Furniture for Your Next TV

Flat-panel screens and shallow boxes offer new design possibilities

BY STEVE CASEY

Televisions are getting shallower and wider

I've been designing and building custom furniture since 1978, much of it devoted to home theater, entertainment centers, and other pieces built around televisions. Recent years have brought major changes in TV technology, creating new furniture possibilities and making my work much more interesting.

TV screens are wider than ever, but the most important change for furniture makers is in how thin the sets have become. Two types of sets have led the way. The first are flat-panel sets with plasma or liquid crystal screens. Some of these displays measure 60 in. diagonally but are only about 5 in. deep. The other type of set is the large-screen projection TV, which used to be housed in a giant cabinet but now averages only about 17 in. deep. The advantage of the latter type is that they cost thousands of dollars less than plasma or LCD sets with comparable screen sizes.

The new sets allow designers to rethink the typical entertainment center and to create cabinetry and furniture for TVs that was not practical or even possible just a few years ago. Televisions today are attractive enough that they don't have to be hidden behind doors in the now-too-familiar black box. Many new designs put the set on display. Here are a few ideas.

Options for flat screens

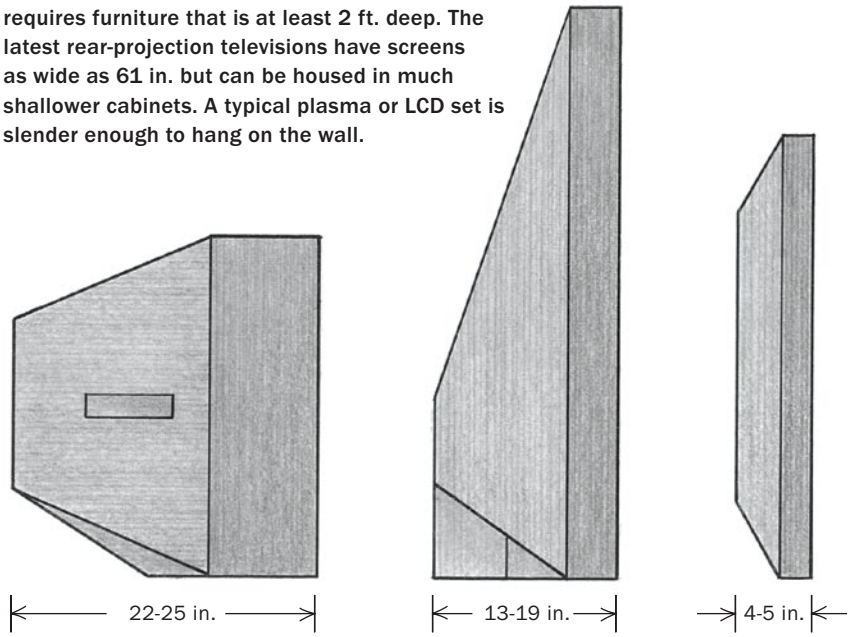
Because TVs now can be hung on the wall like pictures, with minimal intrusion into the room, furniture makers are not limited to "big box" solutions like armoires. Instead, we can create equipment consoles that sit beneath the screens, or mount screens into the shallow bookcase section of traditional built-in cabinets.

It is important to follow proper construction techniques when building equipment furniture and cabinetry. If you plan to build an entertainment unit based on any of the design ideas presented here, Brooks Tanner's article "Engineering an Entertainment Center" (*FWW* #159, pp. 78-83) provides the basics.

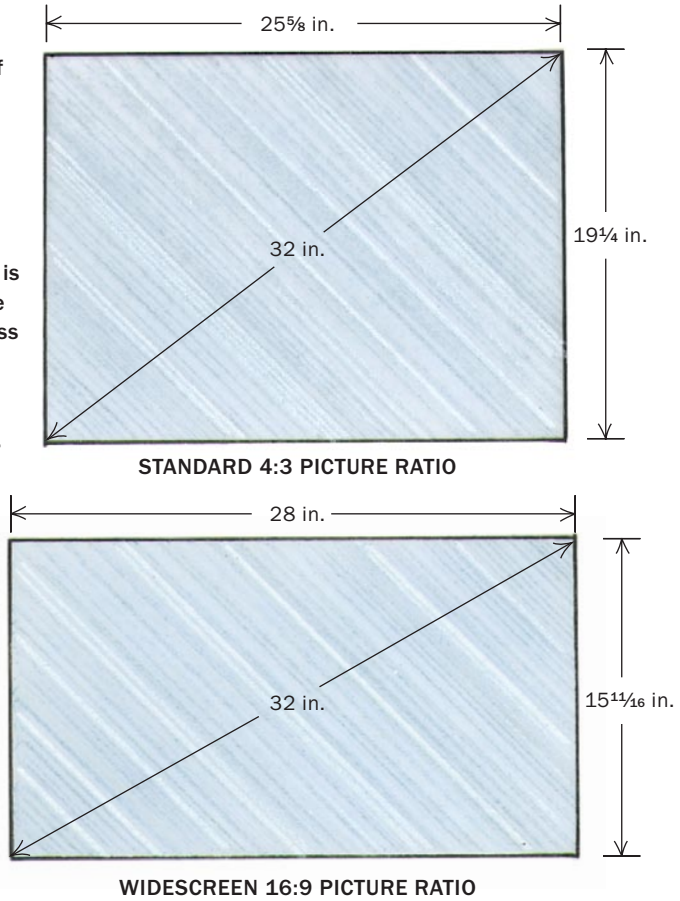
Console units—One piece I often build to go with flat-panel TVs is the console—an ideal furniture design for housing electronic gear in small spaces such as bedrooms or apartments. Consoles support or sit underneath the TV but do not enclose it.

The console's smaller scale offers several advantages over conventional wall units. It is relatively easy to move when users want to relocate the piece or get behind it to connect equipment. Also, because the console doesn't house the TV itself, there is no need to buy new furniture if you buy a bigger set. Being of smaller scale, consoles are less expensive and take less time to build than larger wall units or full-on cabinet systems. But

The picture tube in a large traditional television requires furniture that is at least 2 ft. deep. The latest rear-projection televisions have screens as wide as 61 in. but can be housed in much shallower cabinets. A typical plasma or LCD set is slender enough to hang on the wall.



Wide-screen televisions, many of them designed to carry digital, high-definition signals, have proportions much like those of a movie-theater screen. Screen size is measured the same way, however—across the diagonal. So a 32-in., wide-screen set (bottom) has a screen that is wider and shorter than its standard-ratio counterpart (top).



The console is a modern approach. *Positioned underneath a wall-hung television, consoles offer design freedom. They can be small or very large, they come with you when you move, and they don't have to be replaced when screen technology changes.*

since they function more as pieces of furniture than as cabinetry, they create opportunities for solid-lumber construction and traditional joinery—elements that might break the bank if used on larger built-ins.

Bear in mind that consoles have limitations. The unit's height almost always will require some kind of compromise. Ideally, the piece should be low enough so that it doesn't interfere with the ideal height placement of the TV (the screen should be centered at eye level from the viewing chair). Build a console this low, however, and you'll probably have to stoop down to load your VCR or DVD player. Fortunately, this isn't an issue in bedrooms, where the screen should be much higher off the floor for a viewer perched in bed.

Traditional cabinets—Flat panels can go where no large TV has gone before. A big TV in the shallow bookcase section of a traditional cabinet was not possible until this technology reached the market. The example on the facing page shows how little depth is

Photos: Dean Della Ventura

Solutions for LCD and plasma TVs

Modern technology mixes well with traditional cabinetry. *Because it requires so little depth, a flat-panel television can mount easily inside the bookcase section of a traditional built-in cabinet (left). A commercially available mount (above) allows a plasma or LCD television set to be pulled away from the wall and swiveled, either for service or for viewing.*

needed to build a flat panel into a piece of furniture. With a standard 10-in.-deep shelf, the TV still had to come forward a few inches in order to get the screen flush with the bookcase face frame. The leftover space was used for a mounting device with an articulating arm that allows the screen to be pulled forward and swiveled (see photo, above right).

Most plasma or LCD sets need plenty of open space around them so that air can circulate and keep the equipment from overheating. It's essential to bring the screen forward and to leave a decent amount of space around the display for cool-air draw and proper convection. If you plan to enclose a plasma or LCD set in casework, consult the screen's manufacturer for its specifications on ventilation.

On traditional painted cabinets (see photo, above), I like to use two-sided, pine-core melamine board for the closed case interiors. The melamine requires no further finishing and will take lots of abuse without showing wear. I used white inside the cabinets and black for the component rack because it complements and contrasts with the painted finish and goes really well with electronic equipment. I used MDF (medium-density fiberboard) for the bookcase sides and backs, maple plywood for the shelves, and solid wood for the raised-panel doors, face frames, and all of the trim. On this piece I also included a cherry countertop made from veneer-core plywood with solid trim.

Options for projection-style sets

Large-screen projection TVs are bulkier than flat-panel sets but they, too, allow for much thinner and less conventional furniture designs because they have minimal depth, size, and weight. Not long ago, a projection set with a 48-in. screen was nearly 3 ft. deep. A similar set today is only about 15 in. to 17 in. deep. The furniture I build to house much larger 60 in. or 70 in. projection TVs is typically only 20 in. to 22 in. deep. The TV no longer determines an entertainment center's maximum depth; the other home-theater components do.

Familiar casework with a smaller footprint—As TV displays get larger, clients are growing more comfortable with smaller furniture that shows off their TV instead of hiding it. The example at the top of p. 78 was designed by Deborah Goldstein of Interior Motives to replace a much larger cabinet that housed a much smaller TV. When "big" television screens were only 36 in. across, the sets were heavy and deep, but took up only a small percentage of the cabinet's face area. In this unit, the screen size accounts for more than 25% of the cabinet's face area. Today's large-format sets, in addition to being thinner, are also quite lightweight. I

Projection TV: Big screen fits in a shallow cabinet

This big-screen technology offers a crisp picture for less money than a plasma set, and still is much shallower than a traditional TV. This cherry unit (right) is only 18 in. deep. Another approach uses a plywood backboard instead of a full-height case (below), making the piece contemporary, more open-looking, and easier to install or move.

no longer need to build beefed-up TV-support shelves to hold lots of weight and prevent sagging over time.

The unit is only 18 in. deep and still allows 4 in. behind the TV for good ventilation. In this space, the idea of putting a big, deep cabinet so near the entry to the room would be bad design. The television's narrow profile allowed me to scale back the support furniture for an unencumbered entry to the space while providing a large-format viewing experience.

Put the picture in a frame—A contemporary approach (see bottom photo, facing page) frames and highlights the TV while hiding the equipment behind doors for a clean, sleek look. This design has a lower drawer base with a structural backboard attached. Using a plywood backboard instead of a full-height case gives the piece a more open look and makes it easier to install and move. With lighting and display, this kind of approach creates drama in the room.

I like to build contemporary pieces like this using plywood with a Douglas-fir core and an MDF layer just below the hardwood face veneer. The MDF layer ensures flat surfaces, while the fir core provides structural strength and screw-holding ability. With a few matched sheets, I can play with the grain and do wonderful matched faces and backs. The face frames are solid wood. I typically use hot-melt edge tape to veneer the door and drawer edges.

Assembling the backboard panel on the matched veneer seams gives an illusion of one seamless back even though the final piece might be three parts and 9 ft. across. I used biscuits and tight-joint fasteners to hold the panel together. The backboard did not have to be secured to the wall but is secured to the cases. This helps to prevent racking and provides a way to attach the smaller, floating shelves. Everything is held square and in place on the backboard with biscuits and then secured with drywall screws inserted from the back. All of the equipment is behind doors in the closed cases. The drawers below store DVDs, videotapes, and CDs. □

FineWoodworking.com

Project Diary: Watch online and ask questions as author Steve Casey builds a modern entertainment center. His weekly weblog entries and photos will document the project step-by-step at www.FineWoodworking.com/projectblog.

Steve Casey builds custom furniture and cabinets in Los Angeles.

BUILT ON A BACKBOARD

The author likes to build contemporary pieces like this from hardwood plywood with solid-wood face frames.