


The Main Ones

Genelec 8381A

SAM™ Adaptive Point Source
Main Monitor



GENELEC®



The Genelec 8381A Adaptive Point Source Main Monitor system with Smart Active Technology empowers engineers and creators to perceive every sonic detail, offering true-to-life sound level and dynamics – with the full flexibility of free-standing monitor placement and advanced room adaption.



Tailored precisely to your room

Interacting with our Genelec Loudspeaker Manager (GLM) software, the 8381A monitor system intelligently adapts its response to the monitoring room in the optimal way. This offers great flexibility to tackle even the most challenging environments – delivering precise presentation, including low frequency reproduction that integrates perfectly with the complete sound content.

The 8381A has been engineered to deliver the complete audible content, with a response extending to frequencies beyond the standard audible range – and fully aligned in the time domain – it delivers precise understanding of all the minute details in recorded waveforms. With its high SPL capacity, the 8381A makes even very low-level details audible, creating an uncompromising tool for monitoring.



Imaging you can trust

Quickly arrive at the right mixing and mastering decisions through uncompromising imaging detail. The point source operating principle of the 8381A offers the unique advantage of maintaining precise sound colour and imaging at all listening distances, enabling exceptional freedom of placement, and removing the vertical sound colour change typical of larger monitors.

The carefully designed Directivity Control Waveguide ensures clean off-axis sound colour,

reducing the impact of the reverberant sound in the monitoring room on mixing decisions, while improving the accuracy and reliability of monitoring work in all rooms.

Standing on the floor, the 8381 locates the soundstage at the natural listening height, while supporting traditional high main monitor positions with the included incliner system. This enables the acoustic axis to be optimally configured towards the listening position for all installation heights.

A liberating new solution



The innovations of the 8381A push the limits of free-standing monitoring solutions, creating a powerhouse that deeply envelops the listener in flawless, true-to-life sound images.

The monitor excels at revealing the finest details of audio by combining immense, controlled power with pinpoint imaging precision, even in challenging monitoring spaces.

The point source design principle combined with optimised directivity control maintains the frequency balance in off-axis positions, supporting correct understanding of the sound colour when moving, standing or sitting in the monitoring room..

Genelec quality and support

Crafted with expert guidance from celebrated Industrial Designer Harri Koskinen, the 8381A is completely designed and built in Iisalmi, Finland.

Drawing on more than four decades of company experience, Genelec's passionate engineering team meticulously designed and optimised every component of the 8381A. In doing so, we've created a monitoring loudspeaker that's ideal for the audio world's most demanding applications – built to

perform with effortless power and zero sonic compromise.

The 8381A powers a lifetime of creativity, so it comes included with access to our unique Genelec SonicAdvisor™ services. So, if you require any support on your monitoring journey with the 8381A – from initial configuration to on-site consultation – we're ready to help.

HIGH SPL ULTRA-LINEAR COAXIAL DRIVER

The novel Ultra-Linear Coaxial Driver, fitted in a precision-engineered Directivity Control Waveguide (DCW), is supported by the Quad Midrange System to enable point source characteristics, controlled directivity and precise soundstage imaging at the sound levels needed for main monitor applications.

QUAD MIDRANGE SYSTEM

The Quad Midrange System continues the controlled directivity of the Coaxial Driver in the DCW and maintains its capacity for high SPL. It reproduces low-midrange audio from the same location as the Coaxial Driver to extend the point source further down in frequency.

EASY SYSTEM INTEGRATION

Intelligent room adaption, advanced system management, and premium acoustic reporting from Genelec Loudspeaker Manager software enables our Smart Active range to smoothly cooperate and create monitoring systems of any size.

ADAPTIVE WOOFER SYSTEM

Supports positional freedom to achieve ideal placement of the 8381A in the monitoring room, for precise, powerful monitoring in any environment – and using any loudspeaker layout, from stereo to immersive.



A few key technologies



Point Source Continued Directivity (PCD)

Premiered on the 8381A, important frequencies are experienced radiating from the same location and in perfect time alignment – creating precise sound imaging, natural soundstage presentation, and enabling the lowest frequencies to be reproduced at their intended source locations.



Minimum Diffraction Coaxial (MDC)

Driver technology delivering mid and high frequencies from a single point source, for extremely accurate sound images.



Quad Midrange System (QMS)

Acoustically coaxial woofer solution that supports the MDC driver output and maintains directivity in lower frequencies, enabling the point source to work down into the woofer range.



Double Low-Woofer (DLW) system

Recoil-compensated adaptive low-woofer solution that combines with the PCD for the freedom to place the 8381A in the desired room location – with no compromise in performance or imaging detail.



Smart Active Monitoring (SAM™)

SAM Technology enables monitors and subwoofers to network for automated system calibration and room adaption, utilising digital signal processing.

Specifications and measurements

8381A

- Adaptive five-way with SAM™ Technology.
- 5926 W total amplifier power.
- 129 dB SPL per pair maximum output.
- Frequency range 20 Hz to 35 kHz.
- On-axis response accuracy better than ± 1.5 dB.
- Minimum listening distance < 1 metre.
- Point Source Continued Directivity operating principle for excellent in-room sound quality and precise imaging.
- Constant Delay and Phase.
- Each 8381A includes two RAM81 amplifiers – each uniquely calibrated at the Genelec factory in Isalmi to match its assigned cabinet.
- Black and white enclosure colours.



Mechanical

MECHANICAL		VALUE, NOTES
Weights	Enclosure 1 Enclosure 2 Amplifier 1 Amplifier 2	75 kg 75 kg 11 kg 11 kg
Dimensions HxWxD	Enclosure 1 Enclosure 2 Amplifier 1 Amplifier 2	880 x 500 x 694 mm 570 x 500 x 694 mm 19 in rack mount, 3U high 19 in rack mount, 3U high
Packing	Dimensions HxWxD Shipping weight	1076 x 1200 x 1000 mm > 1000 mm door frame open size 200 kg

Performance summary

PARAMETER	VALUE	NOTES
Low cut-off frequency (Hz)	≤ 20 Hz	-6 dB
High cut-off frequency (Hz)	≥ 35 kHz	-6 dB
Accuracy (dB)	± 1.5 dB	30 Hz – 20 kHz
Minimum latency	5.3 ms (extended phase linearity) 3.2 ms (low delay)	analogue input
Group delay variation (ms)	1 ms (extended phase linearity) 3 ms (low latency)	300 Hz – 20 kHz
Phase linearity (deg)	± 56 deg (extended phase linearity) ± 86 deg (low latency)	300 Hz – 20 kHz
Crossover frequencies	50–130 Hz (variable), 150–250 Hz (variable), c 500 Hz, 1800 Hz	Variable crossover frequencies are optimised by GLM AutoCal based on room acoustics
Maximum SPL (short term)	126 dB	Mean SPL in range 100 Hz – 3 kHz, THD < 10 % f < 200 Hz, THD < 3 % f > 200 Hz Short term sine wave, at 1 m, on axis, in half-space.
Maximum SPL (continuous)	121 dB	Maximum long term RMS acoustic output, IEC-weighted noise (limited by protection circuit) at 1 m, half-space.
Minimum listening distance	< 1 m	The maximum listening distance is limited by the customer requirement for maximum SPL at the listening location.

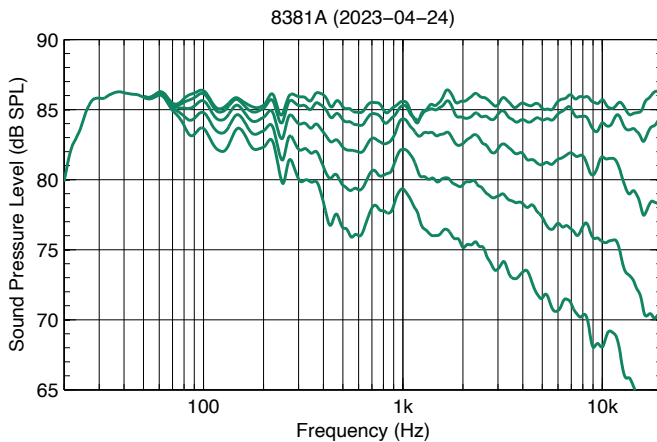
Drivers

DRIVER	SPECIFICATION
Double Low Woofers	2 x 381 mm (2 x 15 in) cone
Front Woofer	381 mm (15 in) cone
QMS Quad Midrange System	4 x 127 mm (4 x 5 in) dome
MDC Coaxial Midrange Driver	Coaxial midrange 127 mm (5 in) cone
MDC Coaxial Tweeter Driver	Compression tweeter voice coil 25 mm (1 in), throat 13 mm (0.5 in)

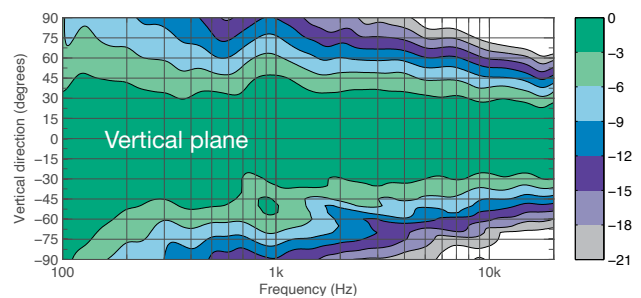
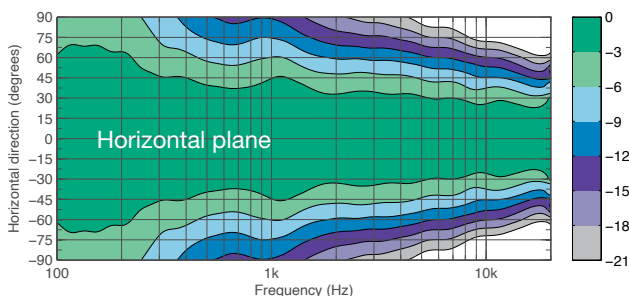
Typical linearity with sound level

SOUND LEVEL dB SPL at 1 m	TOTAL HARMONIC DISTORTION (THD)				
	< 0.5 %	< 1 %	< 3 %	< 10 %	max 50 < f < 7 k
90	50 ... 7.5 k	40 ... > 20 k			0.45 %
100	52 ... 2.3 k	49 ... 3.9 k	40 ... > 20 k		1.4 %
105	55 ... 1.5 k	52 ... 2.7 k	44 ... 7.8 k		2.5 %
110		60 ... 1.5 k	50 ... 3.7 k	34 ... > 20 k	4.7 %
115			75 ... 3.1 k	35 ... 7.8 k	7 %

Frequency responses on the acoustic axis and horizontally off-axis in 15 deg increments



Directivity





Genelec – The global leader in professional monitoring solutions

Taking steps to ensure the health of our environment and community has always been a top priority for Genelec. By following the highest environmental, social and industrial standards, we work tirelessly to:

- Reduce our carbon footprint.
- Manufacture with renewable energy and materials.
- Develop our technology for minimal consumption.
- Recycle our waste.
- Promote well-being.
- Reject any form of disposable culture.

In doing so, we provide quality, long-lasting and serviceable monitoring solutions you can trust and feel proud to use.

“Sustainability is as important to us as sound quality and profitability.”

– Siamäk Naghian, CEO.



For more information and details about your nearest dealer, visit www.genelec.com/8381A

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