screws with metal washer stacks can be used to remove the space between the top rail of the sash and the track in a way that prevents the sash from being lifted from the track. Once this has been accomplished, a length of wood dowel or special blocking lock bar can be installed on the window to prevent the window from sliding.

In some cases, both window sashes slide independently. The outer most sash should be fixed in the track by screws and/or brackets. Once this is accomplished, the actions previously recommended can be implemented.

- **Casement, Hopper or Awning Windows**

These window styles generally hinge or pivot at one point and the locks used on such windows may have lever handles that actually pull the windows tightly closed. They may also have cranks located on the frame which, when rotated, extends the windows to the open position (assuming the handle has been unlocked).

In most cases, the locks used with these styles are reasonably secure. To improve the security of these windows, loosen the set screw in the crank handle and remove the crank handle altogether. The evacuation issue, however, must be addressed.

- **Security Bars or Grills**

Covering the inside or outside of windows with security bars or grills is a good way to discourage burglars, however, if not installed correctly such security precautions could trap the occupant inside the apartment or condominium during a fire emergency. In addition, placing security bars or grills on windows of rented apartments may not be permitted under the occupant's contract.

If security bars or grills are installed — either by the occupant or the property manager — there should be at least one window in each room that can be released or removed from the inside without a key or special tool. Family members and guests should be made aware how the windows can be opened.

- **Below Grade Windows**

Windows that are below grade can be difficult to secure and particularly vulnerable to intrusion. One or two single steel bars or straps over the windows would do much to improve security; or better yet, window glass can

be replaced with polycarbonate material giving them extra strength to resist repeated blows while still permitting exit in an emergency.

✓ **Fire Escapes**

Fire escapes provide both a ladder down for the building occupant during an emergency *and* a ladder up to a less secure upper floor for a burglar. Occupants should not do anything that impedes access to a fire escape but there are things that can be done to make it less attractive to the burglar. If an apartment building uses a fire escape, there are a number of battery operated alarms for less than \$40.00 that can be installed to detect the opening of a door or window and sound a loud alarm to alert the occupants. If the fire escape ladder is a pull down or drop down type, a switch can be added to the ladder that sounds a similar alarm both in and outside the building.

It should be kept in mind that just because fire escape doors must be made available for exit, they do not always have to be available for entry from the exterior. In most cases, locks, window guards or screens or even steel doors can be installed to make the exit more resistant to forced entry as long as exit can be made without special tools or knowledge.

✓ **Alarm Systems**

Intrusion alarm systems can provide valuable protection if installed correctly by a reliable vendor and above all, used responsibly. The existence of alarm systems is a major determining factor in the selection of an intruder's targets; most would prefer to go elsewhere when faced with the possibility of an alarm.

– **The System**

An alarm system is composed of three primary elements: sensors, controls and annunciation. Sensors consist of switches, motion detectors, sound or vibration detectors and other devices that are designed to "sense" the presence of an intruder, either the point of entry or when he moves within the residence. Sensors can also take the form of buttons, that the occupant uses to activate a duress alarm. Controls consist of a panel and a keypad into which a code number that arms or disarms the system is entered. Controls also perform other functions that allow flexibility in how and when an alarm system is armed or disarmed. Finally, the annunciation part of the system is the element that sounds the alert of the intrusion and, hopefully, draws the attention of passerbys and the police so that a response can be generated. *All* alarm systems include these functional elements.

– **Protection While The Occupant Is Home**

Many alarm systems designs offer switches for entry doors and one or two motion detectors installed at inside locations where an intruder is most likely to walk after entering. While such designs may work well when the occupant is not at home, in most cases, interior motion detection cannot be used while

the occupant is home. Moreover, pets may inadvertently trip the alarm if they pass in front of a motion detector when the system is armed. If an alarm system is installed, it should allow the occupant and their family and guests to move freely within the unit with the system armed with one or more motion detectors inside that can be enabled when they (and their pets) are away.

– **Inexpensive Alarm Protection**

There are a number of self-contained alarm systems particularly useful to the tenant or condo owner who does not want the benefits of a full-featured, professionally installed system. These small units can be installed on a wall in a corridor or near a protected door or window and sound a loud local alarm if violated. It should be noted, however, that such devices are intended only to alert occupants and to startle an intruder; they should not be used for, nor are they intended to be used to call the police.

– **False Alarms**

A large percentage of electronic alarms reported to police departments are false. For the sake of publication, a “false alarm” is defined as any alarm activation *not* caused by an intruder. False alarms waste police resources, add unnecessary risk to the responding officers and the public in general.

1) **How to Reduce False Alarms**

The following are measures or steps the occupant or tenant can take to reduce false alarms in multi-residential housing:

- a) If the occupant accidentally activates the alarm, they should advise their alarm monitoring company immediately. They need to memorize their pass code.
- b) All alarm users should be trained to use the system and know the codes to arm and disarm the system; including how to cancel a false alarm.
- c) All loose fitting doors and windows with sensors should be tightened. A loose fit may break the sensor contact, even without opening the door/window. Hinges and strike plates should be adjusted so the door can move no more than 1/4".
- d) Do not have anything that will move (pets, plants, balloons, etc.) or stir the air (fans and heaters) in a room that is protected with a motion detector.
- e) Have wide-gap sensors installed on all doors.
- f) Have the sensitivity settings on motion detectors and glass-

breaking sensors adjusted so unwanted sounds or items do not activate them.

- g) Alarm systems should be checked and tested regularly. Ideally, there should be a service plan for the unit.
- h) If an alarm system is activated by a storm, it should be subsequently checked and adjusted.
- i) It can be arranged for an alarm monitoring company not to dispatch the police for interior motion sensor activations without having other sensors activated. This is known as "double sensor" dispatching.
- j) If an alarm system is more than five years old, the equipment should be evaluated for upgrading or updating.
- k) Finally, after an alarm system has been activated, the occupant should wait a few moments to insure the alarm system activated itself properly.

2) **False Alarm Ordinances**

Many local governments have begun to adopt false alarm ordinances or legislation. In most cases they provide for a fine for a specified number of false alarms. On the following pages are samples of false alarm ordinances from Lake Forest, Illinois, Austin, Texas, Orlando, Florida, Charlotte, North Carolina and Tempe, Arizona.

✓ **General Security Recommendations**

- Use the recommended wide-angle door viewer to "interview" strangers at the apartment or condominium entry door. Ask all salespersons, delivery persons, solicitors, information seekers, etc., to produce valid credentials such as a driver's license and/or photo employee identification. Any stranger who does not cooperate should be reported to the police as a potential threat.
- If the building has an intercom system, occupants should use it wisely. They should never "buzz" the door for persons they do not know.
- The general entrance front door of an apartment or condominium building is a critical area for security. Strangers should not be permitted to enter the building when occupants are leaving or entering.
- Persons living alone should not place their full name on the identification slot or in the telephone director. Adding a second initial — A & B Doe, rather than A.

Doe —— makes it appear that two people are living in a unit.

- If there are mailboxes in a lobby, cover up any slots so the contents aren't visible. A box filled with the same mail from day-to-day is a sign the occupant is not at home.
- If an apartment unit has a mail slot in the entry door, cover it so nobody can flip it up and see the apartment is empty.
- If the occupant is out for the evening, they should leave a light on, even if they live on a high floor. Professional thieves can spot a completely dark unit from the ground.
- Occupants should participate in Operation Identification programs, if offered by the local police department or purchase an engraver on their own. They should engrave their social security number (preceded by a state abbreviation) on property and equipment of value. It is also very important that the serial numbers of engraved items of property be maintained in a safe place. It is also advisable to maintain a photographic inventory of possessions and valuables.