



UPSIDE DOWN



Canton's Reference 9 is the smallest speaker in the company's top series, but is designed to outperform even large speakers.

Text: Michael Lang

Modular systems are a practical solution for manufacturers and customers alike. The use of the same or similar components and a joint development concept ensure lower costs in purchasing and production through higher quantities, from which the buyer ultimately also benefits through a lower retail price. Canton, a loudspeaker specialist with a long tradition based in the Taunus region of Germany, has been known for decades to employ this clever and customer-friendly production method.

Big Bang at the previous High End

The presentation of the new Reference line during the last High End Audio Show was nevertheless a sensation and surprised visitors and the press alike. It radically broke with the look of the predecessor series, showed curves instead of edges and ventured into previously ignored price regions with the top model GS Edition, limited to 50 pairs for around 50,000 euros per pair.

The model we selected for this test, the Reference 9, a standmounted 2-way ported speaker is dramatically cheaper at € 3,600. It can, however, also attract attention. And that not only thanks to its upside-down driver concept – mid-woofer on top, tweeter on the bottom – but at least to the same extent with the underlying technology of the drivers, the crossover and the cabinet, as well as with its fine workmanship.

Let's start with what you can see – a mirror-smooth, 12-layer (!) lacquered surface on the enclosure, which has no hard edges on any side. The advantages that Canton and many other manufacturers expect from this cabinet shape are a reduction in diffraction effects at the edges and an optimized, more even dispersion of sound. The downside is that nothing works without computer optimization and that manufacturing is significantly more complex, time-consuming and therefore ultimately more expensive than with a standard folded cabinet.

For the first time, the bass guide familiar from larger Canton models is to be found in a standmount speaker here. It is a sloped platform mounted under the speaker,



onto which the bass reflex port directs its airflow and which is intended to ensure problem-free placement, even on a bookshelf or sideboard.

Not necessarily visible are the internal resonance-reducing bracings, the shape, thickness and placement of which were again designed with computer support. No big manufacturer nowadays approaches the development of a system as complex as a loudspeaker with pure inspiration and according to the motto "trial and error" anymore.

Of course, this applies not only to the cabinet, but also to the crossover, which delegates the appropriate tasks to each driver. High-quality, consistently available components are indispensable for high consistency here.

The Interaction is Crucial

One of the main goals of Canton head developer Frank Göbl has long been to achieve a uniform dispersion pattern for all loudspeakers from the brand. To achieve this, a lot of tiny gears have to work together.

The drivers have to be optimized for this by design, the shape of the enclosure has to support it, and the asymmetrical shape of the tweeter attachment has to play its part. The crossover, which uses a clever combination of acoustic and electrical slopes of up to 36 decibels to ensure that the drivers only work in a range in which they vibrate in a pistonic manner and exhibit a uniform dispersion pattern, rounds off the concept. Canton loudspeakers never cease to amaze with their astonishingly deep bass – in relation to cabinet and driver size



The WBT-Nextgen terminal and the customization option for the tweeter are convincing.

TEST DEVICES

Streamer / DAC: Eversolo DMP-A8

Integrated Amps: Moonriver 404, Audionet Watt, Exposure 3510

CD Player: Musical Fidelity M3scd

Accessories / Cables: Audioquest, Cardas, In-Akustik, Silent Wire, Creaktiv



For detailed information on the test devices, scan the QR code.

– as well as their well-balanced mixture of low distortion and clarity. Not to forget a bass reproduction that can certainly be described as juicy.

One method that Canton has been using for many years is the so-called DC filter. In it, frequencies below the natural resonance of the driver are cut off with a steep slope – which protects the bass from unnecessary stress caused by excessive excursions.

Exclusive Drivers: Ceramics and More

Ceramic diaphragms have been around for more than 20 years. While some people swear by this material, there are others who believe that it is almost impossible to control its sound. It is, however, a fact that there are quite a lot of loudspeakers that sound excellent with ceramic drivers, while there are almost as many counter-examples.

For the mid-woofer in particular, Canton saw an opportunity to significantly increase the stiffness of the membrane with only a slight increase to its weight by adding tungsten and a particularly lengthy "baking process" in an oxidation bath. According to the German manufacturer, the special multi-layer surround and a powerful magnetic drive have more than com-



High-quality and professional crossover production has long been standard at Canton.

TEST STANDMOUNT SPEAKER

compensated for this, and even the efficiency has been improved slightly by this change.

The tweeter has to manage without the tungsten addition in the interests of low moving mass, but has been fitted with an asymmetrically shaped flange in front of the dome to perfect its dispersion characteristics as intended. To round off the design, two individual driver covers are used instead of a single cover for both drivers.

Let's take a quick look at the back before we turn to the sound characteristics: An excellent single-wiring connection with WBT-Nextgen sockets is to be found there, above which the terminal for sensitive adjustment of the treble range has been placed.

Placement: Expectedly Simple

For our listening sessions, we used the stands specially developed for the Reference 9 and placed the pair of speakers in the room with around 70 cm of space towards all sides.

Even with the affordable Exposure integrated amplifier (see "test devices"), the small Reference impressively demonstrated that it is more than just another "me too" speaker in the highly contested price range of below 4,000 euros.

We had certainly expected that it would always stay in control, as we are used to from the company. Meaning that it would be able to reproduce coarse dynamic leaps, such as those found in Pink Floyd recordings, as well as fine gradations in volume, such as those often found in classical and jazz recordings, directly and without compression, even at higher levels. However, we soon realized that the capabilities of this compact loudspeaker go far beyond that. The speakers not only impress with their breathtakingly good workmanship and the typical Canton sound virtues – but also confidently wanders into areas whe-



Each driver of the Reference 9 has its own asymmetrical and magnetically adhering dust cover.

re one would generally have expected the more or less well-known exotic products on the market, which are considered more audiophile and are dramatically more expensive at times.

One of these areas undoubtedly is the emotional impact. When listening to an Italian opera such as Verdi's "Rigoletto" with the Reference 9, it on the one hand impresses with its ability to portray a wealth of vocal subtleties of the protagonists. But, on the other hand, it also convinces with its talent for credibly conveying the mood of each actor to at least the same extent. The depiction of the stage is spacious, in some recordings even audibly to the left and right of the loudspeaker position. In terms of focus and plasticity, i.e. the three-dimensionality of the music, however, it not quite reaches the conceivable optimum. This also applies to the presentation of the front and back, as was evident in Mozart's "Magic Flute".

However, we were treated to a proper acoustic feast by the "Chorus of the Hebrew Slaves" from "Nabucco". The passion with which the Canton presented the power of a many-headed, mighty choir

would have suited many large floorstanding speakers.

Would you like something a little less high-brow and musically a bit more mainstream? The Canton also disproves many prejudices in this discipline – for example, that rock music is said to come out of small loudspeakers weak and thin, with catchiness and charm falling by the wayside.

Rock Music From a Small Housing

We tested that with "For Those About To Rock (We Salute You)" by Australian hard rock band AC/DC. If you like this kind of music, you'll immediately notice that the Canton builds up an air of tension that makes you literally yearn for the next note. Here, with non-audiophile comfort food with quite average sound quality, the Canton achieve a particular feat: sounding as dirty and unpolished as the music was intended, while still boasting a wealth of information that has the capability to make your jaw drop towards your ribcage.

Of course, there are also recordings in the field of pop and rock that sound first-class. All Yello albums certainly, but the live album of Willy DeVille in Berlin or the intimate recordings of Prince accompanied only by a piano, for example, can – with their sometimes crazy impulse jumps – also be a challenge for any loudspeaker. If the task is not solved with great attention to detail, not much of the magic of DeVille's voice is left, nor do individual piano strokes retain their element of surprise. The Canton also took on this demanding exercise, which was intended as a hurdle, with casual grace. No scratching harmed the vocal range, the piano did not sound glassy and the timing was not disturbed – which would have ruined the magic of the Prince record.

Deep Sounds Without Drone

Long, drawn-out bass notes from an organ or double bass also fall into the category of potential obstacles. The whole room booming when the bass thickens happens all too easily. On the other hand, one sometimes wonders what kind of instrument is being listened to, as it is almost disembodied and deprived of its character, to be imagined more than heard or even felt. But even here, although not embodying ultimate power, the compact speaker did surprisingly well, allowing its capabilities for long-term enjoyment to shine through, reminiscent of many more expensive compact speakers.

The Reference 9 showed that, despite its moderate dimensions and, by current standards, reasonable pricing, it is a speaker that knows how to surprise in a positive way. On top of that, with its all-around convincing sound qualities, astonishing

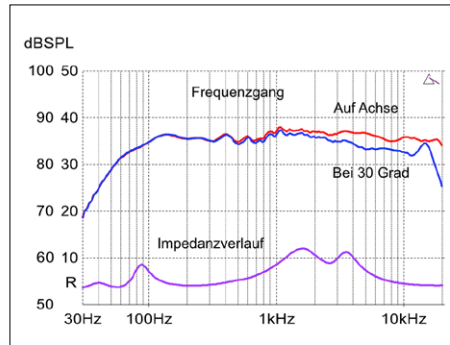


An overview of the Reference series with size comparison: six floorstanding speakers, a center speaker, a compact speaker and a subwoofer, with unit prices ranging from 1,800 to 25,000 euros.

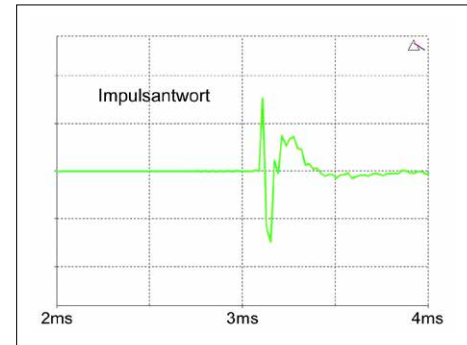


The dispersion characteristics of the tweeter have been optimized with the asymmetric front.

level reserves and workmanship that is hard to find elsewhere in this price range, it can not only be considered a bargain, but an absolutely veritable and impressive bargain at that. The fact that it is also a feast for the eyes both on its own and on the stands makes it downright irresistible. ■



The frequency response is very balanced even below 30° and the impedance is very good.



The impulse response is excellent, showing the care taken in development, including enclosure.

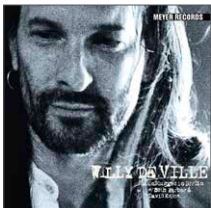
CANTON REFERENCE 9

Product type / price class	Standmount Speaker / 2,000 to 4,000 euros	
Web address	www.canton.de	
Price in euros	3.600	
Dimensions (W x H x D) in cm	26 x 45 x 39	
Weight in kg	18	
German distributor	Canton	
Phone	+49 60 8328787	
Principle	dynamic, 2-way, ported	
Terminal	single wiring	
Recommended positioning	at least 20 centimeters distance to all walls, angle slightly	
SOUND	60 %	good 1.7
Sound quality	dynamic and lively, with delicate, relaxed resolution and deep, contoured bass for its size	
MEASUREMENT RESULTS	15 %	good 1.7
Frequency response	very balanced	
Sound pressure level (in decibels)	very good (89.6)	
Impulse response	very good	
minimum impedance	unproblematic	
Distortion in percent at 63 / 3k / 10k Hz	slightly high (1.05 / 0.051 / 0.11)	
Combination capabilities	very easy	
FEATURES & HANDLING	20 %	very good 1.4
Placement	very easy	
Quality of the manual	good	
First setup	very easy	
Sound correction possible	yes	
Finishes	matte white lacquer, walnut lacquer, high-gloss black lacquer	
Scope of delivery	cover, spikes	
Haptics / workmanship	very good	
SERVICE & ENVIRONMENT	5 %	sufficient 3.6
Warranty in years	10	
Packaging	cardboard and plastic	
Upgradeable	no	
STEREO TEST RESULT	good 1.7	

WHAT WE'VE HEARD



**PRINCE:
PIANO & A
MICROPHONE**
Intimate, direct
and gripping -
just Prince and a
piano.



**WILLY DEVILLE:
UNPLUGGED IN
BERLIN**
The last live
recording of the
American, in
first-class sound
quality.



For more information and
our STEREO playlists, scan
the QR code.