

# GROUND ZERO<sup>®</sup>

GERMAN ENGINEERING



REFERENCE  
**ULTRA**

GZ ULTRA T-30

English Owner's Manual

## THE DEFINITION OF ULTRA-HIGH-END

Objects designated as high-end are assigned to this category based on the assumption that they belong to the top segment of a respective product group and are generally characterized by unusual, exceptional and exclusive features and a very high manufacturing quality. In our opinion, the concept of real high-end is defined much more extensively by experiencing feelings and the resulting impression when listening to your favourite music using such devices. Therefore, it was the only, constant and uncompromising goal during the development of the ULTRA series to achieve that tingling sensation that goes along with the goosebumps when the ear lets us perceive things that go beyond the spectrum that can only be recorded with a test microphone.

"ul·tra"

beyond the range of limits | beyond the ordinary | beyond the others

## REFERENCE ULTRA SERIES - ULTRA-HIGH-END

After collecting detailed experience in SQ performance and general in-car audio reproduction for more than 25 years during the development of loudspeakers, subwoofers and amplifiers for highly demanding customers and having launched a wide range of car audio products used for sound quality competitions all over the world, GROUND ZERO had started to take advantage of all these gathered skills devising a very new and super high-end product line. For the most sophisticated demands, GROUND ZERO introduces an extraordinary two-channel amplifier and matching loudspeakers now! REFERENCE ULTRA series products are developed by highly attentive engineers from England, Sweden and Germany creating products for the most demanding customers without accepting any compromise in overall quality and SQ performance.

## TERMS OF WARRANTY

The limited warranty for this product is covered by GROUND ZERO's regional distribution partners a conditions. For further information contact your local retailer or regional distributor.

## SAFETY INSTRUCTIONS & MANUFACTURER'S DECLARATION

Keep all parts of the content and the packaging away from children and pets to avoid accidents and the risk of suffocation. Permanently extreme levels of over 85 dB can lead to irreparable damage to the hearing. Music systems with high amplifier output power can reach levels of 130 dB or more. Extreme levels can also hinder the perception of important traffic noises and distract from what is happening on the road. Ground Zero GmbH and its sales partners expressly assume no responsibility for hearing damage, physical damage or any damage to property or consequential damage resulting from improper or careless use or improper installation of its products. In particular, any claims are forfeited through the use under competitive conditions. Hereby, Ground Zero GmbH declares that this product conforms to the rules of the following EU directives (including all applicable changes): 2011/65 / EU RoHS2 and 2001/95 / EC directive on general product safety. The full text of the EU declaration of conformity is available at [www.ground-zero-audio.com](http://www.ground-zero-audio.com). Loudspeakers contain magnetized metals and some valuable raw materials and must not be disposed of with normal household waste. Please leave defective or no longer required components to a local recycling facility at the end of their practical use.

## GZ ULTRA T-30 – FEATURES

- Ultra-high-end 30 mm / 1.18" soft dome tweeter
- Tightly-tolerated technical parameters
- Precision-coated textile diaphragm
- High-efficient neodymium motor
- Vented voice coil former reducing distortion
- Lightweight CCA voice coil improving efficiency
- Particular dome damping balancing pressure
- Machined aluminum chamber with wave diffuser
- Flexible lead wires increasing power handling
- GZ-design wave-guide face plate
- GZ-design mounting ring & NRG-grill
- Gold-plated multiway terminal
- Documented final technical inspection
- Wooden box packaging / in matching pairs

## GZ ULTRA T-30 – PARAMETERS

Resonance frequency - $f_s$	500 Hz
Efficiency - SPL	>82 dB
DC voice coil resistance - $R_e$	3.4 ohms
Driver 's Q (nonelectrical losses only) - $Q_{ms}$	1.54
Driver 's Q (at $f_s$ ) - $Q_{es}$	1.74
Total driver 's Q - $Q_{ts}$	0.82
Air vol. compliant to driver 's suspension - $V_{as}$	n/a
Moving mass incl. acoustic load - $M_{ms}$	0.54 g
Product of magnetic flux density - BL	1.83 N/A
Mech. resistance of driver 's suspension - $R_{ms}$	1.10 kg/s
Compliance of driver 's suspension - $C_{ms}$	0.19 mm/N
Voice coil inductance - LE	0.015 mH



Aluminum mounting ring & NRG-grill included

GZ REFERENCE ULTRA SERIES

## GZ ULTRA T-30 – GENERAL SPECIFICATIONS

Speaker type	30 mm / 1.18" soft dome tweeter
Nominal impedance	4 ohms
Frequency Response	1 – 26 kHz
Housing type	Machined aluminum
Dome material	Soft fabric
Motor	High-grade Neodymium
Voice coil diameter	30 mm / 1.18"
Power handling (RMS)	100 Watts
Power handling (max)	150 Watts
Outer diameter	76 mm / 2.99"
Mounting diameter	60 mm / 2.36"
Mounting depth	41 mm / 1.61"



GROUND ZERO is using the worldwide accepted KLIPPEL® R&D Analyzer KA3 measurement system for speaker development during the German in-house development as well as for QC reporting for the production line at the factory. The results of LPM and LSI measurements are the basis for evaluating and verifying further development enabling to offer perfectly working products in any practical application. Continuous and advanced trainings for development employees ensure the highest possible qualification. KLIPPEL® is a registered trademark of KLIPPEL GmbH.

## GZ ULTRA T-30

Sound is something very subjective. Everyone perceives it differently because each ear also hears differently. Consequently, it is hardly possible to predict how the audio playback will be perceived individually. For this reason, it is difficult to develop a so-called perfect speaker. Rather, the aim of the development is to avoid any error, no matter how small it could be, caused by the loudspeaker. Above all this, the interaction of several loudspeakers used for the entire audible frequency range, and even beyond that, with the signal source and the connected power amplifier is decisive for the result and determines whether the music touches the listener emotionally or not.

In only logical consequence, the GZ ULTRA T-30 tweeter was designed and fine-tuned together with the matching midwoofer GZ ULTRA K-165 and driven by the extraordinary power amplifier GZ ULTRA A-2 to its final stage ready to impress the listeners with an outstanding performance when reproducing the upper and highest frequency range of the audio signal by not less than perfect reproduction without creating any deviations from the original signal.



Not a huge surprise but a great honour, the performance of the GZ ULTRA T-30 and ULTRA K-165 charmed the members of the EISA, a group of international car audio trade journalists, right from the very first listening sessions that much that there was any doubt about the decision to award these speakers as simply

**“BEST PRODUCT – IN-CAR SPEAKER SYSTEM”**



**GROUND ZERO** products are engineered in Germany  
**GROUND ZERO** - international sponsor of



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