

Audio Physic Kronos loudspeaker

Michael Fremer, June, 2004
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Thirty-one flavors may work for an ice-cream chain, but a speaker manufacturer who sets out to please every sonic palate ends up with a serious identity crisis, pleasing no-one. From its inception in 1985, Audio Physic, based in Brilon, Germany, has been an event-oriented speaker company. Founder and original chief designer Joachim Gerhard focused much of his attention on providing listeners with the sensation of "live" by emphasizing coherent three-dimensional imaging and soundstaging—though not to the exclusion of timbral accuracy. Except for the Medea, based on a Manger driver (a fascinating design nonetheless), every Audio Physic speaker I've heard has fulfilled the company's mission statement.

When Gerhard visited to install the original Audio Physic Virgos in my old listening room nine years ago, the discussion was not about the nuts and bolts of drivers and crossover networks but rather about event localization and its importance to human survival. "When the twig breaks...*ja*?" I remembering him telling me, "we had better know from where! Or the tiger eats us! Ha ha ha ha!"

Though the conversation was diverting and even intriguing, the subject seemed off-topic, based on my audio experience to that point. When Gerhard set up the narrow-baffled Virgos way out into the room and what seemed to me ridiculously far apart, my skepticism grew and my resistance stiffened.

I ended up buying both the unorthodox setup technique and the Virgos, which produced startlingly holographic images the likes of which I'm not sure I've heard since. They were "musical" and fun to listen to—[my review](#) appeared in the September 1995 *Stereophile*—and if you heard a growling tiger, you'd see a growling tiger.

Deep, narrow-baffled cabinets and opposing, side-mounted woofers have since become commonplace. Along with performance benefits, a narrow baffle makes for a graceful, apartment-friendly appearance. You can see echoes of Gerhard's work in the creations of such young designers as the talented John DeVore in his eponymous speakers.

Illness has since forced Joachim Gerhard to limit his design work, but Audio Physic continues in the capable hands of Gerhard's college acquaintance Manfred Diestertich. Diestertich's high-tech hand was first seen and heard in the Avanti III (which I [reviewed in August 2001](#)), designed in collaboration with Gerhard; then in the Virgo III ([reviewed by Brian Damkroger in September 2003](#)); more recently, in the Padua; and now in the Kronos (\$64,995/pair), which comes complete with integrated powered subwoofer.

Kronos makes a statement

Speaker design is an art, a science—and a business. If you don't build to serve the marketplace, they will *not* come. I know from having watched the Kronos design evolve—from a very early prototype I heard at the Frankfurt hi-fi show a few years ago to the finished product—that the target price was originally around \$50,000. But between perfecting the mechanical design, the electronics, the complex curved and raked cabinet—not to mention the falling US dollar—the price has risen to \$64,995/pair. Add an ebony finish and the price is \$69,995/pair.

Is there a market for a relatively compact three-and-a-half-way loudspeaker costing \$65k? If it can compete with or outperform some of the bigger, bulkier "statement" speakers, you bet. The Kronos' claimed frequency range is 10Hz-40kHz, making it a truly full-range design, yet the pair of them fit comfortably if imposingly in my modestly sized listening space, thanks to that narrow baffle and those side-firing woofers. The Kronos looks gorgeous, though if I'd had a hand in its design I would have passed on the round grille (even if the driver behind the grille *is* round) in favor of a rectangle, to better match the speaker's overall shape.

The two-box Kronos consists of a tall, heavily braced powered subwoofer base and a smaller head unit that sits atop and blends in almost seamlessly with it, thanks in part to the Hornslet speaker-cabinet factory's meticulously matched veneers. At 51" tall and 14" wide, the sleek-looking Kronos, with its curved front and rear baffles, raked profile, and



wedge footprint, looks dramatic, graceful, and masculine. And at 265 lbs each, it's heavier than it looks.

Four 10" long-throw woofers, arranged in opposing pairs ("push-push") on either side of the cabinet, provide the system's foundation. Each woofer is driven by a dedicated 250W amplifier, for a total of 1000Wpc. Having reviewed Audio Physic's versatile Minos subwoofer in the November 2003 *Stereophile Guide to Home Theater*, I was very familiar with the Kronos' wired remote control: it's the same one with a different cover plate. Essentially, the Kronos subwoofer system is a double stack of heavily revised Minos for each channel, with 10" drivers in place of the Minos's 12" cones.

The Kronos' head unit features a unique front-mounted, coaxial driver covering the 250Hz-50kHz range. It combines ScanSpeak's superb ring-radiator tweeter with a 6.5" midrange driver that looks like one of SEAS' ceramic-coated aluminum cones modified with Audio Physic's Active Cone Damping (ACD) technology. The tweeter is hung in front of the midrange cone using AP's three-point String Suspension Concept (SSC) technology. AP claims that SSC both decouples the tweeter from vibrations induced by the midrange driver, and positions it far enough out front to avoid the typical "cuppy" sound that, in a coaxial driver, can result from the tweeter dome being deep within the confines of the midrange cone.

The midrange/tweeter assembly is decoupled from the front baffle via a second cast basket, mirror-image attached to the midrange magnet structure to create an hourglass-shaped device. (The second basket is attached to a brace rooted deep in the cabinet structure.) Two opposed, side-mounted 6" drivers with large foam phase plugs are used for spatial "fill" in the 250-500Hz region, and to give the speaker added "bloom." The midrange-tweeter module features three crossover boards stuffed with ultra-high-quality components.

Like other floorstanding speakers from Audio Physic, each Kronos rests on two aluminum stabilizing crossbraces. These screw into the bottom of the cabinet, and are adjustable; floor spikes are included. More massive than the braces that come with other AP speakers, these are designed to make spiking, leveling, and tightening easy to accomplish from the top.

Setup

Powered subs with ingenious setup flexibility made positioning these large, heavy cabinets somewhat less critical than would normally be the case. I first placed the Kronoses where the side-firing-woofered Audio Physic Avanti IIIs had worked best, and that's where they remained: about 9' apart, 8' from the listening position, 3' from the sidewalls, and 30" from the front wall, toed in toward the listening position, the tweeter axes crossing at a point slightly behind my head.

I plugged the speakers into the wall, and the LEDs on the front baffle glowed red. The wired remote connects to a multi-pin jack on one speaker's underside (the spiked feet provide sufficient clearance); an additional cable runs between the speakers to slave the second Kronos' subwoofer to any adjustments made with the Kronos' remote control.

When I first tried to play something, the signal-sensing circuit took a few seconds to kick the subs on; all I heard were the head units, so the sound was thin. Then the subs activated, the LEDs turned blue, and there was *bass*—but its quality and quantity were determined by what I did with the remote control. There was plenty to do.

The bass level can be adjusted in 10 steps of 1dB each. The Room Gain adjustment lets you compensate for what happens when you try loading a relatively small room with very deep bass. According to Joachim Gerhard, generating deep bass in a small room is problematic: below the frequency of the smallest standing wave in a given room, the room becomes pressurized and low-frequency gain, or room gain, occurs, which rises in amplitude as the frequency falls. That's because, in a normal room, above the "pressurized zone" as you halve the frequency, the woofer has to move four times the amount of air. In the pressurized zone, however, the amount of air the woofer has to move doesn't change with lower frequencies; as the frequency drops, the bass amplitude rises, resulting in boomy, bloated bass.

That's why many designers of full-range speakers roll off the deep bass. In an anechoic chamber, the deep-bass response is reduced, but in the real world, depending on placement, room dimensions, and stiffness, the results may well be flat. The Kronos' low-frequency response can be adjusted to compensate for room gain, in hopes of getting a reasonably flat response free of boom and bloat. Positions 0-10 of the Room Gain control are recommended for small rooms, 10-20 for medium-size rooms, and 20-30 for large ones—but other factors, such as wall and floor stiffness, also come into play.