



## Ground Zero GZNW38C – 15-inch high-performance subwoofer

# SPL Power

► With the GZNW38C, Ground Zero introduces a powerful new 15-inch subwoofer that stands out from the competition. We provide a detailed overview.

For ordinary people, the GZNW38C weighing over 36 kilos is a powerful woofer, but Ground Zero has not yet reached the limit. Even in the Nuclear series, some woofers are even larger and louder, and then there is the Plutonium series, which is even more impressive. In this context, our GZNW38C remains relatively moderate.

However, Ground Zero naturally aims to differentiate each of its woofers, which is why our woofer is unique in many ways as well. We are dealing with a completely new development from scratch; not even the frame or top plates are based on proven, existing parts, but are designed using the latest technologies and tools. The new aluminum die-

cast frame was entirely designed and crafted through computer simulation, aiming to be as lightweight as possible while maintaining high stability. Excess material was virtually removed and then reinforced in key areas to create an optimal frame.

The result is impressive; the 38C frame is not only very open for such a heavy 38, but also delicate and visually appealing. Ground Zero is also innovating with the cone, where carbon is used for the first time in a thick woo-



New developments include the carbon cone and the ConeGrip surround



The eight-layer flat wire coil ensures excursion and resilience

fer. And how! The part has become so stiff with relatively little material that you can have complete confidence in its construction. To justify the effort, there is also a new GZPW38C, built similarly with a carbon cone and cap, but with a four-inch coil typical of Plutonium. Our small Nuclear has to make do with a three-inch coil, which is three inches in diameter. It's wound in 8 (!) layers of CCAW flat wire, meaning aluminum wire with a rectangular cross-section and copper coating. Additionally, it features a matte black coating on top, significantly aiding heat dissipation. Supported by Klippel (in person and using his loudspeaker measurement and

development system), extensive tests were conducted on voice coil cooling, with the results presented here on the GZNW38C.

To our surprise, the woofer lacks pole piece ventilation, which would prevent air congestion and compression inside the woofer (under the dust cap). This omission actually adds a bit more mass to the pole piece and back plate, which helps with heat dissipation. Conversely, the air congestion is used so that air is forced through the air gap during cone movement, cooling the voice coil. By the way, loud woofers without pole piece ventilation are not new; the Americans have built them for decades, sometimes with holes in the voice coil former or cone. In contrast, the GZNW is completely sealed but allows ventilation through the air gap, which has been tested in numerous series of experiments. A significant amount of air moves through the system, with a maximum excursion of 80 millimeters (peak to peak) and a three-inch coil former.

Ground Zero has dedicated significant effort to the suspension to ensure the cone is guided precisely during such excursions. The diameter of the spider has increased to 30 centimeters, and we see two spider levels with a spacer ring. However, instead of a double spider, there are seven layers in front of us, with four at the top and three at the bottom, connected by foam. These configurations can be achieved using the right simulation software, in this case FineSuspension from Loudsoft, which can simulate components like spiders and surrounds. For the surround, the ConeGrip surround was designed similarly, serving as the counterpart to the ConeGlide surround. The purpose of the latter is to minimize the impact of the surround on the suspension, which is ideal for sound quality applications (GZPW10SQX with ConeGlide in the 2024 test). The goal is to maximize efficiency and reduce non-linearity in the mid-range. In the case of the GZNW38C with ConeGrip, the focus is more on SPL, and the surround should assist as much as possible, even during extreme cone travel.

### Measurements and sound

The result is a Thiele Small parameter set that is also very different from that of an SQ woofer—even if we can hardly determine the TSP of woofers like the GZNW38C with our small signal equipment. Nonetheless, the comparison with the GZPW10SQ sheds light on a few correlations. The SQX has both a soft suspension Cms and a higher resonance frequency, which is of course also due to the unfair comparison of 10 versus 15 inches. Still, the GZNW also requires the extreme-



The new cast frame is extremely airy and has been extensively optimized on the computer

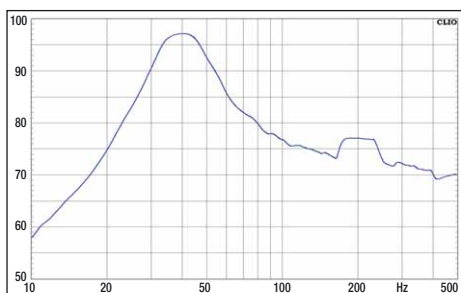


No pole piece ventilation:  
The GZNW38C has an alternative  
system for effective voice coil cooling

ly hard suspension for the massive moving weight of 900 g, which nevertheless helps it achieve a reasonably low resonance (and thus cabinet tuning). The mechanical losses Rms reflect the behavior of the surround (and the air pump through the air gap), which is a low 3.5 for the SQX and an impressive 16 for the GZNW. Here, too, the comparison is very unfair; larger drivers „automatically“ have more Rms.

The voice coil is a highly SPL-prone 2 x 1 ohm variant that requires power. Ground Zero recommends a wattage range of 3000-6000. The GZNW38C is almost economical in terms of cabinet volume. We have 155 liters of bass

reflex tuned to a relatively high 36 Hz. Of course, this does not extend to infrasound; however, at the tuning frequency, it provides an endless range of sound pressure levels. We measure a whopping 97 dB/1 m at one watt, but we have seen better curves. You can also separate the GZNW38C at low frequencies; it does not want to play upper bass anyway. On the other hand, when the woofer is free to go off as it pleases, it really kicks in. It wants to give the occupants of the vehicle a good thrashing. The vibrating seat hits you on the butt, and the pressure on the sternum comes directly from the front. Musically, the woofer is not as picky as feared. The GZNW38C also elevates thick drums and bass drums into bass fireworks, and it excels with electronic sounds. Triangle music, however, is a no-go; we prefer traditional Japanese music with Odaiko.



Not pretty, but effective; or rather, with full efficiency. The GZNW38C delivers an output of up to 97 dB from just one watt

## Conclusion

Subwoofers should be fun, and Ground Zero has invested heavily in making the GZNW38C very enjoyable and highly capable!

Elmar Michels

**BEST PRODUCT**  
**Absolute Top Class**  
**CAR & HiFi** 6/2025

## Ground Zero GZNW38C

Price	1.280 Euro
Distributor	Ground Zero, Egmatung
Hotline	08095 873830
Internet	www.ground-zero-audio.com

## Bewertung

Sound	50 %	0,9	■■■■■
Low frequency extension	12,5 %	1,0	■■■■■
Sound pressure	12,5 %	0,5	■■■■■
Sound purity	12,5 %	1,0	■■■■■
Dynamics	12,5 %	1,0	■■■■■

Lab	30 %	1,0	■■■■■
Frequency response	10 %	2,0	■■■■■
Efficiency	10 %	0,5	■■■■■
Max. SPL	10 %	0,5	■■■■■

Build quality	20 %	1,0	■■■■■
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## Technische Daten

Basket diameter	39,0 cm
Mounting diameter	36,0 cm
Mounting depth	29,0 cm
Magnet diameter	26,0 cm
Weight	36,6 kg

Nominal impedance	2 x 1 Ohm
DC resistance Rdc	1,53 Ohm
Coil inductivity Le	3,23 mH
Coil diameter	76 mm
Membrane surface	819 cm <sup>2</sup>
Resonance frequency fs	29 Hz
Mechanical Q-Factor Qms	10,37
Electrical Q-factor Qes	0,38
Overall Q-factor Qts	0,37
Equivalent volume Vas	30,9 l
Moved mass Mms	898 g
Rms	15,93 kg/s
Cms	0,03 mm/N
B x l	25,73 Tm
SPL 1 W, 1 m	97 dB

Recommended power	>3000 W
Test cabine	BR 155 l
Reflex tunnel (d x l)	16,5 x 20 cm

## Ground Zero GZNW38C

**Absolute Top Class 1,0**

**CAR & HiFi** 6/25

Price/performance: very good

„Megawoofer with SPL and SQ qualities.“

Spider with seven layers in two groups: High-tech in the service of cone travel