


Building Around the TV

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One way consumers are battling escalating gas prices is by staying home. The rising cost of living is compromising millions of consumers' ability to pay for family activities like dining out, trips to the movie theater and vacations. To that end, a new trend has developed -- one that finds consumers spending their dwindling disposable income on products that enhance their leisure activities while they're at home. The product category that is capturing America's discretionary spending is big-screen televisions.

The big-screen television phenomenon is more than just marketing hype from the consumer electronics industry.

An October 2005 study conducted by the Cushman & Wakefield Valuation Services-Retail Industry Group for the movie theater industry found that high-definition television (HDTV) and home theater were substantial threats to movie theater revenues. Validating the movie industry's concern are several studies from the Consumer Electronics Association (CEA) that support the theory that consumers are hungry for big-screen TVs. In its "8th Annual Household and Teen CE Ownership Study," the CEA estimates that the penetration of HDTV is at 19 percent, or about 21 million American homes. The CEA's research also reveals that approximately 11 million households plan on buying an HDTV within the next year, with 70 percent of those consumers being first-time buyers.

What does this all mean for builders? One of the most requested amenities by new-home buyers is a media room, according to both the National Association of Home Builders (NAHB) and the American Institute of Architects (AIA). Without leaving the house -- and burning gas -- families can have some fun in the media room. It's a place to watch television and play video games through the use of their big-screen televisions.

A story published this winter in *USA Today* reported that a growing number of homebuilders are attempting to increase sales through incentive packages that include everything from free kitchen upgrades to HDTVs. Of course, it's not as simple as providing the TV. For instance, if a homebuyer is considering a flat-panel (plasma or LCD) TV, the room must be constructed to accommodate that technology. If a homebuyer wants a front-projector with a screen, the room must meet that criterion. The big question for builders is, which type of big-screen TV should you offer to clients?

How It Works

Builders interested in capitalizing on the desire for media rooms need to incorporate a few provisions into their future home plans that facilitate the room's compliance with its central component -- a large-screen video system. "The first thing builders need to do is position electrical outlets in locations wherever a possible video solution may be placed," says Joel Silver, president and founder of the Imaging Science Foundation (ISF), an electronics industry organization that is dedicated to ensuring the best possible performance for video users. Silver says builders would be best served to place electrical outlets in certain locations: a few locations along the walls for televisions and plasma displays, on the ceiling for a possible front projector, and near the windows in case the homeowner wants to add automatic shade controls to enhance home-theater lighting.

Silver adds that light plays a major role in determining what type of video product should go into the home. If builders are cognizant of the role light plays, they can incorporate that information into the design of a floor plan.

Greg Nicoloso, marketing manager for the video company SIM2 USA, agrees that light is an important consideration. "Ambient light will affect picture performance, especially in a home-theater installation," he says. "We know that a projector does not project black, which means that the black level on a screen will be as good as the absence of light on the screen, and this means that in order to achieve perfect black levels and contrast ratio in a home theater, that the light has to be perfectly controlled."

Nicoloso advises new homebuilders that many of the factors that apply to assembling a video system are subject to a number of variables that can affect the choice of technologies, screen sizes and viewing distances. "The proper viewing distance from a

screen is known to be twice the width of the screen, but when working in somebody's home, you have to fit their preferences," he says. "For a large-screen home theater, there is a need for a large room.

"Going by the rules, the proper viewing distance should be between 2 times to 2 1/2 times the width of the screen. If you want a 150-inch wide screen, you need to have a room that is at least three times that length in order to accommodate seating and space behind the seating. This, of course, ties to the above question -- rules do exist, but those rules are also very relative."

Choices Abound

Beyond choosing the appropriate screen size, the biggest dilemma homebuyers face is what type of video system fits their needs. There are several factors that come into play that help determine whether a front-projection system, flat-panel television (like today's popular plasma displays) or a rear-projection television (RPTV) best fits a consumer's room decor, budget considerations and television viewing habits.

Some of the considerations, Silver says, are psychological. In the case of a front-projection system it's simply a matter of a system's ability to replicate a movie theater environment. He adds that if a homeowner can't adequately control the light entering the room, a flat-panel television or RPTV makes sense.

If homebuyers decide on a flat-panel display, they then have another decision to make. "What kind of technology do you want ... LCD or plasma?" asks Mark Stein, director of corporate communications for the video manufacturer Vidikron. "Right now, the LCD market is dominating the smaller sizes -- from about 37 inches on down, while plasma reigns supreme in larger picture sizes -- generally 42 inches on up. LCDs are beginning to appear in much larger screen sizes, but at a price premium. Most people will say plasma displays still appear to have better picture quality in larger sizes."

Meanwhile, builders have the task of preparing media rooms for display of these flat panels. Generally, builders have six choices:

- Mount the flat panel on the wall with 15-degree tilt
- Recess the flat panel into the wall
- Design a custom cabinet
- Drop the flat panel from the ceiling
- Pull the flat panel from wall and rotate it
- Lift it out of a cabinet

If the first option is chosen, a flat-panel mount must be used. (For a list of flat-panel mount providers, visit our sister publication CE Pro's online buyer's guide, www.cepro.com/mounts.) Given the weight of the TV, builders must take steps to ensure that the mount will be strong enough to hold it.

1. Consider both the weight of the flat panel and the mount.
2. Add support to the structure if necessary by doubling studs where the mount will be located. Double-stud mounts are UL-listed at 150 to 200 pounds capacity (and can hold four times that, though it's not advisable). For single-stud installations, use the proper mount designed for them. Check the manufacturer's spec sheet for maximum load ratings. Note that metal studs hold much less weight.
3. Check for clearances above and around the mount. If using an articulating arm, check clearance for full movement of the arm.

Nicoloso says there are many reputable manufacturers and custom-installation specialists that can help builders decide which products and technologies are right for their home-buying clientele. He adds, "Front projectors should be installed in home theaters and any area where ambient light can be controlled. I would not recommend a front projector for a kitchen or even a bedroom or bathroom."

Nicoloso says RPTVs are more versatile. "They don't suffer as much from ambient light issues."

Flipping Around: TV Choices

Flat-panel display

Liquid Crystal Display (LCD) TV: Long known as the flat-panel TV that comes in small sizes, manufacturers are now making bigger LCDs with prices similar to same-size plasmas. The units display electronic pixels onto the glass screen.

Plasma TV: A popular flat-panel choice, plasma TVs are big, thin TVs that can be mounted on a wall. Plasmas display images on a thin layer of gas trapped behind the glass screen.

Projection TVs

Front-Projection TV (FPTV): Similar to in a movie theater, these projectors "throw" an image across the room onto a screen. They can be mounted on a ceiling, made to drop down from a ceiling or sit on a table.

Rear-Projection TV (RPTV): Similar to a conventional tube television in terms of depth, RPTVs "project" a picture from the rear of the TV to a screen. You won't actually see a projector. Includes the subcategory of microdisplays (which greatly reduce the cabinet size).

Debating Flat-Panel Technologies

Many homebuyers will opt for a flat-panel display for their video solution. They may seek advice on which popular technology -- plasma and LCD -- to choose. Here is a very high-level comparison:

Plasma

- Better image clarity/colors
- Larger screen sizes
- Less expensive in large sizes

LCD

- Lighter in weight
- Viewing angle issues
- Better in dark light
- Less expensive in smaller sizes
- No image retention
- No altitude issues
- Less dimming issues
- Uses less power

Source: NEC



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