

GOING TO EXTREMES is what the Michelin/*Car and Driver* One Lap of America is all about. For the drivers and their co-pilots, participation in the 4,200-mile event is a grueling, week-long, 24-hour-a-day affair. [You can get all of the gory details in "Lap Dogs 3: Lap of Luxury," page 47—Ed.] A few fearless (or foolhardy, de-

pending on your viewpoint) editors of CAR STEREO REVIEW have repeatedly accepted this daunting challenge, and have survived to tell the tale each time. You wanna talk extreme? For the 1999 One Lap, CSR left behind the pint-sized 1966½ MG Midget that sputtered through the '98 race (see "Systems: Small Soldier" and "Lap Dogs 2," October 1998)

for a brand-new, reliable, football-field-sized \$46,525 '99 Cadillac Escalade SUV. (The Escalade is so large, in fact, that the Midget could probably fit into its rear cargo area with room to spare.)

Since we didn't feel we'd win the race, we decided to turn the Escalade into a mobile theater, figuring that we might as well run with the big dogs in style.

Big Daddy Caddy

*CSR takes the high road in outfitting a monster '99 Cadillac Escalade with a mondo A/V system for its ride on the One Lap of America by **Chuck Tannert***



Paradise Theater

To help bring the curtain up on the Big Daddy Caddy's mobile theater, we turned to CSR Senior Contributing Editor Micah Sheveloff and his crackerjack team of installers at Audio Coupe in Fairfield, Connecticut. Before putting the system together, Sheveloff and I sat down to formulate an install game plan. The idea was



CADDY'S STEPDADDIES: Audio Coupe's owner Micah Sheveloff (foreground) and ace installer Jason Venne (leaning on door) stand by their work.



simple: Build a killer audio/video system using product supplied by our One Lap of America sponsors—Alpine, JL Audio, and JVC. Our primary goal was to construct an A/V system that reproduced music as accurately as possible without audible distortion. To create the feeling of watching a film as if you're inside a movie theater, we also wanted the video-playback portion of the A/V equation to be seamlessly integrated into the sound system; i.e., the audio portion of the video playback had to play through the main speakers. The sound system had to be highly functional, durable, and take up as little space as possible and maintain the Big Daddy Caddy's functionality.

Also thrown into the mix was GM's OnStar in-vehicle safety, security, and information system. OnStar links motorists to a manned service center via cellular telephone 24-7, and OnStar service folk can provide you with GPS-based positioning information, turn-by-turn route guidance, and provide or call for help in emergency situations. Since OnStar is standard equipment on the Escalade, a separate navigation system wasn't necessary, but OnStar would have to be integrated into the A/V system.

Oh, there was one catch to all of this—the Escalade is only on loan to us, which means that the Big Daddy Caddy's own big daddy eventually wants the SUV back in the same condition they gave it to us in; i.e., looking like it just rolled off the Detroit assembly line. As such, Sheveloff and his crew wouldn't be making any major modifications to the vehicle's interior panels or structure.

While some of you might think that a

Big Daddy Caddy

good number of these guidelines are a bit constrictive, Sheveloff disagrees. "This is a typical real-world install," he affirms. "Actually, I like this kind of system because it's practical. Many of the customers that come into my shop don't want me to do slice-and-dice installs, anyway; they want their vehicles kept intact, and I can't say I blame them. An installer should view this type of install as a challenge, not an annoyance. I mean, any qualified installer can slice and dice a vehicle and make it sound and look

good. The trick is to take a vehicle that you can't modify a whole lot and make it sound and look good. That's called artistry." Let's see how Sheveloff and his fellow Audio Coupe artistes used their palettes to rise to the challenge.

Look Who's Coming To DIN

The Escalade's system is fronted by JVC's sleek eKameleon KD-LX3 CD receiver [reviewed in August 1999—Ed.] that takes up residency in the stock dash radio hole. Not only does the LX3 provide seamless CD-changer control, it comes with an auxiliary audio input as well, which provides an easy way to integrate the vehicle's video and sound systems. Since the head unit that comes with the Escalade's stock Bose system is a DIN-and-a-half model, the DIN-sized LX3 is secured in the dash with an installation kit from Best Kits. "The stock radio was much bigger than the KD-LX3," details Audio Coupe installation manager Jason Venne, "so we used the kit to maintain the stock appearance and fill in the remaining space. If you didn't know it was a kit, you'd swear it was stock." In keeping with the stock motif, the installation kit uses the same snap-in mounting brackets that are found on the stock radio, so it snaps into the factory mounting scheme without any modifications or mounting screws. To maintain use of the stock wire harness, Venne used a Best Kits wire-harness adaptor.

A few inches below the JVC head resides the control unit from an Alpine PXA-H600 digital phase processor that's been flush-mounted into a small map pocket underneath the factory climate controls. "We modified the map pocket by cutting the back off it and replacing it with a piece of 1/4-inch medium-density fiberboard (MDF)," details Venne. "This created a flat mounting surface for the control unit." To match the JVC head cosmetically, Venne covered the MDF with the fuzzy part of the black Velcro. The back part of the Velcro holds the unit in place, and, in this configuration, the controller looks like it's "floating" in the opening. It's held in place via industrial-strength Velcro. The H600's brain is mounted under the cupholder inside the center console where the factory-installed subwoofer was located. Instead of being bolted to the floor pan, the H600's brain is attached to the center console's framework via sheet-metal screws.

Inside the center console is a JVC CH-X1200 12-disc CD changer, which replaced the factory 6-disc changer. Since the X1200 is a little wider than the factory changer, Venne



THE STASH IN THE DASH: The Escalade's aircraft-carrier-sized dashboard was a haven for mobile-electronics gear (A). JVC's eKameleon CD receiver (B) took up residency in the stock-radio hole, while the controller for an Alpine digital phase processor (C) was custom-mounted in the map pocket below the climate controls.

had to remove one of the stock side-mounting brackets and fashioned some of his own out of steel strips. (These strips look like radio straps without the holes.) Even though the X1200 didn't mate with the factory mounting scheme, it did fit through the stock trim panel like a glove. "It was a near exact match," marvels Venne. "Since nothing visible was modified, the changer appears to have come factory-installed."

Mount Headrests

The heart and soul of the Escalade's mobile theater, a JVC KZ-V10 videocassette recorder, is mounted under the passenger's-side rear seat and held in place with the supplied L-shaped brackets. Surprisingly, these brackets aren't secured with any screws. "The brackets are actually sandwiched between the carpet and the seat frame," Venne admits. "When we were test-fitting the VCR, we found that it fit under the seat without any cajoling. To avoid having to drill holes in the floor pan to secure the brackets, we reversed them so they'd face out. We unbolted each seat, stuck the brackets under the metal framework, and bolted the seat back down. As long as the seat's in place, the brackets are in there solid, so no holes were drilled in the floor pan." The VCR is attached to the brackets with sheet-metal screws.

A JVC KV-M65 6.5-inch LCD mobile color monitor has been flush-mounted into the back of each of the front-seat headrests. "This is the perfect configuration for rear-seat-passenger viewing," claims Sheveloff. Although flush-mounting the LCD monitors into the headrests would have to be considered a major modification, it was actually the most expedient mounting configuration, according to Sheveloff. "There was really no other realistic way to mount these monitors without doing some major-league fabrication work," he insists.

To create the headrest mounts, Venne removed the leather cover from each headrest and cut a square hole in the back of it that matched the size of the M65. He then removed enough foam from the back of each headrest to flush-mount the LCD in it, and secured the LCD in place with heavy-duty Velcro. After replacing the leather cover, installer James Samudosky sewed the leather by hand so that it would mold to the contours of the LCD.

In this mounting configuration, the monitors had to be modified just a bit.



CADDY THEATER: A pair of JVC color LCD monitors are flush-mounted into the backs of the front-seat headrests (D) and attached with Velcro. A JVC VCR shows its stuff from under the passenger's-side rear seat (E).

"The controls are located on top of the screen," explains Venne. "The foam inside the headrest was pressing against the buttons and wreaking havoc with system operation. So I opened up the LCD chassis and removed the actual buttons. Since all of the LCD functions can be controlled via remote control, none of the LCD's functionality was lost during the operation." Each M65 control unit is bolted to the vehicle's floor pan underneath their respective front seats. The two are daisy-chained together, and the supplied video-signal wiring is run up and through the backs of the seats.

Cargo Beholden

The most visible component of the Caddy's A/V system besides the color monitors is the rather wide amplifier rack/subwoofer enclosure that's mounted in the cargo area just behind the fold-down rear seats. "We chose to combine the amp rack

and the sub enclosure to save space and center all of the weight over the rear axle," explains Sheveloff. "The box probably weighs close to 200 pounds with all of the components attached. This is a lot of weight to add to a 'race car,' so, in this mounting configuration, the weight is more evenly distributed over both rear tires." Although the boys at Audio Coupe had a hard time admitting that they care about my health and general well-being, they also chose the "wide-load" configuration for safety reasons. "I wanted the enclosure to be as wide as the wheel wells so that I could get three solid screws into



CHANGE THE CHANGER: Audio Coupe replaced the stock 6-disc changer in the center console with a JVC 12-disc model (F).

Big Daddy Caddy



either side of the box from the outside the vehicle," reasons Venne. "This way the enclosure is less likely to become dislodged if you'd rolled the Escalade over at one of the race tracks." (Gee, thanks for the confidence, Jason.) The box also had to be wide enough to accommodate all three amps on top and sturdy enough to withstand a lot of abuse.

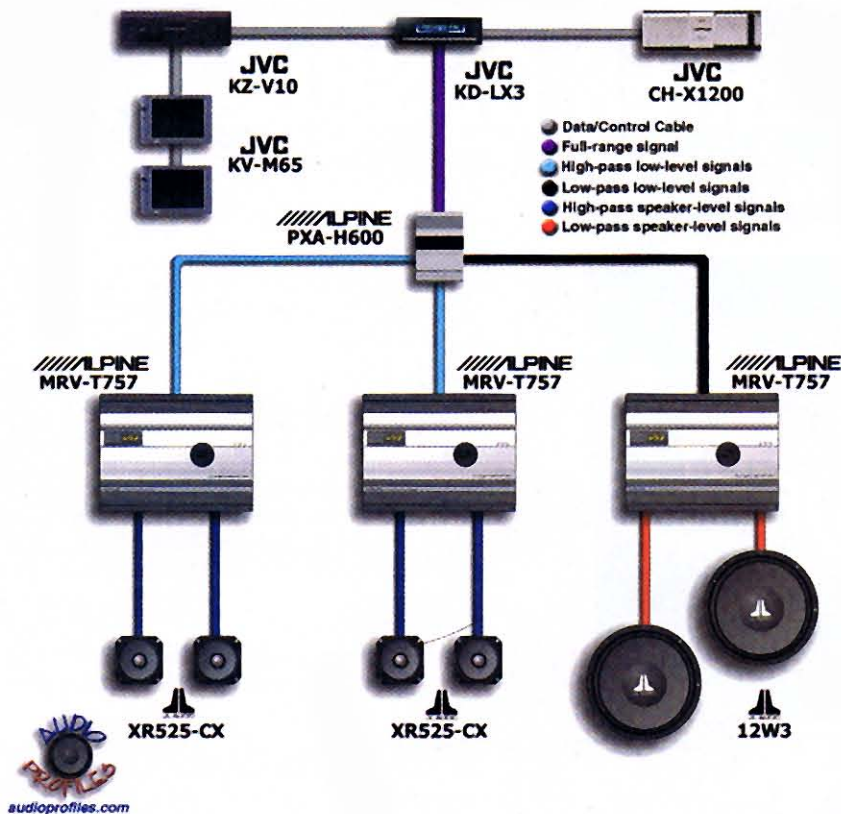
The hexagonal-shaped sub box is angled in the front for styling purposes and angled in the back to match the contours of the rear seats. "This way, the seats can fold up and down without any problems," explains Venne. The box is made of 1-inch MDF, held together with wood screws and glue, and is covered in black trunk liner. There's a septum down the center of the enclosure so that it actually has two separate sealed chambers. The volume of each chamber is approximately 1.6 cubic feet, and each is equipped with a JL Audio 12W3 12-inch subwoofer. Because the box is anchored into the wheel wells, it sits about an inch off the cargo-area floor. "We suspended the box so you could move the mats and access the cargo tie-down brackets," clarifies Venne.

A trio of Alpine MRV-T757 power amplifiers (75 watts x 2 into 4 ohms at 12 volts DC) sits atop the sub enclosure on two 1-inch-wide strips of MDF that run the width of the enclosure. To maintain the contour of the enclosure, the MDF strips—or pedestals, as Venne calls them—were cut at the same angles as the box itself. They were then screwed into the top of the enclosure before it was carpeted, giving the illusion that the pedestals are actually part of the enclosure and not an add-on. Thus, there's actually a 1-inch deep valley that runs under the amps. "The amps were elevated so we could run all of the cables under the amps; speaker and signal out one side and power out the other," details Venne. "This keeps everything looking clean." It also doesn't hurt that there's air running underneath amps to keep them cool. The amps themselves are secured into each strip with wood screws.

A giant grille made out of 1-inch-thick MDF covers the backside of the enclosure that faces the rear cargo door. The grille was designed to make the rather large amp-rack/sub-enclosure structure look somewhat stock. Made to fit the contours of the wheel wells, the grille was covered in the same leather used to cover the seats. Sheveloff purchased it directly from a local Cadillac dealer. The subs vent through a perforated-steel plate



POWER PACKED: Behind a leather grille cover is the amp-rack/sub-enclosure combo (G). Remove the grille, reveal a pair of JL Audio 12W3s (H). A trio of Alpine power amps do their thing atop the enclosure (I). Some of the "required" gear for the One Lap, including a race helmet, tool kit, fire extinguisher, and powered Igloo cooler for drinks and snacks (J).



that's been covered in foam and grille cloth and flush-mounted into the back of the grille. "We used a metal plate to protect the subwoofers from flying debris while on the road," explains Venne. "Luggage can easily destroy a subwoofer, especially if it's rammed into the driver while trying to make a hairpin turn." The grille attaches to the enclosure with a home-speaker type of ball-and-socket snap. Unlike the enclosure itself, which hovers off the ground, the grille was designed to sit on the floor of the cargo area to cover the bottom and sides of the box.

A JL Audio XR525-CX 5½-inch coaxial is mounted in the stock locales in each front and rear door. The rear-fill 525s are attenuated slightly so that they won't pull the soundstage to the rear of the vehicle.

As noted earlier, the OnStar system had to be interfaced with the Caddy's new A/V system. In the stock configuration, OnStar interfaces with the Caddy's Bose Premium sound system via the stock wire harness. To make the aftermarket interface seamless without modifying the

stock harness too much, Venne turned to OnStar for help. "The people at OnStar faxed us a wiring diagram and helped me track down the audio tie-in point on the factory wire harness," Venne reveals. "Once that was pinpointed, I fashioned an RCA Y-connector onto the ends of the OnStar factory harness and ran it into the auxiliary input on the elKameleon head unit along with the audio portion of the system's video signal."

Bigger Daddy

Compared to last year's CSR One Lapper, the mighty-mite Midget, the Big Daddy Caddy gave us lots of real estate to exploit for A/V purposes. Wanna find out for yourself how good a job we did? The Big Daddy Caddy will be making the trek on our 3rd-annual Caravan to The IASCA Finals; see the ad on page 8 for a list of cities we'll be stopping in. Meanwhile, I'm already looking ahead to next year, and I'm thinking bigger might be better—but somehow I doubt that they'd let us run a Winnebago on the One Lap. ■

SOUNDCHECK

Editor's note: Turn back to "Laps Dogs 3: Lap of Luxury," our feature story on the '99 Cadillac Escalade's involvement in this year's One Lap of America, to find Big Daddy Caddy SoundCheck material galore. That story begins on page 47.

Renaissance Rising



morel acoustics USA is rising with the sun. Now, with a new line of updated and refined products, **morel acoustics USA** is introducing the Renaissance car audio series, using the most advantageous technology in the audio field. Mid-basses and woofers are duct designed, with a hexagonal aluminum wire, 3" voice coil – just a few of the unusual features we offer. The Renaissance series comprises a complete line of tweeters, midranges, mid-basses, woofers, **integra** designs, and more.



for fast information contact:

morel acoustics USA

414 Harvard Street, Brookline, MA 02146

Tel: (617) 277-6663

Fax: (617) 277-2415

www.gis.net/~morelusa