

# Burglar Alarm System Components

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## Control Panel

The control panel is the "brain" of the burglar alarm system. When a detection device of any kind is activated, the signal is transmitted to the control panel, which in turn activates an audible sounding device and the communicator reports the alarm signal to EMERgency24.

## Keypad

When an alarm system is installed, the homeowner is asked to select a secret password that will arm or disarm the system from a keypad, usually located near an entry door.

It is recommended that homeowners choose a new type of keypad designed to help reduce false alarms and dispatches. Based on a standard called CP-01-2000 developed by the Security Industry Association, the new generation of keypad control panels takes aim at user error by building in extra precautions that will minimize unwarranted dispatch of emergency responders.

## Annunciators/Notification Devices

These are devices like bells, sirens or lights that activate when alarm-system sensors detect activity within a protected area. These are intended to prompt evacuation of the structure if warranted, or to alert of adverse conditions.

## Perimeter Sensors

The use of these varies based on the type of space being monitored, whether there are small children or pets residing in the household, and what the alarm system is protecting (for instance, specific valuable objects). Perimeter sensors are installed on doors, windows and other outside openings/egresses.

## Magnetic Contacts

Magnetic contacts are used to sense when a door or window has been opened. These depend on the direct physical operation or disturbance of the sensor to generate an alarm. When a door or window is opened, a magnet releases a switch, breaking the contact and activating the alarm.

## Mechanical Switches

Mechanical switches detect the opening of a protected door or window using mechanical contact switches, which are spring-loaded to trigger an alarm when a door or window is opened.

## Glassbreak Sensors

Glassbreak sensors monitor windows that are likely to be broken during intrusion. These devices sense the vibration or sound of breaking glass to activate the alarm.

## Interior Motion Sensors

- **Passive Infrared Sensors:** Passive Infrared Sensors (PIRS) are used to sense the entry of an intruder into a protected area. Detection occurs when a heat source (thermal energy) crosses a defined boundary. When the radiation change captured by a PIRS exceeds a certain pre-set value, the thermal sensor produces an electrical signal which is sent to a built-in processor for evaluation and possible alarm.
- **Photoelectric Sensors:** Photoelectric sensors transmit a beam of infrared light to a remote receiver. Once the beam is interrupted, the loss of signal at the receiver generates an alarm signal.
- **Ultrasonic Sensors:** An Ultrasonic sensor is an active motion detecting device that emits ultrasonic sound energy into a protected area and reacts to a change in the reflected energy pattern. When a person enters a room, the wave pattern is disturbed and reflects back more quickly with an increased pitch, thus signaling an alarm.
- **Microwave Sensors:** Microwave sensors are motion detection devices that flood a designated area with an electronic field. Movement in the protected zone disturbs the field and sets off an alarm.

## Audio Detectors

Audio detectors use a series of microphones to listen for noises generated by an intruder's entry into a protected area. If a certain amount of noise is detected within a selected time period, an alarm signal is generated.