

GENELEC®

The New 8260A Three-Way DSP Loudspeaker System
with Minimum Diffraction Coaxial
(MDC™) Technology



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Masterpiece In Electro-Acoustic Design

Genelec 8260A features major advances in audio driver technology integrated to a sophisticated enclosure design. Genelec MDC™ Minimum Diffraction Coaxial Mid/High driver technology takes a big step in perfecting audio quality in professional active studio monitors. This breakthrough in coaxial driver design provides extremely accurate imaging and improved sound quality both on the acoustical axis as well as off-axis. The extremely smooth frequency response leads to outstanding clarity and definition of the inner details of the music. The 8260A combines, for the first time, a coaxial driver (MDC™) with a modern Directivity Control Waveguide™ technology (DCW™), ensuring drivers to couple coherently over their full operating bandwidth, as well as creating coincident mid-frequency/high-frequency point source.

Designed To Adapt

As a new member of the TEC (Technical Excellence and Creativity) Award-winning 8200 Series, the 8260A features Genelec DSP digital signal processing responsible for all loudspeaker functions, such as the crossover filters, driver equalizers, driver position alignment, room response alignment, calibration, and equalization related filters as well as distance compensating delays. The Genelec Loudspeaker Manager™ (GLM™) software manages all these functions allowing the 8260A to be used together with other 8200 Series DSP monitors and 7200 Series subwoofers in the same setup. Genelec AutoCal™ automated room calibration and sound system alignment method provides consistent and accurate frequency response for a multichannel audio system in widely varying room environments. The GLM™ software kit is available separately.

The 8260A is housed in a die-cast aluminium Minimum Diffraction Enclosure™ (MDE™) with acoustically optimized rounded edges to prevent diffractions and yielding superb sound stage imaging. Of course, the robust enclosure is also completely immune to vibrations.



Advanced Genelec DCW™

The innovative DCW™ is formed by blending the new MDC™ surface perfectly with the enclosure front shape to provide extremely accurate control of the speaker's directivity. This acoustically optimized smooth DCW™ shape is integrated in the enclosure and is maximized in area to achieve an astoundingly flat on-axis and off-axis frequency response.

MDC™ – Minimum Diffraction Coaxial driver

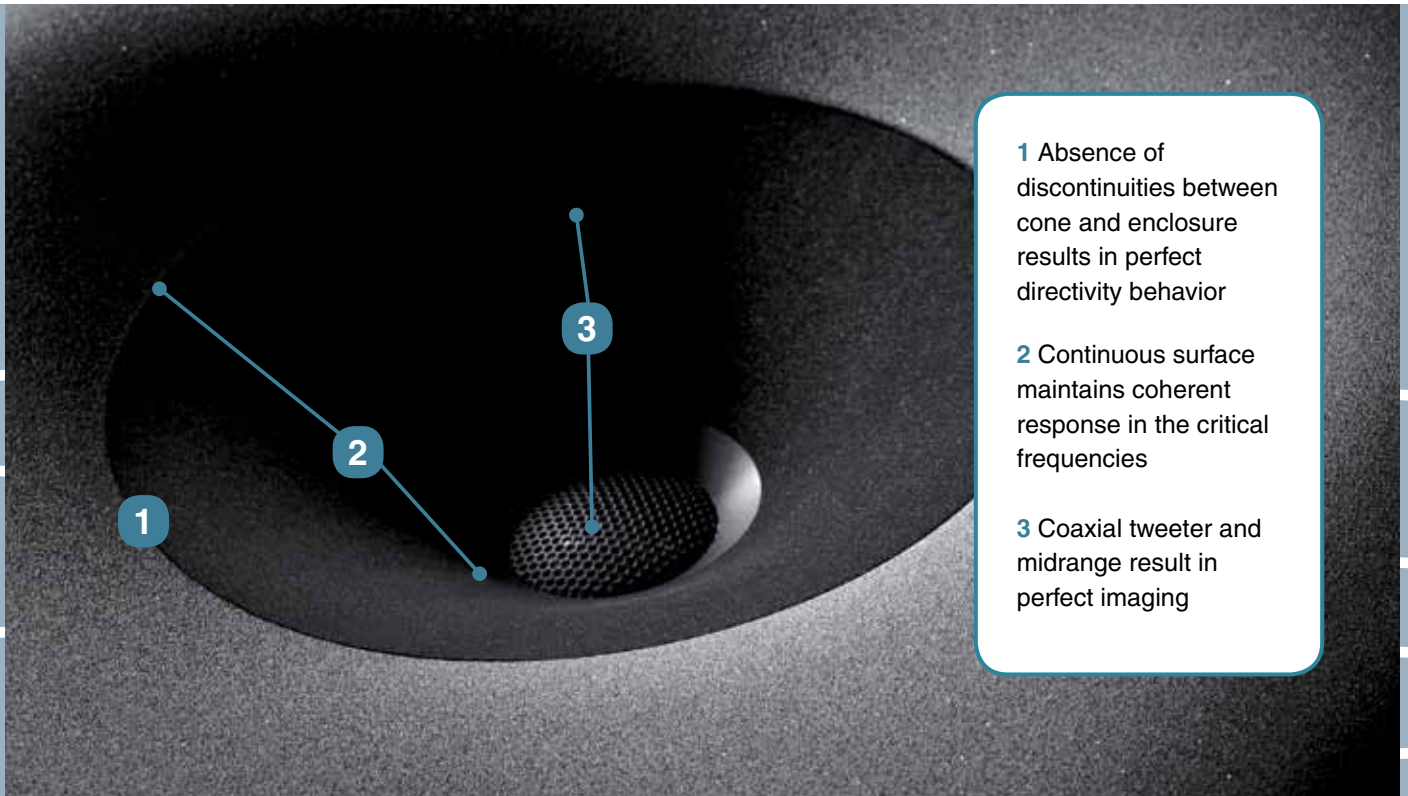
The midrange driver cone forms a smooth, continuous surface between the tweeter and the enclosure. This prevents acoustical diffractions. Diffractions are a major cause of uneven high frequency response in traditional coaxial drivers. The smooth midrange surface contributes to a perfect DCW™ behavior. The treble and midrange drivers couple coherently over their full operating bandwidths as a single coincident point source.

MDE™ – Minimum Diffraction Enclosure

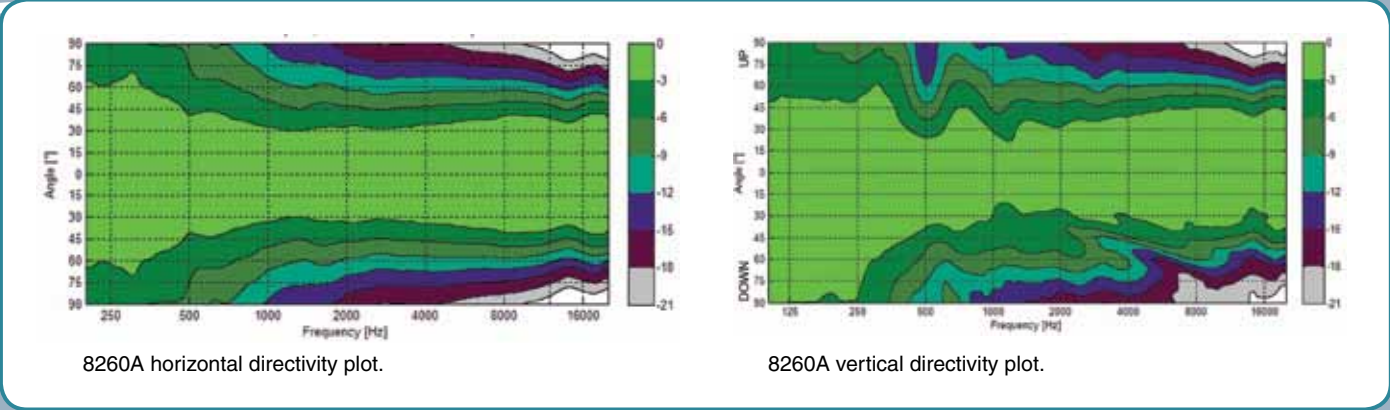
In order to improve frequency and power responses, Genelec has designed a rugged enclosure, featuring acoustically optimized rounded edges and gently curved front and sides. In addition to unsurpassed frequency response, the minimized cabinet edge diffraction yields superb imaging qualities.

Genelec 8200 Series DSP Technology

The sophisticated acoustical design of the 8260A is complemented by Genelec DSP Technology and GLM™ software, providing powerful and practical tools such as AutoCal™ for accurate alignment, calibration and control of the monitoring system in all situations.



- 1** Absence of discontinuities between cone and enclosure results in perfect directivity behavior
- 2** Continuous surface maintains coherent response in the critical frequencies
- 3** Coaxial tweeter and midrange result in perfect imaging



8260A horizontal directivity plot.

8260A vertical directivity plot.

Genelec Minimum Diffraction Coaxial™ (MDC™) driver

Startling New Design

Genelec has history of unexpected innovations. Our approach is basically simple: solve the problems by eliminating their root causes.

Coaxial drivers have existed for tens of years in two-way designs but are uncommon in three-way systems, where they would reproduce mid and high frequencies. Typical to all current coaxial designs is somewhat ragged frequency response due to inherent diffraction problems. Nevertheless, crossover issues due to non-coincident location of sources are often solved with traditional coaxial configurations. Here lay the seeds of Genelec's Minimum Diffraction Coaxial (MDC™) solution: while it benefits from typical coaxial design advantages, it now overcomes the serious shortages as well.

Elimination of Acoustical Discontinuities

The main structure of the MDC™ tweeter-midrange coaxial design consists of an integrated midrange diaphragm-suspension-tweeter. The visible part of the coaxial driver is formed by a cone with a flexible foam curved to support the radiation of the tweeter in its center. The inner section joins the cone to the tweeter without any acoustical discontinuity, and the outer one does the same between the cone and the driver chassis. As there are no acoustically observable discontinuities between the tweeter and the cone, just a smooth surface, there is no diffraction either. The cone profile is very carefully optimized to form an integrated directivity control waveguide for the tweeter radiation. The driver outer edge is terminated to an advanced DCW™ waveguide in order to control the dispersion of midrange radiation as well.

This breakthrough in coaxial design provides improved imaging and extremely smooth frequency response both on and off-axis, leading to outstanding clarity and definition of the inner details of the music.

The Powerful Genelec DSP

Genelec 8260A and other 8200 and 7200 Series loudspeaker systems have an independent dedicated DSP signal processing engine in each loudspeaker. All AES/EBU digital audio formats are supported, as well as standard line level analog signals. The 8200/7200 Series accepts sampling rates ranging from 32 kHz to 192 kHz.

Up to 30 loudspeakers and subwoofers can be connected on, set up and controlled with GLM™ control network over standard CAT5 cabling. Genelec Loudspeaker Manager™ (GLM™) is a computer software providing full real-time control of all aspects of all loudspeakers on the network.

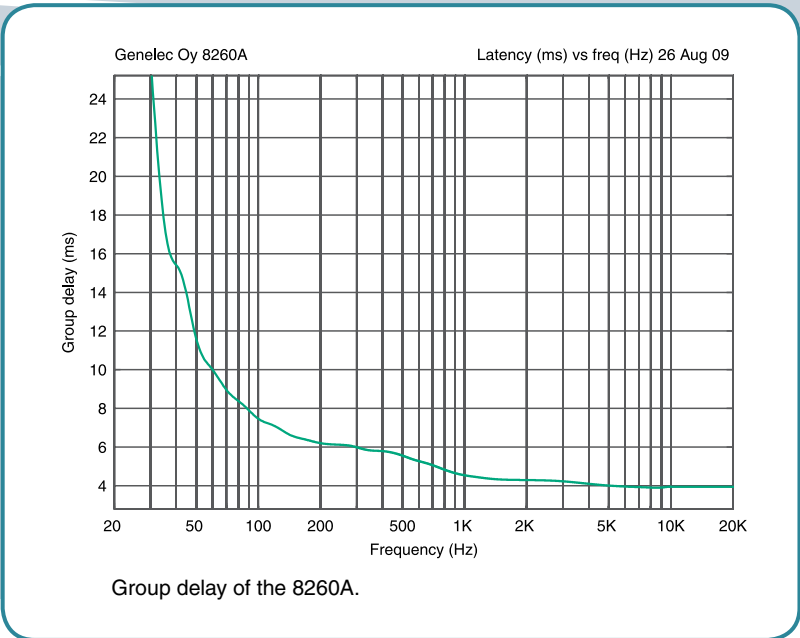
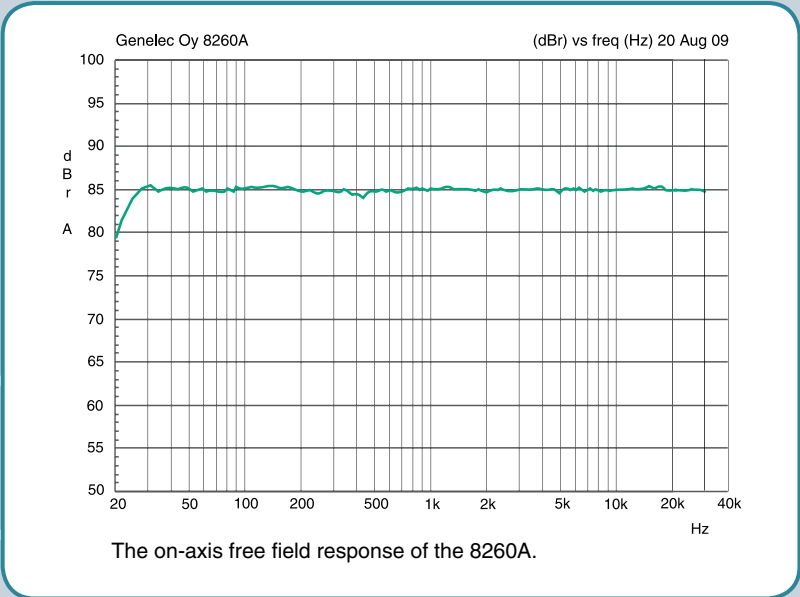
Fast And Easy Calibration With AutoCal™

AutoCal™ is a fully automated loudspeaker system alignment algorithm within GLM™ software. It sets levels, distance compensating delays, phase (for subwoofers) and room response equalization using a factory-calibrated Genelec measurement microphone included in the GLM™ software kit. SinglePoint™ and MultiPoint™ microphone locations for one, two, or three-person mixing environments can be selected. The Interactive Response Editor provides visual readout of measured and corrected response curves as well as full manual editing of all acoustical settings.

All functions and settings are stored in GLM™ System Setup Files or directly into each loudspeaker. As the control network is separate from the audio cabling, the control network can be dismantled and moved to another place after saving the settings into the loudspeakers. Furthermore, the 8200 Series loudspeakers retain all the features and benefits of Genelec 8000 Series products and can be used independently of the GLM™ control network.



The New Genelec 8260A Three-Way DSP Loudspeaker System is a masterpiece in electro-acoustic system thinking where mechanical, acoustical and signal processing designs are intimately linked together. The revolutionary MDC™ coaxial driver design eliminates all acoustical discontinuities and the integrated structure with the aluminium enclosure and waveguide provides exceptional clarity and sound stage imaging. Combining the benefits of a coaxial driver seamlessly with directivity control and including a fully automated calibration process with GLM™ and AutoCal™ results in a true breakthrough in audio monitoring.



Specifications in brief	8260A
Drivers Bass Midrange Treble	255 mm (10") 120 mm (5") laminate cone 19 mm (3/4") coaxial Al-dome
Free field frequency response of system	29 Hz - 21 kHz (± 1 dB)
Maximum peak acoustic output @ 1 m with music material	≥ 120 dB SPL
Maximum short term sine wave acoustic output @ 1 m on axis in half space, averaged as specified	(from 100 Hz to 3 kHz) ≥ 113 dB SPL
Crossover frequencies	490 Hz, 2.6 kHz
Self generated noise level in free field @ 1 m on axis (A-weighted)	< 5 dB SPL
Harmonic distortion at 90 dB SPL @ 1 m on axis Freq: 50...100 Hz > 100 Hz	< 1 % < 0.5 %
Input signal connectors Analog 10 kOhm balanced AES/EBU (single wire and dual wire) 110 kOhm	1 XLR female 1 XLR female
Output / Thru signal connectors AES/EBU (single wire and dual wire) 110 kOhm	1 XLR male
Digital audio Word length Sample rate	16 - 24 bits 32 - 192 kHz
Control network Type Connection	proprietary GLM™ network 2 RJ45, CAT5 cables
GLM™ / GLM.SE™ software frequency response adjustment * Notch filters Shelving filters	4 LF and 2 HF 2 LF and 2 HF
System calibration *	AutoCal™, Stand-alone
Bass amplifier output power Midrange amplifier output power Treble amplifier output power (Long term output power is limited by driver protection circuitry)	150 W 120 W 120 W
Power consumption Idle Full output	26 VA 330 VA
Dimensions Height without Iso-Pod™ table support Height with Iso-Pod™ table support Width Depth	570 mm (22 7/16") 593 mm (23 3/8") 357 mm (14 1/8") 347 mm (13 5/8")
Weight	27.5 kg (60.5 lb)

* The notch and shelving filter adjustments and AutoCal™ system calibration features are part of the Genelec Loudspeaker Manager (GLM™) software.

GLM™ Genelec Loudspeaker Manager Software

Genelec Loudspeaker Manager™ software manages connectivity to all loudspeakers on the network – up to 30 – from cabling and labeling to complete loudspeaker definitions. Standard system configurations are provided as well as provision for customized User Setups. All functions and settings are stored in these Setups or you can store this data in each loudspeaker should you wish to disconnect the network and operate without GLM™ to ensure security of your monitoring system.



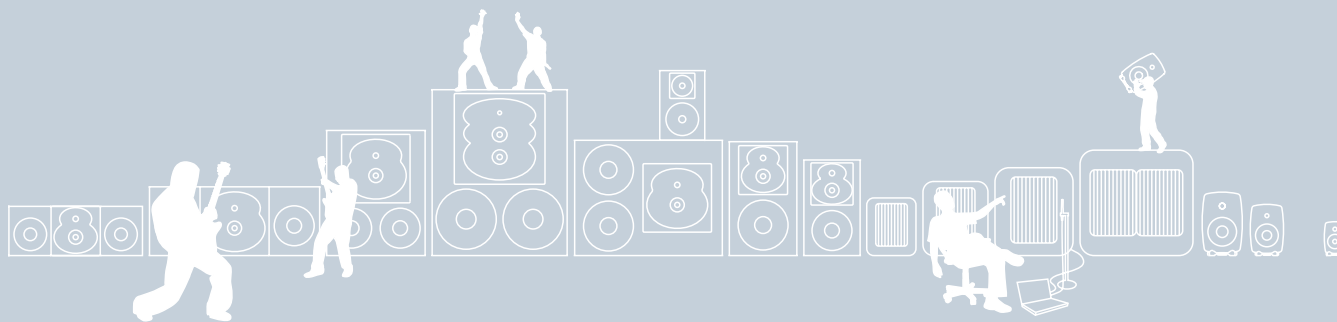
AutoCal™

Operating system supported	Windows XP, Vista/Mac OS X 10.4 or later *
Number of loudspeakers supported	30
Number of audio channels supported	24 (AES/EBU single-wire), 12 (Analog, AES/EBU dual-wire)
System calibration	AutoCal™, GLM™ manual
Major components included	GLM™ Network interface device 8200A Calibration microphone and holder USB cable Measurement signal cable Software CD System Operating Manual
Order code	8200-601B

*Check current support from www.genelec.com

GLM™ Multiroom Expansion Kit

Major components included	GLM™ Network interface device GLM™ Control Network cable USB cable
Order code	8200-602



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