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Reviewed by
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NuForce MCH-3SE-C7 Multichannel Amplifier



FEATURES SNAPSHOT!

Description

Model: MCH-3SE-C7

Price: \$5000 USD

Dimensions: 17"W x 3.5"H x 14"D

Weight: 33 pounds

Warranty: Five years parts and labor

Features

- RCA and XLR inputs
- Power output (manufacturer rated): 190Wx7 into 8 ohms, 300Wx7 into 4 ohms
- Chassis of high-grade, anodized, brushed aluminum
- Five-way binding posts
- Channels configurable for optimum stereo operation
- Individual trim controls for each channel

- Operation between 84VAC to 264VAC without adjustment
- Remote control

When you think of high-end, class-D power amplifiers, which manufacturers' names pop into your mind? Without a doubt, NuForce has to be among them. Over the last few years, this California-based company has taken the reins of class-D amplifier design, stripped away the stigma of compromised sound attributed to prior attempts, and firmly established the technology as a viable choice for discerning audiophiles all over the world. But, like me until this review, many of these same audiophiles may have heard the NuForce name without ever hearing one of their products. Fewer have had the opportunity to have one power their speakers in their room.

Until the arrival of the NuForce MCH-3SE-C7 multichannel amplifier (\$5000), my experience of power amplifiers had been solely with linear class-A or class-AB solid-state amps. But the digital switching technology used in all NuForce amplifiers differs quite a bit from linear amplifier technology. The main difference is one of *efficiency*: the ratio of power produced by the amplifier to drive the speakers compared to the amount of power entering the amplifier from the wall socket. Linear amplifiers are generally very inefficient -- around 50% on average. An inefficient amplifier wastes power by using much of it to generate heat. Class-D amplifiers, on the other hand, are close to 90% efficient.

The NuForce MCH-3SE-C7 is a relatively small seven-channel amplifier specified to deliver 190Wpc into 8 ohms, all channels driven. When I say *small*, think of the size of a well-built DVD player. At 17" wide by 3.5" high by 14" deep, the MCH-3SE-C7 slips right into and virtually blends in with most systems. Most other amps claiming this sort of power output take up three times as much space and weigh at least twice as much as the NuForce's 33 pounds. Another great advantage of class-D amplifiers: they can be much smaller than their linear counterparts.

The review sample arrived in an all-black finish. The front and sides of the housing are of brushed aluminum, which gives it a classy, if not understated look. The top panel of my review sample was also black, with a small opening above the tops of all seven amplifier modules, slightly recessed and covered with a thin piece of perforated metal, to cool the amp modules. The faceplate has a small cutout for a panel that displays the NuForce name and the numbers 1-7. Each number is backlit in three colors: green, blue, and red. Green means that the channel is powered on but is not receiving a signal, blue that a channel is active and receiving a signal, and red that there is a channel failure. The numbers correlate to the MCH-3SE-C7's snazzy little remote control. It's sturdy, long and thin, and hexagonal, rather than the normal rectangular shape. On it are an On/Off button, as well as buttons numbered 1-7. Each number directs the amplifier to turn on in a certain configuration. For example, if you press On, then 2, the left and right front channels are activated -- and, on the amp's display, numbers 3 and 4

light up.

This is important. In configuration 2, the MCH-3SE-C7 is a two-channel stereo amp that uses all of its power resources for only those two channels, not the seven it is capable of delivering. In fact, when the NuForce is working in two-channel mode, its power delivery is identical to that of a pair of the company's flagship Reference 9 V2SE monoblocks. If the other channels are powered on, the power available to the two main channels is only slightly decreased, as the idle channels consume a bit of power at idle. The remote's other buttons switch the MCH-3SE-C7 to three-, five-, or seven-channel configurations. When the NuForce is powered down using the remote, it remembers the last configuration used, and restores itself to that configuration when turned back on.

The rear panel is packed full of connectors: For each channel you have the choice of an XLR connection or a single-ended RCA connection. Each channel level can also be individually trimmed, to fine-tune the level of the speaker it drives. The plastic-covered binding posts accept banana plugs. Because of the compact design of the MCH-3SE-C7, I had to sit it up on a box to connect my spade-equipped speaker cables to the binding posts, which are at the bottom of the rear panel. Also on the rear panel are an On/Off switch, and a 12V trigger to enable the NuForce to be turned on in sequence by other equipment.



Performance

To familiarize myself with the sound of the NuForce MCH-3SE-C7 by using it as a two-channel amp for a few weeks, I pressed 2 on the remote to activate the left and right front channels. Aimee Mann's "This Is How It Goes," from her *Lost in Space* [CD, Superego 7], begins with acoustic guitar. The image of the guitar was very precise and detailed. However, it did sound just a bit recessed in the soundstage. When Mann began to sing, the strings seemed to fade and my focus was held by the NuForce's wonderfully transparent reproduction of her voice, an experience that had me hanging on each syllable.

Another track that provides an excellent test of transparency and low-end control is a favorite of mine, "3,000 Miles," from Tracy Chapman's *Where You Live* [CD, Atlantic 83803]. As far as transparency goes, the handclaps at the beginning of the song are about as realistic as recordings get. I've listened to this track on many different systems, from ultra-high-end rigs to bottom-dollar setups, and either they shine or they fail miserably. My system, with the

NuForce pushing it, shone brightly. The handclaps imaged to the right of center, as they should, and the level of each clap differed from the next, as it should. The ability of a system to accurately reproduce these varying levels of sound is vital. While what I've described is only one element of one track, it was the longing for details such as this that made me an audiophile. Later in the song (around 1:40), a tight kick drum provides a quick, deep thump. Because this kick-drum stroke is at a frequency that excites one of my room's bass peaks, the thump is a little strong and perhaps a little out of balance, but what's important to note is how sharp the stroke was and how quickly it disappeared through the NuForce. I was thrilled with the MCH-3SE-C7's performance.

Now confident of the NuForce's ability to reproduce music -- the real test of any great amplifier -- I decided to torture five of its channels with one of the most intense surround mixes I own, the "Under Attack" chapter of *Master and Commander: The Far Side of the World*. I adjusted my Anthem Statement D2 surround processor to run all of my speakers as Large and set the subwoofer to Off. While this is not the best way to listen to this scene -- and perhaps not the safest test for your system -- it was a genuine torture test for the MCH-3SE-C7: every speaker was reproducing a full-range signal, and the mains were also reproducing the LFE track. The real action begins when the first cannonball smashes through the ship. There is a deep wave of bass, from the front of the stage to the rear, that is fully present and delivered with great impact and weight. Other details, such as the splintering of the ship's mast and the crew's cries for help, were also brought to life. Nor were these details lost in the NuForce's effort to deliver gobs of power to my temporarily subwooferless system. While I did miss the earth-shaking performance of my two JL Audio Fathom f112 subs, the MCH-3SE-C7 pushed my speakers to their limits and left nothing on the table.

The option of turning specific channels on or off made the MCH-3SE-C7 quite versatile. I found its performance in two-channel mode on a par with that of my reference stereo amp, the Coda Amplifier 11, a 100Wpc, class-A design (\$4900, long discontinued) that, within the last year, replaced a class-A, 50Wpc Krell KSA-50s (\$3300 when new). Both are linear designs. In terms of transparency, the Coda provided the most realistic vocal reproduction of the three, but the NuForce was a very close second. The NuForce's soundstage was slightly recessed with strings, which added a hint more depth to those instruments. The MCH-3SE-C7 provided ample power in the lower octaves, matching the Krell's punch if not quite its detail. But these differences were slight, and evident only with some material. Both of my amps produce plenty of heat when pushed hard; but when I placed my hand on the NuForce's top panel, I was surprised to discover that it was equally as warm.

The best multichannel amp I had on hand for comparison to the NuForce amp was the [Anthem MCA 50](#) (\$1999). Rated at 185Wpc, all five channels driven, the Anthem runs cool to the touch. It and the NuForce were equal in power output, but the MCH-3SE-C7 provides an additional two channels of amplification, as well as the ability to engage and disengage specific channels via remote control. The MCA 50 is twice the MCH-3SE-C7's size and weight, a tribute to the NuForce's class-D design. While the Anthem is quite powerful, the NuForce matched it in that regard, and bettered it with levels of finesse and control typical

only of higher-end amplifiers. While these qualities are not often found in multichannel amplifiers, the NuForce MCH-3SE-C7 provided them, bettering the MCA 50 in almost every respect.

Conclusion

The NuForce MCH-3SE-C7 made a big impression on me. I have always used class-A or -A/B amplifiers in my system because I believed only they could give me the performance I required. NuForce has opened my eyes: their MCH-3SE-C7 provided all the qualities I demand from my system. My music was just as dynamic, just as detailed, and just as transparent as with the combination of amps that I own, but the NuForce takes up a fifth of the space on my floor or in my equipment rack. If you have to trade a little to get a little, then sometimes a compromise is a good thing. In the case of the NuForce MCH-3SE-C7, you can have it all.

Review System

Speakers - Rockport Technologies Mira (mains), Energy Veritas 2.0Ri (surrounds), JL Audio Fathom f112 (2 subwoofers); Paradigm Studio 100 v.4 (mains), Studio CC-690 v.4 (center), Studio ADP-590 v.4 (surrounds), Seismic 12 (subwoofer)

A/V processor - Anthem Statement D2

Amplifiers - Anthem MCA 50, Krell KSA-50s, Coda Amplifier 11

Sources - Toshiba HD-XA2 HD DVD player, Sony PlayStation 3, Slim Devices/Logitech Squeezebox music server

Cables - Nordost, Monster Cable, DH Labs

Power conditioner - Shunyata Research Hydra Model-6 with Copperhead power cord

Display device - Mitsubishi WD-Y57

Remote - Universal Remote Control MX-850

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