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**A Rural 12-Volt
Success Story**

The *Low-Fi* Generation

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The Low-Fi

Does anyone out there appreciate high fidelity anymore?

By Micah Sheveloff
Editorial Advisor

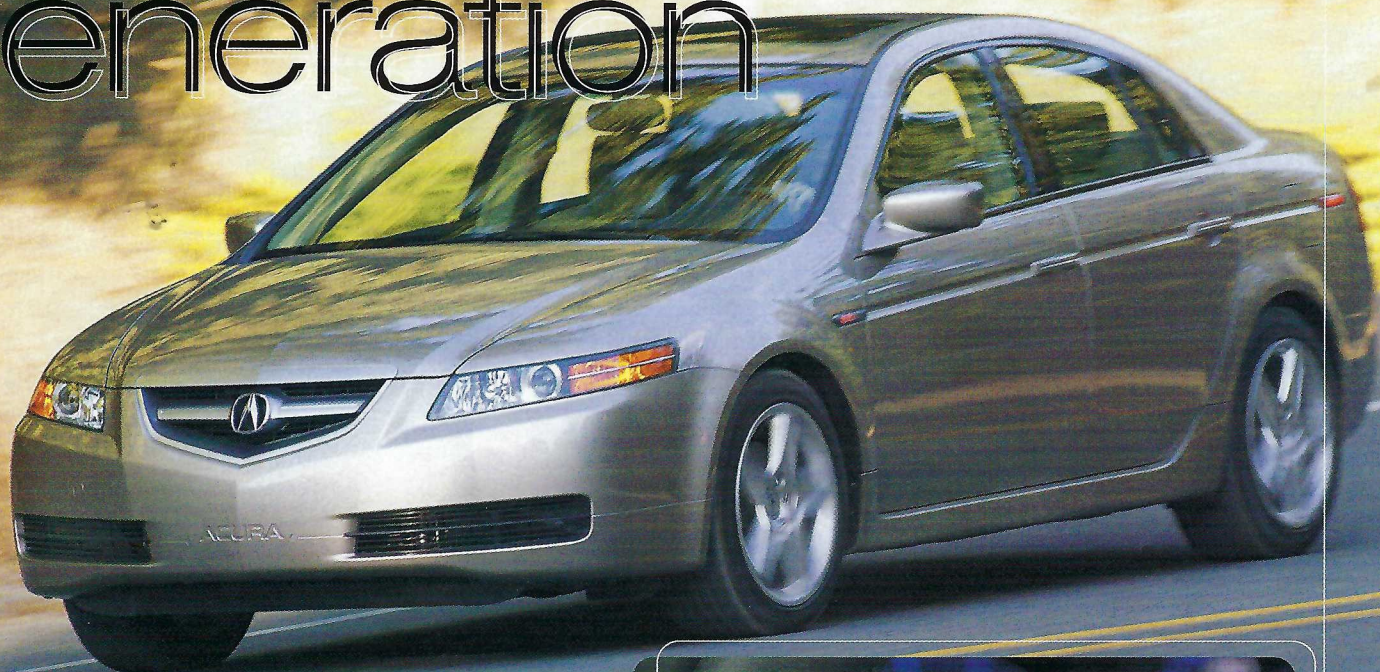
It is distinctly possible that the world's population of audiophiles may wind up on the endangered species list if the music and electronics industries continue their disturbing evolution towards convenience and away from high fidelity. If well-recorded music and better quality media formats are to be considered required materials for the audiophile species, then the breed is doomed to starvation. Although the miniaturization of electronics devices combined with the soaring capabilities of digital data storage have yielded an ever increasing level of convenience for the music listener, fidelity has suffered to such a degree that reference standards have been lowered by default. Millions of people don't even realize that what they are hearing through their miniscule portable audio devices is compromised. As young adults become consumers during this era of sonic mediocrity, there is justified concern that the world will forget how moving, how truly special, it can be to lose oneself in the aural onslaught of a great hi-fi system.

Selling Car Stereo Today

Sure, I know the deal. Each and every time there is a training seminar, salespeople are hammered upon to sell what is in stock and add those high-margin accessories and wire. Such a regimen is necessary for the realities of business operations in a highly competitive market; however our purpose first and foremost must be to expose customers to the world of great sound. How many young consumers exploring the world of car stereo for the first time might grow to become audio enthusiasts if shown the way? The answer most certainly will be zero if the sales floor is not manned by people who love the business and bring genuine energy and a passion to work each day. Do you have a demo room and/or demo cars that will leave a memorable impression on your customers? Do you have a selection of software that you know well for each popular style of music? Understandably, only a small percentage of those who walk in to the store will buy a first class system, but it is the job of the salesperson to open the doors of possibility.

What follows is a breakdown of sound quality system terminology, and insight to where the world

Generation



is headed from some of the top audio producers and manufacturers today.

School of Sound

One of the determining factors in the performance of any audio system is the quality of the music software (LP record, CD, DVD-A, SACD, cassette, etc) being listened to. Record producers face the fundamental challenge of not knowing what type of system consumers are listening to at home or in their cars, so they often try to mix a record in such a way that it sounds good on everything from a table radio to a factory car audio package. The problem with that strategy is that although the music may sound decent just about anywhere, it can no longer sound exceptional for those educated listeners who expected more when plunking down their hard-earned cash at the music store.

"If it has to sound good on a clock radio, you are telling people who care about sound that they have been left out in the cold," said Manville Smith, VP of marketing at JL Audio. Although there are numerous techniques employed to make a piece of music sound full on smaller playback devices, the most commonly used electronic effect is called dynamic compression, which squashes all of the quiet moments and all of the louder passages into a more narrow range.

"It is sad that although the digital recording medium has such a wide dynamic range, we end up with this relentless wall of energy," Smith observed. JL Audio has begun teaching their dealer base how to understand the nuances of audio playback with a training course called School of Sound. The company uses a team of instructors to deliver the curriculum, which can range anywhere from four to eight hours in duration. The JL Audio course is either taught at the JL facility in South Florida or on the road in hotel suites. "Dealers need fundamental audio knowledge for their



Pictures of the beast... the audio system in the 2004 Acura TL has been called "disturbingly good."

PHOTOS COURTESY OF HONDA OF AMERICA

The Low-Fi Generation



Recording industry icon Elliott Scheiner helped develop the sound system in the 2004 Acura TL which bears the ELS name.



sales people,” explained Smith. “These issues are more important than the differences between this year’s products and last year’s, and they are a determining factor in the reliability of our speaker systems,” Smith continued, emphasizing why JL Audio has made such an investment in this type of training program. “The average power reaching the loudspeaker is very high because of this ultra-compressed recording style, placing an increased strain on amplifiers, speakers, and even automotive charging systems trying to deliver enough current throughout the car. The people behind JL Audio are passionate about sound quality, and we will fly that flag as we continue to focus on the faithful reproduction of music,” Smith said.

Charts within JL’s School of Sound manual clearly illustrate how the use of dynamic compression has reduced the crest factor (the ratio of peak energy to average energy within a signal) to such a degree that it has led to a “gigantic leap in average power” required for an audio amplifier trying to play back such recordings. The manual goes on to point out that The Beatles *She Loves You* recorded in the 1960’s (crest factor of 13.8 dB), Stevie Wonder *Sir Duke* recorded in the 1970’s (crest factor of 19.4 dB), Talking Heads *Burning Down The House* recorded in the 1980’s (crest factor 23.8 dB), and Red Hot Chili Peppers *The Power Of Equality* recorded in the 1990’s (crest factor 19.3 dB) all illustrate a judicious use of dynamic compression. Recordings made more recently, such as Linkin Park *Somewhere I Belong* (crest factor 8.4 dB), Santana *The Game Of Love* (crest factor 10.1 dB), and Eminem *Lose Yourself* (crest factor 9.3 dB) illustrates how record companies are determined to make their products “sound louder on the radio and on low-fidelity equipment.”

Real Musicians in a Real Studio

Paul DiComo, the marketing manager at Polk Audio, refers back to one of his all-time favorite pop recordings; “Dada’s *Puzzle* (IRS Records, 1992) is the definitive rock and roll record of the 1990’s in my mind,” said DiComo. Featuring the hit song, *Dizz Knee Land*, Dada’s debut effort has become a favorite demo in many audio showrooms across the country. “Storied producer Ken Scott (began at Abbey Road Studios, worked with David

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The Acura ELS system includes navigation.

Bowie and others) brought a refined element to the recording process," remembers Dada bassist and vocalist Joie Calio. "He was very particular about every detail, and the band was new and fresh at the time," Calio added. "Ken Scott's ear matched well with what we were doing, it was a great blend of artist and producer," said Calio, who frequently makes use of compression in the studio. "Puzzle was made by real musicians in a real studio, with a real producer," assessed Calio, who pointed out that with the advent of today's digital home studios, kids are often listening to a vastly different product than a record made the old fashioned way. "When Dada is in the studio, we go nuts," reported Calio. "We truly appreciate the range of sounds that become possible within the studio landscape," he added. "We have found that it is important to remember to leave some space within the music." Calio indicated that all three members of the band (Michael Gurley plays guitar and sings, Phil Leavitt plays drums and sings) are into high fidelity.

In regards to the dynamic qualities of today's recordings, a lot depends on the how the musicians choose to execute their songs. "First of all, there has to be dynamics within the actual band," said Calio. Sometimes, it is easier to just fill in all of the gaps when recording. People respond well to the use of open space within a song," Calio suggested. "Some styles of music are recorded in a balls-to-the-walls way, such as Nirvana (Calio is a big fan) and Godsmack," Calio observed. "I think this overuse of compression might just be a trend, and with every destruction, there is an opportunity for construction," he added, pointing out that such a recording style might open the door for some artist or producer to counter the trend by making a highly dynamic record. Calio also acknowledged the fact that many people listen to music on comparatively low-fi equipment; "I think people react to music because of what it does for their soul. To most people, sound quality is probably not that big of a concern."

A Changing Market

High fidelity equipment ranges in price and design philosophy to an enormous degree. There are complete home theater systems available for \$199, and aftermarket car audio packages that cost thousands and take weeks or even months to install. In 1980, a determined entrepreneur named Dan D'Agostino founded a company called Krell, on a mission to design and manufacture the ultimate home entertainment components. "I wish young kids were not brought up on the MP3 format today," said D'Agostino, now CEO of the Connecticut-based company. "The digitally compressed format sounds terrible, and they listen to everything through their computer," he complained. "When I do a demo for someone, I generally use CD, now some SACD (Super Audio CD). The key to using compact discs is to choose the right recording and to have your system set up properly," D'Agostino explained. "The only way to know how the recordings are is to go out and buy a bunch of CD's," he added.

"Home theater has changed the market dramatically," D'Agostino pointed out. "Retailers now demo everything with

5-channel video systems, music has become a side note," he added. "There are more parts to a 5-channel system, but the quality of each part is typically not as good as it would have been in a traditional 2-channel music system. I suspect that there will always be a base of people who love music, who use it as an escape. For those people, true high fidelity will not go away," D'Agostino concluded. As the multi-channel format begins to become popular for music playback (as well as video soundtracks), the world's library of stereo recordings will have to be remixed to accommodate the extra channels. "It will take some time for the engineers to commit to doing the remixes the correct way, without putting random instruments behind the listener," D'Agostino commented. "The rear channels are supposed to be for room ambience. When stereo first came out, they made the same mistakes; you couldn't buy a record without everything being panned either left or right," he laughed.

Remix: Break it Down

One of the most prominent engineers saddled with bringing 2-channel recordings into the multi-channel realm is Elliott Scheiner, who has worked with such artists as The Eagles, Steely Dan, Aretha Franklin, Sting, Pavarotti, and many more. Scheiner has won two Grammy's for his work with Steely Dan, and has been nominated for several others. "Yes, there is a trend today to try and have the loudest record on radio," Scheiner acknowledged, commenting on the overuse of dynamic compression. "Everyone is afraid to have a 'soft' record. By the time the mix reaches the mastering studio, the levels are often maxed out," said Scheiner. "Sure, they have taken the dynamic range out of the recording," he added.

"I am on a personal crusade to make DVD-Audio (DVD-A) the next music format," said Scheiner, who is committed to maintaining the integrity of the original mix as he transforms stereo recordings into the world of multi-channel audio. "I am doing these remixes so that there is software out there to support the DVD-A format," he explained. Scheiner is currently working on Derek and the Dominoes *Layla*, and has recently completed a project designing the 5.1 surround option for the 2004 Acura TL that bears his initials (for a review of the ELS system, please see sidebar). "DVD-Audio is a very high resolution format, and I believe that it is the direction that music needs to go for the future," Scheiner explained. "People hear surround sound for the first time, and it's like they are hearing the music they have known for years in a completely new way. The car audio aftermarket is also beginning to do a remarkable job with surround sound for the car. We need more of it," he concluded.

Is it Live, or is it a TV Speaker?

Many of the modern artists who are recording in this climate of over-compression also have to take their show on the road. "A live show is all about dynamics," reported Dave Licursi, front of house (FOH) engineer and tour manager for Sugar Ray, Kid Rock and others. "With Sugar Ray, you have electric guitars and

acoustic guitars switching all of the time, and I am mixing in the DJ, loops, turntables, and other instruments while Mark McGrath (vocalist for Sugar Ray) goes between shouting at the crowd and singing a pop song," Licursi explained. "I have to use compression on individual instruments in order to keep everything within a certain range without squashing the system," he added. "I prefer vacuum tube compression devices for vocals; they produce a smoother overall sound. I do avoid using compression on the overall mix; I stick to adjusting the effect on individual channels so as to maintain dynamic quality while preventing any overdrive of the system." Licursi has been working at his craft for about 18 years, and obtained his sensitivity for live concert dynamics while mixing jazz bands. "I recently remixed a Sugar Ray special on VH-1, and the compression had to be heavy for that application in order to squeeze that entire signal through small TV speakers," recalled Licursi.

Singer/songwriter (and playwright) Jonathan Spottiswoode has recently completed a record called *Building A Road* with his band called Spottiswoode and his Enemies. "I took a well rehearsed band into the studio and we recorded 17 songs in four days," recalled Spottiswoode. "We put the tracks to tape (as opposed to digital hard-drive recording that is more common today) and over dubbed the backing vocals later on," he related. "The record has a Gospel-ish, Americana quality to it, and I think it sounds fantastic. The better the stereo, the better it sounds," Spottiswoode added. "I am always concerned when it goes to reviewers that they will put it on a boom-box, expecting that sort of monochromatic sound that is so popular today," he said. "I think people employ a whole different approach to listening these days, they look for that one song. They are not putting on an entire record, taking the complete journey," Spottiswoode related. "I am fearful that people won't take the time to listen more than once," he added.

Editor's note: *I used to demo my cars for people while they waited for an installer to change the dead battery in their alarm remote, and I sold countless systems and upgrades that way! Looking back on all of the things I did well (and did not do well) running my store for eleven years, I was the champion of turning people on to the passion I have always had for great music. As some modern recordings became unexciting for me, I bought a CD burner and began making discs from my extensive collection of LP records. Whether the customer purchased a system that day or not, they were treated to a memorable experience that became the foundation on which I was able to grow my clientele. Although the mobile electronics industry has expanded to become big business, it must find a way to bring a new generation of consumers along for the same great ride we have all shared, or we risk becoming commodity sellers and nothing more. It's all about the music!*

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