

ELECTRONIC HOUSE

Smooth Operator



Gold Winner: Home Theater \$25,000 - \$75,000

A ceiling aglow with LED lighting is just a prelude to this smooth ride.

Apr. 21, 2011 — by [Steven Castle](#)

You're treated to an entertaining show the second you enter this theater. About 150 feet of LEDs (light emitting diodes) integrated into the coffered ceiling light up and cycle through several different colors as guests take their seats.

"It's a neat effect, and it gives it such a Wow! factor," says Mike Fox of systems installation firm Fox Audio Visual in Springfield, Ill. "I chose five to six colors that can be toggled through. For more advanced colors, you can call them up via the remote."

A motion sensor at the front of the room detects visitors from the side door and triggers an LED processor that's connected to a Control4 home control system. The LED processor turns on combinations of the red, green and blue LEDs to achieve different effects. Fox and his company programmed several preset scenes into the Control4

system, so the homeowners can show off their theater and its colorful ceiling at the touch of a button.

The ceiling isn't the only amazing part of this room. The LED lights ramp down when it's showtime, and that's when the audio and video system shines.

Custom on a Budget

This theater provides a warm feeling due to the space, designer fabrics and the quality custom woodwork from builder Leka Construction of Riverton, Ill., and it doesn't cost as much as some pre-fabricated or modular theaters. "With a little creativity, you can work with a good designer, builder, woodworker and upholsterer, and build a true one-off theater with real hardwoods, custom fabrics and those little details that make it uniquely your own," says Mike Fox of home theater specialist Fox Audio Visual in Springfield, Ill. Fox also pays special attention to the ceilings in his theaters, as is more than evident in this LED-lit space. "I like to make home theater ceilings interesting, because it's part of what you first see when you walk in."

Fox used seven of BG's Radia "ribbon" speakers to provide the audio thump. The speakers use flat diaphragms instead of traditional cone drivers, and an electromagnetic force on aluminum conductors evenly distributes a signal over the entire surface of the diaphragms. This eliminates vibrations and results in a smooth sound, especially in the upper frequencies.

"I love the sound of the BG speakers; it doesn't really bounce off the walls," says Fox. "And they're great for both home theater and listening to music." This suits the 70-year-old couple who owns this theater, as they tend to watch older movie classics, rather than today's bass-heavy blockbusters—although Fox did enhance the low end of the sound (or bass) by adding two 15-inch Velodyne subwoofers. Lastly, Fox applied a variety of acoustical materials to the walls and ceiling to enhance the sound.

The three front Radia CC-LCR speakers are located behind an acoustically perforated video screen. Fox made sure no reflective surface on the hidden speakers would shine through the pinholes of the screen, by removing all of the plastic on the top and bottom of the units and painting their housings black. Four additional full-size Z62 LCRs are hidden behind fabric in the pillars along the side and rear walls, and the Velodyne subs are concealed underneath a cabinet in the front of the room. Together, these pieces provide the full sonic effect of a 7.2-channel surround-sound system, which is driven by a Denon AVR-4310 surround-sound receiver and Velodyne SC1250 amps.

The smooth A/V theme continues with the combination of a JVC DLA-RS25 projector and Screen Innovations 119-inch display. "I love JVC projectors, and for the money they provide a great picture," says Fox. JVC's D-ILA (Direct-Drive Image Light Amplification) is a variant of LCoS (Liquid Crystal on Silicon) technology, which is considered a cross between DLP (Digital Light Projection) and LCD. Forgive the alphabet soup, but in LCoS technology a light shines on reflective panels of liquid crystals to produce a picture.

The resulting images tend to be very smooth and film-like, without some of the artifacts that can result with other display technologies. "Other [projection technologies] are brighter and have a little more color, but these are a lot smoother," says Fox. "The skin tones are more realistic and the colors aren't overly exaggerated."

Fox also likes Screen Innovations' fabric screen because he says the perforation pattern that allows the sound to come through is tighter than others.

The JVC projector is all but invisible, shining from one unobtrusive hole in a soffit at the rear of the theater. The projector was hidden there, and a rear door in the adjacent exercise room allows easy access and ventilation.

A handheld Control4 remote revs up the projector, as well as all of the necessary components. The lights, including the LEDs, are controlled through the remote, too, making this one smooth room to operate. EH

Products

Denon 4310 Receiver
(2) Velodyne SC15 subwoofers
Velodyne SC1250 Amp
(3) BG-Radia CC-LCR Fronts
(4) BG-Radia Z62 LCR Sides and rears
Screen Innovations 119" Acoustic transparent screen
JVC RS25 DLA Projector
(8) United Leather theater seats
Samsung BDP-1600 Blu-ray player
Control 4 model 300 controller & remote (tied into whole-house system)
150' custom LED lights

Installation Info

Systems Design & Installation:
Fox Audio Visual, Springfield, Ill., <http://www.foxav.net>

Builder/Woodwork:
Leka Construction, Riverton, Ill., 217-652-1420

Project Details

Room Size (L x W x H): 20 x 21 x 10 feet
Cost: \$44,000 (includes installation and labor)
Project Duration: 1 year
Construction: New

