

Wilson Sub 10

A classically oriented subwoofer, with bass reflex tuning, appropriate amplification, practical and reasonably priced.

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In a vast and overpopulated world of nearly eight billion people, it is no wonder that we occasionally come across cases of homonymy. Not only people or places but also companies that bear the same or nearly the same name. This is the case, for example, with the Wilson brand. In sports, it is a manufacturer of at-equipment for tennis, padel, basketball, golf, baseball, and American football. Who does not remember the "castaway" ball, Tom Hanks' companion in the movie "Cast Away"? Even in high fidelity we find companies bearing this name. Two are for-se best known having a relatively long sto-ria and having earned a high-end blazon. These are the American Wilson Audio and the British Wilson Benesch. In more recent times another manufacturer has been added under the Wilson name and who, like the previous ones, also deals with loudspeaker systems. In this case, if we analyze its organizational structure we can see how it is perfectly embedded in a globalized world. The ownership is Polish, specifically the Horn Distribution group, a leader in its homeland in the field of distribution of audio-video products. However, the design of the speaker systems takes place in Denmark, a country with a long and established tradition in this very field. Production is then carried out in China, where favorable conditions can be obtained to keep co-styles down. Regarding the choice of the name Wilson, its origin is not known; it is certain, however, that after starting operations in 1991, Horn Distribution has co-stantly grown by expanding its business activities to other countries such as Switzerland, Lithuania, the Czech Republic, Slovakia, Romania, Hungary,

WILSON SUB 10 Active bass reflex subwoofer

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CHARACTERISTICS STATED BY THE MANUFACTURER

Altoparlante: woofer da 250 mm a lunga escursione. **Potenza ampli interno:** 150 W. **Ri-spоста in frequenza:** 25-150 Hz. **Ingressi:** RCA (stereo). **Interruttore di fase:** 0-180°. **Frequenza di crossover:** regolabile. **Dimen-sioni:** 32x32x33 cm. **Peso:** 11,6 kg



Germany. As is often the case from commercial experience, the opportunity or need to create its own product line developed. The Polish group co-created the Wilson brand with the intention of producing loudspeaker systems for high fidelity and home cinema addressing a popular target audience by focusing strongly on value for money.

In AUDIOREVIEW issue 445 we have known the Classic speakers, a three-way model inspired by the great British monitors. This review, on the other hand, is devoted to a subwoofer, the model called Sub 10, which is part of a family of dif-fusers dedicated to the low range in which we find three different drivers with respective diameters of 12, 10 and 9 inches.

How it is made

The Sub 10 is an active subwoofer with bass reflex cari- cation. It takes the form of a compact cube, with a side slightly more than 30 centimeters long, enough to accommodate the ten-inch woofer, or 25 cm, and the internal dimensions of the cabinet walls. The design includes an open tuning port at the bottom, quin-dially oriented toward the floor.

duct of open tuning at the bottom, quin-dially oriented toward the floor. Four semi-conical feet of soft rubber provide the proper space for inter-facing with air and at the same time adequately dampen cabinet vibrations. The finish of the exem-pleary under test consists of a black (it is also available in white) open-pore impial-lacquer that thus shows wooden grain. The look is pleasing and does not look at all economical, thanks in part to the front panel, made of MDF about two and a half inches thick, which is also black but glossy lacquered. A grille covered with sound-transparent cloth is applied to protect the woo-fer. Fastening is achieved with classic press-fit "mushrooms," in this case with a very tenacious seal, not easy to remove but effective in preventing the in-nesco of vibrations.

On the rear face there is an opening in which the control qua-dro has been inserted, which in addition to the controls and connections houses a finned black aluminum heatsink of good size. As many as twelve screws secure that movable panel so as to ensure a sufficient seal against the pressures generated internally. Behind is fixed all the electro-nics, developed on two differentiated boards.

The larger one comprises the 150-watt amplifier and has two unidentifiable transistors mounted so as to be in contact with the aforementioned heatsink. The presence of two electro-lithic filter capacitors and a discrete-sized laminierne transformer (mounted off the board) indicate to us that this is a linear amplifier. On the same board are numerous passive and active discrete pass-hole components and a small transformer that serves the service circuits. Another PCB is placed parallel to the board and is responsible for signal handling, mounted right at the line connectors and controls. On the other hand, the bushings for receiving high-level signals and those for sending them back to the speakers are at the bottom of the panel. We see that they are connected in parallel and thus, as in almost all subs, how there is no high-pass filter for the satellites.

The cabinet shows some simple and clever construction tricks that are worth pointing out. The cables that go from the amplifier to the loudspeaker are well fixed so as not to vibrate and generate noise. The reflex port has flared ends so as to reduce turbulence at the inlet. The pipe dimensions are substantial, eight centimeters in diameter along the route and about ten at the point of emptying.

The inner side of the rear panel houses all the active part, with the sturdy laminated transformer powering the power stage at the top, and the signal control board at its side. At the bottom can be seen the terminals for receiving the high-level signal with parallel connections for remoting to the satellites.

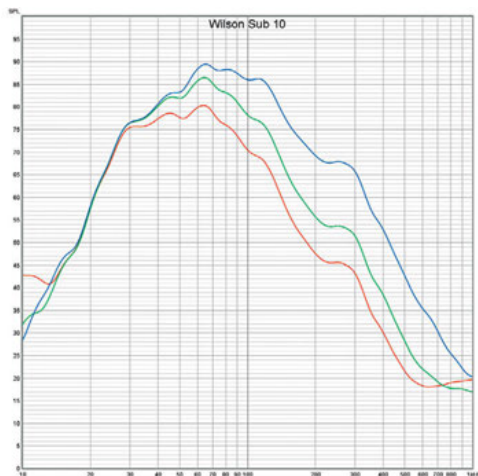


The size of the tube is substantial, eight centimeters in diameter along the path and about ten at the point of venting. The length of 24 centimeters is such that it takes advantage of all available internal space and thus achieves the necessary low tuning frequency.

The side and top walls of the cabinet are covered with low-density absorbent material while where the front panel rests, simple wooden rebate reinforcements have been provided.



The Sub 10 cabinet with electronics and speaker disassembled. Note the slightly flared ends of the tuning port and the low-density absorber material lining the inner walls.



Room measurements of Sub 10's crossover cutoff with the potentiometer in three positions, minimum (50 Hz), medium and maximum (150 Hz). The crossover is designed so that the crossover frequency appears to vary by acting on the level rather than by changing the curve pattern. The extension is good and allows it to go down to about 30 Hz.

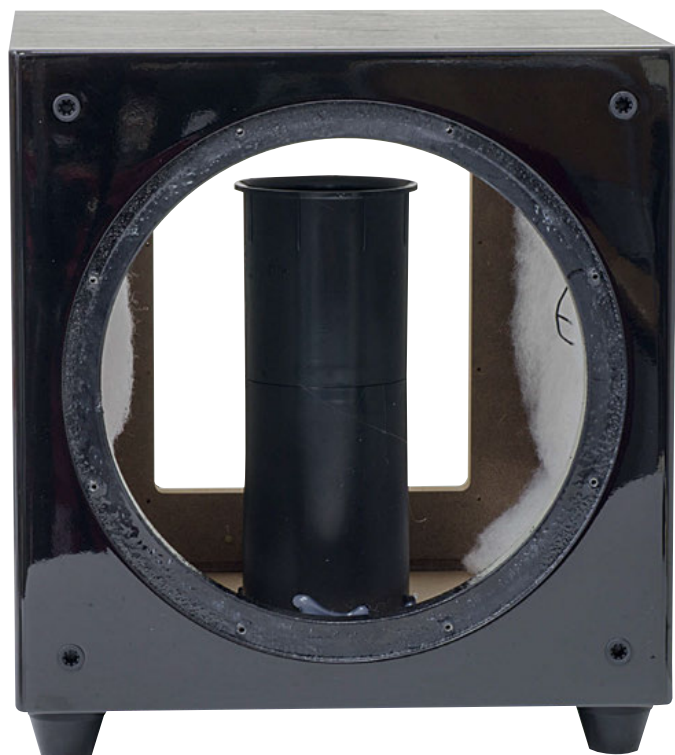
The woofer has a stamped sheet metal basket and cellulose cone with a fairly pronounced suspension, suggesting a fair amount of excursion capability. It is made of butyl rubber, so it is more long-lived than the foam we still find on some subwoofers, even of high level.

The coil is 38 millimeters in there is a decompression hole on the bottom of the magnet equipped with a perforated grid inside.

In the listening room

The subwoofer is a transversal component that can have indispensable applications in audio-video but also has its importance in stereo. In the latter situation it is not always beloved by enthusiasts. Much of its appreciation, especially in a two-channel system, depends on the installer's capacity in integrating it with the satellites and the environment. As a lover of multichannel listening I find it an indispensable component, and for personal use I take appropriate doses of it even in stereo. For the test of Sub 10 I wanted to simulate a 2.1 type of use, with a well-matched and reasonably priced center, appropriate to the category of this speaker. I paired it with KEF LS50s, stand-mounted speakers of small calibration but exceptional price/quality ratio, a high-performance and timbrally neutral integrated amplifier such as the Primare I32, and an SMSL M200 digital source, a D/A converter with unsuspected musical qualities in relation to its price.

The sub was driven by the low-level stereo signal provided by the pre output of the integrated amplifier. Contrary to my usual solito, I did not perform ambient measurements prior to the listening test. I wanted to simulate (at least initially) an installation by an uninstrumented user. A very common situation that unfortunately could easily lead to erroneous results and in the long run even make one desist from the idea of using a subwoofer. In fact, I remember that putting a sub in any system is like drawing another speaker. Going by ear alone I have always considered it the search for the classic needle in the haystack. In this specific case, however, I was not completely "blind." I already knew-I knew the response of my speakers in my room and the effect of a subwoofer in my room. I went almost sure. I placed the Sub 10 on the floor in the right corner of the room, lunged the front wall, although Wilson suggests placing it in the center between the two speakers. As we have discussed several times in our magazine, it is true that the subwoofer emits frequencies whose direction is not individuable dall'orecchio umano e quindi posizionabile in qualsiasi punto.



The reflex port is of significant size and uses virtually the entire length available inside the cabinet. Of note is the flaring at the inlet, both internally and externally, to limit turbulence.



The rear panel houses stereo RCA connections and high-level signal terminals. Controls rely on two potentiometers to adjust cutoff frequency and level while phase can only be inverted with a selector switch. The amplifier's heatsink appears well sized.



The 25-cm diameter woofer is of traditional construction, with a 38-mm voice coil, pressed sheet metal basket and ferrite magnet with decompression hole.

However, it is also true that the energy im-mitted in the room is better exploited if the source is located close to the pare-ts, maximum therefore in a corner. There is also to be said that in most cases in the center of the front wall the space is occupied by the electron-carrying cabinet, as in my living room, so placing the sub there in front is usually more complicated.

However, it is also true that the energy im-mitted in the room is better exploited if the source is located close to the pare-ts, maximum therefore in a corner. There is also to be said that in most cases in the center of the front wall the space is occupied by the electron-carrying cabinet, as in my living room, so placing the sub there in front is usually more complicated. The Sub 10 is equipped with a potentiometer for adjusting the frequency cutoff, which starts to intervene at 50 Hz and goes up to 150 Hz but does not give intermediate references. I started from the po-sition where I thought by eye I would find 90 Hz, a good crossover point for my speakers when I use their reflex tuning caps. I use this expedient to maximize the performance of the subwoofer and limit the "stress" on the satellites as much as possible. I did not touch the polarity while the level was adjusted by listening to a music signal, gradually raising it until I felt it was coherent enough. The first listening did not fully satisfy me because evi-dently the crossover was too high and thus the overlap between the satellites and sub caused a fair amount of confusion in the mid-bass range. After a couple of tweaks to the crossover control, things more or less fell into place. The Wilson Sub 10 integrated well with the KEF LS50s; the timbre of the ensemble ap-parated naturally, with a discreetly generous lower portion of the spectrum without overly noticeable tails or rumble.

The soundstage, too, showed a nice profon-dity with the bass that, dropping where the satellites do not reach, increased the feeling of spaciousness in no small measure. After a few days, conquering pigriety, I then decided to do things more thoroughly, devoting a half afternoon to the instrument-tal calibration of the system. After taking preliminary measurements of just the satellites and pulling out the frequency response of the sub at three different cutoffs, I found that all in all the settings made by ear were on the right track, not far from optimum. The level was just below what Moeller's curve would recommend while the crossover could be better centered and "filled in" by reversing the polarity. With the new instrumental setup the Sub 10 took on an even more importan- tive role, showed remarkable com-plex tonal balance even if after a few somewhat pumped-up tracks I felt like re-directing the sensitivity. This was the case with "Brivido Felino" by Mina and Celentano, which seemed too "loaded" in the bass. I almost always resist the temptation to intervene on the level once the instrumental calibration is done. If the work done with the PC and microphone is good, the blame for some intrusiveness in the low range lies with those who made a recording a little too pumped up. If we want to adjust to the recording, we have to get out of the chair to an-go and touch the subwoofer volume at every record change. You do fi-sic activity (which is good) but at the risk of always having arbi-trary equalization (which is a little less good). The fact is that the slight reduction in the of the too much the lack of digital acoustics correction. The latter is unavoidable in the use of my subwoofer, which having six times more power evidently stresses ambient resonances more. The Wilson Sub 10, on the other hand, is more "gentle" and left me favorably impressed with the balance achieved.

Continuing the rehearsal, I really enjoyed Depeche Mode's "Enjoy the Silence" with its pulsing, rhythmical bass and engaging but non-invasive presence. A few hints of gommo-sity I found entirely forgivable considering the price category and bass reflex construction. Overall, the upper ranges so-remained crisp as Diana Krall's "My Love" demonstrated to me, which evi-denced a very credible voice shoved by a firm and timbrally credible double bass.

At the end of the review period I think the performance of this Wilson was truly enjoyable; I would not have preferred floorstanding speakers in their place, which is tantamount to a pro-movement with good marks.

Conclusions

Wilson's Sub 10 favorably impressed me. It proved to be a concrete, well-built and, above all, well sounding component. This new company evidently knows its stuff. It has equipped its subwoofer with necessary tuning controls and a more-than-decent po-tence, adequate for many urban home environments. The Sub 10 social stands out for a distinct musicality that at five hundred euros is by no means taken for granted. Recommended in many systems more concerned with budget and musical performance than with brand.