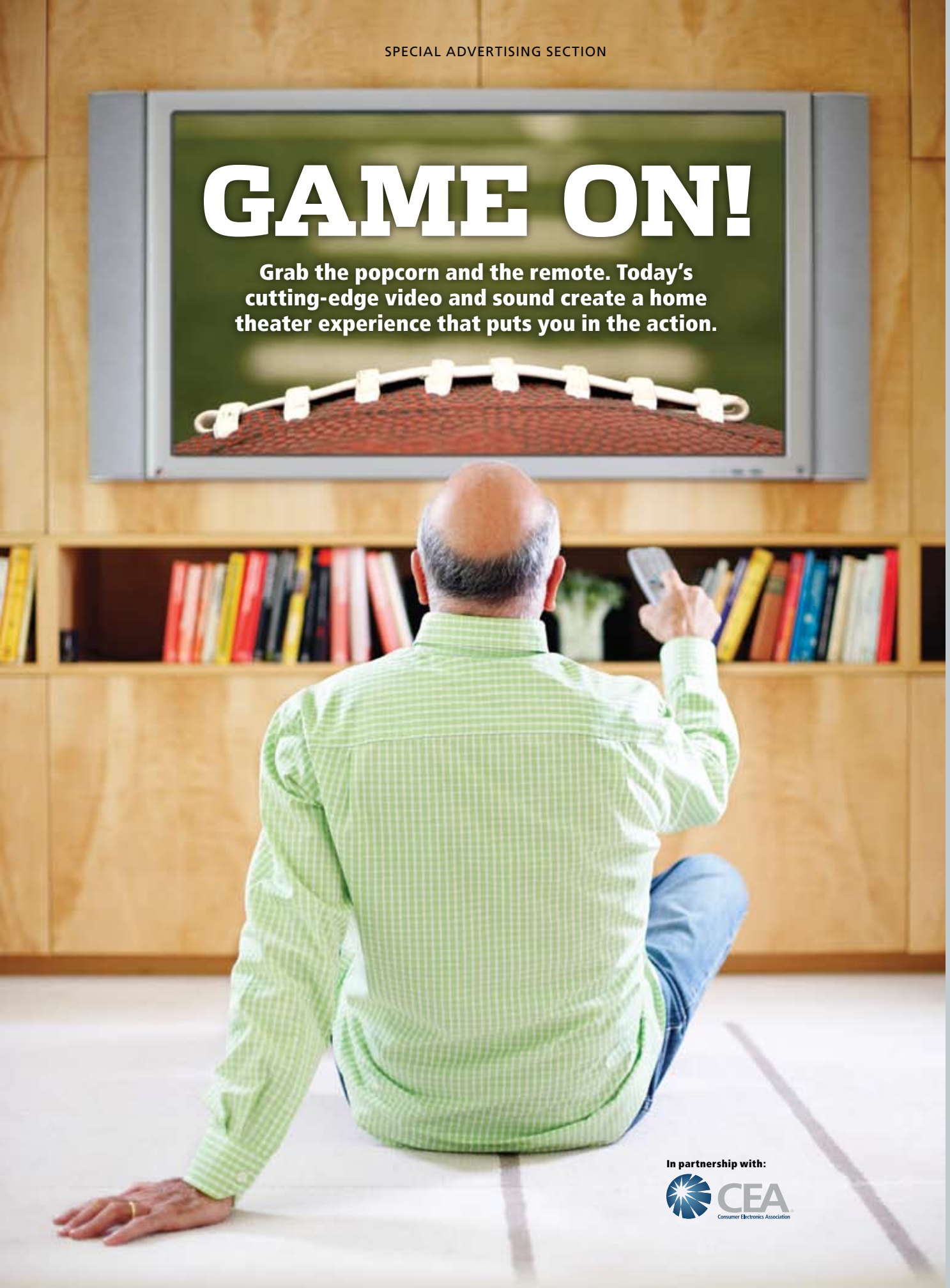
GAME ON!
Grab the popcorn and the remote. Today's cutting-edge video and sound create a home theater experience that puts you in the action.
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Super Bowl tickets may be hard to come by, but an immersive, in-the-game experience is surprisingly within reach, thanks to today's home-theater technology. High-definition video combined with multichannel surround sound bring the plays, and players, to life. Yet for many fans, creating the perfect system can seem intimidating, since there are many different technologies to choose from, and a variety of installation options. It doesn't have to be that way. By following some simple tips, you can join the ranks of the more than 54 million U.S. households that own a flat-panel HDTV—and bring the sights, sounds, and action of the game home.

Each year, the quest for a bigger, better Super Bowl experience spurs thousands of buyers to embrace high-definition television. But this year there are a couple of added incentives. For one thing, HDTV sets—which range in size from a kitchen-friendly 15 inches to 100-inch and larger models that can double as garage doors—are more capable, and more competitively priced, than ever before. A 37-inch HDTV that sold for $3,000 two years ago can be found for under $900 today, and with a lot more bells and whistles, including more advanced connection options to link up other audio and video components.

This is also the year—Feb. 17, to be exact—that all but the smallest television stations will transition from analog to digital broadcasts. That makes it an ideal time to get rid of the old TV (by recycling or donating it, naturally: see myGreenElectronics.org to learn more).

Focus on the Big Picture

HDTVs come in more shapes and sizes than conventional televisions, and that's where things can get confusing for a first-time buyer. Understanding the pros and cons of the different display technologies can help you make the right purchase.

Plasma TVs—which use ionized gas to excite red, green, and blue phosphors to emit light—offer wide viewing angles (so you can sit off to the side of the screen), deep blacks, bright colors, and, at large screen sizes, a better bang for the buck than their chief rival, LCD TVs. A 50-inch plasma can be found for under $2,000, compared to $2,500 for an LCD model. Plasma sets, however, are heavier than their LCD counterparts and consume more power.

Thin and light, LCD TVs—which use liquid crystals to control the passage of light—are easily mounted on walls. And, unlike plasmas, there is no chance of "burn in"—when an image that's been displayed for a long period becomes a permanent impression on the screen. But LCDs offer narrower viewing angles than plasma models, so you'll want to make sure your couch faces the center of your screen. Older LCDs couldn't match the bright, vibrant colors of plasma displays, but the latest LCD models have narrowed the gap significantly.

Rear-projection HDTVs offer big screens (50 inches and up) at lower prices than both plasma and LCD models. Indeed, a 60-inch model can run less than $1,300. Fewer manufacturers produce these TVs, viewing angles can be narrow, and they use bulbs that typically need to be replaced every few years at a cost of up to $400.

A final option, front-projection HDTV, doesn't resemble a television at all. This system, much like a movie theater setup,

A BUYER'S GUIDE

Like all technologies, HDTV has a lingo all its own. Here are the key terms you'll need to know when shopping for your next television.

1080p HDTV comes in several flavors, but 1080p serves up the best possible visuals. The "1080" indicates the number of horizontal lines in the picture, the highest resolution available. The "p" stands for progressive scanning, a technique that produces images that are smoother (i.e., no flicker) than those viewed on old tube-based televisions. Many, but not all, new plasma and LCD TVs are capable of 1080p resolution.

720p This is the other main type of HDTV. Images are composed of 720 scan lines, and while that's significantly less than 1,080, most viewers will need to watch a large screen (generally, more than 50 inches), or sit close to a smaller one, to notice the difference. All HDTVs are capable of 720p resolution, and sets that

is composed of a projector (which can cost $1,000 and up) and a screen (another several hundred dollars). A dark room is required, and screens often measure north of 100 inches, so most front-projection systems are used in dedicated home-theater rooms.

Those giant front-projection screens bring up an important point: How big should you go? Here is an easy rule of thumb. First, measure the distance in inches between your sitting area and the spot where you plan to place the television. Next, divide this number by two. This will give you the maximum size screen you'll want. Then take the original distance you measured and divide it by three. That will give you the minimum size. Any HDTV within this range will work well for your space.

The Sharper Image

Another choice HDTV buyers need to make regards the set's resolution. The greater it is, the sharper the picture. Traditional tube-based televisions divide the screen into 480 separate lines. All HDTVs can display 720 lines, and the difference is dramatic. At the higher resolution, the smallest details—down to the sweat of a quarterback—suddenly become visible.

stop there cost hundreds less than their 1080p siblings.

HDMI Short for High-Definition Multimedia Interface, this is the optimal method of connecting components (such as cable set-top boxes and videogame consoles) to your HDTV. A single wire (which, alas, you'll have to buy separately) carries high-definition video along with up to eight channels of digital audio, resulting in the best possible picture and sound. When shopping for an HDTV, what you're looking for is an HDMI input allowing you to use this type of connection. Almost all current HDTV models have at least one input, while some have three or four. More are better.

Component Video Connection Like HDMI, this is a method of connecting A/V components to an HDTV. But here, three separate wires carry the video and two more handle audio. Picture and sound quality don't match HDMI, but it's still good, and with older DVD players and game consoles that lack HDMI outputs, this is generally your best option.

Blu-ray The next generation of DVD technology, Blu-ray discs are capable of 1080p resolution and spectacular sound. Because they can hold far more digital information than traditional DVDs, special features are possible, such as picture-in-picture commentaries and live chat with others watching the same movie on their own HDTVs.

ANOTHER MAKEOVER IS ABOUT TO HIT YOUR SET: DIGITAL TV IS UP NEXT. STAY TUNED.

Many of today's HDTVs go a step further, offering 1,080 lines of resolution. While 1080 is clearly the wave of the future—the standard is supported by Blu-ray, the high-definition DVD format—keep in mind that 720 is so sharp that viewers watching smaller HDTVs will be hard-pressed to notice the improvement 1080 brings. Sets capable of only 720 lines cost less: For a 32-inch LCD, the savings can be several hundred dollars. These units let you break into HDTV on a small budget.

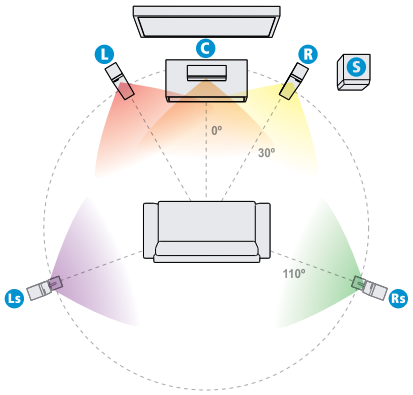
You'll also want to make sure your HDTV has an HDMI connection. HDMI, short for High-Definition Multimedia Interface, uses a single cable that carries high-definition video along with up to eight channels of digital audio. It produces the best possible picture and sound when linking components such as a videogame console to your HDTV.

Because they are far thinner than traditional sets, HDTVs can be wall-mounted; ideally, you'll want the center of the screen positioned so it is at eye level when viewers are seated. But you'll need to be careful here, too. Never attempt to mount a television by yourself, and be sure to leave room for any cables you may need to connect components. You'll want to install a surge protector, as well, so your equipment isn't damaged by a sudden spike of electrical power. Consider using a wall-mountable model, positioning it out of sight behind the television.

Perfect Sound Effects

One mistake many people make is to concentrate on the visuals and forget about the sound. By relying on the television's built-in speakers, they miss out on the full home theater experience. That's because most HDTV broadcasts, and many DVDs, have digital 5.1 channel surround sound encoded in their soundtracks. By employing multiple audio channels and speakers, this technology produces sound that comes at the listener from different directions. A car, for example, doesn't just move from left to right on the screen—it also sounds like it's moving across the scene.

SURROUNDED BY SOUND



A speaker floor plan: Be sure to put surround speakers (Ls and Rs) higher than ear level. The front speakers (L and R) should never be in a corner, or sound will be muddy. Always place the center speaker (C) in front of the TV and the subwoofer (S) on the floor.

As its name implies, 5.1 channel surround uses five full-range speakers positioned around a room (left, center, and right speakers in front, along with two side surround speakers), plus a subwoofer. The ".1" of the equation, the subwoofer is a large loudspeaker dedicated to bass frequencies (for large rooms, 7.1 channel surround leverages seven speakers and a subwoofer). Gathering the equipment is relatively easy; for several hundred dollars, or more, buyers can purchase a so-called "home theater in a box" (HTiB) that comes complete with all speakers and an A/V receiver. Or they can buy the pieces à la carte—a pricier option, but one that offers more flexibility in acquiring the specific components you want. Where people often go wrong is in the placement of the speakers, as bad positioning can translate into less-than-optimal sound.

Some tips: Never put a full-range speaker in a corner, as the intersecting surfaces will muddy the sound. Be sure to place the front speakers so they are at ear level; floor stands are a good option here. If you have a hardwood floor, think about laying a carpet, as you'll avoid reflections that can distort sound. Finally, experiment with the left and right surround speakers. Some listeners like them at their side, others slightly to their rear.

As for the subwoofer, it should always go on the floor. A handy trick: Move your couch and put the subwoofer, temporarily, in its place. Then crawl around, ear close to the floor, while playing a bass-heavy CD. Wherever the sound is best, that's your subwoofer's spot.

If space is an issue and running wire isn't practical, a sound bar may be a solution. Sound bars offer virtual surround sound without the potential clutter of conventional surround sound systems. You won't get the level of precision you'd get with a conventional multispeaker setup, but they can be surprisingly effective.

Of course, if the do-it-yourself route isn't for you, a professional installer can help. Visit TechHome.com to find a professional in your neighborhood. All are members of the Consumer Electronics Association.

With a bit of planning, and some high-tech savvy, your Super Bowl party will have fans of its own—and for something other than the chicken wings. ●