

## Home Security Decision Guide

Deciding on the right home security system may seem like a daunting task. But it doesn't have to be. Like most projects, a little bit of knowledge and preparation goes a long way.

The fact is, if you know what you want to protect then you are already half way there.

This guide will provide you with the right questions to ask yourself, and then help you choose the right devices for the job. It will also help you figure out where to install the accessories you choose, such as motion detectors, magnetic contacts, sirens and more.

After a few very easy steps, you will have a good idea of what you need and where to put it. Then it's just a matter of choosing the brand you want.

### Choosing Between Hardwired and Wireless

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There is a lot of outdated information about wireless alarm systems. Long ago, wireless systems had poor transmission distances and used common frequencies that allowed interference. These problems were so well known that even now, when most people think of wireless systems, they think of poor performance, short battery life and an easy target for savvy criminals.

This is no longer the case. With improvements like rolling code technology and better encryption, wireless home security systems are now just as reliable as hardwired alarm systems. And with the use of lithium batteries, you can get a battery life of 8-10 years in some cases.

Even so, hardwired systems are still preferred by some homeowners. And if you have the ability to run wires to all of your windows, doors, motion detectors, keypads and sirens, then it may be a good choice for you. But there are other considerations — like cost.



While hardwired contacts are generally much less expensive than wireless contacts, other features will weigh heavily in favor of wireless systems.

For example, if you aren't interested in Central Station monitoring and you just want the system to call you directly in the event of an alarm, then you would need to add an auto dialer to your hardwired system. This feature is typically built in to most wireless systems. So if you liked the wireless features and wanted the hardwired system to do most of the same, you would have to invest in a few more accessories.

Often times, a basic hardwired system will seem like a less expensive choice. But if you want features like Two Way Voice, the ability to dial in and control the system remotely, and have the system call you directly, a wireless system will give you what you need without extras. To get these features with a hardwired system would require purchasing three separate accessories for around \$300 to \$400 more.

Hardwired devices will typically work on any system, so you don't have to stick to the same manufacturer as the alarm system. Wireless systems on the other hand do require that you use the accessories that were designed specifically for it.

Almost all of the hardwired systems available will support wireless integration. So if you finish setting up your system and then decide that you could use a glass break detector, you could always use a wireless device.

If you decide to go with a wireless system, but are unsure which one to get, check out our wireless security system comparison chart at:

<http://www.safemart.com/compare-wireless-home-security-systems.html>.

## Deciding What to Protect: Perimeter Coverage

The most important part of configuring and setting up your home security system is figuring out exactly what you will need in order to protect the perimeter of your home.

Placing magnetic contacts on your doors and windows provides you with coverage for potential points of entry. To determine where these points are, start by walking around the outside of your home. Step into the shoes of a thief and try to think like they would. Ask yourself these questions:

- Would I come in this window, or this door, over here?
- Can I be seen from the street or neighbors?
- Am I more visible during the day or night?
- Could I reach that bedroom window on the second floor by myself, or would I need an accomplice or a ladder?

Answering these questions will help guide you through the process of fully assessing your home on your own, instead of paying someone to do it for you.

After you have written down these points of entry, then you can decide on additional options and accessories. For example, in the event that a thief made it in by another route that you hadn't thought of, you would want to have a motion sensor inside to catch him. Or if the thief saw your contact on the window and decided to break it, glass break detectors can pick up the sound of the shattering glass.

## Interior Protection: Motion and Glass Break Detectors

Motion detectors and Glass Break Detectors are excellent backup devices to your magnetic contacts. You would want to place motion detectors in common areas like a living room or family room. Basically any location that someone would have to pass through if they were already inside.

Hallways aren't the best location because of the way motion detectors are designed. They detect motion the best when someone is walking past the motion detector, not towards it or away from it. If you do choose to place a motion detector in a hallway, consider a ceiling mount model. This will pick up any movement underneath it.



Stairs can pose problems with pet-immune motion detectors. Since they work on an area based grid, an animal walking up stairs can trick the motion detector into thinking the animal is larger than it is.

If you use pet-immune motion detectors, you will want to locate them in a room without furniture that your pet can climb or jump on to. Each motion detector will include detailed instructions about where and how to mount it as well.

If false alarms are a concern, then you will definitely want to consider Dual Tech motion detectors. These use Microwave Technology as well as Passive Infrared. This gives you two methods of detecting motion, so anomalies like heat coming on and curtains moving will not trick them into an alarm. They are a bit more expensive, but it's a worthwhile investment if you want to minimize false alarms. There is nothing worse than the sirens going off in the middle of the night because your motion detector was mounted too close to a heat vent.

Glass Break Detectors are excellent devices for watching your windows for breakage. The great thing about these devices is their range. They are able to cover several windows within a large area, typically between 20 to 25 feet. You can mount them on the wall like a motion detector or mount them on the ceiling. Recessed models are also available if you don't want another device on the wall or the ceiling.

## Smoke Detectors and Carbon Monoxide Detectors

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An important element of Home Security that is commonly overlooked is Smoke Detectors and Carbon Monoxide Detectors.

You most likely already have Smoke Detectors wired into your home's electrical system. But these sensors are for your safety when you are at home. But what about when you aren't home? If your system was monitored and you had Smoke Detectors connected into your system, they would dispatch the fire department for you.

Carbon Monoxide is a deadly enemy to be safeguarded against. Installing one or two Carbon Monoxide detectors in your home will provide you with the comfort of knowing that you and your loved ones are protected. You can get stand alone models or purchase ones that will integrate with your alarm system.

## Laying it All Out: Building Your System

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At this point you should have a fairly complete idea of what you want to cover and how to cover it. You should take your list of entry points and decide what type of devices you want to use.

If you decided on a hardwired system and you are going to place contacts on all of your windows and doors then you should decide if you want them recessed or surface mounted.

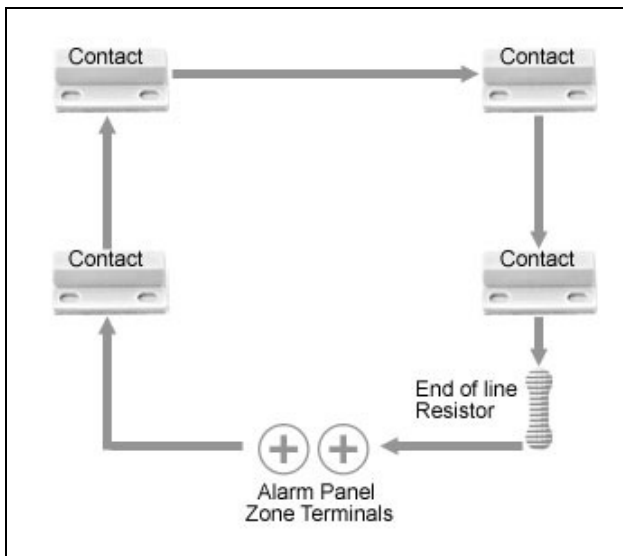
As far as performance goes, either one will do a great job; it's really just a matter of preference. Recessed are invisible to the eye but more difficult to install. Surface mounts are easier to install but are very noticeable.

## Zone Layout

The next step is to figure out how you want to lay out your zones. You have the option of having one window or door on its own zone, or placing an entire room of contacts on a zone. It's all a matter of how detailed you want your system to be.

Wireless systems will only allow you to have one wireless device per zone. If you choose to isolate each area then you will need zone expanders to allow the system to separate those out. These can range in price from \$35 to \$80 depending on the manufacturer.

If you aren't interested in knowing which window opened in which room, then you can wire those zones in series. This is a very simple process (see diagram below).



Basically you are connecting the zones together so that if one window opens anywhere on that loop, it will trigger the zone.

This is not the same as home running the zones and placing them all under the same zone terminals. If you do this, then all of the windows or doors would have to open in order to trigger the zone.

To better understand this, imagine you have two pairs of wires representing two windows that you want to wire in series. In each pair you have a red and black wire.

From the first pair, you would terminate the black wire under the zone terminal. The remaining red wire would get connected to the

black wire from your second pair of wires on the other window. This would leave a red wire on the second pair. This red wire will be terminated to the second terminal on that zone. So what you have done electrically is made one big loop with two contacts.

You can wire any type of device in series. Motion detectors, glass break detectors, smoke detectors, heat detectors; just about any hardwired device.

However, mixing the different types of devices is not advisable. You wouldn't want a contact and a motion detector on the same zone. It would be very difficult to troubleshoot and you would want to know the difference between someone opening a window and someone just walking through the living room.

## Backup Devices

After you have your perimeter areas covered with contacts then you will want to add the backup devices. Motion detectors and glass break detectors provide excellent redundant coverage for alternate entry.

If someone sees a contact on your window and decides to break your window, he will have sirens immediately announcing his presence. If he happens to break the window without making noise and he slides in the window, as soon as he crosses your living room the sirens are there once again.

The best way to completely protect your home is to plan for all situations. This doesn't mean that you have to place contacts on every door and window. Usually covering the most obvious points of entry and then using a few backup devices is sufficient.

Many options are available for motion detectors. Any Passive Infrared motion detector will do a great job. Pet Immunity is a good feature but you shouldn't expect more out of it than what it was designed for. They were intended to ignore a cat or dog walking past them. If your pets have a tendency to jump up on furniture or if you have two or more pets that roam around together, your motion detectors will most likely have trouble with false alarms.

You can use Dual Tech motion detectors in these cases. These motion detectors use Passive Infrared and Microwave technology to detect an intruder. They do a better job of ignoring animals since they can measure the size of the object more effectively. This initial investment will help you to avoid false alarms.

Placement of glass break sensors is probably the easiest of the bunch. A typical range of coverage is around 20 to 25 feet. These devices need to be in view of your windows though. The sound waves don't go around corners or through walls.

So if you have windows in a large room, all you have to do is mount the glass break detector in the middle and if the windows are within 25 feet it will work just fine.

Glass break testers are recommended as well. These will help make sure you have the glass break detector in the optimum area and it will give you a visual that they are in fact working.

## Accessory Options

Now that you have the core of your security system put together, you can now choose some optional accessories. Placement of smoke detectors is very simple.

Since you will most likely have smoke detectors already integrated into your home, these will serve as backups to those devices and will notify the Central Station in the event that you have a fire. It is recommended that you have at least one per floor, but more is definitely better.

Heat detectors are great for laundry rooms and kitchens where you might normally have false alarms with smoke detectors. Carbon Monoxide detectors should be located in the bedroom hallways, the living room and any other common area.

If you are looking for flood detection or freeze protection those have pretty obvious placements. Flood detectors should be placed near a sump pump or other area where pipes could burst or leak. Freeze detectors can be in a common area like the living room.

All of these devices are optional and can usually be added at any time. They add to the fullness of your home security system and give you the reassurance that every part of your home is being watched when you are home or away.

## Choosing a Method of Notification

The last and most vital part of your system is the notification method. Sirens and strobes let intruders know that they've been caught. They also notify people in the area that a break in has occurred. A siren inside your home and one located outside or in the attic is recommended. That way there is plenty of noise inside and outside.

Nothing is more unsettling to the nerves of a thief than a loud siren, especially if the intruder is moving stealthily and listening for every little noise. The natural reaction to a loud noise is to start and run. This also will let your neighbors know that something is wrong and that they should call the police.



A strobe light is an excellent companion. This gives a visual confirmation that your system is going off and will also draw a lot more attention. If police have been dispatched they will see that light several homes away.

We have now successfully completed an entire layout for the system. All that remains is to select a brand, choose the individual devices, and decide how you want to monitor it.

Here are the options available for monitoring your alarm system:

1) Self-Monitoring. Use this method if you want your alarm system to call a private phone number(s). The advantage to self-monitoring is that there are no monthly fees involved. However, if you miss the call from your system, you will not be able to have the police dispatched. And there is no homeowner's insurance discount for self-monitored systems.

2) Central Station Monitoring. Use this option to have a central monitoring station monitor your alarm system day and night, and contact your local emergency dispatch center for police or fire in the event of an alarm. With a do-it-yourself project, the cost for this service is significantly lower than conventional alarm companies (UL listed monitoring is available from SafeMart for just \$9.00 per month). Many times, this cost is offset by the savings on homeowner's insurance. For more information, go to: <http://www.safemart.com/Alarm-System-Monitoring.html>

3) LiveWatch GSM (Compatible with GE Simon 3). This option allows you to stay in control of your GE Simon 3 system remotely, through the GSM (wireless) network. LiveWatch uses the power of the web, email, and cell phone communications to secure your home, without the need for a land phone line. The web interface allows you to arm or disarm your system, receive real-time alerts & notifications via email and cell phone text messaging, and more. For a slightly higher cost (around \$20 per month), you can instantly access to your system from anywhere. For more information, go to: <http://www.safemart.com/livewatch.htm>

## Installation Tips

Installing the devices and system is a very straightforward process. For wireless systems, you will want to program in your devices before you mount them. That way you don't have to run to each device to enroll them. Also, test them before mounting them to make sure they are programmed properly and functioning.

Hardwired devices can be installed during the construction phase and then connected to the alarm system and programmed at any time. Make sure to test each connection while the walls are down so you can troubleshoot it right away. Trying to find a break in a wire behind drywall is nothing short of a nightmare.

After you have programmed the system, do a thorough test to make sure everything is functioning properly. Pretend you are a burglar and really test it. Make sure those motion detectors pick you up, even if you are sneaky or moving slowly. Get a glass break tester and see if the glass breaks really do go off when shattering glass is heard. This will make sure that everything is doing its job and give you reassurance that your home is protected.

After installing your system, be sure to test it on a regular basis, as recommended in the manual.

## Final Consideration—Technical Support after the Sale

If you decide to go ahead with your do-it-yourself home security project, it is very important that you have access to after-sale support in case you have questions. In addition to a full manufacturer's warranty, SafeMart offers lifetime tech support to all customers, with U.S. based technicians. Wherever you shop, you should buy with the confidence that you're getting the right equipment, the right price, and professional support.

We hope this guide has been helpful. If you have any questions or comments, please email [info@safemart.com](mailto:info@safemart.com) or call 800-628-6093.

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