

Reprinted from issue 4/2006

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It was one of those seemingly never ending audio test evenings. The list of products included 12 different speaker cables – plus several of the latter in different lengths. And to round off the evening, we tested three of these cables using connectors of different quality. At the end of our listening marathon, our colleague Dalibor Beric put it most succinctly: "Inferior connectors make it almost impossible to hear the benefits of good cables. The interfaces are even more important than we realised."

The point of this short story is to focus attention on components in the hifi chain that people generally pay little or no attention to: namely the plugs and sockets.

## THE IMPORTANCE OF PLUGS AND SOCKETS IS UNDERESTIMATED

We have been debating the pros and cons of different cable materials, cross sections and designs for well over a decade, and it's fair to say that more or less all

the serious cable producers deliver high-quality products. But this debate has totally ignored the interfaces, particularly those at the amplifier outputs and speaker inputs – with the result that while many systems look as though they mean business, they often supply only a very average sound; even worse, the poor quality of the material used means they lack long-term stability.

Wolfgang B. Thörner is someone who, for decades now, has been continuously improving the standard of quality of these components and striving to achieve the perfect contact. He can meanwhile point to no fewer than 16 international plug patents, and the number and names of the manufacturers he supplies make impressive reading (see the box here under). The hifi industry keeps a close eye on developments at Thörner's pioneering company – and buys its supplies from him: the Essen-based company is the unchallenged world market leader in the high-end segment.

His last stroke of genius brought us what experts consider to be the best RCA plug of our times. With his nextgen connector, Thörner made the age-old RCA concept dating back to 1941 fit for the 21<sup>st</sup> century. And it's no coincidence that nextgen are the plugs on the end of the stereoplay benchmark audio cable, the Nordost Tyr (9/05). The design of these miniature masterpieces is explained in more detail on the last page.

At the end of 2005, Thörner then came up with loudspeaker sockets to match his nextgen system. To understand the true importance of this development, it's worth taking another look at the reality of standard hifi chains.

## EVERY PLUG NEEDS A MATCHING SOCKET

As a rule, first-rate cables are plugged into second-rate sockets, and the excellent conductive properties of high-purity wires with large cross sections meet head-on with the modest conductive quality of brass sockets.

The sound quality is then taken down a couple more notches by cost-cutting production and the CE safety regulations.

Against this backdrop, WBT's "last generation" binding posts (the WBT-0702, for example) already made waves in the market. The stylish components made of turned brass parts provided the best possible compromise in terms of conductivity and stability. But a compromise remains a compromise. Thörner: "Fine silver or high-purity copper are still the best materials for signal transmission." The downside: both these materials are far too soft for someone who wants to make a socket.

But there was one question that continually nagged away at Thörner: could it be possible to design an ingenious strengthening system? He spent the next four years trying to find the optimum design for such a plug, investing more than 300,000 euros in research and new tools until he had reached his goal. The result is a binding post with a conductor core made of fine sil-

### WBT customer list

## The users

The sockets and connectors developed and manufactured by Wolfgang B. Thörner are a byword for quality the world over. The list of producers who trust in WBT reads like a who's who of the high-end segment. Here's an abridged list:

Acapella Audio Arts, ALR/Jordan, Ascendo, Audio Consulting, Audioplan, Audio Physic, Audio Static, Audiodata, Audionet, AudioQuest, Avantgarde Acoustic, Avid, AVM, B&W, BC Acoustique, Bel Canto Design, Burmester, Cabasse, Cadence, Cary Audio, Chario, Chord, Classé, Conrad Johnson, Day Sequerra, Denon, Dynaudio, Dynavector, Einstein, Elac, Electro-

companiet, Enlightened Audio Designs, Ensemble, Esoteric, Fadel Art, Focal, Forsell, GamuT, Genesis, Graaf, Graham Engineering, Gronenberg, Halcro, HMS, Infinity, Isoophon, KEF, Kharma, Kimber Kable, Klipsch, KR Audio Electronics, Krell, Lehmann Audio, Lindemann Audio Elektronik, Linn, Manger, Manley, Marantz, Mission, NAD, Nagra, Naim Audio, Nordost, Pathos,

Phonosophie, Piega, QED, Quad, Restek, Samsung, Sharp, Siltech, Sonus Faber, Sony, Sugden, Swoboda Audio, Symphonic Line, Synergistic Research, TACT/Lyngdorf Audio, TAD Audio, Tannoy, Thule, Totem, Transrotor, Westlake Audio, Wilson Audio, Velodyne, Yamaha, ...

ver or high-purity copper (both with a big cross section of 4mm<sup>2</sup>/ 12 AWG) protected against deformation by a sturdy plastic skeleton and a brass cap.

Thörner had finally squared the circle, developing a product that not only boasted optimum conductive properties but was also robust and in compliance with all the safety standards. Thörner promises users a 30-ampere working and a 500-ampere pulse current resistance complete with the trademark WBT touch safety.

**THE BINDING POST IS NO LONGER THE "EYE OF THE NEEDLE"**

This means that binding post problems are a thing of the past. But even the pure copper version didn't make the quality grade in the eyes of Wolfgang B. Thörner. Why? Because when copper becomes moist, patina forms on the surface due to oxidisation and acts as a strong insulator. This in turn alters the parameters of the cables. This is why Thörner covers the copper nextgen conductor with a coat of long-term stable gold – and he does without the usual nickel additives that are used to make the gold more supple. Nickel is magnetic, and Thörner believes this negatively impacts sound quality.

Thörner's long years of research and development have repeatedly confirmed one of the basic rules of audio technology: "To obtain a contact that supplies the best sound, you need a front-to-end conductor material of the highest quality." In other words, if you're using copper cables, you should also use copper binding posts and copper

sleeves or spades. In keeping with this principle, the WBT boss therefore advises all silver cable owners to use the considerably more expensive pure silver (Ag) WBT-0710s. WBT also offers both terminal posts, silver and copper, as a complete bi-wiring or tri-wiring speaker terminal – elegantly enclosed in an aluminium case.

**AN AUDIODATA WAS THE FIRST SPEAKER TO USE NEXTGEN**

Aachen-based loudspeaker producer Audiodata was the first manufacturer to recognise the benefits of the new sockets. We really like the Ambience models (Test: 3/06), but we naturally weren't able to determine exact-

ly just how big a part the nextgen binding posts played in the excellent sound reproduction.

It was a special version of the Audio Physic Tempo (Test 4/05) that finally supplied this information. The Tempo's connection panel was equipped with three different binding post pairs (see the next page). Each terminal pair was routed via a wiring setup

nextgen for speakers

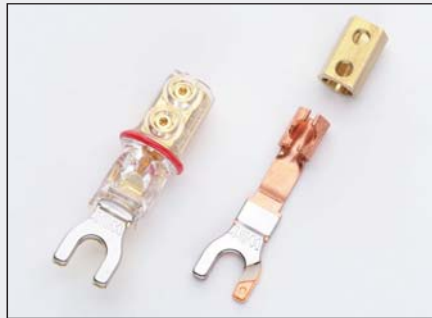
**WBT-0710**

The 0710 speaker terminals are the final piece in the WBT nextgen jigsaw, ensuring perfect signal transmission thanks to a pure silver or high-purity copper con-

ductor. Both materials may be perfect conductors, but they are far too soft to withstand the strains on a binding post. This is why the 0710s are protected against deformation by a sturdy plastic sheath. Figure 1 shows the design of the copper version, which is gold-plated to prevent oxidisation.



**1**  
The explosion drawing shows the design of the nextgen terminals: pure copper and dual protection



**2**  
Perfect fit: the WBT spades have the same copper conductor as the binding posts.



**3**  
The WBT-0710 is available in 3 different versions: two with gold-plated copper conductors and one with a silver conductor

Company factfile

- i** WBT was founded in 1985 by Wolfgang B. Thörner. Today, the Essen-based company has 21 employees.
- i** WBT is the undisputed market leader for high-quality plugs and posts annual sales of 5.5 million euros.
- i** WBT is one of Germany's export "world champions": 84% of the full "Made-in-Germany" products are sold abroad.

**i** Anyone can buy WBT connectors: the ratio of industrial to private customers is around 50:50.



Wolfgang B. Thörner, 59, is the founder and boss of WBT and is also a committed high-ender, having been on the Board of the High End Society for six years now.



of identical type and length to serve the entire three-way design. This enabled us to conveniently test the quality of the sockets simply by changing the plugs over.

It's hard to believe that so much can happen in such a short piece of metal. Hirschmann standard plugs sounded normal, for want of a better word, and by no means conspicuous – but only because we lacked a point of reference. Sound reproduction gained considerably in terms of

precision as soon as we switched over to a pair of Intertechnik terminals – but this was nothing compared to the nextgens: it was as though the sound profile had suddenly locked into place. There was such a difference compared to the Hirschmann plugs it was like listening to two different Tempos: a tired one with a matt overtone and one with a vibrancy and spatial reach that really lived up to its claim.

There was a clear difference in class between these two termi-

nal pairs. But how did they compare to the previous top models in the WBT binding post range?

### THE NEW WBTs SUPPLY EVEN GREATER PRECISION

In a further test setup, we hooked the nextgens up to a pair of Dynaudio Focus 110 speakers (Test: 9/05) which are normally

equipped with the older WBTs. The difference was immediately apparent: the upgraded Focus speakers emitted a more open, fuller and more precise sound.

There's no question: these terminals are currently the best on the market and deserve to be warmly recommended to both high-benchmark manufacturers and retrofitters. ■

**Pole terminal WBT-0710 Cu**  
Pure copper signal conductor, gold plated, price p. pce 28.50 €

**Pole terminal WBT-0710 Ag**  
Fine silver signal conductor, price p. pce 45 €

**Pole terminal WBT-0710 Cu mC**  
Pure copper signal conductor, gold plated, price p. pce 28.50 €

Distribution: WBT-Distribution GmbH  
Tel.: +49 (0) 2054 87 552-0 · Internet: www.wbt.de · e-mail: info@wbt.de

Our test setup number one: an Audio Physic Tempo with three connector pairs. A standard Intertechnik model at the top, the nextgen WBT-0710 in the middle and a set of Hirschmann terminals, old favourites, at the bottom.



### nextgen for Cinch Plug & Play

In standard RCA plugs, the entire external part of the plug acts as the negative conductor. This function is performed in the nextgen connector by a small pin. This prevents external radiation and radia-

tion emission effects. The nextgen is designed as a 75-ohm plug, also making it suitable for use with digital cable. It goes without saying that the plugs are equipped with WBT's signature clamping mechanism for the signal conductor. This is the only way to balance the different socket sizes and achieve optimum contact quality.

