JASON VICTOR SERINUS

Nordost QKore and QKore Wire

SYSTEM GROUNDING ACCESSORIES

As a longtime user of Nordost's cable and AC-power products, my ears opened wide when they released their three QKore Ground Units and QKore Wire at High End 2017, in Munich. While I've never questioned the importance of proper electrical grounding, to prevent problems with safety and noise—the latter including measurable noise generated by transformers, appliances, LED lighting, power supplies, and Bluetooth, WiFi, and cellular devices—I couldn't fathom what difference a passive grounding device might make in a high-end system that, in my case, is fed by an 8-gauge dedicated line with its own copper ground rod driven into the terra infirma of the fault-ridden Pacific Northwest.

From Nordost's Michael Taylor and Michael Marko, I soon learned that their three Ground Units—the QKore1, QKore3, and QKore6—were intended for all systems, *including* those with dedicated lines and grounding rods. While Nordost counsels against removing grounding rods, the efficacy of such rods seems to vary with season, temperature, and soil salinity. When the soil dries out, you have to drive a grounding rod *very* deep to achieve effective grounding.

"It has been said that keeping the ground moist and salty enhances the electrical connection to earth," Marko explained by phone. I envisioned myself, in bathrobe and pink fuzzy slippers, daily toting an iridescent green watering can filled with salt water to the exterior corner of our detached music room to water my grounding rod. I also imagined the imminent appearance of people in white coats, intent on grounding me permanently.

The QKore, which acts as a manufactured ground reference—a point of zero potential—includes a "low voltage attractor plate" (LVAP), made of a proprietary alloy, that avoids the variability of the organic materials that constitute soil and that are affected by temperature and/or humidity. The QKores' precise contents—and the names of other companies involved in their development, if any—are secrets kept so close to the corporate chest that I fully understand why anyone who has neither attended one of Nordost's demonstrations nor tried a QKore at home would raise at least one eyebrow at these things, if not reject them out of hand.

SPECIFICATIONS

QKORE1, QKORE3, QKORE6 GROUND UNITS: Passive grounding devices, connected to power conditioners and audio components with QKore Wires. **Dimensions** (all three) 10.6" (270mm) W by 3.2" (80mm) H by 7.9" (200mm) D, or 8.9" (225mm) D with binding posts. Weights: QKore1, 13.25 lb (6kg); QKore3, 13.55 lb (6.1kg); QKore6, 17.2 lb (7.8kg). **Serial numbers of units reviewed** QKore1, 4157251; QKore3, 4158509; QKore6, 4158572. **Prices** QKore1, $2499.99; QKore3, $3499.99; QKore6, $4999.99.

QKORE WIRE CONDUCTORS: 1x16 AWG, solid-core, 99.9999%-pure oxygen-free copper (OFC), silver-plated. Insulation: fluorinated ethylene propylene (FEP). Terminations available: banana, spade, RCA, male or female XLR, BNC, RJ45, USB-A, USB-B. **Price** $359.99/2m; add $150 per additional meter. USB, RJ45 terminations, $399.99. All Approximate number of dealers: 95.

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The QKore1 ($2499.99) includes one 2m-long banana-to-banana QKore Wire and one QBase Ground gold-plated binding post, and is designed to ground the primary power distribution block/conditioner/regenerator/distributor. The QKore3 ($3499.99), with one 2m RCA-to-banana QKore Wire and three QBase Ground multi-use binding posts, is intended to ground audio circuits on the secondary side of the power supply. The QKore6 ($4999.99) combines a QKore1 and a QKore3 in a single box, and comes with 2m runs of banana-to-banana and RCA-to-banana QKore Wire, as well as: three multi-use binding posts for audio circuits, two posts for monoblock amplifiers or other components, and a single QBase Ground post for the primary power product.

QKore Ground Units are intended, ideally, to be connected to as many system components as possible via Nordost's patented QKore Wire ($359.99 each for a 2m length). This comprises Nordost's patented Mono-Filament technology of a silver-plated copper conductor insulated with extruded fluorinated ethylene propylene (FEP) insulation, aka Teflon. The wire is solid, to better conduct resonance. Marko explained:

> Any wire that conducts AC physically vibrates. All of our top [power cords] separate conductors from one another, and use mechanically tuned lengths to minimize resonance. Imagine a wind chime. When it normally hangs in the wind, the chimes are separated, but when they touch, they ring like bells. Now, imagine those chimes tied together with a string. If you were to hit those, they would not ring; they would thud. That's a lot like what we do. Instead of trying to damp resonance with filler and foam, we get better results when we control resonances in a less damped fashion.

The QKores address two different aspects of ground noise in audio systems. Pre-transformer ground noise (AC), which comes out the wall, is addressed when you attach a QKore1 to a power product's ground post. Post-transformer ground noise (DC), which lives in the audio circuits of the audio components proper, is addressed when you attach a QKore3 to those components' open jacks or ports: RCA, XLR, USB, BNC, Ethernet, etc.

Rather than analog, Taylor prefers open digital connections, when available, because digital tends to carry more noise. As for RCA *vs* XLR, he said, "I tend to get the best results when I connect QKores to single-ended (RCA or BNC) connections. However, it is very dependent on how the manufacturer designs the circuitry. While in cases where the balanced circuitry has more noise in it, balanced connectors should be used, I've found that a higher percentage of components benefit most from pulling noise from the single-ended circuit."

To further reduce noise caused by vibration, Nordost advises keeping QKores off the floor. "The QKore is a resonant sink as well as an electrical-noise ground sink," Taylor said. "Putting it on three Nordost Sort Kones creates a grounding path for resonance to travel out of the unit." While Marko prefers titanium Sort Kones ($369.99 each), he acknowledges that some audiophiles prefer bronze Sort Kones ($149.99 each), or a combination of them. Those who lack space on their equipment racks can put QKores on the floor atop Sort Kones. Each of the QKore's removable rubber feet conceals an indentation designed to accept a Sort Kone's pointed top.

An ideal setup for an ultra-high-resolution system consists of a single QKore1 for the power product, and a separate QKore3 for each of three other components. While you can theoretically double up connections by using two wires to ground two components to each binding post, Taylor says that, for maximum efficiency, each component should have its own QKore binding post.

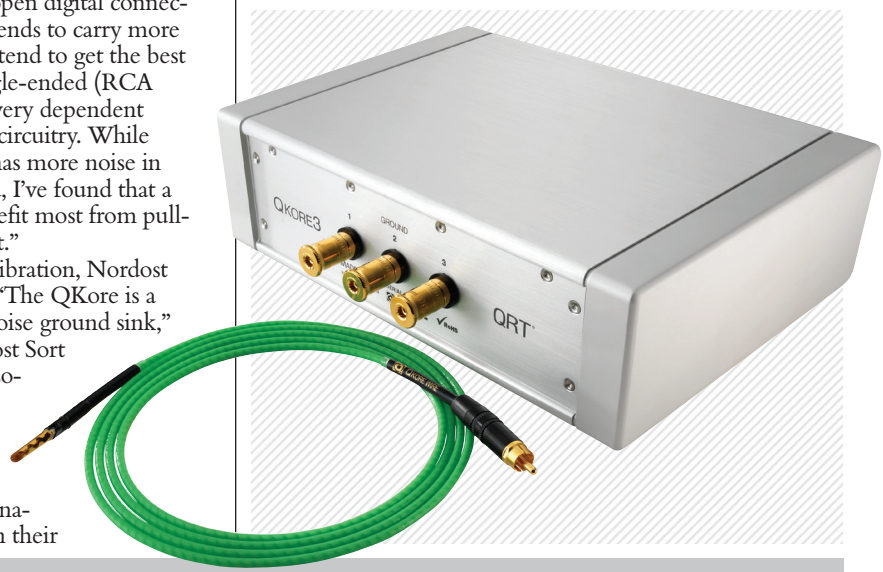
The most cost-effective Ground Unit, the QKore6, can accommodate a power product and five audio components. The two Michaels claim that, if budget and space permit, going with a separate QKore1 and QKore3 instead of a single QKore6, and connecting one component per binding post, produces the greatest reduction in noise.

Setup and Choices

Nordost sent me single review samples of the QKore1, QKore3, and QKore6, along with sufficient QKore Wires and Sort Kones to accommodate the three components I was using while doing the listening for my review of CH Precision's I1 integrated amplifier (Look for it in the February 2019 *Stereophile*). Lacking was a QKore Wire with USB-A termination to use on the MacBook Pro computer I'd installed for that review: I'd forgotten to ask for that Wire, and they take a while to build.

Setup decisions were simplified when Taylor explained that, since the component LVAPs in the QKore3 and 6 are identical, and the power-product LVAPs in the QKore1 and 6 are also identical, if I were to use the QKore6 to connect only three components plus a power product, the sound would be equivalent to connecting a separate QKore1 and QKore3. It got even easier when I discovered that the only open digital connectors on my components were single-ended BNC and RCA. This meant that I wouldn't be able to compare the sounds of the QKores' grounding via single-ended *vs* balanced connectors.

With no room on my rack, and little floor space behind a system wired with 1,001 cables, I feared that more boxes and wires would consume *all* the remaining space behind the rack. Happily, the QKores perched securely atop the diffusers that Bart Andeer of Resolution Acoustics had designed



for the front wall of my listening room. I could still tiptoe through the cables.

I began by removing the QKores' rubber feet and perching each Ground Unit atop one titanium and two bronze Sort Kones. Later, well into my listening, I discovered that using two titaniums and one bronze better illumined the sound.

I listened to three reference recordings: Lou Harrison's percussion-rich Concerto for Violin with Percussion Orchestra, with soloist Tim Fain accompanied by Angel Gil-Ordóñez leading the PostClassical Ensemble (24-bit/48kHz WAV, Naxos 8.559825); Andris Nelsons and the Boston Symphony Orchestra's knockout performance of Shostakovich's Symphony 4 (24/96 WAV, Deutsche Grammophon 002859502); and Michael Tilson Thomas and the San Francisco Symphony's recording of Berg's Three Pieces for Orchestra (24/192 WAV, SFS Media SFS0070). All three wallop the listener with copious bass, considerable high extension, dramatic outbursts, and a hell of a lot going on all at once.

Listening to the CH Precision I1, which includes a DAC, I heard a pervasive grayness that covered the music's glory like a light, transparent fog. I longed for richer colors in the Berg, more silence around climactic percussive strokes in the Shostakovich. Then, when I connected the QKore1 to the Tweek Geek Dark Matter Stealth power conditioner, I was ready to swear that the soundstage had widened and colors were now a bit more distinct. Once I'd gotten past the shock of discovering how more transparent and vivid everything sounded, I realized that while the soundstage had *not* widened, sounds now stood out more because much of the fog had lifted. I especially loved how I could hear more subtle bass differentiation in the Berg, and more vivid colors.

In connecting the CH Precision I1 to the QKore3, I now had to make a choice between BNC and RCA inputs. No contest; using an open BNC clock input on the CH I1 delivered wetter, more transparent sound. With the Harrison concerto, for example, images grew notably more three-dimensional and round. There was more air around the violin, and the percussive explosions were now distinctly behind it.

I added the dCS Scarlatti clock to the signal chain, using one of its open BNC outputs, listened, and noted: "The sound is getting ghostly quiet. Everything I love about this music and these recordings is standing out more."

For the CH Precision review, I'd intended to compare the sound of the I1's internal DAC to that of an external dCS Rossini DAC, the latter's analog outputs connected to the I1's preamp section. Connecting the QKore3 to both the Rossini and the I1 further shifted the sound, from gray around the edges to remarkably more vivid. As for which open input sounded better, when I moved the QKore Wire from the Rossini's open RCA to its open BNC clock input, BNC again delivered wetter, more transparent images.

Because I always listen to the Rossini DAC with the Scarlatti clock engaged, I next added the latter, but without the QKore3 attached. With the clock alone, the soundstage was more 3D, instruments moved farther back and seemed more naturally differentiated from each other, and an appreciable amount of additional air increased the distinction between hi-fi and high-end.

Next, when I connected the external Scarlatti clock to the QKore3, I heard the clearest, most color-differentiated sound, and the most silence between sounds, that I'd yet heard from the combo of Rossini DAC and CH Precision I1. Harrison's gamelan-like use of a wide variety of percussion—all manner of gongs, drums, bells, each with a different timbre and different length of decay—makes this recording a superb test for a sound system, as well as a thrilling musical ride.

Of the many improvements wrought by the Nordosts, one that stood out was how much longer I could hear the sounds of bells and gongs decay, even as other instruments began playing over those decays. That increased sense of natural decays in space—even with recordings, such as the Harrison, that lack a high sampling rate—validated all the energy and money that we audiophiles devote to searching out ways to increase our systems' capacity to reproduce what the finest recording and mastering engineers wish us to hear.

After listening some more, and having discovered my preference for one bronze and two titanium Sort Kones under each QKore Ground Unit, I found the music so convincing, colorful, and pleasing that I declared, "Enough snippets of orchestral tours de force!" Instead I revisited some of the recordings I love of sopranos and mezzos singing music that brings warmth to my heart and smiles to my face, as I reveled in quieter backgrounds, more colorful accompaniment, and more thrilling overtones than I'd ever heard from my system. It was good—very, very good.

Conclusions

I can't imagine that anyone who's invested considerable time and energy and money in a high-end system would want to be without the markedly "blacker" backgrounds, increased transparency and detail, more vivid colors, and greater overall veracity delivered by Nordost's QKore Ground Units. Connecting just a single power distributor or conditioner to a QKore1 or QKore6 brought marked improvements; adding as many additional components as possible increased the effect greatly. The law of diminishing returns does not apply; the differences were cumulative, and anything but subtle. ■

ASSOCIATED EQUIPMENT

Digital Sources dCS Rossini DAC & Scarlatti clock; Apple MacBook Pro computer with Intel i7, SSD, 8GB RAM; Intel NUC7i7BNH with 8GB RAM, 128GB SSD running Roon; Linksys routers with two sets TP-Link Gigabit Ethernet media converters, multimode duplex fiber-optic cables, Small Green Computer linear power supply; external hard drives, USB sticks, iPad Pro.
Integrated Amplifier CH Precision I1
Loudspeakers Wilson Audio Specialties Alexia 2.
Cables Digital: AudioQuest Diamond (Ethernet), Nordost Odin 1 & Odin 2 & Valhalla 2 (USB), Wireworld Platinum Starlight Cat8 (Ethernet). Interconnect, Speaker, AC: Nordost Odin 2.
Accessories Grand Prix Monaco rack & amp stands, 1.5" Formula platform; Nordost QB8, QX4 (2), QK1, QV2 AC power accessories, Sort Kones, Sort Lifts; Audience aR2p-TOSOX, Tweek Geek Dark Matter Stealth (with High Fidelity & Furutech options) power conditioners; GreenWave AC filter; AudioQuest NRG Edison outlets; Stein Music Super Naturals, Signature Harmonizers, Blue Suns/Diamonds, Quantum Organizer; Bybee Room Neutralizers; Absolare Stabilians; Resolution Acoustics room treatment; Stillpoints Aperture panels.
Listening Room 20' L by 16' W by 9' H. —**Jason Victor Serinus**