

INSTANT ACCESS TO THOUSANDS OF PRODUCTS BY PHONE!

# AudioVideo

A CurtCo Freedom Publication March 1997

# Shopper



## LCD's Big Picture

### Car CD Changers



## Dishes on the Go!



## Theater Systems



## Hot New Camcorders

### 4-Channel Car Power



## Speakers Take A Stand



US \$2.95

**a**fter a long week of frustration bustin' it for the man, the weekend's finally come. It's going to be just you and the road; it won't matter where you're going, just as long as you're going somewhere.

## Four-Channel Amps Deliver On-Road Power

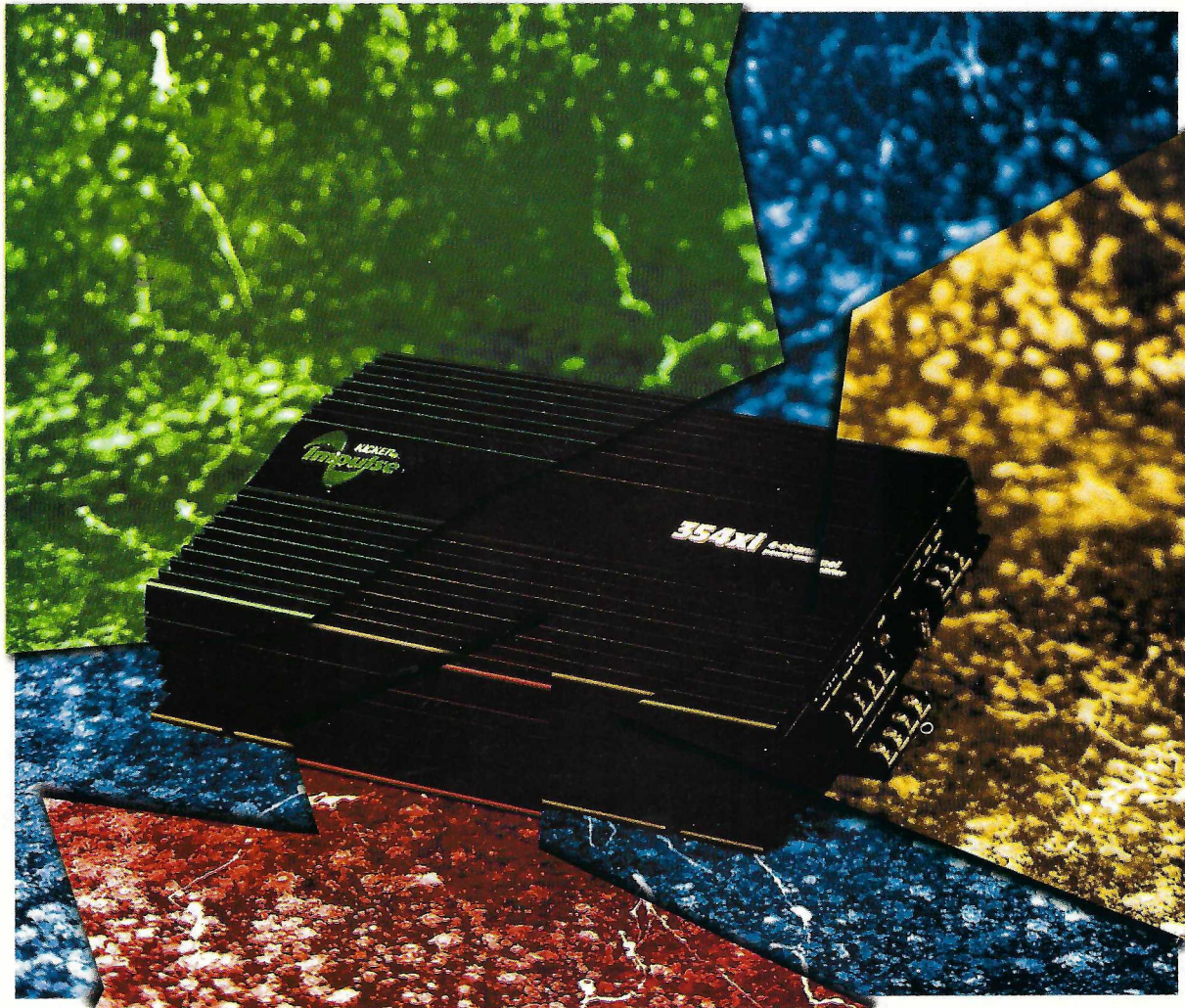
And there's nothing like some great tunes for a road trip. So as you pull onto the highway and fire up your car's sound system, you crank up the volume and...the music sounds garbled and strained. Ahhhh!

The vocals seem strident, the bass is weak, and the drummer sounds like he's playing that plastic toy kit you had when you were 7. What gives? After all, you just replaced your stock head unit with a new CD receiver, right? In a desperate panic, you drive to your installer, and with crowbar in hand you present your case. For some reason, he's smiling and doesn't seem terribly perplexed. Maybe some cold iron across the cranium will surprise him, eh? But wait! Before you crack him upside his head, let's hear him beg for forgiveness. "Bring that disc

# four x fours

by Micah Sheveloff

inside and listen," he says surprisingly, beckoning you over to his demo system (which happens to use the same CD receiver that's in your car). He turns up the volume, pushes the play button, and BAM...it's so loud and clean-sounding that you drop the damned crowbar on your foot. That pathetic CD you heard in your car suddenly sounds powerful and magically in focus, and before you can ask how or why, he explains. Basically, the humble amplifier section in your CD receiver is fine for moderate listening levels but wholly inadequate for your more serious power demands. Thankfully, you can easily add a multichannel amp to give you the performance you're craving.



#### **Four on the Floor**

What does multichannel mean? Multichannel refers to an amplifier's ability to power more than one stereo pair of speakers. Four-channel car amplifiers are designed to power two front speakers and two rear speakers. (An odd number of channels—like three—usually refers to a stereo pair plus a designated mono or subwoofer output.) The most flexible format is the bridgeable four-channel amp, which can be used as four, three, or two channels. Bridging together the output of two channels can turn a pair of stereo channels into one mono output with much greater power reserves. This makes future upgrades easier and will work with virtually any current system design.

Just like a stereo power amp—its less complex cousin—a multichannel power amp will take the signal from the preamp section of your head unit and deliver it to your speakers with far more precision and punch than your head unit's weeny amp section ever could. You see, the design of a truly magical car-stereo system requires an outboard amplifier that's powerful

enough to handle serious sound peaks, consistent enough to feed your speakers with a strong signal, and flexible enough to accommodate both the speakers in your system and your listening habits.

#### **The Right Cross**

Most multichannel power amps employ onboard crossover networks—small circuits that act like traffic cops, routing different frequency bandwidths. When properly adjusted, they can solve many of the problems in a lifeless sound system by directing signals above or below a predetermined crossover point to a particular speaker(s). This saves your speakers from straining. (For example, a low-pass crossover set at 80 Hz will send any audio signal below 80 Hz to your subwoofer. The sub is designed to handle such low frequencies more efficiently than a full-range speaker, so the end result will be clearer bass response from the sub and more efficiency from your other speakers.)

If you've never seen or heard a multichannel amp at work, all this power and serious circuitry may seem a

bit intimidating, but we're sure you'll be amazed at the improvement every time you power up your system. Once you've got it properly installed and set up, you'll find it makes your music sound better than ever; it'll operate without a hitch and won't take up much room. These characteristics make multichannel amps a great buy—especially when so much performance is available at such affordable prices.

### Stock Boy

Do you still have the stock head unit that came with the car? Most aftermarket head units are “amplifier ready”—meaning they come equipped with audio output jacks for use in an upgrade—while most stock head units are not. Thankfully, some of these new amplifiers provide high-level inputs to enable interface with your stock component. Please note that using these inputs will detract slightly from the overall sound-quality potential of your system. While they'll work, we advise you to consider buying a new head unit to go along with a new multichannel amp (see “Going to the Source” in the February '97 issue). But if you want to get the amp power now, you can use the high-level inputs and make the head unit upgrade at a later point; then you'll really have your system maxed out.

### Methodology

If you think you're a candidate for a new multichannel amp, consider yourself blessed, because I evaluated six of 'em for you. First and foremost, I listened to how well each one drove the sound in my car, but I also examined each unit to gauge whether its design might create operational or installation headaches. (I've seen products in the past that perform well but are so impractical to use or install in a car that they're just not worth the hassle.)

I listened to each amplifier using an Alpine 7930 CD receiver, two pairs of MB Quart 100.03 KX loudspeakers (which I've found to be highly revealing 4-inch coaxials), and an ADS SB10S subwoofer system (with two 10-inch woofers in a sealed enclosure). I listened to each amp at low, medium, and high volumes both in full-range operation (with all crossovers bypassed) and with the crossovers set, and I paid careful attention to how stable each amp remained in each scenario. I altered the available front-panel tuning adjustments (like gain controls and EQ or bass boosts), while listening for pops, clicks, and hisses—nobody wants these culprits rearing their ugly heads during quiet passages.

I chose songs from a few different CDs, each with uniquely torturous passages perfect for revealing an

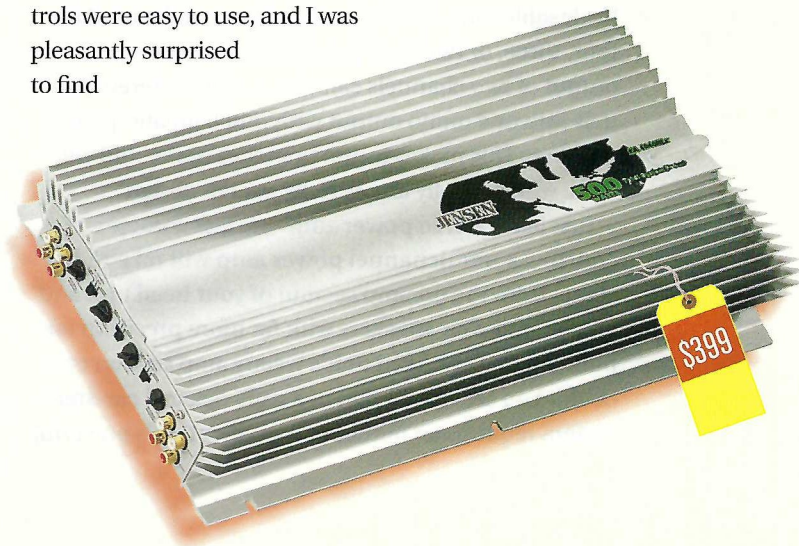
amplifier's strengths and weaknesses. One track I really like is “Star That You Are” off Dada's *El Subliminoso*. This quiet vocal track immediately illustrates how well an amplifier handles staging, which is the illusion that the singer is centered between the speakers. The song also has a lot of sharp kick-drum attacks and finely detailed acoustic-guitar picking, both of which can become exaggerated, masked, or muddled if not handled adeptly by your amp.

The title track off Herbie Hancock's *Dis is da Drum* draws heavily on electronic synth sound, with some awfully deep, growling bass lines and drum-machine samples. Sooner or later, this track will unravel the most costly amplifier if it's not up to the task. Finally, I still love Tracy Chapman's old hit “Fast Car.” Her subtle, almost fragile vocal track combines with spacious acoustic guitar and detailed bass guitar in a way that can quickly reveal a lack of amplifier headroom (the power reserve an amplifier needs to stay smooth while delivering deep bass passages and quick transients). Any signs of amp strain will cause listener fatigue. Now, to the survivors...

### Jensen KA-4040

If you're looking for an all-purpose amp that does everything well, the KA-4040 might be for you. Producing 50 watts by 4 into 4 ohms, this amplifier delivered the goods at all volumes (although some details began to get masked at extreme levels). Soundstaging and overall imaging were respectable, and what I liked most was the KA-4040's ability to go on and on at loud volumes without complaining or giving up the ghost. Stamina is a good thing.

This unit allows each pair of channels to be bridged, which ensures system flexibility, but the two crossovers (one high pass and one low pass) are fixed at 100 Hz, which can be somewhat restrictive—especially if you're going to expect killer performance from your high-quality subwoofer, let's say. All of the controls were easy to use, and I was pleasantly surprised to find



through-pass outputs: They allow you to daisy-chain the audio signal to another amplifier by bypassing the power stage of your amp and routing the same full-range signal from the preamp to *another* amp (like a dedicated sub-woofer amp) simultaneously. Although they don't come equipped with a crossover, the through-pass outputs are a noted plus in this price range.

Measuring 2.25 by 17 by 9.5 inches (h/w/d), the KA-4040 is a bit large but still represents a solid package at a decent price. It's a perfect choice for your system if you want to get reasonably loud performance but can't spend an arm and a leg to get there. Just be careful not to touch the razor-sharp heat sinks, or you could lose one of those limbs anyway. Ouch! Very sharp. Circle Reader Service No. 630.

### Eclipse 3241

This Eclipse model certainly represents a great value. In addition to ample power (50 watts by 4 into 4 ohms) and a good soundstage, the bass was very tight and kept up with all but the loudest passages. High-frequency detail was also present without being harsh, and the vocals didn't become masked until the volume soared.

The 3241's built-in crossovers are unquestionably the best out there in this price range; there's one for the front speakers, one for the rears, and one to send a filtered signal to a second amplifier. Each crossover is



continuously variable between 50 Hz and 200 Hz, and there's a switchable frequency multiplier that enables you to increase those crossover points by a factor of 30. Pretty convenient! This presents a significant range of adjustability that should ensure the correct filtering point for any application, now or in the future.

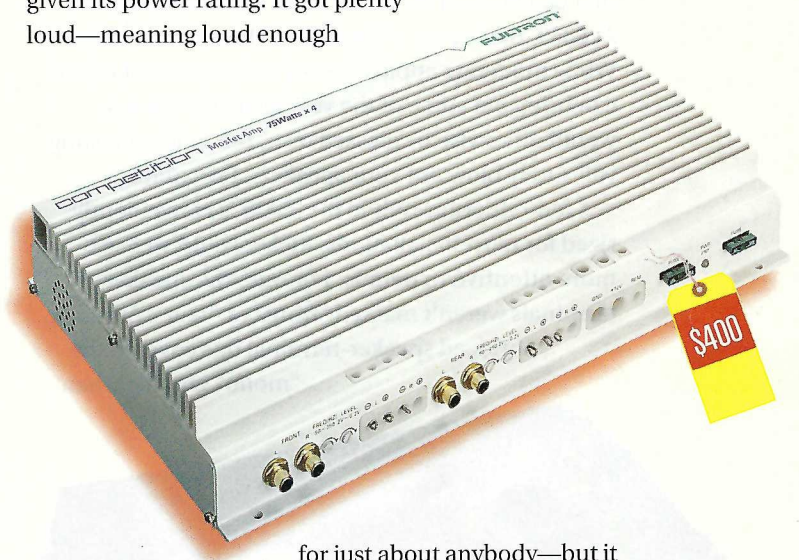
All this flexibility doesn't come without a few gripes, though. For one, the various switches and knobs are extremely small and rather hard to see, making the simplest adjustments somewhat of a drag if you're in a rush.

Also, the corners of the amplifier are particularly sharp and could scratch you if you're not careful. Finally, the mono speaker graphics reside *under* the connector, rendering them invisible once the unit is installed.

Even with these minor criticisms, the 3241 is a very strong amplifier. It's capable of bridged operation as a four-, three-, or two-channel amplifier, and given the 3241's precise controls and performance traits, I view it as a serious contender in its price category. Highly recommended. Circle Reader Service No. 631.

### Fultron 16-CA300-4

The Fultron offers an interesting array of strengths: power, extremely solid craftsmanship, and flexibility. Capable of delivering 75 watts by 4 into 4 ohms, the 16-CA300-4 performed well at moderate volume levels with particularly good staging and beefy low-end response. Surprisingly, this amp seemed to run out of power a little before the others, which is odd given its power rating. It got plenty loud—meaning loud enough



for just about anybody—but it didn't handle extreme volume levels as gracefully as it did moderate levels. (If your goal is to hear clearly while going deaf, you might look elsewhere. While you're at it, you might want to have your head checked out.)

I really appreciated the 16-CA300-4's physical layout. The gold-plated speaker terminals were a cinch to use, and the RCA jacks were the sturdiest of the bunch. (I tugged on the RCA cords and they didn't budge.) All the necessary inputs and outputs are located on one panel, making for a very tidy installation, and every knob and input/output was labeled beautifully. As for the under-ripe-avocado-green finish, it wouldn't have been my first choice. You won't be staring at the amplifier every day, but green? It's not easy being green. (There's white also.)

One oversight on Fultron's part: It's a shame that the crossover-mode select switches are located on the bot-

tom of the unit. To make any post-install adjustments, you'll have to remove the unit from its mounting, so be thorough when you set those crossovers the first time. I found the overall design appropriate for most applications, and while a bit more power would put the 16-CA300-4 over the top, it does offer enough user features to make it a practical purchase at this price. A solid contender. Circle Reader Service No. 632.

### Kicker 354Xi

The Kicker 354Xi amplifier fared well throughout all my testing, with a wide soundstage and a pleasant sound. Bass passages held up well until the highest volumes, and vocals never sounded strained. Rated to deliver 35 watts by 4 into 4 ohms, the bridgeable 354Xi is equipped with high-level inputs (if you've still got your stock head unit), a fixed bass-boost circuit with variable gain (0 dB to +18 dB fixed at 40 Hz), and two switchable crossovers (between 70 Hz and 110 Hz) that can be used for either high- or low-pass duties. At \$349, that's a lot of flexibility. One note of caution: While moderate application of the bass-boost circuit can bring out some of the very lowest notes that would otherwise be glossed over, too much boosting will surely blow out your speakers. Be careful.

A few criticisms: While the 354Xi is conveniently sized for most installations, Kicker could've been more attentive to details. For one, the speaker terminals weren't marked "front" or "rear." Also, the bridged speaker-terminal bus covered the "mono" graphic when



installed, and the connections must run to opposite ends of the amplifier—a somewhat inconvenient option for tight installation spaces. Still, when I ran the 354Xi alongside the other units (which are all rated for higher power output), I found that it had the features and gumption to form a solid foundation for any multichannel system. The Kicker delivers a pleasant

sound overall and offers strong value for its price. This is a solid package and comes recommended. Circle Reader Service No. 633.

### AudioControl System 90 Model 50

In my book, the Model 50 is clearly a step up in terms of system flexibility, sound quality, and price; it's rated to deliver 50 watts by 4 into 4 ohms. While it doesn't play any louder than the other amplifiers, it does allow for pinpoint accuracy when tuning your system, thanks to variable front and rear crossovers and front/rear equalization. Staging was excellent, vocals were gracious and detailed, and bass response was punchy and tight. And unlike lots of other components I've seen in my day, the Model 50's EQ circuitry was unusually quiet and didn't introduce any noticeable noise. (This is a rare and pleasant surprise, but it also makes it easier to overdo it with the EQ. Be careful not to boost the low end too much or the bass response can get sloppy.)

The Model 50 is equipped with high-level inputs for use with a stock head unit and line-level outputs for an additional amplifier. I also liked the independent gain adjustments for each channel, which will help overcome imbalances from awkward speaker location. All the exterior edges of the Model 50 were rounded and smooth to the touch, and the chassis itself is very compact. Forced to nit-pick, I'd have preferred that the wiring didn't require opposite-end connections to the amplifier. Also, you have to remove the top panel



in order to change the crossover filters (one set is supplied), but access is easy once inside. All the graphics and labeling are clear, and it's obvious that a lot of effort went into the design of this product. You can't ask for much more in this price range. Highly recommended. Circle Reader Service No. 634. 🗨