

# Pure and Easy

**Micah Sheveloff's  
'89 Acura Legend Coupe**





**BY JOHN STUART**

MOST INSTALLERS WHO OWN A CAR STEREO shop try to make a statement when it comes to outfitting their own car. Whether it's an imposing sub box, a stunning amp rack, a unique front stage, or all of the above, they make an obvious play for visual impact. Not Micah Sheveloff, co-owner of Audio Coupe in Fairfield, Connecticut. His 1989 Acura Legend Coupe lacks flash, but that doesn't mean it's not special. For Micah, a "dream system" translates to sound quality. Period.

Using nothing more than stock speaker locations and the highest quality components, the installer squeezes excellent sound from a stealth system without disturbing the integrity of the vehicle or chewing up valuable cargo space. He sees little point in filling an entire trunk with equipment when it's not necessary to achieve good sonics. And though his approach may be rare in competition circles, where ornate installation often overshadows the music, it's a boon for real-world audiophiles who have no intention of hitting the sound-off circuit.

Once you know about Micah's background, it's easy to see why sound speaks louder for him than glitz. His involvement with music began back when he wailed his first note. His father teaches music at Boston University; Micah grew up playing the piano. His reward, he says, is that he's "cursed" with perfect pitch. "A lot of people laugh when I say that, but it's true," he says. "I can listen to something and play it back note for note—but that also means I know when a note is off by half."

In 1983, Micah was an aspiring musician in Boston. He was also an avid car stereo enthusiast, and was fortunate to land a job working for Rich Infererra of Rich's Car Tunes. Micah did his time as an installer, learning as he went, and says he owes much of what he knows today to Infererra, an industry pioneer. In 1990, after a few years of crawling under dashes and routing wires, he opened Audio Coupe in Fairfield with his partner Steve Reinhold. Their objective was clear from the start: They wanted to create great sounding systems that people could drive home without sacrificing an arm, a leg, and a ton of vital interior space.

Though Micah helped put together a competition system in a similar Legend Coupe while working for Rich, he stresses that the two cars couldn't be more different. Unlike Rich's interpretation, Micah's lacks a visual crescendo; the system was built only to meet his own exacting

PHOTOS BY JIM RAYCROFT



**The OEM head and the clock-turned-CD display; below, a stock door pod houses a component kit.**

steering wheel for volume and station-preset adjustment, and these were retained too. (Just because Micah only listens to sports on the head doesn't mean it should be a stretch to use it.) Signals then hit a trick a/d/s/ 642ix two-way crossover/interface that functions as the brains of the system. We'll say more about the 642ix—and Micah's unusual configuration of it—in a moment.

As noted, the system's real music source is a changer. And that changer is a Clarion ProAudio 2060 six-disc CD changer, which is suspended from the rear shelf in the trunk—a favorite location of many installer (and automakers), since it can be easily reached and keeps the unit out of harm's way. Operation of the

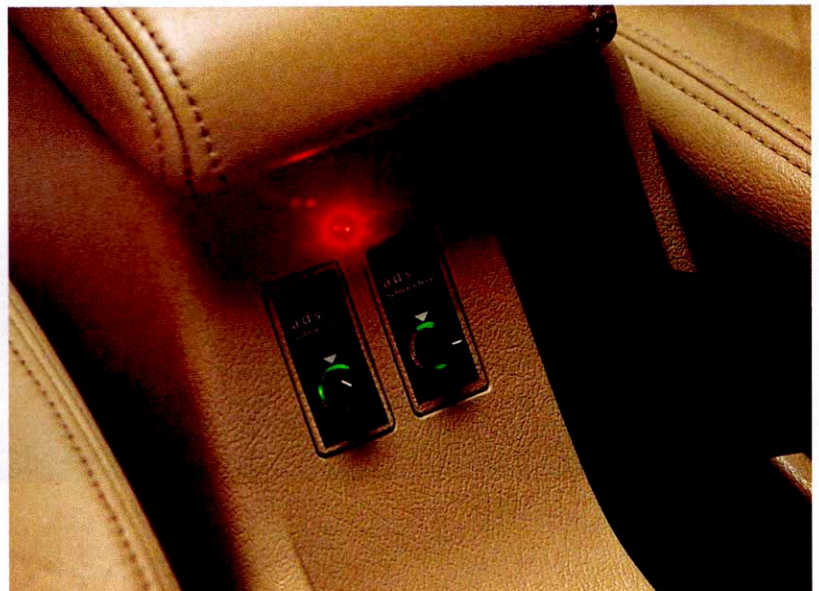


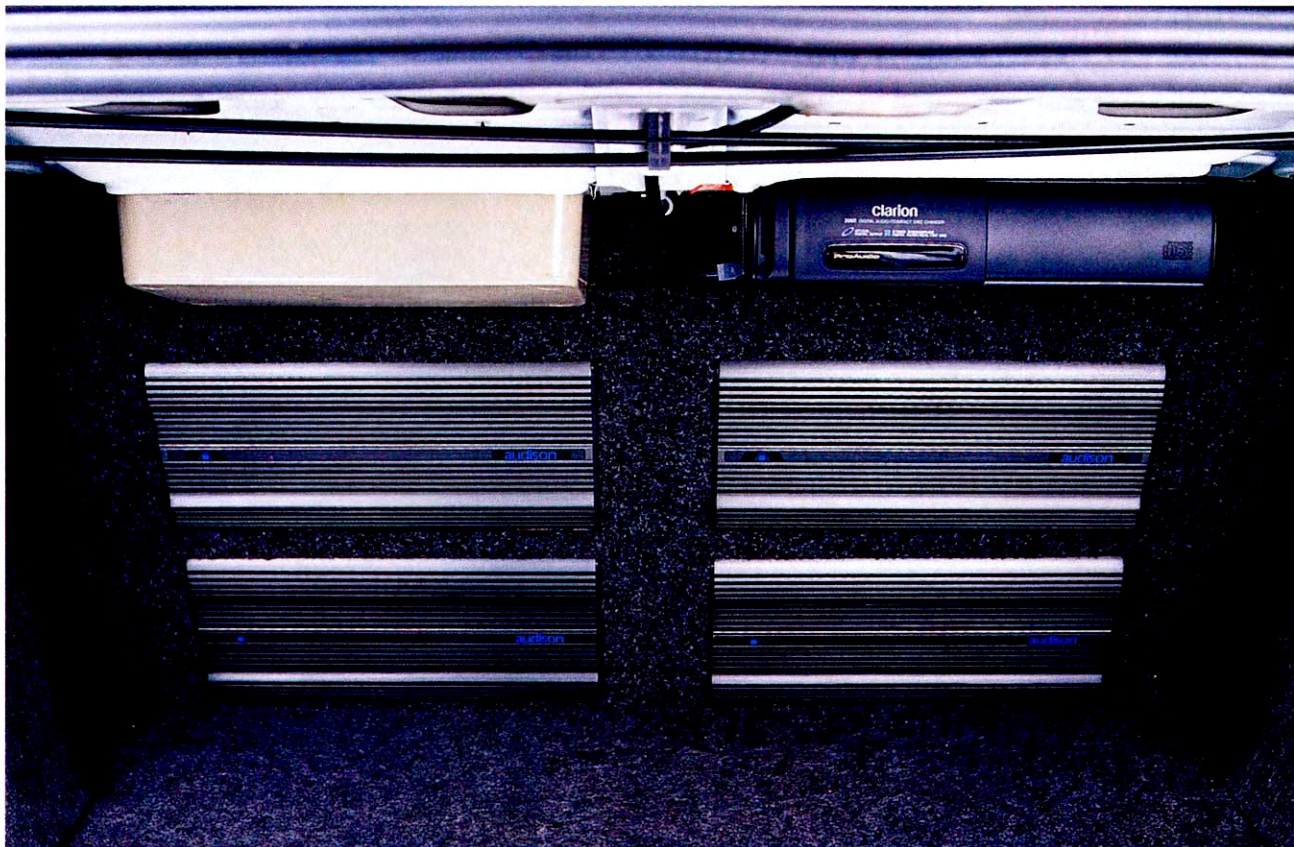
listening demands. The stock appearance is purely intentional, and the message is clear: You can spin install tricks all you want, but ultimately it's the music that counts.

If Micah's musical background made him a finicky audiophile, it shows in his choice of components for this system, which was installed by Audio Coupe's Jason Venne. For example, the system begins with . . . a stock head unit? Don't laugh. Micah's retention of the OEM Acura cassette receiver perfectly reflects his desire for superior sound. Frankly, he never touches the thing. Okay, once in a while he'll tune in a ball game. But "you can't get the fidelity out of a radio or tape," he says, so why bother replacing the deck? And as you'll see in a moment, he's well covered on the CD side with a modified changer.

So there the head sits in the stock dash location, looking very, uh, stock. The OEM system features auxiliary dash buttons to the right of the

**Punchouts provide a factory look for bass and volume knobs.**





**A clean trunk install protects the Audison amps and Clarion changer without chewing space.**

changer is handled from a three-piece Clarion Model 1060 changer-control system, which offers a small but concise LCD display, a palm-size wireless remote for pushbutton control of disc and track selection, and a remote "black box" that houses the circuitry.

Mounting the display involved some trickery, but only to make it easier to read while driving. The installer removed it from its housing and integrated it into the Legend's stock clock location at the top-center of the dash. Even the two buttons that normally change the time readout of the car's clock were retained and rescreened; now they're used to control the power to the changer and to toggle the illumination color of the display from green to amber. The remote takes care of all of the changer's transport functions and normally resides behind a flip-up door in a perfectly sized utility compartment at the base of the dash console. The 1060's black-box chassis was hidden away under the passenger seat.

The 2060 changer was selected in large part for one uncommon feature: a direct fiber-optic digital output. It also offers standard line-level analog RCA outs, but using those would have meant using the built-in digital-to-analog (D/A) converter. That's a big no-no, says Micah, who points out that the 1-bit D/A converters usually found in car sources just don't deliver the sonic goods. "Having been exposed to a lot of professional and high-end home gear," he says, "I knew that I needed better D/A conversion."

His solution was to add an a/d/s/ DA44 outboard D/A converter. At \$999, the DA44 is no cheap add-on. Among its key attributes is an anti-jitter circuit that's said to keep all of the D/A's chips working in step to eliminate some common forms of distortion. "There's a tremendous increase in detail with the DA44," Micah says. "It just sounds like more information and less error is making it to the speakers, and it reduces the harsh, gritty sound that's often attributed to digital." The DA44's high-quality output stage also delivers a robust 3.5-volt signal to the system's amplifiers.

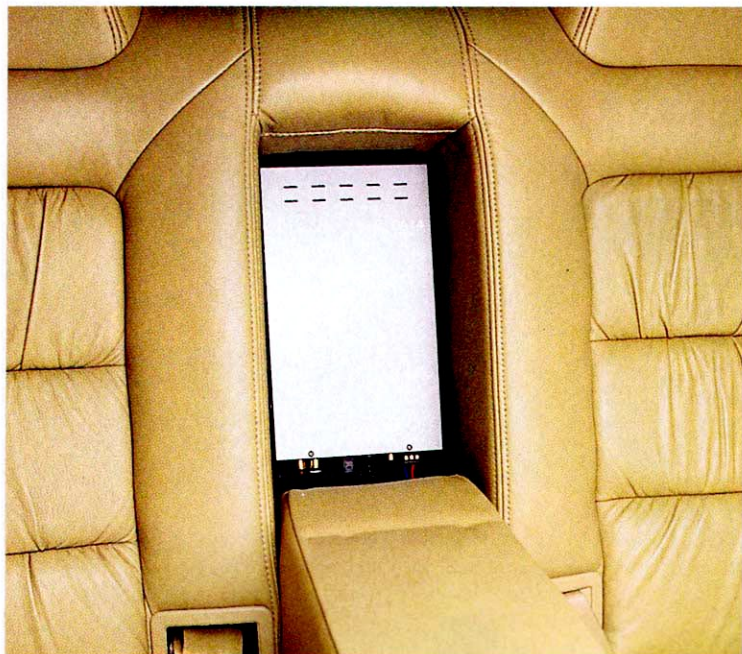
Since the DA44 is the star of the system, it was mounted prominently behind the armrest that folds down between the Legend's rear seats. This lets Micah display the converter whenever he's asked to prove he's not hiding a 100-piece orchestra in the trunk. The unit was screwed into a wall of 0.75-inch industrial-grade MDF that's installed between the rear seat and its metal cross-bracing; a layer of closed-cell foam went

between the MDF and the braces to reduce resonances and seal the passenger compartment from the trunk—a critical step that ensured toponotch bass performance, as you'll see. The MDF was covered with black factory trunk material to help finish it off.

In its off-the-shelf state, the changer's fiber-optic output uses a proprietary Clarion digital interface, and it wouldn't mate with the DA44. So Micah shipped the 2060 off to Ed Meitner, chief engineer at a/d/s/, to have its output converted to the Toslink format. A Toslink fiber-optic cable was then used to transport the digital bit stream from the 2060 to the DA44.

The converter's analog stereo output is sent to an a/d/s/ Model 501mx potentiometer, which provides volume control during CD playback. Micah likes the 501's high resistance (47 kohms), which he says eliminates much of the noise present in lesser controls. The illuminated pot was mounted on the front slope of the center console in what was once a factory-option punchout; Micah removed the blank cover, cut it to ac-

**An a/d/s/ D/A converter gets top billing in a stealth cocoon behind the armrest.**



commodate the pot, and popped it back into the console for a perfect OEM look—without cutting the car.

As noted, the brains of the system is the clever and flexible a/d/s/ Model 642ix. It's essentially a two-way crossover with six outputs labeled as front and rear stereo high-pass and stereo low-pass; crossover frequencies are chosen by plug-in modules. But the 642ix has several unusual features, including four high-level inputs that directly accept the speaker feeds from a head unit; these are offered in addition to two pair of standard low-level RCA inputs for front and rear.

The 642ix also has a jack for plugging in an a/d/s/ 501ix level control, which can be configured in one of

two ways by setting jumpers inside the 642ix. One mode rigs the 501ix to allow level adjustment of the 642ix's low-pass output within a range of  $\pm 6$  dB; a/d/s/ says that range allows listeners to compensate for typical levels of road noise and the variety of bass levels found on different software. The other mode causes the 501ix to act as a bass fader, shifting a slight degree of bass output to the front drivers in order to extend response in systems that lack a large subwoofer.

In this system, line-level signals from the DA44 (via the 501mx) and speaker-level signals from the stock head are sent to the 642ix's respective inputs. Micah simply turns on the source unit of choice while leaving the other deactivated; this means that there's no unnecessary audio switching circuitry in-line that might in-



**Stock grilles on the rear deck were cut and recovered.**

roduce unwanted noise.

The 642's crossover section splits the signal from either source into a 130-Hz stereo high-pass output with a slope of 24 dB per octave for the Legend's front stage and a 70-Hz stereo low-pass output with a slope of 12 dB per octave for a pair of woofers mounted on the rear deck. The 642's rear-channel high-pass outputs are left untapped. The 642 slid under the passenger seat, taking its rightful place beside the 1060 black box. It's almost gauche to mount components under the seats, but

recall that Micah's goal was to hide things and do as little fabrication as possible. Sometimes, the old ways are the best ways.

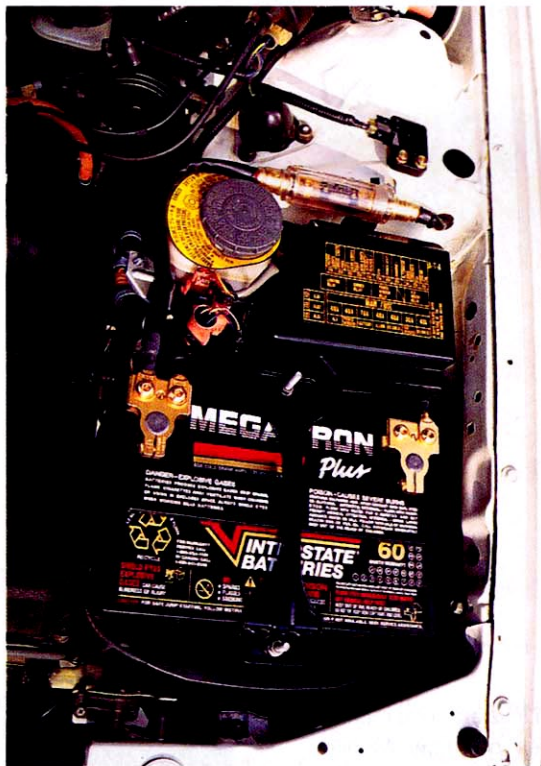
The 501ix controller popped into the dash console in yet another option punchout right alongside the 501mx volume control. Micah passed on the 642ix's bass-fader option and uses the 501ix as a simple bass gain control. The extra degree of control it im-

parts helps ensure solid low end from the system's woofers—which, as you'll see, don't boast a large cone area. Micah also dislikes the inconsistent bass levels found on different CDs, and having the 501ix up front lets him tweak each tune for the most natural sound. "I'm a monstrous Brian Wilson fan," he says, "and just within the chronology of his work alone, the bass is all over the place."

The 642ix's outputs hit four Audison Model 1140M mono amplifiers, each of which is rated at 140 watts into 4 ohms. The amps drive an a/d/s/ Model 325is two-way component set and two a/d/s/ Model 420W 6½-inch woofers. Micah is extremely impressed with the amp's sound quality, and he prefers the mono format for the isolation it provides from component crosstalk. He calls the \$389 1140M the best value—period—in car amplifiers.

Mounting the amps was the biggest obstacle to Micah's quest to maintain cargo capacity because they required the most real estate. They had to be mounted out of the way so he could still use the trunk, but they also had to be easy to show off. A false floor was one option, but it would've decreased the usefulness of the trunk while requiring cooling fans and removable display panels. The only other available space was where they finally ended up: on the back of the rear-seat bulkhead.

In the end, the amps were mounted in a two-over-



**An Interstate juicebox keeps the Legend humming, while the power cable (right) disappears quickly into the fender.**

two arrangement on yet another 0.75-inch MDF wall that was attached to the trunk cross-bracing for the rear seat. A carpeted fascia panel comes within a quarter-inch of being flush with the amps' heat sinks. The panel hides and protects all of the system's wiring. The fins of each amp run horizontally, and there's more than enough air in the trunk to keep temperatures well within normal operating range. Overall, the MDF wall only extends into the trunk a mere 3 inches—saving tons of precious trunk space.

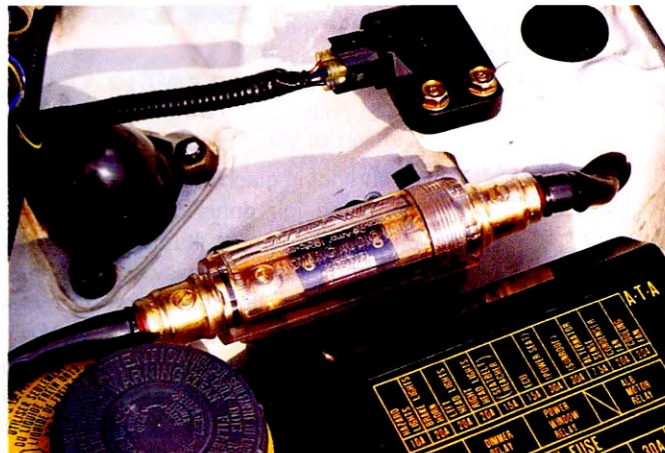
One problem: To make full use of the rear-seat bulkhead, the computer for the anti-lock brakes had to be relocated onto the rear wall of the rack and hidden by custom panels. Because of the sensitive nature of the ABS computer, Acura was consulted for leads on orienting and grounding the unit. This ground became the ground for all of the components mounted in the rear of the car.

As noted, all of the speakers used in this system are from a/d/s/. Going with the 325is set was a no-brainer—it's simply the best component set offered by a/d/s/ and the successor to the company's well regarded 320i speakers. Each set consists of a 5¼-inch copolymer cone woofer and a 1-inch copolymer dome tweeter.

The supplied passive crossover splits signals between woof and tweet at 2,500 Hz with a slope of 12 dB per octave. It's unusually loaded for a passive network, and a/d/s/ recently upgraded it to provide richer, more detailed sound. Included are such niceties as fancy polypropylene caps (to prevent stunting of transients) and a second set of inputs (to allow biamping); Micah only uses the single input. A two-position EQ switch offers flat response or a slight dip in the 2,000-Hz region to counteract the brightness often caused by in-car reflections. Finally, the xover boasts a three-position tweeter level control that offers flat response (relative to the woofer) or a boost/cut of ±2 dB; after tuning by ear, Micah went with the flat position.

The woofers and tweeters from the 325is set found a home in the left and right stock speaker pods in the Legend's doors, which are designed to accommodate a single 6½-inch driver. A baffleboard was used to help angle the tweeter and woofer to achieve better imaging and a higher soundstage, and the oversized hole left enough room to maneuver the mid/woofer a bit without having to build out the pod.

The center section of the stock grilles was removed



to prevent unwanted baffling, and the grille frames were covered in acoustically transparent cloth that was color-matched to the Legend's interior. Behind the speakers, a liberal amount of closed-cell foam and heat-treated dampening material were applied. "The doors are very tightly sealed and deadened—resonances drive me nuts," Micah says.

All of the bass in the system is provided by the two 420W 6½-inch woofers. They slipped easily into the 6½-inch stock holes on the Legend's parcel shelf. The 420Ws are designed for free-air installation, which is why Micah used closed-cell foam on the wall behind the rear seat to seal the trunk from the passenger compartment and keep the speakers' front and rear waves separated. Micah says he gets plenty of lows despite the 420s' diminutive size, and the 501ix controller and 642ix processor let him finely tune the level. As with the front stage, the grilles were "windowed" and re-covered.

Micah's aware that his use of nothing more than a pair of 6½-inch drivers in a free-air mount will have most enthusiasts doubting this system's bass extension. He understands their skepticism—people who hear the system usually can't believe the speakers are only 6½-inchers. But in this configuration, with each driven by a hefty 140-watt amp and buoyed by the car's transfer function, the results are astonishing, with response that he rates down to the low 40s. Micah credits the 420s: "It's an accurate driver with nice impact—and they take a *sick* amount of abuse."

Firing up four amps and the ancillary components takes a bit of juice, of course. To accommodate his system's needs, Micah changed out the Legend's stock battery for an Interstate Megatron Plus rated to deliver



**A lifelong piano player and a demanding audiophile, Micah is "cursed" with perfect pitch.**

855 cold-cranking amps. The stock alternator was retained; Micah says its 70-amp rating is conservative. Either way, "there's not even the faintest sign of complaint" from the amplifiers, he says.

Esoteric Audio's StreetWires cables, fuses, and blocks keep power and signals flowing. A 4-gauge power cable was tapped off the battery to an 80-amp fuse in a waterproof in-line fuseholder. After the fuse, the cable disappears from the engine compartment through a neatly grommeted hole in the fender and snakes through the frame before entering the trunk. It stops at a distribution/fuse-block mounted on the back wall of the amp rack and provides a host of 8-gauge feeders.

The last element in this innocent-looking install is a Clifford Intelliguard security system, which protects the Acura and its contents when it's parked out of sight. The LED indicator was mounted above the two 501 control knobs in the center console: it literally was the only thing in the entire install that required cutting directly into the vehicle. Though there'd be some work involved, virtually everything else in the car could be restored to stock condition. Micah and Jason also retained most of the original materials, including the trunk carpeting and the tissue-box holder that's suspended from the rear deck.

IN THE FINAL ANALYSIS, MICAH'S APPROACH is as far from a loaded competition install as Connecticut is from Dallas. But from an angle of pure musicality, this system holds its own—and you'd never know it by peering through one of the Legend's windows. Sometimes the best disguise is no disguise at all. ■

