

How to choose a control system

The primary reason for purchasing a control system is to provide simplified, user-friendly access to the latest technology. A well-designed system eliminates the need for training and becomes a useful tool even for the "technologically challenged."



Imagine yourself starting a very important meeting with your full attention on your audience and the topic you are about to present. At some point you find yourself shutting the drapes, dimming the lights, lowering the wall screen turning on the VCR, powering up the projector, selecting the proper input and turning on the projector's lamp, pressing play on the VCR and adjusting the sound. You cross your fingers hoping you did everything correctly and with luck your tape begins to play. Your audio/visual equipment has just taken control of your actions and interrupted the flow of your meeting.

Now imagine the same meeting with a well-designed control system installed. All of these tasks are handled automatically at the push of a button, putting you back in control of the meeting.

While we suggest you consult a professional A/V Integrator, here are some of the most important things to look for when selecting a system.

The most important specifications

- **Integrated or cardframe (custom)** are the two basic types of control systems and you should know the benefits of each.
- **The integrated control system** is by far the most commonly used, since it is the most affordable, yet is versatile enough to handle most situations. This stand-alone system has a fixed number of inputs and outputs. Every device has its own port, and a master control card keeps track of all the components and their functions.
- **The cardframe controller** is a custom designed system that is expandable to handle hundreds of devices, if necessary. The system



integrator assigns devices to various types of control cards, programs the cards and adds them to the cardframe. The system is easily expandable by adding other cards and if needed even another cardframe. Because cardframes are so versatile and expandable, they carry



higher price tags than integrated systems.

- **The control panel.** The control panel is the most important component of a control system. Once you've selected and integrated or cardframe system, choosing the right control panel is the next and *most* important step. The control panel is the user interface—the only piece of your system that most people will ever interact with. You need an experienced a/v integrator to help you choose or design a panel that is easy to understand and use.
- A **handheld panel** will probably remind you of your television remote control. The most inexpensive of these panels uses pushbuttons. Though layouts are standardized, each button is programmable and can be used for almost any function or multiple functions. Your dealer will have the buttons engraved and perhaps color-coded, so that it will be easy to tell which button does what. Still, the number of buttons is limited, which limits the number of devices you can control.
- At the other end of the scale is the **color video touch**



screen, a completely programmable panel that can provide an unlimited array of screen layouts. Offering anything from simple color icons to multi-page menus to live video, these touch panels can be wireless, table mounted or built-in to wall or lectern surfaces. They vary in cost depending on functionality.



- Between the two extremes are the **mini-touch panels** that offer the programmability of the full-sized touch screens, but with fewer capabilities and a smaller price tag. While they are still fully programmable, they are limited to performing a smaller set of common functions.



Useful features

Whether you choose a simple push-button remote or a programmable touch panel, you'll need to decide if you want **wired or wireless panels**. Hard-wired panels can be built-in to tables, podiums, and equipment racks as well as wall-

mounted in the most convenient places for a presenter. They cannot be misplaced and they are extremely reliable. The obvious advantage of wireless panels is the freedom to move around while making a presentation. Wireless panels, however, are not capable of two-way communication, as wired panels are, so they are unable to receive useful feedback from the equipment being controlled.

Wireless panels come in two types. **Infrared panels**, like your television remote, use infrared light to transmit information. The panel must be in direct line-of-sight of your control system's IR receiver or you will need to bounce the signal off of a reflective surface or use an IR repeater. **RF panels** use radio waves to transmit signals. The panel does not need to be visible to the receiver and can even transmit through most walls. You should have your a/v integrator help you select the proper type of transmitter/receiver.

Various **device controllers** offer you the ability to control equipment not necessarily intended to interface with a central control system. (Typically a high-end projector or VCR will have an RS-232C or RS-422C input, which will allow it to plug directly into your system.) You can buy a controller that will tie into almost any monitor, projector, videoconferencing system, sound system, VCR, DVD player, camera, computer, lighting system, motorized window shades or draperies, even your heating or air conditioning,



Beyond the specifications

The key ingredient to any control system is the programming. As such, the **experience and ability** of the person programming your new system is extremely important, especially for more complex or sophisticated systems. Ask to see previous control panel designs from any a/v integrator you are considering. They should be very simple to understand and use.

Service can be an issue. Help should be a phone call away if you have questions or problems. Be sure to find out if the company you're buying from is an authorized repair facility for the systems it sells. Training should also be included in your purchase price.

Documentation is very important. Any professional system should include a detailed instruction book with screen-by-screen illustrations of the system. You should also be provided with an equipment list, schematics on how each device is wired and all manufacturers' manuals put together in a convenient format. You will use your system for many years. You should be confident that if a question or problem comes up, say, a decade from now, you'll have the documentation you need at your fingertips.