



Nordost • Qkore

Benefits of parallel grounding

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Every home has a main electrical safety ground, as required by all electrical building codes. Safety grounding is achieved by connecting the metallic casings of all electrical appliances to a ground conductor that leads to an earth ground. In the case of an audio system, components are connected to the safety ground via the ground pin of their three-pin power cords. While this main ground network ensures safety, it also provides a path for electromagnetic pollution to circulate. And for audio, this interference can rob a system of some of its sound quality.

The problem arises when electrical devices other than audio components share the same circuit or circuits. Examples in the modern home are numerous: lighting fixtures (notably LED bulbs), dimmable halogen bulbs, computers with switching power supplies, televisions, HD recorders, mobile phones, tablets, chargers, routers, modems and other units with multiple high-frequency signals of a few millivolts. These sources can generate excessively fast waves and bursts of interference that end up polluting, veiling and ultimately diminishing the potential of an audio system, especially when the system is not on a separate, dedicated circuit.

When these parasitic signals find no adequate paths to flow and disperse, they are picked up by the grounding network, the latter acting as an antenna. The signals then circulate in the network and arrive in the metal casings of an audio system's components. The problem is compoun-

ded when connecting cables are inadequately shielded. The result is a ground loop phenomenon between components, creating an electronic "fog" that disrupts the performance of an audio system. The result imposes a ceiling on listening quality that limits dynamic contrast, information retrieval and musical realism, amongst other aspects of music replay.

This problem led the American company Nordost to design and manufacture its own parallel grounding solution dedicated to audio components. Marketed under the name QKORE, Nordost claims that units from its QRT product line will provide an overall improvement in the sound and musicality of an audio system.

Nordost is not alone in this area. The British firm CAD and the Swedish company Entreq also specialize in grounding solutions, the latter for almost twenty years. One of the advantages for Nordost is that their vast distribution network.

CONTEXT

I consider the grounding of an audio system to be one of its essential links, even more so now than twenty years ago, due to the profusion of digital technologies, WiFi and other radiofrequency sources that permeate our living, listening and viewing areas.

One of our contributors recently wrote about Gutwire's Perfect Ground grounding cable, reviewed in Vol. 18 No.

4, stating that: "In an audio device, grounding serves two purposes: providing safety against shock in the event of a short circuit and providing a reference point (zero volts) relative to the audio signal. Since all our household electrical appliances are grounded, these conductors can also become pathways for transmitting electromagnetic pollution, which can corrupt the audio signal."

Gutwire claims that better grounding helps enhance sound dynamics and stereo imaging accuracy, by lowering background noise. This is in line with Nordost's assertion of significant noise reduction and increased accuracy, including harmonics and the overall musicality of an audio system. In addition, as not all audio system components are designed and engineered in the same way with regards to circuitry and power supply, they can differ in the electromagnetic interference they may generate.

I recall one of our installations of the month consisting of high-end products from Tenor Audio. The owner, assisted by a specialist in the field, had built a dedicated earthing system that drained to the back of the residence's grounds, thus isolating the audio ground from the house ground, minimizing contamination and interference. Not everyone can install this type of separate ground. If you live in an apartment or condo and you have a high-level audio system, Nordost's QKORE solution is certainly an avenue to explore.

SOLUTION

Nordost's QRT QKORE system is a passive earthing device providing a parallel and clean earthing system for high-end audio systems. The QKORE1 unit is designed to connect to a power bar's ground terminal, thus removing stray voltages before they can reach the power supplies of audio components. While the QKORE1 is designed for use with Nordost's own QBASE Mk II (Qb-8), it is not exclusive to QBASE and can be connected to any other power supply and power distribution system that can accommodate it.

As its name suggests, the QKORE 3 unit is equipped with three multipurpose grounding terminals for audio components and provides earthing of the secondary side of the power supply, where the audio circuits are located. Each QKORE unit contains Low-Voltage Attractor Plates (LVAP), manufactured from a proprietary alloy that functions to attract and absorb high-frequency noise and voltage-generated magnetic fields near audio components. Weighing in at 12 pounds per unit, the QKORE's 10.5 x 7.5 x 3.25" chassis is neatly finished in brushed aluminium and features German-branded gold-plated WBT earthing terminals on the rear. These units will benefit from being decoupled from the floor or the audio cabinet using, for example, Nordost's own Sort Kones (three per unit). The QKORE3 unit comes with a two-metre QKORE Nordost wire fitted with RCA to banana plug. A third unit, the QKORE6, is an all-in-one solution providing six terminals, two of which are destined for left and right monoblock amplifiers.

INSTALLATION

The QKORE 1 unit was connected via its earthing terminal to the Nordost QBASE Mk II power supply and distribution

system, using the supplied two-metre QKORE terminated at both ends with banana plugs. The QKORE 3 was connected, in alternance, via one of its three terminals, to one of the RCA connectors of the Brinkmann integrated amplifier (free, input or output) or to the Jadis DA88S integrated amp using the QKORE banana to RCA cable provided. The other components of the system (turntable, digital transport, DAC and network player) were connected to the QKORE 3 using additional QKORE cables with various terminations ranging from RCA to XLR, RJ-45 Ethernet and banana. In its QKORE cables, Nordost uses its proprietary patented Micro Mono-Filament technology, combined with extruded FEP (fluorinated ethylene propylene) insulation, built with a 16 AWG, silver-plated OFC, solid core conductor. The cables are terminated with connectors of your choice, including banana plugs, RCA, male or female XLR, BNC, spade and Ethernet RJ-45. With all the cables installed, the visual effect resembles a bouquet of green-tinted threads, adding to the already well-supplied cabling of the audio system. Proper cable dressing applies here!

APPRECIATION

With such a set-up, the optimal approach was to live a certain time with the QKORE installation in place and listen carefully to known albums and then disconnect all earthing connections, to fully appreciate the QKORE's contribution. From the outset, I opted for the Q3 unit connected to three components via its triple terminals. Note that the number of connected devices can be doubled or even tripled due to the configuration of the WBT connectors on the QKORE.

SILENCE ... WE'RE LISTENING!

Diana Krall's "Temptation", from *The Girl In The Other Room*, both in CD mode and in vinyl proves to be well reproduced but slightly lacklustre without the QKORE units connected. With either the QKORE1 or QKORE3 unit in place, listening becomes engaging. There is better precision and fluidity along with a less veiled sound. A significant improvement of the sound and musical rendering emerges, an unexpected but very real effect. The results are immediate, as claimed by Nordost. Clarity improves across the board, very noticeable in instrumental harmonics. Vocal presence is improved, along with overall musicality from the audio system. Dynamic contrast is heightened, and a more natural and coherent rendering of sound and musical content permeates the listening room. Improvements are obvious in the attack of the double bass notes that open the track, in Anthony Wilson's guitar work, in the Hammond organ and in the warm tone of Diana Krall's voice. The net effect is a significant increase in emotional involvement with this music. Repeating the experiment on the same track, but this time in vinyl, confirms that the QKORE units contribute equally well to analogue playback. After witnessing the benefits of the QKORE units in my home system, I wonder why recording studios don't also install parallel grounding systems!

Listening next to Patricia Barber's live album *Companion*, in both vinyl and CD mode, I can truly appreciate the black background that is evoked by so many designers and manu-

facturers of high-end electrical power and distribution systems. The sound and the musical content is laid out on a backdrop of pure silence, simultaneously improving musical contrasts, fluidity, articulation and clarity between notes and instruments. A greater sense of presence and authenticity fills the listening room. The tracks "The Beat Goes On" and "Use Me" transport me to the artist's concert a few years ago at the Maisonneuve hall during the Montreal International Jazz Festival, where the talent and dexterity of the musicians allied to Barber's voice captivated me and delighted the audience.

Whether I choose to focus on tonal balance, in terms of bass, midrange and high frequencies, or assertiveness of attacks, or the timbre of the Hammond organ (which is not that easy to get right, notably in the treble), or on the intonations of the artist's voice, all turn out to be more realistic and engaging once the QKORE units are connected.

VERDICT

It is worth noting that the audio system used in this review benefits from its own dedicated electrical circuit terminated with two duplex Hubble and Furutech outlets. No

other electrical equipment shares the circuit. Nonetheless, the contribution of the QKORE units proved to be significant, reducing noise and improving dynamic contrasts, coherence of sound and retrieval of micro-information (trailing ends of notes, instrumental timbres, vocal and instrumental harmonics, concert hall reverberation, etc.). Listening was imbued with a sense of calmness to the sound and the music. Astonishing, unexpected and real!

CONCLUSION

If there is one area that continues to push the limits of the possible, often through innovative solutions, it is domestic audio reproduction. New technologies appear at a dizzying rate. Some are more fundamental; others are more incremental. High-fidelity audio is a world of details, where optimization of high-end systems often takes the form of incremental changes to obtain the best possible rendering of sound and music in the home.

Nordost's QRT range of products, which include the QKORE units, are highly specialized tools, fine instruments for perfecting a high-end system, where they will show their full value. They are not cheap, just like other audio



optimization tools such as cables, audio support furniture and specialized acoustic materials. The cost of acquiring these units is justified for those for whom music and its faithful reproduction constitute essential values and who seek to attain the quintessence of refinement in sound and music reproduction from their audio systems.

We would like to thank Bruno Delorimier, Nordost's representative, for his assistance in the installation of the QKORE units.

Nordost • QKORE:

QKORE Unit 1: \$3,000 (CND)

QKORE Unit 3: \$4,200 (CND)

Additional QKORE Cables: \$432 (CND) for 2 metres and \$180 (CND) for each additional metre.

Five-year warranty to the first purchaser, non-transferable.

Distributor-Manufacturer: Nordost Corporation

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