September 2006

Crystal Cable CrystalConnect Piccolo and CrystalConnect Micro Phono Cables

Making and selling cables for hi-fi systems clearly appeals to the entrepreneurial spirit. Hundreds of cable brands are listed for sale, all claiming to deserve the expenditure of your hard-earned money. Some cables emphasize value, others technology, and others still craftsmanship -- or combinations of one or more of these. While they can't all be the best, some wags question if any of them are better than the 20-cents-a-foot lamp cord sold at your local hardware store.

Review Summary

Sound	The Micro "passed a wide range of dynamics, from the quietest microdynamic to the loudest macrodynamic, and those dynamics had great agility and impact." It also "passed a notably wide range of frequencies, from highest treble to lowest bass, with no noticeable peaks in the amplitude response, and no smearing of the time relationships of the frequencies." "The Piccolo phono cable's sound was cut from the same cloth," but "the balance between the Piccolo's highs and lows resulted in a brighter sound, perhaps too bright for some (but not all) systems."
Features	"Crystal Cable pursues *small* with a vengeance." "The Piccolo phono cable uses a 0.3mm-diameter inner wire, while the Micro uses 0.5mm-diameter wire; otherwise, construction is the same." Both cables use an "'*annealed gold/silver alloy as the central core conductor, helically wrapped in a dual layer of ultra-thin Kapton foil as a shield. . . . Annealing (as opposed to melting) keeps the molecular integrity of both materials intact.*'"
Use	"For my Linn Sondek turntable, phono cables have to pass through a plastic clamp (called a P clip) that secures them to the turntable base to prevent vibrations or torsional forces on the phono cable from passing to the base of the tonearm. The Crystal Cable phono cables were so small in diameter that they were difficult to clamp with the P clip."
Value	"Although the Piccolo sounded good, it lacked the startling clarity of the Micro. Spending the additional $200 for the Micro is a no-brainer."

In my experience, the cables that have the greatest effect on a system's sound are interconnects, which transmit the lowest-level audio signals. Perhaps that's because when the signal is weakest, intrusions and distortions are easiest to hear. No cable carries lower-level signals than the one that connects a turntable's tonearm to the input of the phono preamp. Signals passing through phono cables are at the lowest level found anywhere in an audio system, often just fractions of a millivolt. If any cable affects the sound of the signal passing through it, it's got to be the phono cable. This may explain why so few cable companies make phono cables.

When I heard that Crystal Cable was offering not one but two different phono cables, I was eager to try them. I had been hugely impressed with other Crystal Cable products when I reviewed them last year. In fact, I subsequently purchased Crystal Cable interconnects and speaker cables, and they see

daily use in my system.

Description

Crystal Cable pursues *small* with a vengeance. Physically tiny in comparison to most of the competition, Crystal Cable products' performance is dynamic and robust. Besides, for the fractional millivolt signals found between the tonearm and phono preamp, even a small conductor should be just fine.

I received CrystalConnect Piccolo ($399 USD per meter-and-a-quarter length) and CrystalConnect Micro phono cables ($599 per meter-and-a-quarter length). Both had a ground wire slightly longer than the signal wires, terminated with a small spade lug. The manufacturer describes the wire itself this way:

"All the cables are made using an annealed gold/silver alloy as the central core conductor, helically wrapped in a dual layer of ultra-thin Kapton foil as a shield and to give tremendous structural integrity. The braided silver mesh shield/negative conductor is next followed by the clear Teflon outer covering. Annealing (as opposed to melting) keeps the molecular integrity of both materials intact."

Both CrystalConnect phono cables use proprietary RCA plugs the have no locking collar on the preamp end. Because I've used Crystal Cable interconnects for some time, I can report that the RCA plugs snap tightly onto every RCA jack I have ever plugged them into, and don't seem to lose their grip over time.

On the tonearm end, the Crystal Cable phono cables use a five-pin TAC-5 DIN plug that mates with all the tonearms I've seen. The tonearm plug of the review cables had a 90-degree bend that would have been great for tonearms where the DIN plug goes vertically into the base of the 'arm. My Graham 'arm already had a 90-degree bend where the cable plugs in, but the Crystal Cable phono cables still worked fine.

The Piccolo phono cable uses a 0.3mm-diameter inner wire, while the Micro uses 0.5mm-diameter wire; otherwise, construction is the same. Electrically, the Piccolo cable has an inner wire capacitance of 154 picofarads, and a resistance of 224 milliohms; the Micro cable has an inner wire capacitance 248 picofarads and a resistance of 132 milliohms. These are both quite low, and shouldn't perceptibly degrade the signal. Visually, the cables are identical, although the Micro is just a little stiffer.

Setting up

According to Crystal Cable's former US distributor, each set of cables needs 500 hours of break-in. Normal interconnects are easy to break in; just connect them to your tuner and play it for the specified break-in period. Breaking in phono cables using music is much more challenging. You could break them in by playing LPs, but an LP has maybe 25 minutes of music on a side, which means you'd have to play 1200 LP sides to break in a phono cable. While that might be fun, it wouldn't work too well for a deadline-driven review. I suspect that some phono cables *never* get broken in. Ditto for the wires inside tonearms.

I have my own solution to this dilemma. Using a homemade adapter and the Purist Audio Design break-in CD, which I find very effective for cable break-in, I put 500 hours of use on

both cables.

For my Linn Sondek turntable, phono cables have to pass through a plastic clamp (called a P clip) that secures them to the turntable base to prevent vibrations or torsional forces on the phono cable from passing to the base of the tonearm. The Crystal Cable phono cables were so small in diameter that they were difficult to clamp with the P clip, but with some expert help from Mark Heaston, Linn setup guru from audio dealership Concert Sound, I think we succeeded. The miniscule size of the Crystal Cables made them unusually flexible and easy to route from the turntable to the preamp. The only problem I had was getting them routed around some much thicker cables in my system.

So what do they sound like?

Given the physical similarities of these two phono cables, I wondered if I'd be able to hear any difference between them. My worries proved groundless.

I initially used the Micro, and it exhibited two predominant characteristics. First, it passed a wide range of dynamics, from the quietest microdynamic to the loudest macrodynamic, and those dynamics had great agility and impact. That meant that orchestral climaxes came through uncompressed and undistorted, while on the microdynamic end of the scale, the most subtle inflections singers used to interpret a song were easy to hear, making performances more moving. The Micro didn't soften the dynamics, either; when a sudden increase in volume occurred, it was abrupt, with lots of impact, which added to the excitement of a performance.

The other characteristic of the Micro was coherence. It passed a notably wide range of frequencies, from highest treble to lowest bass, with no noticeable peaks in the amplitude response, and no smearing of the time relationships of the frequencies. As a result, a trumpet sounded distinctly like a trumpet, and a soprano sounded distinctly like a soprano. Coupled with the Micro's wide dynamic envelope, this coherence produced a very realistic reproduction of musical performances.

Associated Equipment

Loudspeakers – Second ReTHM, Opera Consonance M-12 Barque.

Power amplifiers – Art Audio PX 25 stereo amp, Kailin AM34-845-QAM mono amps.

Preamplifier – deHavilland Mercury 2.

Digital – Meridian 508.24.

Analog – Linn LP-12 turntable, Graham 2.2 tonearm, Dynavector DRT XV-1 cartridge, Audio Research PH5 phono stage.

Interconnects – Crystal Cable CrystalConnect Piccolo, Purist Audio Design Venustas, Silver Circle Audio TimeWise.

Speaker cables – Crystal Cable CrystalSpeak Micro, Purist Audio Design Venustas, Silver Circle Audio DreamCatcher.

Power cords – Purist Audio Design Venustas, Silver Circle Audio.

I love the music on Eva Cassidy's compilation LP *Songbird* [S&P Records S&P-501], whose high frequencies are smoother than those of the original CD. The Micro presented "Fields of Gold" with unusual clarity. I heard subtle inflections in Cassidy's phrasing that had been smeared in the past, making her interpretations even more touching. Although it's obvious that this LP has plenty of high-frequency content, it was not at all peaky through the Micro.

Donald Johanos and the Dallas Symphony Orchestra's performance of *Rachmaninoff's Symphonic Dances* [Athena ASLW-10001] was one of the earliest reissue spectaculars, and still sounds quite good. The recording's strong dynamic contrasts and realistic instrumental timbres were a made-to-order showcase for the Micro. The tinkling triangles soared freely over the orchestra, thanks to the extended high-frequency response. Low frequencies not only went deep, but were reproduced with the same full-bodied dynamic scale as the rest of the frequency spectrum.

The Micro cable's extended high frequencies could make the sound slightly bright in some systems. In others, they could inject some welcome sparkle into the music. Adjusting the cartridge VTA can reduce the high-frequency output to compensate, if you think it's necessary.

The Piccolo phono cable's sound was cut from the same cloth, but it filtered out more information than the Micro. Missing were the Micro's robust low-frequency response and dynamics, although the high frequencies were extended. The balance between the Piccolo's highs and lows resulted in a brighter sound, perhaps too bright for some (but not all) systems. If your system lacks highs and has an overabundance of lows, the Piccolos could be a great choice. Although the Piccolo sounded good, it lacked the startling clarity of the Micro. Spending the additional $200 for the Micro is a no-brainer.

Comparison

For some time, my reference phono cable has been Purist Audio Design Venustas. This cable was specifically designed for a Linn turntable, so the section inside the turntable base is a single cable, splitting into two separate cables where they exit the turntable base. The $1775 Venustas is totally different from the Micro and Piccolo. Purist uses a powdered substance called Ferox to insulate its cables from both electrical noise and physical vibration. The result is quite audible; you'll first notice it as lots of musical detail without a smidgen of high-frequency emphasis.

Detail through the Venustas is excellent from deep bass up to the highest frequencies, and unlike some cables, it doesn't fake detail by accentuating high frequencies. But on *Rachmaninoff's Symphonic Dances*, the Venustas sounded a bit less transparent and dynamic

than the Micro. High frequencies were less extended, although bass extension was quite good. The sound was just less alive. Both cables sounded very quiet in the absence of a signal.

The Crystal Cable Micro and the Purist Audio Design Venustas phono cables both have strong points, but the Micro is *much* less expensive. The Piccolo is more of a mixed bag. On most material, the Purist cable's wider, better-balanced frequency response gave it the edge over the Piccolo.

Small is big

Crystal Cable's Micro phono cable passes a huge amount of information from the phono cartridge to the preamp, with exceptional clarity and dynamics. That makes the music more exciting and involving. At $599, I can't think of a better value. It is also a joy to handle -- much easier to plug in and route around your components than the typically thick cables favored by audiophiles. The Piccolo is less sonically distinguished, but can still be considered appropriate for use in certain systems.

Try some Crystal Cables and find out for yourself that *small rules.*

...*Vade Forrester*
vade@soundstage.com