

Intelligent.  
Powerful.  
Accurate.

Genelec 1234 SAM™ System



**GENELEC®**

# Powerful sound accuracy

Genelec's new 1234 Smart Active Monitoring (SAM™) system and its Remote Amplifier Module RAM XL are designed to achieve accurate and powerful sound reproduction in demanding recording and mixing environments. Providing extremely well controlled directivity leading to neutral sound reproduction, the 1234 SAM system represents the most modern technology and the highest performance in large, flush-mounted main monitoring systems.

## Power and precision

The 1234 has a system frequency response from 29 Hz to 21 kHz and is capable of delivering 125 dB SPL at 1 meter through a combination of efficient Genelec-designed Class D amplifiers providing 2x 750 W, 400 W and 250 W of short term power for the woofers, midrange and tweeter channels respectively. The 160 litre enclosure features two 12 inch drivers and a Genelec proprietary 5 inch midrange driver as well as a 1 inch treble driver mounted in a large Directivity Control Waveguide (DCW™).

The remote amplifier module RAM XL is a 3U high, standard 19 inch modular amplifier unit. Its powerful Digital Signal Processing algorithms are used for driver equalization, allowing very smooth magnitude response, and to achieve steep crossover filters which allow precise transition between drivers. DSP is also used to implement efficient driver overload protection enabling high system reliability as well as flexible room response compensation filtering.

## Intelligent accuracy

Genelec SAM systems are controlled via Genelec proprietary Loudspeaker Manager (GLM™) network and software. Genelec intelligent SAM technology integrates the 1234 system into the listening environment by automatically compensating for detrimental room influences. Adaptation to the room acoustics for any number of listening positions or even over an area is called – Genelec AutoCal™.

SAM technology enables computer controlled, flexible networked monitors and subwoofers to be aligned and adjusted for level, time-of-flight, and room response compensations.

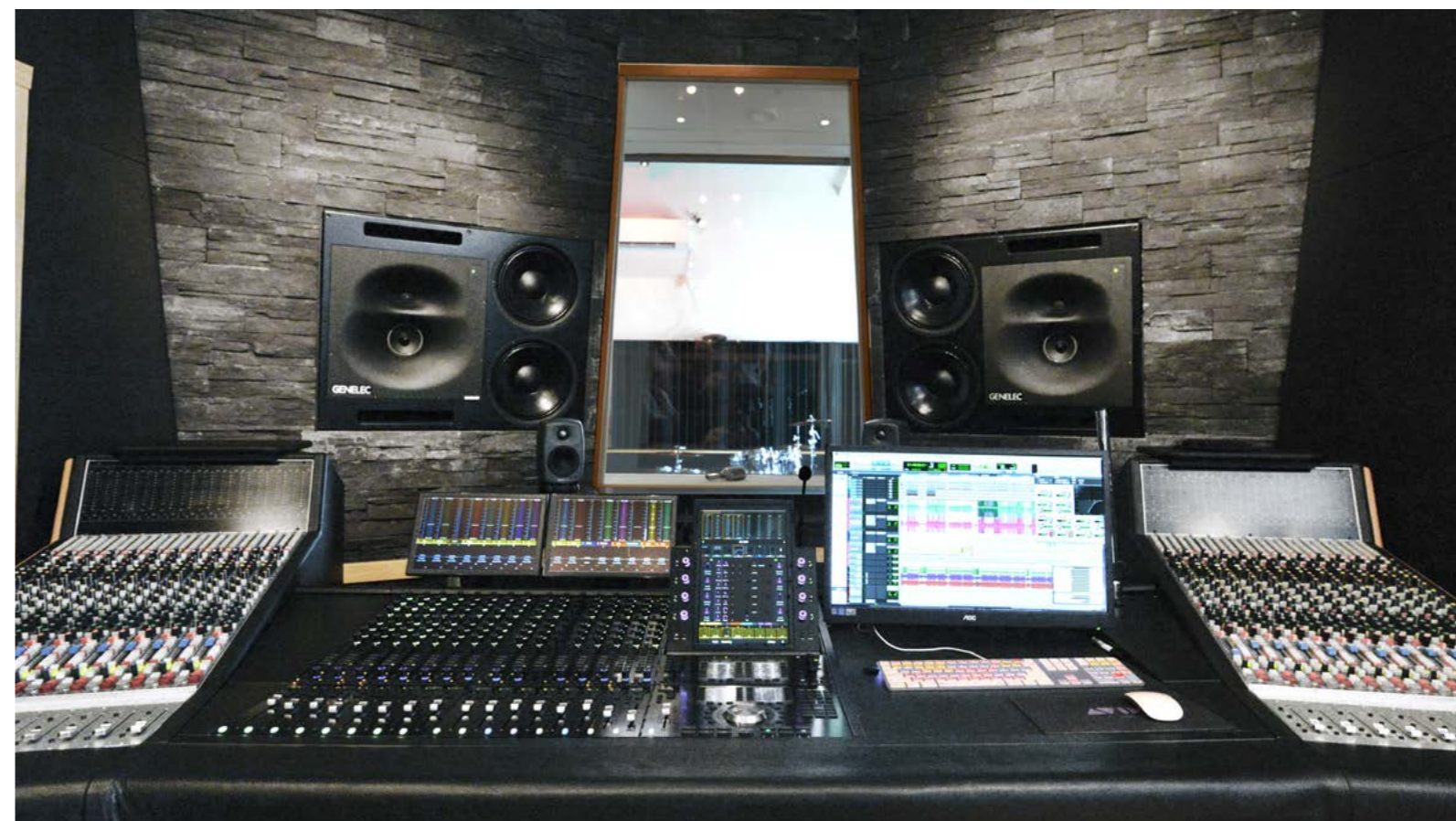
## A large, stable audio picture

Main monitors should reproduce full and accurate sound, but just simply going loud is not enough. Genelec's revolutionary Directivity Control Waveguide technology developed and refined over more than 30 years greatly improves the performance of direct radiating multi-way monitors. The Genelec DCW is designed to match the frequency response and directivity of each of the drivers. It results in excellent flatness of the overall frequency response – both on and off-axis. The improved directivity reduces the reflected sound energy at the listening position, and provides a wider listening area with far less frequency colouration. Sound staging, a critical component in any listening environment, is important not only for on-axis listening, but also off-axis. This feature accommodates not only the engineer doing his or her job, but others in the listening field as is so often the case in large control rooms. The Genelec DCW technology is an important component to a faithful listening experience!

## Pioneering technology – Made in Finland

Since its founding Genelec design philosophy is based on sustainable development and environmental values, aiming to deliver performance-driven, tonally neutral monitor and subwoofer systems for audio professionals. Conservation of natural resources and efficient use of materials and energy as well as long product lifetime are essential to us.

The Genelec 1234 SAM system packs the most modern and intelligent technology in a powerful, high performance main monitoring solution. All electronics, amplifier circuitry, drivers and enclosure are designed, assembled, tested and individually calibrated in the Genelec factory in Finland.



GLM 2.0 software



Remote Amplifier Module RAM XL



Network interface and measurement microphone










- **Directivity Control Waveguide (DCW™)** technology provides accurate sound reproduction for on- and off-axis listening positions.
- **High SPL and low distortion** thanks to high efficiency drivers and high power Class D amplifiers.
- **Quality electronic design** and precision DSP algorithms ensure high dynamic range and low self-generated noise.
- **Thoughtful thermal design** makes RAM XL extremely silent in order to be installed in the listening space.
- **Dual woofer design** extends the control of the directivity to low frequencies.
- **Genelec AutoCal™** measures the response in the listening area and applies relevant compensation to minimise the room's acoustical influence and the differences between various listening positions.
- **Smart Active Monitoring systems** eliminate guesswork in system configuration and acoustic performance.
- **Sustainability and green values.** Efficient use of materials, low energy consumption and extremely long life time by design.

## Features and benefits

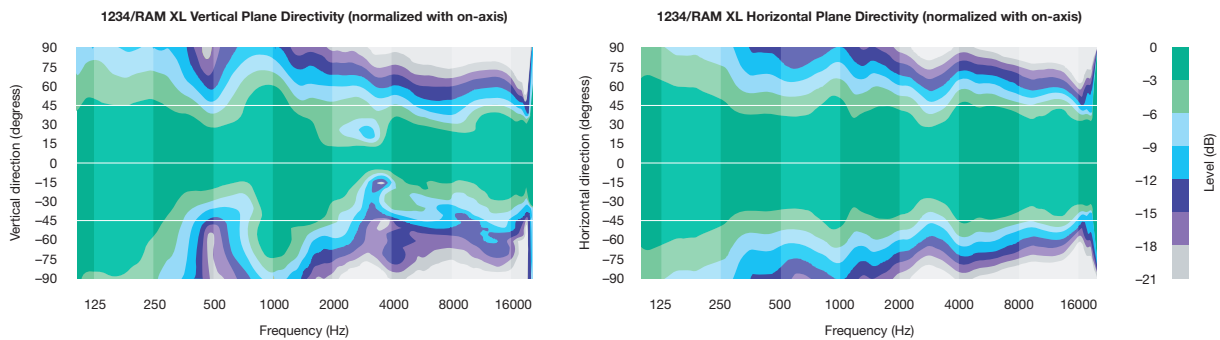
- Genelec advanced Directivity Control Waveguide provides a wide and controlled listening area, minimizing early reflections for very accurate sound reproduction on- and off-axis.
- Dual woofer design extends the control of the directivity to low frequencies.
- The RAM XL features high efficiency Class D amplification providing high SPL and dynamic range as well as high reliability with very low distortion.
- The modular RAM XL design and software control allow easy service operations and system updates.
- Thoughtful thermal design makes RAM XL extremely silent in order to be installed in the listening space.
- Genelec Intelligent Signal Sensing (ISS™) circuitry switches the system to standby when no audio input is detected, providing significant power consumption savings.
- Genelec quality and reliability ensure a long term security of investment, low energy consumption, and outstanding audio quality.

## Technical specifications

### 1234 SAM™ System

 125 dB <sup>1</sup>	 420 Hz and 3.2 kHz	 H 700 x W 890 x D 383 mm H 27 9/16 x W 35 x D 15 in RAM XL: standard 3U / 19 in rack
 29 Hz – 21 kHz (-6 dB)	 2 x Woofers 305 mm (12 in), midrange 125 mm (5 in), tweeter 25 mm (1 in) + DCW™	 73 kg / 161 lb 11.2 kg / 25 lb
 ± 2 dB (34 Hz - 20 kHz)	 Woofers 2x 750 W, midrange 400 W, tweeter 250 W (all Class D)	 1x XLR analogue input 2x XLR AES/EBU input / output 2x RJ45 control network

<sup>1</sup> Maximum short term sine wave acoustic output, averaged from 100 Hz to 3 kHz, measured in half space at 1 meter.



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