



## ENTERTAINMENT

# Optimizing Home Theaters for Video Games

Just ask Jim Dickey, a 44-year-old video-game enthusiast, about the difference between playing video games on a small screen versus playing with a full-blown projection system: “The first time you play on a screen that big, it’s almost overwhelming because you feel like you’re literally inside the game.”

Dickey is the owner of one of Casio’s LampFree Slim projectors, which is ceiling-mounted in a spare room that’s equipped with a 10-foot-wide projection screen and a surround-sound system. His experience is similar to other gamers, according to some of Casio’s focus groups. Most gaming enthusiasts who never have “gamed” with a projector say they wouldn’t buy one for gaming purposes. But let them try out a large-screen system and ask them again—and they’re sold.

### Big screens and big sound

Designing a video gaming system in a home theater environment is different than setting up a media room—from the sound components, to the switchers, to the set-up.

To start, consider installing any of the top consoles—Sony’s PlayStation 4, Microsoft’s Xbox One and Nintendo’s Wii U—plus a personal computer. If you want the ability to play all your favorite games and those of your friends, you’ll need to install one of each. Next, the ultimate gaming systems deserve big-screen televisions and great sound—so forget about setting up a flat-panel display in Johnnie’s room. “I have friends who have spent quite a lot of money on large flat-screen TVs for a better gaming experience,” Dickey

says, “but when they come to my place and see what I have, they say, ‘I’ll never buy another TV.’”

The optimum screen size for a single-screen game is, for most people, probably the same as for a movie. Multi-player games, however, require splitting the screen into two to four windows, which means each player is using half or one-fourth of the screen. It’s a given that the image will be smaller in a multi-player mode, so you may want to round up—instead of down—when determining screen size.

A great gaming room not only deserves a high-def image, but great sound also. “Surround-sound definitely makes Guitar Hero twice as much fun,” Dickey says. “You want real rock concert volume levels as well.”

In terms of sound, Eric Wolfram, a principal at Chicago-based installation firm Integrisys, suggests tying all three consoles into a high-end receiver, using HDMI to handle the video and audio for the Xbox One and PlayStation 4.

### Speed, latency and lamp life

Many popular video games allow multi-player competition via the Internet. Thus, a strong Internet connection is a must. “To me, it’s almost like a social network” Dickey says, “because when you go online with your friends, you talk to them while you play.” To accommodate that, a fast connection is required.

The most important issue with gaming, however, isn't bandwidth—it's latency (or long, round-trip network communications times). High latency, or any packet-loss issue, can give players a noticeable disadvantage. For that reason a good Internet service provider is a must, as well as a good Wi-Fi router.

Lamp life can also be a problem. Dickey says he averages about two hours a day with his Xbox, while many teen-agers can play four to six hours or more in one sitting. A home theater designed for video gaming will be used more frequently than one designed for movie-watching only, so careful projector selection is important to ensure uninterrupted play.

To that end, select any of the new projectors that are equipped with a LED/laser hybrid light source instead of a projection lamp. Casio estimates that the light source in its LampFree projector lasts for up to 20,000 hours, or about 10 times the life of a projection lamp. Specifying this type of projector will significantly reduce maintenance costs. All LampFree projectors have HDMI ports for

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easy connection into your gaming or video systems. In addition, the LampFree Slim series projectors are equipped with a 2:1 zoom lens so they can be positioned close enough to the screen to eliminate sightline problems when players cross the light path.

## Seating vs. stand-up space

One potential problem that occurs when a gaming system is incorporated into a home theater is player positioning. With motion-controlled games the gamers need to be able to stand up and move their arms, and sometimes their entire body, freely.

"This can be a real problem in a large home theater," Wolfram says. "If the projector is in the back of the theater with a long-throw lens, standing players will cast a shadow on the screen no matter where they're standing." Wolfram prefers to use short-throw lenses, especially in rooms with higher ceilings. "If we're doing a full design, we'll definitely create drawings with standing players to show the projection path," he says. "Even if a client isn't planning to include video gaming in the theater, you don't want people to block the screen when they stand up to get a snack." Rear projection,

of course, eliminates that problem completely, and is worth considering if stand-up video games are important.

According to Wolfram, the front of the theater is the best place to play stand-up games. "With the Wii, you need to position a sensor bar where it can read the controller; with the Xbox and the PlayStation, some sort of camera has to be up front and center."

To accommodate the necessary gaming space in a home theater, consider installing movable theater seating rather than fixed chairs. This kind of set-up allows for a clear projection path, and provides eight to 10 feet of space in front of the first row of seating.



**Slim Series**

Another alternative, of course, is to create a secondary video gaming area in another part of the house. Wolfram has devised multiple playing areas in his own house by tying his Xbox into a video distribution system so he can carry his wireless controllers with him wherever he wants to play. By installing separate consoles or PCs in each playing area, family members can "game" with each other from room-to-room.

## Gamers sit differently than movie-watchers

Most gamers sit differently than movie-watchers. "I find that I like to sit on the front edge of my seat and lean forward, so I feel like I'm in more control," Dickey says. "Big, comfy seats aren't a negative, but you usually end up sitting forward on them." If you install proper theater seating, consider adding two or more armless chairs to the mix.

Wolfram finished a project recently that had to accommodate up to 11 grandkids. "It wasn't practical to provide that many fixed seats in this space, so we used big beanbags that they could move, slide out of the way, or bring in as needed," he says. Beanbags, in fact, are preferred by many gamers; some companies—such as Ace Bayou and SumoLounge—sell beanbags designed specifically for gaming.

Playing video games on large-screen systems is extremely appealing to those who have tried it. So consider going big with a large screen with a LampFree projector when choosing your next home theater and/or gaming set-up.