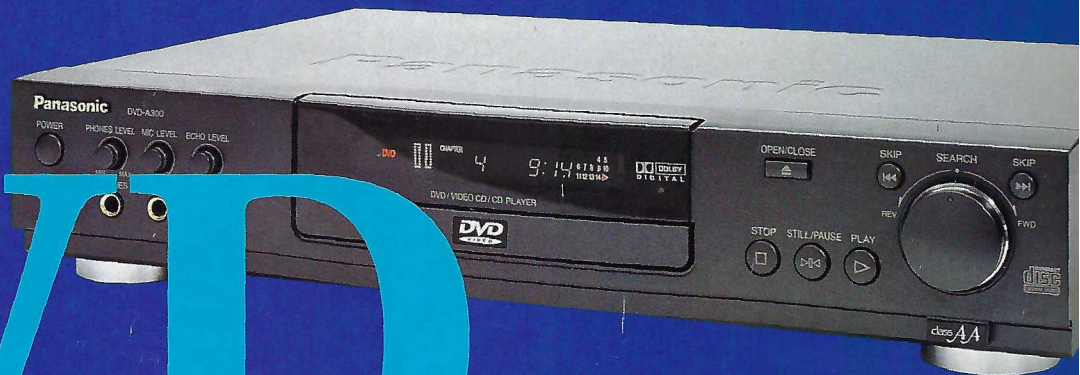
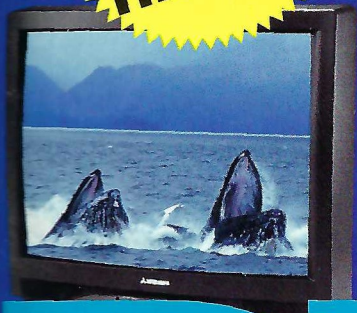


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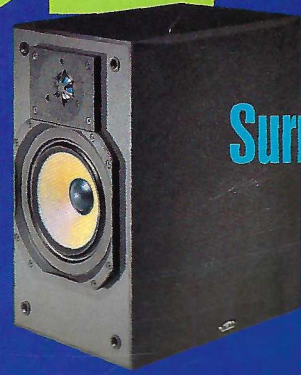


Six Hot Movie Players Reviewed!

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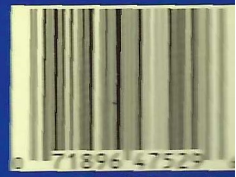
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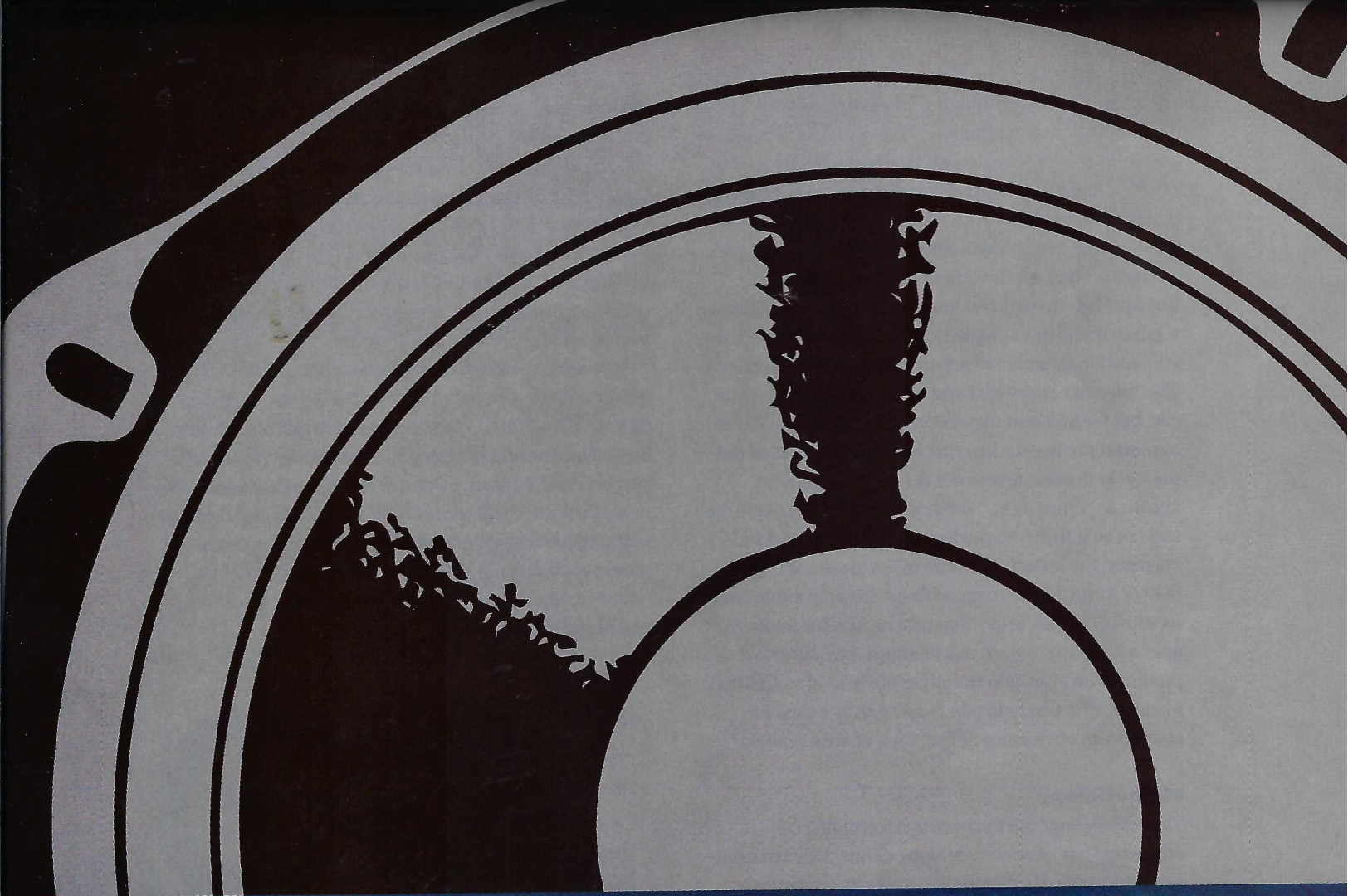
by Micah Sheveloff

there's no doubt that the automobile ranks as one of the crowning modern-engineering achievements, but as we approach the new millennium, it's odd to note that many of today's new cars and trucks still come equipped with sound systems that perform as though they were designed by cavemen.

After all, the automobile is the embodiment of modern ingenuity put to practical use. It usually provides a comfortable, stylish, and efficient mode of getting from point A to point B, and many vehicles come stocked with enough amenities to humble the hippest consumers. So why is it that these whitecoats can't design a stock sound system that'll keep pace with the advanced state of automotive technology?

OK, there are exceptions among the new premium sound systems available today, some of which sound pretty good. But the fact

remains that many consumers find themselves driving their brand-new cars into a local car stereo shop to upgrade or redesign their sound systems. Of course, there are numerous recipes for improving a car's audio system, and one of the most popular upgrades is speaker installation. No other piece of gear will improve your current system as drastically. And while any speaker upgrade is a good one, component speakers will provide the most flexible method for refining the punch, sparkle, and clarity of your music.



The Nuts and Bolts

Your current system likely employs one of two different two-way speaker types—either a component set or coaxials. A two-way speaker is composed of a woofer, which reproduces the lower frequencies, and a tweeter, which handles the higher frequencies. While three-way component sets and triaxials are available, two-way speakers represent an extremely efficient method for delivering all but the very lowest notes in the audible frequency range.

The “component” part of a component set refers to the fact that while the woofer and tweeter are packaged together, they are individual drivers that must be installed separately. Coaxial or triaxial speakers, on the other hand, are mounted in a piggyback configuration that forms a single source point. While these speakers provide excellent sound in combination with a stealthy appearance, their piggyback design makes it impossible to optimize each driver type in the best mounting location. That means their performance probably won’t equal that of

a high-quality, well-installed component set.

One of the most important but often forgotten aspects of a component set is its crossover network. The crossover is the circuit responsible for routing the higher frequencies to the tweeters and the midrange and bass frequencies to the woofers. Neither speaker in the component set is capable of doing the other’s job, but a well-designed crossover will maximize the potential of each speaker by strictly controlling the crossover frequency—the point at which the respective frequency groups must be separated. Better component sets often have more elaborate crossover networks to help manage this job.

Mounting Excitement

Component loudspeakers are extremely convenient in terms of mounting flexibility, although some installation methods work best for given situations.

While installing a component set isn’t as simple as just plugging them in and playing your music, you’ll

find that it's not as difficult a job as it may sound. Thankfully, crossover networks are relatively small, so you'll be able to wire 'em up and tuck 'em away without much of a fuss. And unless the woofers come with extreme mounting-depth requirements, they should fit into your door panels without much of a struggle.

The tweeters, on the other hand, are a bit more finicky. High frequencies are directional in nature and seem to travel in a straight line (sonically speaking), so you need to take care when choosing tweeter locations. This may take some trial and error, and different vehicles call for different measures. Often times you'll have to mount the tweeters so they point at the head of the person in the seat across the car, an arrangement known as "crossfiring." Other times, you may angle the tweeter so it fires into the front windshield—if done properly, the reflective nature of the glass will help deliver a crystalline image without drawing attention to its source. Suffice to say that proper tweeter mounting goes a long way toward re-creating a realistic musical picture. Don't hesitate to call for the help of a qualified installer, who can help you create a truly balanced sound in an environment that's full of obstructions.

Methodology

There've been some tremendous technological advances that have conveniently allowed for aftermarket automotive speakers to be made significantly smaller without sacrificing much in the way of performance. Durability has been enhanced with the use of synthetic woofer cones instead of paper, sonic and dynamic accuracy are better than ever before, and most speaker sets are designed to handle the enormous power output of today's more powerful amplifiers.

Basically, there are lots of quality speakers to choose from, but since they come in many sizes and price ranges, how will you know which set is right for you? Don't worry—we did the work for you. We tested seven different component sets and found five that ought to do the job.

Listening tests were performed in the comfy confines of a retail demonstration room designed to mimic the frequency response of a car. The room is typical of what you'd encounter when shopping for speakers at any good car stereo salon. It measures 7 by 10 feet with an 8-foot ceiling and has been treated with acoustic damping material on the ceiling and industrial carpeting on the floor. I mounted each set of speakers in a custom-built, 1-inch-thick, sealed industrial-fiberboard enclosure (with an internal volume of 1 cubic foot); the woofer was mounted in the far upper corner, while the tweeter was mounted in the near upper corner. Each

enclosure was loosely filled with Dacron pillow stuffing and sealed inside with caulking.

For test purposes, I sat toward one side of the room (as if I were sitting in a car) and placed each speaker enclosure in a different corner of the room at my sides in an off-axis position at knee-level (as though the speakers were mounted in the front door panels of a car). This is a common and probable mounting location in most of today's automobiles.

I powered the speakers using both an Audison LR-435 power amplifier (rated to deliver 35 watts by 4) and an Alpine CDE-7828 CD receiver (rated to deliver 35 watts by 4). The Audison's clean power minimized tonal coloration and laid bare the characteristics of each speaker, while the CDE-7828 revealed how well each speaker pair might perform in a simpler audio system. Each speaker was given two hours of break-in time before I ran my listening test. This gives them time to loosen up and perform at their best.



For my main listening test, I chose two interesting CDs: World Party's *BANG!*, which is heavily produced and sonically busy, and jazz vocalist John Pizzarelli's *Dear Mr. Cole*, where all the instruments are clearly defined against some very liquid vocals. Given the harmonic complexity of each record, any rough edges in speaker design would show up quickly here.

I also paid careful attention to the quality and user friendliness of each set's included installation hardware and accessories. Likewise, specifications between speakers will always vary, but there are a few that are critically important, and I chose to note them: Rated frequency response, sensitivity, and mounting depth topped the list.

One last note of advice before the reviews. No matter which direction you turn, there's never a substitute for an authentic listening test of your own. Whenever you're shopping for loudspeakers, do so with some familiar CDs in tow. And don't expect every store's demo room to sound like Carnegie Hall—most won't ever come close. Use common sense, and if you're still not satisfied, try listening to the same speakers in differ-

ent stores. Also, take the time to consider which size speakers will work best in your vehicle. In any case, explore all the products that might work in your vehicle, and then talk to a qualified installer about your plans. A little time spent here will save your butt down the road when you're carving up the door panels of your car.

Sony XS-HL630

It's often said that you can't be all things to all people, and given Sony's tremendous presence in just about every consumer electronics category, I must admit to being a little skeptical about these speakers. I was wrong. At \$220 a pair, the 6.5-inch XS-HL630s represent a great value.

Whether I was listening to rock, jazz, or classical, music sounded smooth up to the highest volume levels, and these speakers had lots of guts. Bass response was accurate and reasonably deep, with full-bodied midrange, excellent high-frequency details, and an image that was always locked dead center. Frequency response is given as 35 Hz to 25 kHz, and sensitivity as 90 dB.

In terms of their functionality, the XS-HL630s are relatively easygoing. The crossover networks were compact and easy to wire, and the tweeters come with flush-, angled-, and flat-mounting kits, making them especially flexible for whatever type of installation you're looking to do. Woofer mounting depth is a mere 2.5 inches, and woofer grilles are also included. Considering their surprising performance, install flexibility, and low price tag, I have to admit that the XS-HL630s left me impressed. The fact is, I've heard many speakers that cost much more than the XS-HL630s, but most didn't sound nearly as good. A real bargain. Circle Reader Service No. 627.

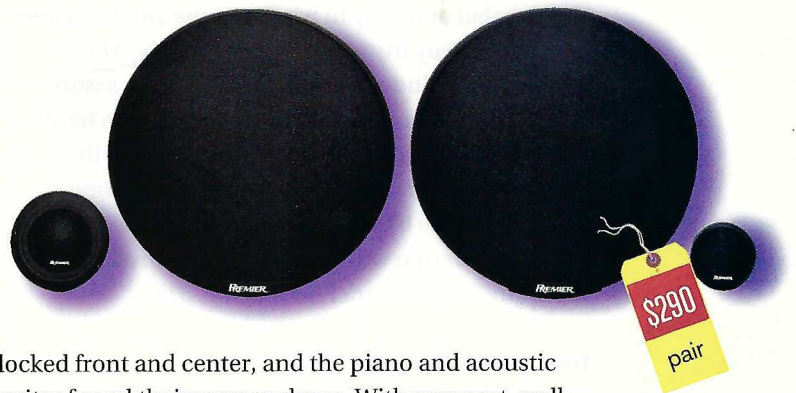
Pioneer Premier TS-C702

Pioneer lists the TS-C702 as an oversized 6.5-inch component set, indicating that the woofer is roughly .25 inches larger than a standard 6.5-inch speaker. Mounting depth is only 2.6 inches, though, so this shouldn't matter much unless you're not willing to slightly enlarge the factory holes where your current speakers reside. In any event, the speakers are very handsome and should work well in any installation.

My initial reaction to the C702s was that they seemed to handle higher volumes well (sensitivity is rated at 90 dB) and excelled at low-frequency extension; frequency response is given as 30 Hz to 30 kHz. My biggest surprise was the amazing amount of high-frequency detail coming from such compact tweeters (although there were occasions when I thought I

heard a metallic edge to the music).

Overall, nothing seemed to get lost in the mix, the timbre remained accurate and pleasing, even at lower volumes. Pizzarelli's vocals were

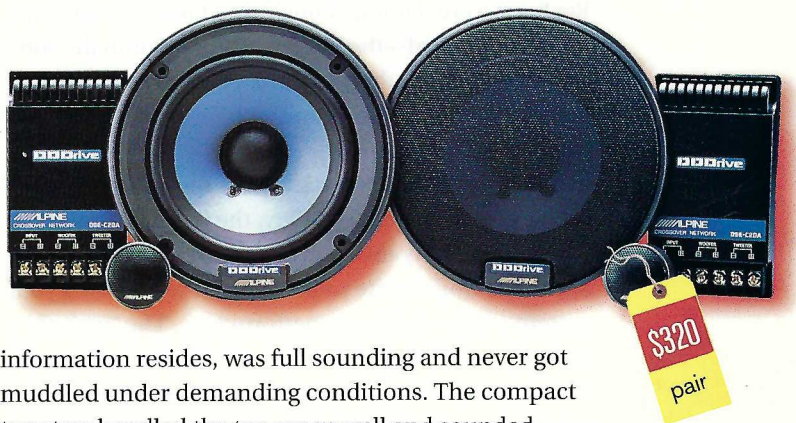


locked front and center, and the piano and acoustic guitar found their proper places. With compact, well-labeled, flexible crossovers, a supply of mounting accessories for positioning the tweeters, and supplied grilles, the TS-C702s are good speakers for sophisticated listeners looking for a lot of punch. Circle Reader Service No. 628.

Alpine DDC-R13H

The 5.25-inch Alpine DDC-R13H component set was immediately capable of imposing volume levels with minimal distortion. Either the 88dB sensitivity rating is conservative, or the other guys are lying, because these speakers play loud!

While frequency response is given as 45 Hz to 35 kHz, the DDC-R13Hs did their best in the critical midrange area. Bass response seemed to taper off when things got down low, but with some careful EQ adjustments, output became consistently acceptable. The midrange, which is where most of the vital musical



information resides, was full sounding and never got muddled under demanding conditions. The compact tweeters handled the top range well and sounded their best at medium volumes, although they did get a bit strident during the loudest portions of the music. Overall, vocals were centered, and the acoustic guitars

on the Pizzarelli record simply sparkled, but piano passages couldn't seem to find their space.

To their credit, the DDC-R13Hs are compact and quite capable of fitting just about anywhere. Mounting depth is a mere 2.5 inches, the crossovers are well labeled and easy to wire, and the small tweeter pods will fit any install need comfortably. Alpine generously includes speaker grilles, a wide assortment of tweeter mounting cups, and enough hardware to build a suspension bridge. Although the DDC-R13Hs aren't the most polished-sounding speakers on the block, they play loudly, and their innovative design will allow for a lot of installation flexibility. Circle Reader Service No. 629.

Rockford Fosgate RFR-1514

The RFR-1514s were the first of the 5.25-inch component sets I listened to, and given their inherently smaller woofer size, I expected a little less bass response from them. You can't really expect a 5.25-inch woofer to play cannon blasts, but that doesn't mean you should let them off the hook completely.

The RFR-1514s' frequency response is rated between 70 Hz and 20 kHz, and I expected to hear every last drop of low end that they could offer.

When I took the RFR-1514s out of their box, I noticed that the woofer assembly actually

felt heavy and solid; this got my hopes up about the low-end response. (Mounting depth is just over 2.6 inches.)

Reality is a cruel thing, though, and I found what I had initially expected—the Fosgates didn't plumb the subterranean depths, though it wasn't for lack of trying. They were tight, detailed, and with their 89dB sensitivity rating, loved playing loud.

What the RFR-1514s lack in bass response is made up for in their install flexibility; the tweeters swivel within some nifty mounting cups, and you'll find this approach works quite well when you're tweaking your system's high-frequency performance. The "wall of sound" production of the World Party disc remained uncluttered, with the electronic-drum samples notably snapping with authority. The soundstage on the Pizzarelli record was very wide and portrayed each instrument in its proper place (except for the piano, which seemed a little masked). Mounting hardware

was adequate in the package, but the wire terminations at the woofer could've been a higher grade. The crossovers were compact and easy to terminate, and grille covers are included. These are good speakers if you need ample power handling and impact from your speakers but can't accommodate a speaker larger than 5.25 inches. Circle Reader Service No. 630.

Infinity Kappa 50CS

With their ultrathin profile (2.1-inch mounting depth) and cool looks, the Kappa 50CSs fall into the 5.25-inch component-set family. Like most speakers, they did need some extra break-in time before I was satisfied with their performance. This is something you need to consider once you've installed your speakers, because they might not sound as good on that first note as they're going to sound in a week.

After a few hours of continuous high-volume material, the 50CSs loosened up nicely, revealing a moderate appetite for high volume (sensitivity is rated 89 dB) and a desire to impress. Frequency response for this set is given as 59 Hz to 20 kHz, and output across the board was sensational, especially in both the lower and middle frequencies, where clean and solid performance is essential. The tweeters lost a degree of high-frequency detail and couldn't quite keep pace when I pushed the volume level; but on the other hand, their small pods allow for easy mounting just about anywhere in your vehicle. That's a pretty fair trade-off.

Both World Party and the Pizzarelli gang sounded extremely rich and very realistic, with perfect soundstaging throughout. The crossovers are compact and give you the option of selecting between low or high output for the tweeter, which should come in handy when you're tuning the entire system. An array of tweeter mounting cups are also included, which further enhances your install options. Attractive grille covers are provided. These speakers will fit into virtually any possible install scenario you can dream up, and given their performance, the 50CSs represent a solid value. Circle Reader Service No. 631. 🚗

