

Build for the Future

By integrating key technologies into a home as it's being built, you can enjoy state-of-the-art conveniences and comforts as soon as you move in.

by Lisa Montgomery

Whoever said less is more never built a house. Research shows that most homeowners are beginning to shun small spaces. Big and expansive is how we like our homes designed these days, even if we don't really need all that room. • Same goes for the technology. There's absolutely no reason to tiptoe into the 21st century when you're building a new house. Go all-out while the plans are still on the drawing board. Work high-speed cabling, a lighting control system and a whole-house audio system into the house designs now, and you'll thank yourself later. Why? For starters, it's much less expensive to integrate most types of technologies into a home as it's being built than after it's finished.

Plus, because so many technologies are designed to be installed during home construction, you'll have a wider selection of products and systems from which to choose than if you wait until after the home is finished. High-speed wiring, advanced lighting control, a security system and a whole-house music system are a few tech essentials to work into the blueprints of any new home.

High-Speed Wiring

Anyone who uses the Internet yearns for quicker connections to Web sites and faster downloads. Well, that day, at least for many of us, is finally here. Cable modems and DSL modems promise to push information to the PC at speeds 10 times faster than normal 56K modems. For a new house you'll definitely want to purchase a modem from your local phone company or cable company and subscribe to a high-speed broadband Internet service. A broadband modem is definitely a step in the right direction, but it benefits only one computer. In order for every computer in the house to hook onto the broadband modem, a home needs a high-speed wiring network.

Fortunately, high-speed wiring is one of the easiest and most valuable investments you can make in a home. Nearly 40 percent of homebuilders offer a high-speed wiring package (often called structured wiring) as either an option or a standard amenity. And if they don't, almost any professional home systems installer does (log on to electronichouse.com or cedia.org to find a professional home systems installer in your area).

Shared broadband access is only the tip of the iceberg. A high-speed wiring infrastructure also enables music to be distributed from a common stereo system to speakers in other rooms of the house. Video captured by security cameras can be transmitted to the screen of any TV. And last but not least, standard telephones behave like business phones, able to transfer calls to different extensions and make speakerphones behave like intercoms.

Fast Facts

What You'll Pay: \$500 to \$1,500

What You'll Get:

- Multiple PCs can share a broadband (high-speed) connection to the Internet.
- Multiple incoming telephone lines can be shared and accessed by all telephones in the house.
- Video from one DVD player, one VCR or another source can be distributed to multiple TVs.
- Music from one stereo system can be distributed to multiple speakers throughout the house.

Lighting Control System

The larger a home is, the more difficult it becomes to manage its lights. Most people can relate to the bedtime switch-off ritual, or the at-work did-I-leave-the-lights-on conundrum. A lighting control system ends all lighting hassles, and in so doing helps you save money on electricity. As an added benefit, fixtures managed by a lighting control system can enhance the look of any room by brightening and dimming to specific levels automatically.

The commands that cue the house lights to act a certain way travel over special low-voltage cabling. Sure, you can always have a wireless lighting control system installed later, but why not roll the expense into the home mortgage now? Besides, hardwired lighting control systems are usually more powerful and packed with many impressive features. In fact, some systems can seamlessly manage not just a home's lights, but also its audio/video equipment, heating/cooling system and more.

So important is a lighting control system to the needs of a house, you really can't afford not to have one installed. Certainly, there's the convenience and energy savings it provides by turning lights on and off automatically. But when appropriately installed and programmed by a professional home systems installer, it can help protect the home and family as well. As a complement to a traditional security system, it can turn lights on and off randomly to make an empty home look occupied. At night it can illuminate a pathway to popular destinations in the house like the kitchen and the bathroom.

Finally, there are its mood swings, perhaps a lighting control system's biggest claim to fame. By employing the help of a lighting designer and a home systems installer, a lighting control system can actually make every room of your house look better. At the command of the system, each fixture can set itself to a brightness level that enhances a room's décor and unique architectural characteristics. And it's not all about looks. A variety of lighting "scenes" can be choreographed to complement any type of activity that might occur at your house. Take the family room. A lighting control system can elegantly transition the space from one that welcomes a huge party to one that invites the family to settle down for a quiet night in front of the tube.

Fast Facts

What You'll Pay: \$300 total to \$2 per square foot

What You'll Get:

- Lights choreographed by a lighting control system can brighten and dim to evoke a particular mood.
- By turning fixtures on and off automatically, a lighting control system offers convenience and saves money on electricity bills.
- Adds a level of security by automatically illuminating dark hallways and making an empty home look occupied.

Security System

Nearly 30 percent of homebuilders put a security system into their homes as a standard feature. And for good reason. Cocooning is a national trend that finds families staying at home on a Saturday night. Of course, every cocooning family member wants to feel secure and well protected, not only at night but at all times throughout the day.

No matter how sturdy a home's door and window locks, it's a security system that ultimately offers a feeling of supreme safety. And again, the best time to have one installed, for both financial and performance reasons, is while a home is being built.

Security is a very serious type of system that leaves little room for trial and error. You can fiddle with the settings of automated light fixtures without risking the safety of your family or home. But with security, you want it right on the first crack.

That's why most builders who offer security systems use security specialists to design and install the systems for their customers. These specialists know exactly where to run the wiring that will connect the door and window sensors, the motion detectors, and the security keypads (the devices you use to arm and disarm the sensors) to the processing unit of the system. Most builders offer a security system prepackaged to fit the size of your home. The package and system layout of a single-story home of 2,000 square feet will be designed much differently than the package and layout for a two-story home that measures 4,000 square feet. Of course, you can always ask for more sensors or a modification in the design; it just might cost you a little extra.

Fast Facts

What You'll Pay: \$1,500 to \$4,000

What You'll Get:

- A well-designed security system protects both your family and your house.
- Provides peace of mind.
- Offers the convenience of arming a home or calling the authorities by pressing one button.

Whole-House Music

Enjoying music in every room of the house is simple enough: You plop down a few boomboxes or string a little speaker wiring, and presto, your entire house sings. But that's hardly the best way to tune a new home. When walls are open during construction is prime time to pull wiring to all corners of the house. Because of this, and a growing consumer demand for whole-house music, more and more builders are offering to prewire a house for sound. Rooms to which wire is commonly run include the family room, the kitchen, and the master bedroom. After the wire is installed, it's often your call. You leave the wire behind the walls and later add speakers. A more economical and elegant choice is to attach speakers right away (some builders offer speakers as an upgrade). That way, they can easily be built into the walls and ceilings, creating a clean music listening environment.

Of course, speakers are only part of the sound solution. You'll also need a stereo receiver, an amplifier and, of course, a CD player (or some other music source such as a digital audio server). A builder who offers a whole-house music system probably also offers a receiver. The other equipment, you'll probably have to buy yourself.

Even if a builder hasn't caught on to the whole-house music trend, it's just as easy to hire a professional audio/video installer to handle the installation. In fact, an outside installation firm will probably offer more speaker choices and suggest ways to customize the system to suit your home and your taste in music. Just be sure that the installation company and the builder communicate right away, so that the whole-house music system fits into the construction schedule and the home's architectural style.

Fast Facts

What You'll Pay: \$500 to \$1,250 per room

What You'll Get:

- Creates an aura of festivity, relaxation or romance for a home.
- Is often more economical than buying a separate stereo system for each room.

- Simplifies how you cue and control a CD player, a tuner and other stereo components.

From the Depths

Who would have thought the lowly basement would play such a critical role in the efficiency and functionality of a new home? Typically, the basement is where builders locate all the sensitive processors that intelligently supervise and command the devices on the upper levels of a home. A builder who offers an extensive portfolio of systems might even dedicate a small area as the technology “hub.” It’s important that every processor for music, security, and lighting control share a common space that is fed by incoming telephone, cable TV, and electrical service. This not only simplifies the initial installation of the systems, but also facilitates future upgrades and the integration of other types of systems. EH

SIDEBARS

Highlights

- 4 technologies that every new home needs.
- The practical benefits of building a smart home: convenience, comfort, and efficiency.
- Estimated costs of building a modern home.