

ZR65CS – ZR series speakers from Phoenix Gold

Top-class 6.5" components

- Phoenix Gold has been providing us with top-notch amplifiers and subwoofers lately, only holding back on speakers. This is about to change because, with the ZR65CS, Phoenix Gold enters the upper class right away.



The woofer has a huge magnet, immediately suggesting power



Sure, there are not only amplifiers and subwoofers from Phoenix Gold. They also have speakers that have been situated exclusively in the affordable market segment in the recent past. But now Phoenix Gold

also wants to play at the top of the loudspeaker segment and introduces the ZR65CS. The abbreviation ZR already indicates that this is an ambitious system, as ZR is ranked relatively high within the company's

hierarchy. The ZR series includes three newly developed amplifiers, all of which are pretty powerful, and the ZMAX subwoofers we have already tested.

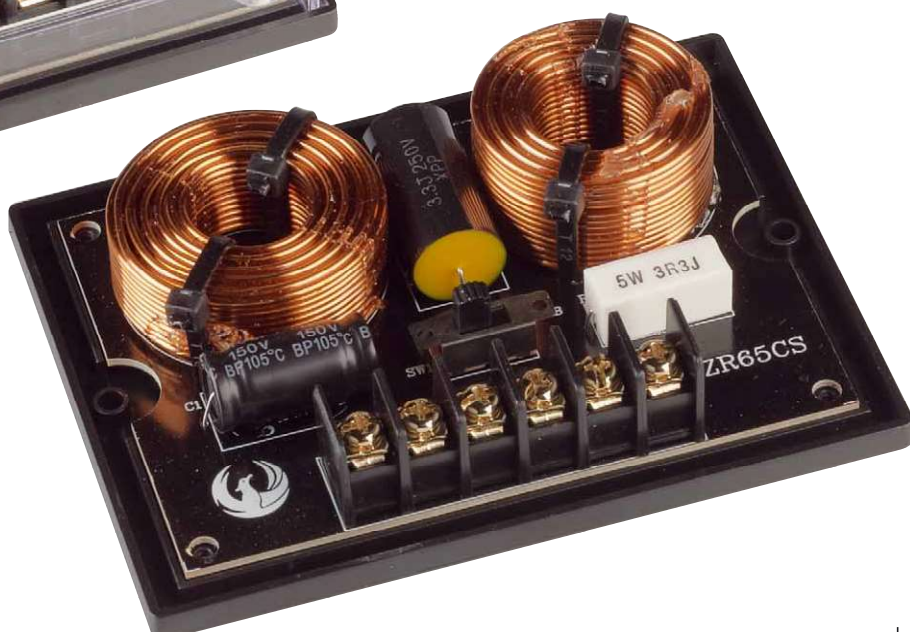
Now, the ZR65CS adds a two-way component system that also turns out quite powerful. The appearance already leaves no doubt about that. The ZR65CS is entirely black, with only a few copper-colored spots on the crossover. These are due to the coils, which are wound of thick 1.4-millimeter copper wire. Additionally, they do without an iron core, which could show signs of saturation at high power levels, leading to distortion. The circuit is straightforward, with second-order high-pass and low-pass consisting of one coil and one capacitor each.

However, the showpiece of the ZR65CS is the woofer, which stands out with its colossal ferrite magnet - here, no one needs to fear that Phoenix Gold has skimped on the motor. The magnet ring measures a full 110 millimeters in diameter. Such a giant magnet is rarely seen on a 6.5" driver. The voice coil is also larger than usual, with a diameter of 32 millimeters, which is good for power handling. The cone material used is aluminum, which is, of course, anodized black for aesthetic reasons. The cone has a unique feature: it is actually

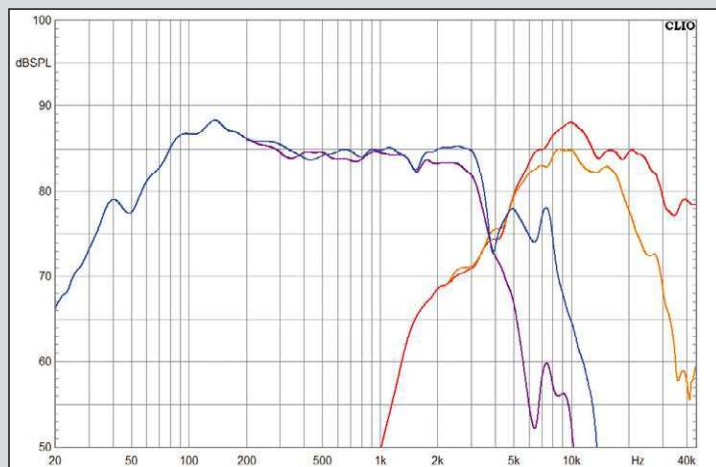
cone-shaped. It is not flared towards the edge like the bell of a trumpet but shows a straight cone profile (AWI shape) when viewed from the side, giving maximum stability but being somewhat more susceptible to resonances than the usual curved NAWI shape. The dust cap and the surround, both made of soft rubber, have a somewhat moderating effect on these cone resonances. The ZR65CS's tweeter is inconspicuous. We are dealing with a one-inch fabric dome - by far the most popular design for high-quality car audio systems.



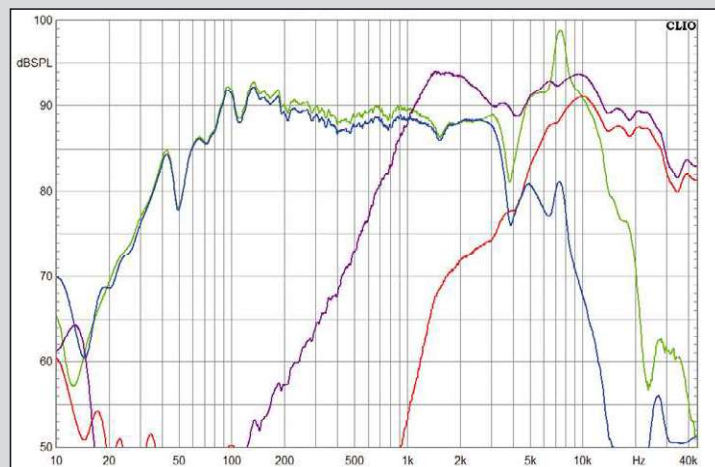
The crossover shines with two thick air core coils for low distortion



CAR&HIFI Laboratory



The woofer and tweeter run smoothly both on-axis and under an angle



The woofer shows cone resonances at 7.5 kHz, which are well-filtered by the crossover. The tweeter could also be used at lower frequencies



94 / 5.000

The woofer is equipped with a powder coated steel frame and a large 1.25" voice coil

Measurements and sound

Our measurement microphone certifies that both the woofer and the tweeter behave very well. The woofer runs smoothly up to 3 kHz. Its cone resonances are noticeable at 7.5 kHz, but the crossover attenuates them effectively. The tweeter pleases with quite broadband performance, running up to a respectable 27 kHz. The system satisfies us with very low THD values in the distortion measurements up to very high volume levels, for which it receives top ratings. Sound-wise, this is reflected in a clear, precise, and uncluttered performance that is also maintained at high volumes. Drums are especially fun because the ZR65CS offers a wonderfully dynamic reproduction. Hard-hitting drums and percussion come across as very crisp. The bass range does not soften impulses in the least, either. The tweeter contributes lovely details without annoying sharpness - that's how it should be. Male and female voices are presented honestly; nothing is glossed over or reproduced with a loss of detail.

Conclusion

With the ZR65CS, Phoenix Gold has created a speaker system that appeals to sound enthusiasts and provides plenty of fun and SPL. A striking combination.

Elmar Michels



The tweeter is designed as a 1" fabric dome featuring a wave guide under the grille

Specifications	
Basket diameter	165 mm
Installation diameter	146 mm
Installation dept	76 mm
Magnet diameter	116 mm
Tweeter diaphragm	25 mm
Tweeter cabinet	50 mm
slope woofer/tweeter	12 / 12 dB
Tweeter protection	–
Tweeter level adjustment	0, +3 dB
Grille	•
Other	–
Nominal impedance	3 Ohm
DC resistance R _{dc}	2,34 Ohm
Voice coil inductance L _e	0,15 mH
Voice coil diameter	32 mm
Cone area S _d	129 cm ²
Resonance frequency f _s	56 Hz
Mechanical Q Q _{ms}	4,52
Electrical Q Q _{es}	0,68
Total Q Q _{ts}	0,59
Equivalent volume V _{as}	10,1 l
Moving mass M _{ms}	18,4 g
R _{ms}	1,44 kg/s
C _{ms}	0,43 mm/N
B* _l	4,72 Tm
SPL 2v, 1m	86 dB
Amplifier power recommendation	30 – 120 W

Phoenix Gold ZR65CS

Price	350 Euro
Contact	AAMP European Division, UK/Sweden
Internet	www.phoenixgold-eu.com

Rating

► Sound	55 %	★★★★★
Bass foundation	11 %	★★★★★
Neutrality	11 %	★★★★★
Sound stage	11 %	★★★★★
Spatiality	11 %	★★★★★
Dynamics	11 %	★★★★★
► Lab	30 %	★★★★★
Frequency response	10 %	★★★★★
Max. SPL	10 %	★★★★★
Distortion	10 %	★★★★★
► Practice	15 %	★★★★★
Crossover	10 %	★★★★★
Build quality	5 %	★★★★★

Top Class



CAR & HiFi
INTERNATIONAL

Germany 3/22

Price/performance: very good

„High-output speakers,
also for sound enthusiasts.“