

# I Heart iBias

By David Vaughn

## Krell Chorus 7200 Amplifier

**PRICE \$10,500**

### DO YOU REMEMBER WHAT IT

was like sitting for your high school or college lessons? Well, get ready for a trip down memory lane, because to give the Krell Chorus 7200 the praise it's due and explain just how much this "little"-amplifier-that-could is going to change the audio industry, we'll need to start with a short class in "classes."

There are many different established amplifier topologies out there, designated by class, as in Class A, B, A/B, D, G, and H. Each have their own set of pluses and minuses, but in the audiophile world, Class A has always been king for a variety of reasons. First and foremost is sound quality, which is virtually unmatched to those with golden ears—those things attached to the side of your head, not the speaker company that Darryl Wilkinson always raves about. Audio signals are basically alternating current—the sine waves you learned about in grade school—that have both a negative and positive voltage. Remember, the goal is to make a loudspeaker diaphragm move out (positive voltage) as well as in (negative voltage.) The Class A amplifier has the ability to conduct the full audio signal, both the positive and negative portions of the cycle, on each output device, reducing distortion in the process.

Unfortunately, there's no such thing as a free lunch. There's one negative—and it's huge: Class A's efficiency is about as green conscious as a Lear jet carrying one passenger across the country. A pure Class A design has the output transistors operating at full power all the time, they're never idle. This means any energy not required to drive the speaker is released through the amplifier's heat sinks, turning the amp into a power-wasting space heater. Furthermore, the ability to place multiple channels in the same chassis is all but impossible due to

### AT A GLANCE

**+** Plus

- A new take on amplifier classes with iBias
- Superb dynamics and soundstage
- Ethernet capability for system monitoring

**-** Minus

- LED illumination too bright
- Extremely heavy

the heat build-up, which has essentially shut out the technology for the majority of home theater installations.

### Wht Exactly Is iBias

Krell's audio legacy is built upon Class A amplification, and it's no surprise that their engineers have been able to develop a patent-pending circuit delivering traditional Class A-like operation without the excessive heat and wasted energy of conventional Class A. Furthermore, the design can be housed in a form factor fit for home theater applications. It's called iBias, but a better name may be iReallyLikeIt!

Krell's innovative iBias technology allows the amplifiers to run in full Class A mode as needed, while at the same time minimizing heat generation. Krell isn't the first to attempt using a "tracking" or "sliding" bias that reacts based on the nature of the audio signal, but their approach is quite different. In the past, the

tracking monitored the incoming signal and set the bias based upon this information. The iBias technology takes a different approach by calculating the bias from the output stage; it directly measures the output current of the amplifier and adjusts the bias to the optimum level. By measuring the output current, the real-time demands of the specific speaker connected to the amp are directly incorporated into the circuit function. The amplifier monitors the load, accounting for the variables present at any given moment, rather than blindly reacting to the incoming audio.

The president of Krell Industries, Bill McKiegan, likes to compare this technology to a 12-cylinder automotive engine, which shuts down some of the cylinders when you don't need a lot of power. But when you slam the accelerator to the floor, the engine can deliver 600 horsepower—or more—near instantly. iBias works virtually the same way. It can be cruising along in

efficiency mode yet in a matter of microseconds give you hundreds of watts of full Class A amplification for musical peaks or when the action kicks up in the latest Hollywood blockbuster.

With this new topology come other benefits. Krell has been able to fit seven channels of amplification into a relatively small—though extremely heavy—rack-mountable chassis, making iBias practical for use in environments where a traditional Class A amplifier would be too large. That's not to say the Chorus doesn't generate heat; it certainly does. Krell cools the amplifier using thermostatically-controlled fans, which are generally eschewed by audiophiles and home theater aficionados. Still, in all of my testing, I was never able to detect any audible noise from the four fans on the rear of the amp, and the output temperature measured with an IR thermometer never exceeded 115 degrees F, even under the most strenuous tests.

### Oh, My Aching Back

I was out of town when UPS delivered the amp, and the arduous task of bringing the 100-pound beast (110 including packing materials) fell to my 16-year-old son and one of his friends. It took two strapping boys to get this baby into



## THE VERDICT

The iBias technology has allowed Krell to deliver a multichannel amplifier that will have audiophiles grinning from ear to ear.

the house, and while it's not the heaviest amp I've reviewed, it certainly is one of most dense, and getting it into the rack was a serious chore.

Aesthetically, the Chorus 7200 is quite beautiful, as far as black boxes go. The front façade is matte black highlighted by a silver band running vertically through the center of the facing where a backlit Krell logo protrudes slightly from the box. The left side features a small circular power button, while the right has a rectangular LCD display that gives you the IP address of the amp when it powers up.

Yes, I said IP address. You see, the rear of the amp has all of the connections you typically see on an amplifier—both balanced and unbalanced inputs for all seven channels, the aforementioned fans, a 12-volt trigger input, a detachable power cord, master power button, and, unusually, an Ethernet port.

Why put Ethernet in an amplifier? In this case, the amplifier can be accessed through any device that can run a Web browser, such as a smartphone, tablet, or computer. Using the interface, you or your dealer can monitor the heat-sink temperature and fan speed, as well as configure the unit to send out e-mail notifications (up to three addresses)

if it's on-board diagnostics detects any faults. Furthermore, if there's ever a software upgrade for the amplifier, you can have the amp update its software from the Krell servers with the push of a button.

### The Fun Begins

Once installed, I hooked the 7-channel Chorus 7200 up to my Marantz AV8801 surround processor and calibrated the sound levels to my speakers: three M&K S150s across the front, four M&K SS150 surround speakers, and two subwoofers—a brand-new HSU VTF-15H MK2 situated at about the midpoint of my right wall and an SVS PC-Ultra sitting in the front left corner of the room.

I lived with the Krell for a few days before really putting it to the test, but out of the gate, I was impressed by its neutral tonal quality. Not too bright, not too laid-back. When I finally sat down for some critical listening I truly started to appreciate how sweet this amp sounded.

I began with an eclectic collection of SACDs, including the Telarc SACD Sampler 1 recording of "Moanin'" by Monty Alexander from his *Monty Meets Sly and Robbie* album. This jazz-meets-Jamaica recording

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## AMPLIFIER

### Krell Chorus 7200 Amplifier

## SPECS

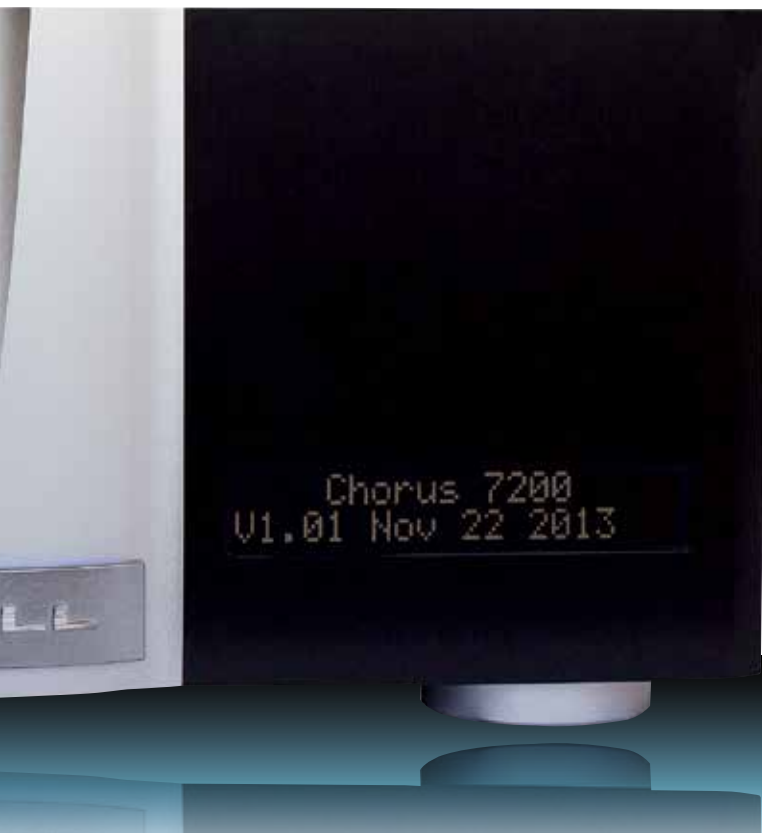
**Power Output:** 7 x 200 watts (8 ohms); 7 x 360 watts (4 ohms) • **Dimensions (W x H x D, Inches):** 17.1 x 7.65 x 21.10 • **Weight (Pounds):** 100 • **Audio Inputs:** 7 single-ended RCA; 7 balanced XLR • **Audio Outputs:** 7 pairs binding posts • **Additional:** Ethernet (1), 12-volt trigger (1)

features Alexander gracefully moving his fingers across the keys of a Yamaha Grand piano and a smooth rhythm section playing in the background, with Sly Dunbar on drums (and ridim) and Robbie Shakespeare on bass. The song is a lot of fun, with Monty's piano slightly left of center, Sly's drums to the right, and the tight bass from Robbie fills the room. Every strike of the piano is clean, and the midrange is full of body. As I pushed the volume higher and higher, the instrumental track never strained the amplifier, and it was able to resolve all of the detail in the music without any obvious coloration.

I could say the same for a number of redbook CDs ripped to FLAC files on my home server. The Spin Doctors' "Two Princes" is lyrically challenged for sure, but I've always enjoyed the rhythm of the song, especially the percussion beat that

opens the song and the guitar solo midway through that instantly transports me back to my early 20s. *Wow* was the first thought in my mind as the drums kicked to life. Is the band playing live in my room? While my reference Parasound A51 amp operates in Class A mode up to a few watts, as is the case with its A/B design topology, I can't say that I remember this recording sounding quite this crisp and clean, with the voices projecting well into the room and the guitars layered in the background.

Class A amp makers tout their product's ability to re-create voice, and here the Krell truly shined. Take the opening of fun's "Some Nights," where Nate Ruess' voice kicks off the song with a catchy ballad-like opening that transports you back in rock history to harmonies from groups such as Queen and Styx (those bands also shine on the 7200).





With this amp in the chain, Ruess' melody came alive with seemingly limitless dynamics, 3D-like soundstage, and amazing detail.

This dynamic performance was readily apparent with every Blu-ray I threw at the Krell. The beach landing in *Saving Private Ryan* exploded into my room, with each discrete effect placed precisely in the soundstage. And the 7200 brought an uncanny immediacy to softer passages, such as the opening monologue recited by Morgan Freeman in Clint Eastwood's *Million Dollar Baby*, where it truly sounded as if Freeman was sitting in the room with me describing Frankie Dunn's personality and why he wouldn't train girls to fight. Impressive is an understatement.

### **A Strong Foundation**

I spent the vast majority of my review time using my reference Marantz

surround processor, but Krell really wanted me to pair this fantastic amplifier with their entry-level Foundation surround processor (\$6,500, *S&V* Top Pick of the Year, reviewed April 2014). Michael Fremer raved about the Foundation's prowess in his review, and I have to concur 100 percent. As good as the Chorus 7200 sounded with my Marantz, the Foundation took it up a notch, and I now have some serious processor envy and a strong case of upgrade-itis due to this combo's audio muscle. The Foundation isn't the most ergonomically friendly prepro I've ever used—setting it up was about as much fun as a root canal—but it's by far the best sounding. The soundstage is so

convincing, you can't really tell where the speakers are in the room, and the subwoofer integration is by far the best I've ever experienced. Like Michael, when I put my Marantz back in my rack, I felt like I needed a prescription for Prozac to fight the depression I was facing.

### **Putting It Into Words**

The hardest part of reviewing audio equipment is putting what you hear into words that can impart upon the reader just how impressive (or uninspired) a particular piece of equipment was to your ears. In the case of the Chorus 7200—and Foundation—it was six weeks of audio bliss for me and my family. My son actually sat on the couch with

me to listen to music because it had never sounded so alive, but when I broke the news that the processor/amp combo cost \$16,000, he knew instantly our days of audio bliss were numbered.

The only complaint I have about both the amp and processor is the non-dimming backlights that hide behind the Krell logo on each unit. When I was listening to music, they didn't bother me one bit, but when the lights were off and I was trying to watch a movie, the blue LED lights were so bright that I thought they might be able to lead a wayward ship into port after a long journey at sea.

At \$10,500, the Chorus 7200 isn't cheap by any means, but its iBias technology delivers bliss for a relatively low cost per channel when compared against the cost of traditional Class A amps. If you're in the market for a new amp and are a member of the cost-is-little-object crowd, definitely check out the Chorus 7200 from Krell. You won't be disappointed. ♦