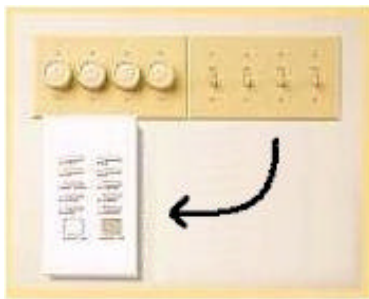# SOUND SOLUTIONS
A DIVISION OF SOLUTION ENTERPRISES, INC.

INTEGRATED HOME CONTROL SYSTEMS

Sound Solutions offers a range of fully integrated home control systems, with a choice of several approaches, and a range of features and prices. With the press of a button, or touch of a screen, we make it simple for you to control the lighting, climate, entertainment, security, energy and communication systems – anything you install, plug-in, switch on, and/or remotely control. Homeowners who want home systems that are simple-to-use *and* are elegantly integrated into the architectural design find that our approach fits their needs perfectly.

Sound Solutions provides several types of controls and wallplates that can be installed in any combination to suit our clients' needs. The goal is to give people the control they need, where they need it, with simple and intuitive operation, and within their allotted budget. The elegant display wallplates are as easy to operate as an ATM machine, yet can perform any control function. Button wallplates are the equivalent of a simple light switch for basic control of lighting or other simple functions.

Graphical touchpanels in key areas allow zooming in on a floorplan, control of any room in the house, selection of whole-house modes, as well as viewing of system status and security cameras.

The Full Home Control System

For our clients who demand the best: we offer a complete Home Control System (HCS). This system is the most advanced and highest performance system available, yet is simple enough for anyone to select whatever lighting, entertainment or comfort settings they choose. Selections can be made from a wide range of display wallplates, button wallplates, Touchpanels, and even HTML webpages for each area as desired. The HCS is the epitome of simplicity, comfort, safety and convenience.

The HCS system is designed to address our clients' demands for simple, seamless, and elegant integration of their home technology systems without the unsightly clutter of mismatched wall panels and controls typical of luxury homes. Our primary goal is simplification, not technology in itself.

Display Wallplate	**OR**	Lighting	**+**	Climate (HVAC)	**+**	Security	**+**	Audio

The Home Control System is a single, easy-to-operate system that facilitates all of the home's operations while providing the comfort and confidence, that before, could only be provided by totally separate, unrelated systems. The list of controlled systems can include virtually any and all environmental, entertainment, mechanical, electric or electronic systems that can be installed in homes.

With the HCS, it is possible to access control of remote rooms or areas from many wallplates in the house, eliminating the need to walk to remote areas just to check something or turn it off. Our clients decide what can and cannot be accessed from any wallplate for convenience, safety, and privacy.

Truly Simplified Operation of the Home, with the HCS

The Home Control System provides unification of all of the home's environmental, security and entertainment functions. Instead of having to learn and remember how to operate all of the different systems in the home, one has only to get comfortable with a single "system" wallplate with simple and logical menus that are similar in operation for all functions. Imagine what it would be like to easily control the temperature, music, lights, drapes and the security system from a single panel in any room.

The HCS includes central equipment, multiple types of wall-mounted control panels, lighting dimmer system, relays, control electronics and various other interfaces. PCs may be included for scheduling, monitoring and remote access, but are not part of the core operation of the home's systems (no such thing as crashes or other PC problems effecting the basic operation of the home).

Whole-house modes, such as "Entertain", "Away", "Evening Retire", can be selected. These modes can include lighting, temperature, window covers, music and other settings. Specific sub-system events (such as alarm system violation) can trigger predetermined settings on other systems (i.e. lights, gates).

Sound Solutions has been honored with numerous awards including, most recently, the prestigious Dealer of the Year and Luxury Estate Home awards from the Consumer Electronics Association for homes fully integrated with a Home Control System.

The Limited HCS

When almost the best is enough: we offer a basic version of the HCS that is similar in many aspects to the complete HCS, but with a reduced feature set that does not offer the same level of unification of the home's systems. This version interfaces with separate subsystems such as the Lutron or Vantage lighting dimmer system and Enerzone thermostats. The display wallplates and the touchpanels can be included where desired.

Touchpanel Control System:

The conventional approach, but with the touchpanel twist: If the goal is to have conventional and separate systems, each with their own controls and operation, we provide a touchpanel system. This approach allows our clients to perform specific control and monitoring of their home systems from key areas, as well as manage some whole-house commands or modes. These systems are distinguished from the HCS options as there would likely be mismatched independent wall controls and keypads scattered throughout the house. This plan can be the lowest cost option.

Additional Systems, Upgrades and Options

- **Motorized Window Covers, Drapes or Shades:** Manual and scheduled control, monitoring.
- **Pools, Spas, Waterfalls, Ponds and Fountains:** Manual and scheduled control, monitoring.
- **Weather Station:** Display the current outside weather: wind speed, direction and temperature.
- **Touchpanel Upgrades:** to larger models with video monitoring and internet capabilities.
- **Dual CNP:** Provides redundancy for the Central Network Processor, power supply and memory.
- **Dimmer Manual Override Panels:** Provides convenience during construction and redundant control.
- **Monitor and Alarms:** allows for subsystem status or problems to be indicated on Touchpanels, including HVAC systems, water/flood sensors, pool/spa systems, filtration equipment, backup generator and others. This option requires that the monitored systems are properly equipped.

- **Spares Kit:** We can suggest a custom spares package upon final selection of systems.

SURROUND SOUND AND MULTI-MEDIA SYSTEMS

Multi-Media, Home Theater and Surround Sound Systems

Sound Solutions offers a broad range of custom screening room, home theater, surround sound and TV systems to meet any combination of performance goals, desired audio/video formats, room size, aesthetics and budget requirements. For small room or personal viewing applications we design systems that include direct view or rear projection TVs, a surround sound AV receiver and a small six-channel speaker system. On the other end of the spectrum, for professional or high performance screening room applications, we provide systems that include custom video/data projectors with line scalers, THX surround sound decoders that include Dolby Digital (AC-3) and DTS digital theater sound decoding and commercial THX speakers. We provide many systems that are somewhere in the middle or a mix of these two approaches.

Most of our systems include an upgrade path to accommodate the new digital TV (DTV) and high definition (HDTV) formats with only the addition of an appropriate tuner. Our projection systems can include multi-aspect ratio masking systems to optimize the image for both standard 4:3 television, 16:9 widescreen movies and HDTV programming. Source machines can include VHS or D-VHS VCRs, DVD players, satellite receivers, TIVO, CD changers, turntables, cassette decks, FM/AM tuners, and more.

Home Theater Subsystems

We custom design each system to meet our clients' specific goals and requirements, and to match the room. In addition to budget goals or limitations, we address four primary areas as separate subjects:

1. Video: image quality, size, resolution, viewing distance/angles, brightness and ambient light levels. We offer standard and high-resolution direct view, flat screen plasma and rear projection TVs. For large screen viewing (from 75" to 150+" diagonal), we design custom front or rear projection systems. Components include commercial high-resolution graphics projectors (CRT, multiple CRT, LCD and DLP/DMD), line doublers, quadruplers and scalers, computer interfaces, projection screens, motorized masking and curtains.

2. Sound: quality, room size, acoustics, analogue/digital surround formats, THX or not, desired sound pressure levels and theatrical impact. Proper placement of front and surround speakers can result in reproduction of sound that is close to the quality and performance that the director worked hard to achieve. We offer high quality separate surround sound decoders and receivers.

3. Control of the systems can be accomplished many ways. The best plan is our custom touchpanel control panels which simplify otherwise complex operation of all components and settings by providing single buttons that perform all required commands.

4. Facility, furnishings and aesthetic integration, including custom millwork rack systems, flush speakers, theater seating, acoustical design and treatment, lighting and room designs. Sound Solutions considers all aspects of the rooms, from acoustics to aesthetics in gauging the proper design.

It is our job to insure that we meet our clients' requirements and preferences in each of these areas, independent of the others. It is only by this approach that we can be sure that the resulting designs are truly the right solutions for our clients. Pricing is dependent on the final system selected, projection system technologies, video processing, surround sound speaker systems and control.

WHOLE HOUSE MULTI-ZONE AUDIO/MUSIC SYSTEMS

Multi-Room Distributed Music Systems

Sound Solutions offers several levels of custom whole-house audio systems. Music can be provided in any or all rooms as desired including outside areas and even in the pool itself. We "mix and match" a wide range of speakers, amplifiers and sources to create a system that is only as good as needed in each area, yet aesthetics and operation can be simple and consistent throughout the home. All zones can share centralized sources including FM tuners, CD jukeboxes, digital radio and others. Additionally, local or dedicated sources can be provided for specific areas.

Wiring for background music includes many potential speaker locations, preparation for volume control locations, and one or more central audio systems. Our designs include routing of wire in such a way that either a simple one-zone or a multi-zone sound system can be installed.   We design these systems to match the individual requirements, preferences and budgets of our clients on a whole house or room by room basis.

Speakers and Amplifiers

Speakers may be flush mounted in ceilings or walls and can be finished to match the room's decor. Bookshelf or floor-standing models with subwoofers generally provide better sound quality and imaging. We offer speaker lines from which flush and box speakers can be combined without compromise, even in the same room. We provide a wide range of quality and types of amplifiers. Multiple rooms can be powered by a single amplifier, each room can have it's own amplifier, or a combination of these options can be provided.

Music Sources and Formats

Music can be provided by a combination of virtually any audio devices. Possibilities include, but are not limited to: CD Players, CD Jukeboxes, Cassette Decks, DVD Audio Players, FM/AM Tuners, Satellite Receivers and others. The different zones, or rooms, share the main package of central source equipment which sometimes includes more than one of the same type source (such as two FM tuners).

Music System Control

Control systems range greatly in capability and in price. Wallplates may be placed in each room or in central locations only. The simplest form of control is the wall-mounted volume control, which is also the lowest in cost. Alternatively, we can provide the capability in each room to select that room's music source, provide basic source control (play, stop, skip, etc.), and turn the system on/off. The music controls can either be fully integrated with the Home Control System wallplates and/or touchpanels or be completely separate.

More sophisticated control options allow for selective control of multiple areas from a given location, for example, the volume can be adjusted throughout the house from any room. Or perhaps it would be nice to configure the system for specific modes or events. Press the "morning button" and the news radio comes on in the bedroom, master bath, kitchen, and breakfast nook. Press "Entertain" and the system switches on a CD and plays it in the family room, patio and pool areas.

RESIDENTIAL TECHNOLOGY INFRASTRUCTURE

Sound Solutions offers residential design, preparation and wiring for three distinct purposes: multi-media (voice, data and video service infrastructure); audio/video entertainment (multi-room distributed music and closed circuit camera systems); and home control or automation systems. For our customers who are not specifically interested in technology or in preparing their home for the future, we do offer traditional prewire services covering just telephone, cable TV, antenna and/or satellite. We recommend that the alarm system be prewired and provided by a company who offers monitoring and/or patrolling service in the neighborhood.

Multi-Media Services Supported

The infrastructure package manages and distributes multiple communication, information and entertainment delivery services to all desired computer, stereo, TV and phone locations.   Virtually all currently available and anticipated future in-home services can be accommodated.

Communication: We provide the design and wiring to support either standard phones or a multi-zone telephone system with intercom (i.e. Panasonic, Toshiba, Lucent or other).   Each phone location can accommodate up to four standard telephone (POTS) lines, or a multi-line phone with a fax or modem line.

Information: Our structured wiring design provides the ability to implement an internal local area network (LAN), for computer applications, including sharing of printers, scanners and internet access. Our clients can have one connection (of any kind) to the Internet, yet several computers can use the connection at the same time. An example might be for the client to check their email while their child is online doing homework research.

- The Internet connection can be via standard, ISDN or ADSL phone line, or cable modem. The system can be utilized with whatever connection or service is available now, and can be upgraded to additional or future connections or services, as they become available.

- The system can be implemented with the best connection available now, but with the ability to change later as new and improved services become available.

- When the Internet becomes viable for delivery of high quality movies and music, the LAN will already be in place to facilitate full enjoyment via entertainment systems.

- The wiring supports 10-100mbps (10baseT or 100baseT). Our standard hub is 10baseT.

Entertainment: Distribution of one or more broadcast sources throughout the house,. One of the cables to each TV location can be utilized for an "internal" channel for a Satellite Receiver, DVD player, VHS VCR, camera or other source to be viewed throughout the house on other TVs.

- Any combination of the following can be distributed: cable TV (CATV), standard or HDTV rooftop antenna, satellite receiver and/or distribution of any internal video source (DVD, VHS or other).

- A cable modem broadband Internet access service can also be accommodated.

Infrastructure System Elements

The wiring infrastructure package is comprised of three elements: 1. The planning and design phase in which we address both the minimum required systems and preparation for future capabilities; 2. Multi-Media Ports, standard jacks with wiring and connector plates and ability to bring in multiple outside services (telephone, TV, radio, satellite, internet and others); and 3. The central connection center with distribution, routing, control devices and expansion room.

Planning, Design and Engineering

We design the whole-house infrastructure to facilitate standard, currently available and emerging communication, information and entertainment technologies. Our designs lay the foundation for our clients to take advantage of many available services, to be prepared for the future, and also to improve their home's value. It is easy to install wiring during construction, and expensive, unsightly or even sometimes impossible to do it later. The design service includes:

- Review blueprints (provided by client) and determine placement of wallplates, system components and the best wiring routes. During this examination, many possible conflicts or problems can be identified and resolved in advance.
- Specify electrical outlet (AC) locations for equipment related to our scope (AC work by others).
- Suggest appropriate conduits to and from key locations (conduit not provided in this scope).

Prewire (for data, TV & telephone)

The prewire includes Multi-Media Port locations, each with 2 coax and 2 Cat-5 phone/data cables, and telephone-LAN locations, with 2 Cat-5 phone/data cable. Main drops for the Telco, with 2 Cat-5 phone/data cables for 8 lines or 4 plus ISDN or ADSL service, cable TV, with two coax cables for cable TV and/or internet cable modems, and rooftop TV/HDTV antenna and/or satellite dish location with 3 coax cables.

Multi-Media Ports, Wiring and Standard Receptacles

The Multi-Media Ports (MMP) manage and distribute a combination of multiple communication, information and entertainment delivery services to all desired computer, entertainment system, TV and phone locations. We recommend MMPs for all anticipated future locations as well as the minimum required at this time. Each MMP features the following:

- Two "F" connectors for TVs, Cable Boxes, Satellite Receivers and/or Cameras.
- One RJ-45 jack for up to four telephone, fax or modem lines at each location.
- One RJ-45 jack for sharing computer resources throughout the house.
- This white plastic wallplate can share a cover plate with an AC receptacle.
- A four-pair high-bandwidth CAT-5 data cable for phones or telephone system.
- An additional (2nd) CAT-5 cable for a computer local area network (LAN).
- Dual RG-6 coax cables (2) for any two of the following: cable TV (CATV), standard or HDTV roof-top antenna, satellite receiver and/or distribution of any video source (DVD, VHS or other). A cable modem broadband Internet access can also be accommodated.

All wiring is color-coded, numbered and labeled at each end for easy identification.