

## Cable Crystal Cable Reference Line

*Fernando Andrette*

In February 2004, the international press announced the existence of a new manufacturer of audio and video cables produced in The Netherlands.

Cable manufacturers arise and vanish by tens every year throughout the world.

However, **Crystal Cable** has immediately attracted the market's attention for its products line and for having a woman presiding the company.

Gabi van der Kley is an internationally well-known concert pianist who as early as 16 years old, participated in an intense routine of tours and concerts throughout Europe.

Gabi was born in Hungary, but knew her husband in the Netherlands (he was also a clarinet player and owned the well-respected **Siltech**) and has lived there for more than 20 years.

Being a mother of four kids, Gabi still plays regularly and since the late 2003, has run **Crystal Cable** in person.

Gabi insists on affirming that first of all, she is a musician and only after, she is the President at **Crystal Cable**.

The basic idea – both of design and market strategy – arose from Gabi's observation, inside **Siltech**, that a large portion of the audio cables are heavy, bulky and difficult to handle.

Then, Gabi suggested a radical solution to the **Siltech** engineers: create high-performance micro-sized cables, which could be used both in the domestic market and the aerospace engineering.

As the project can not be implemented at **Siltech** itself, a completely new autonomous company arose.

The **Crystal Cable**'s products are very different from all the cables you may have already seen and listened to, my fellow reader.

All the products are variations of the same theme, ultra thin wires of about 3 mm in diameter. And all the cables have a beautiful silvered look.

To give you an idea, they are thinner than the E string of an electrical bass.

In a market in which almost 100% of all the manufacturers bet on the tendency that a good cable is the thickest, looking like a garden hose rather than an audio cable, the **Crystal Cable**'s proposal was a huge audacity.

And once more, we are being saved by the women's view.

The **Crystal**'s cables were developed to serve the aerospace industry as well.

All the modern aircrafts, satellites and astroprobes use kilometers of cables. Such cables must be strong, light and perfectly shielded. They must be resistant to physical vibrations, temperature extremities and each gram of weight saved has to be considered as useful load.

The problem is that complex-shielded cables were heavy until this moment.

And in this industry segment, a perfect shield is crucial.

Just imagine, my fellow reader, the catastrophic effects of EMI and RF interferences in the aircrafts', satellites' and astroprobes' board computers.

For these reasons, recent researches led to the insulation and shield of cables with exotic materials, like Kapton by **Dupont** (developed in ultra thin metal foils and Peek

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carbon fiber). Those materials meet the cables construction's needs of low weight, extraordinary physical resistance and perfect shield for their applications.

Coming back to the audio market, we have an infiniteness of ideas put into practice regarding the use of the conducting material. It ranges from the common copper to the oxygen-free, molecules lengthened through modern extrusion methods to reduce granulation and the resistance to the signal passing through the cable, mixture of copper and silver, pure silver, silver with gold, palladium, carbon, each of which with its own sound signature, for all kinds of pockets and ears.

At the edge of the most exotic, we found the called amorphous metals. Just to give you an idea of how many variants may exist, let's take Teflon of the company **Dupont** – it costs, on average, from 8 to 9 dollars in its normal version – which is used by a great amount of cables manufacturers. The amorphous version equivalent to this material, the same amount with zero vein and used recently in one of the astroprobes, which is exploring the Saturn planet and its moons, costs 20 thousand dollars!

The conductor chosen by **Crystal Cable** is the silver with gold injection (just like the **Siltech's** cables generation 5 **Classic, MK II** and generation 6).

The conductors obtained through a careful extrusion of these ingots of silver with gold injection are covered with Kapton and Peek foils and a thin carbon layer, before a silver-bathed shield is applied.

More recent studies report the influence that the dielectrics (insulators) and the jackets that cover the cables have over a cable sound, particularly in one audio setup, where harmonic signals are the basic rule.

It is said that the air is the best dielectric, but just like the absolute vacuity, it is not very practical.

The problem is that the interaction between any dielectric which may be chosen and the conductor itself may cause deep sound alterations in the cable.

Until recently, the signal in one cable was believed to flow like water inside a pipe, but, actually, it was found that the signal travels more like a train on its tracks.

And the swinging (like a train on its tracks) causes several magnetic fields, and is affected by radiofrequency interference, as well as by electromagnetic interference from the components nearby.

And that's why the most of the manufacturers build very rigid (little flexible), excessively thick cables, with the addition of countless materials in order to obtain the best shield as possible.

The **Crystal Cable** stood up to this problem from a new angle, investing in a super-shield with metal foils.

It is the Kapton, a very expensive material by **Dupont** when compared with the Teflon, but it's harder, stronger and a better dielectric material.

What's the reason, then, for other manufacturers haven't made use of this resource so far?

Besides the price, there is the practical difficult to apply such thin foils and wires as the **Crystal Cable's**.

The **Crystal's** cables use line connectors by **Furutech** or **Neutrik**.

The **Reference** line, constituted of RCA interconnection cables, Balanced and Loudspeaker, is sent into small packages which could perfectly be used to store jewels.

The cables are so thin and light that an amazedness and astonishment sensation is immediate as soon as you take them in your hands.

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I'd never handled cables with these characteristics.

And above all, they are beautiful and it can be clearly seen the women's touch in all the phases: from the packages selection to the connectors' color.

For the test, we used a large amount of products.

Loudspeakers: **EVO III, Temptation, Confidence 4, B&W 802 D, PMC DB 1 +** (read audio Test 3 in this issue), **JVC SX-WD 10, Elac Elegant 304 and Quad L 11.**

Amplifiers: **Audiopax model 98, Aloia ST 15, Sphinx 24, Krell Kav 400 xi, Nad 320 BEE, Etalon** (read audio Test 2 in this issue) and **Audiopax AH-3.**

Preamplifiers: **Nagra PL-L, Audiopax model 5 and Accuphase C-2800.**

Digital sources: **Bow Wizard MK II, Sony 9000 ES, CEC TL 1** transport and **MSB Platinun Link Plus** converter.

The manufacturer recommends at least 100-hour burning. As all the cables came unused, we concluded that the best to do was to leave them in our main system for at least five days before applying the test methodology.

Our first work was just mapping the first five burning hours, writing down the main characteristics and then, repeating a brief audition at the 25, 50 and 75 hours.

What I can describe from this running in process is that the **Reference by Crystal Cable**, as soon as they are turned on, they present a background silence (or dark, as you prefer) as I have never listened to in any cable.

This predominant characteristic makes itself present since the first moment.

As the cables were getting run in, there were significant changes in the sound stage, like a quick retrocession of the musical event (in all the loudspeakers and systems used), an improvement in the focus and clipping and airing refinement.

In order to extract all the huge potential of these cables, it's necessary more than 100 hours, and I'd dare to say 200 to 250 hours, because as the time goes by, we note constant evolutions in the quality of textures presentation and the harmonic cover perception.

All the qualities of the **Crystal Cable Reference** are led by the absolute background silence.

It is the base or foundation of all the refinement in the micro-details presentation and that unmistakable three-dimensional sensation in the sound stage construction in front of us.

Its tonal balance is so accurate and free of any type of coloring that it can be disturbing in some cases.

We took long to accept that the drums and the tympanum have always been reproduced more accurately with the **Crystal Cable** than with any of our reference cables.

They exclude every additional fat in the song, allowing a unique presentation of colors (I'd dare to say that this is maybe the best Gabi's contribution to the development of such cables, because as a renowned musician, she must not have waived a correct color reproduction).

As we were getting used to the **Crystal Cable's** sound signature, we could not how much they distinguish themselves from other excellent cables.

In relation to the background silence, the cables that get closest (even in an obvious way) are the **Siltech's** generation **5** and **6.**

However, we found the **Crystal** silence even larger and better.

Yet regarding the harmonic body subject, the doubt was very big, because depending on the instrument and the recording quality (more distant sockets, for example), we found **Siltech** more correct. However in recordings with very close sockets, the differences decreased drastically.

Another **Crystal Cable**'s strong point is the transients reproduction, which is amazing!

The pianos are simply reproduced with such high level of accuracy and balance between color and speed that you simply forget at first it is an electronic reproduction and plunge into it.

### **Conclusion**

The only cares that must be taken in order to extract the most of **Crystal Cable** are related to the system's sound signature. If it tends more towards the analytical or the excessively transparent, it can be a problem.

However, in warm, hot and very musical systems, the **Crystal** may be "that genius touch".

It is not that kind of cable that will please audio enthusiasts who like colors in the bass or medium-bass region. As I wrote, it does not make any concession to any type of color. Its purpose is to extract all the instruments' colors with fidelity. If it's your dream, it can come true already.

As I always say, I don't believe in "the best of the world". This is advertising (and many times of the worst kind). What I can say regarding the **Crystal Cable Reference** is that this manufacturer is qualified with credits to take a standout position in the worldwide view, in the first row.

<b>CRYSTAL CABLE</b>	
<b>Tonal Balance</b>	<b>10.0</b>
<b>Sound Stage</b>	<b>9.8</b>
<b>Texture</b>	<b>10.0</b>
<b>Dynamics</b>	<b>10.0</b>
<b>Transients</b>	<b>10.0</b>
<b>Harmonic Body</b>	<b>9.8</b>
<b>Organic feeling</b>	<b>10.0</b>
<b>Musicality</b>	<b>10.0</b>
<b>Total</b>	<b>79.6</b>

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Maximum Score, equipment  
Diamond Class: 80

DIAMOND REFERENCE

Distributor:  
Distributor: **Audioland**  
(11) 5096-4888

Average Prices  
Crystal Cable Reference 1 meter  
(RCA or XLR) US\$ 2,280

Crystal Cable Reference Loudspeaker  
2.4 meters US\$ 4,980