Designed to Adapt
Genelec Smart Active Monitoring (SAM™) Systems
Designed to Adapt

The last decade has experienced a rapid increase in global media content creation, resulting in significant changes in the way network facilities deal with increased workload. Now, more than ever, a growing number of audio productions are done in tighter, more confined working environments. This increases acoustic problems and lowers the reliability of monitoring. At the same time, a professional audio engineer needs high confidence in the monitoring system which should be acoustically adjusted to its environment.

Genelec, the world’s pioneer in active monitoring technology for over 37 years now provides the industry’s first, highly intelligent monitoring solution with its full-range product line – the Smart Active Monitoring (SAM™) Systems. From the smallest 8320A to the flagship 1236A, including a full range of highly versatile subwoofers, Genelec SAM Systems offer the most advanced solutions for recording studios, radio and TV broadcasting, mobile production vehicles and post-production houses of any type and size.

SAM technology creates a computer controlled, flexible network of monitors and subwoofers which allows you to easily and quickly set up all types of monitoring system from traditional stereo to various 3D immersive audio applications, or even experimental and research sound systems, with the entirely new and highly intuitive Genelec Loudspeaker Manager (GLM™) 2.0 software.

With Genelec proprietary AutoCal™ and the powerful DSP capability included in every SAM System, GLM can automatically measure, analyze and adjust every monitor and subwoofer on the network, and make the monitoring environment a fully aligned and integrated system with regards to level, timing and room response equalization adapting to different room acoustics. SAM Systems are today’s most sophisticated tool for accurate and reliable monitoring and an indispensable solution for any production facility.
Features and Benefits

Unprecedented powerful monitoring system

- Management of up to 30 SAM studio monitors and subwoofers covering all types of monitoring systems from traditional stereo to various 3D immersive audio applications, or even experimental and research sound systems.
- Handling both digital and analogue input signals (8330 and above)
- Volume control functions via GLM software master fader or via external wired or wireless volume controllers (optional) covering all possible applications.
- Flexible control of Solo, Mute, Bypass Bass Management and delay compensation for video system.
- SAM technology integrates the monitoring system into the listening environment by automatically compensating for detrimental room influences, especially when dealing with the challenging reality of room acoustics.
- SAM technology achieve results quickly and easily to implement neutral and consistent monitoring environment even in unfamiliar or improvised working environment, saving time and cost for your work.
- GLM allows to switch and compare the calibration results with just one click.

Intelligent and accurate calibration

- Controlled via Genelec proprietary Loudspeaker Manager (GLM) network and software, AutoCal provides the industry’s first integrated process for complete automated measurement, analysis and adjustment of every monitor on the network, achieving accurate sound reproduction with few clicks only.
- GLM AutoCal automatically optimizes and aligns each monitor and subwoofer for relative levels, time of flight, subwoofer crossover phase as well as individual room response compensations, while full manual control of all acoustic settings remains available to meet specific adjustment needs.
- SAM technology integrates the monitoring system into the listening environment by automatically compensating for detrimental room influences, especially when dealing with the challenging reality of room acoustics.
- SAM technology achieve results quickly and easily to implement neutral and consistent monitoring environment even in unfamiliar or improvised working environment, saving time and cost for your work.
- GLM allows to switch and compare the calibration results with just one click.

Multiple flexible functions

- SinglePoint™ and MultiPoint™ microphone positions provide measurements for one, two or three person mixing environments, optimizing the listening conditions over an area.
- Ability to store Group calibration settings for different listening positions (ex: recording/mixing engineer, musician and producer positions), to be re-called instantly.
- On-screen, real-time SPL reading of the active monitor Group allows to monitor carefully the production sound pressure level.
- SAM Systems can be used in Stand-alone mode without any computer. All monitoring system calibration parameters can be stored in each individual monitor and subwoofer if the GLM network needs to be disconnected.
GLM 2.0 User Kit

The GLM 2.0 is a powerful loudspeaker management system for all Genelec Smart Active Monitor (SAM™) systems. Available for Mac (Mavericks, Yosemite, El Capitan) and Windows PC, GLM 2.0 provides control to every aspect of any Genelec SAM product that is connected on the Genelec network.

AutoCal™ provides the industry’s first integrated process for complete automated measurement, analysis and adjustment of every monitor on the network, which can automatically optimize and align each monitor and subwoofer for relative levels, time of flight, subwoofer crossover phase as well as individual room response compensations.

GLM 2.0 simple, intuitive, but yet feature-rich user interface allows fast setting up and calibration procedures. GLM 2.0 allows your monitoring system to adapt to different room acoustics, providing neutral, accurate, reliable sound reproduction, reducing perceived differences between listening environments or positions, and allowing a monitor to be turned into the reference it needs to be for the challenging and complex tasks encountered by engineers today.

The GLM 2.0 User Kit includes the Genelec Loudspeaker Manager software, a factory-calibrated measurement microphone and a network adapter unit.
GLM System Connections

Control of up to 30 monitors and subwoofers in one room

Flexible GLM user interface

GLM™ CONTROL NETWORK

Volume control options

Accurate measurements of acoustics

USB

GLM Network Adapter

GLM 2.0 Software

Control of up to 30 monitors and subwoofers in one room

Flexible GLM user interface

GLM™ CONTROL NETWORK

Volume control options

Accurate measurements of acoustics

USB

GLM Network Adapter

GLM 2.0 Software

Windows

Operating System
Windows 8 or 8.1 (32- or 64 bit), Windows 7 SP1 or newer (32- or 64 bit), Vista, XP
Processor: Intel Pentium or compatible, 1.6 GHz minimum.
GPU*: DirectX 11.0 class or better.
RAM: 2 GB
Disk space: 1 GB
Display: 1024 x 768 or higher-resolution monitor.

Mac

Operating System
OS X 10.11 El Capitan, OS X 10.10 Yosemite, OS X 10.9 Mavericks
Processor and GPU*: Mac has a qualified Processor and GPU if Mac is running either of the operating systems above.
RAM: 2 GB
Disk space: 1 GB
Display: 1024 x 768 or higher-resolution monitor.

*GPU - Graphics Processing Unit
Compact SAM Systems

Perfect tools for audio monitoring in small environments

Small in stature, outstanding in performance, flexible to install, the 8320A and 8330A monitors and 7350A subwoofer offer the most advanced monitoring solutions especially for challenging small environments such as OB vans, radio and TV studios as well as audio and video production rooms.

### 8320
- **Level:** 100 dB
- **Frequency Response:** 55 Hz - 23 kHz (-6 dB)
- **Sensitivity:** ± 1.5 dB (66 Hz - 20 kHz)
- **Features:**
  - 3.0 kHz
  - Woofer 50 W
  - Tweeter 50 W
  - Woofer 4 in
  - Tweeter 3/4 in
- **Dimensions:** H 242 x W 151 x D 142 mm
- **Weight:** 3.2 kg / 7.0 lb

### 8330
- **Level:** 104 dB
- **Frequency Response:** 45 Hz - 23 kHz (-6 dB)
- **Sensitivity:** ± 1.5 dB (58 Hz - 20 kHz)
- **Features:**
  - 3.0 kHz
  - Woofer 50 W
  - Tweeter 50 W
  - Woofer 5 in
  - Tweeter 3/4 in
- **Dimensions:** H 299 x W 189 x D 178 mm
- **Weight:** 5.5 kg / 12.1 lb

### 7350
- **Level:** 104 dB
- **Frequency Response:** 22 Hz - 160 Hz (-6 dB)
- **Sensitivity:** +/- 3 dB (25 Hz - 150 Hz)
- **Features:**
  - 50 - 100 Hz in 5 Hz step
  - woofer 150 W
  - woofer 8 in
- **Dimensions:** H 410 x W 350 x D 319 mm
- **Weight:** 18 kg / 39.7 lb
The three-way revolution continues

8351 Acoustically Coaxial SAM Studio Monitor

The Genelec 8351 marks a unique achievement in electroacoustic engineering. Multiple innovations combine to create an astounding coaxial three-way system with the size of a typical two-way monitor. The Minimum Diffraction Coaxial (MDC™) midrange/tweeter combined with dual Acoustically Concealed Woofers (ACW™) design form an acoustically coaxial three-way system featuring an extremely large waveguide (MaxDCW™) across the entire front baffle. The 8351 breaks new ground. Extremely well controlled directivity in both vertical and horizontal orientation. Absence of sound colouration. Outstanding accuracy. Inventive design.
SAM Studio Monitors

8240
- 105 dB
- 41 Hz - 23 kHz (-6 dB)
- ± 1 dB (48 Hz - 20 kHz)
- 3.0 kHz
- Woofer 90 W
- Tweeter 90 W
- Woofer 6 1/2 in
- Tweeter 3/4 in + DCW™
- H 365 x W 237 x D 223 mm
- H 14 3/8 x W 9 3/8 x D 8 13/16 in
- 1 x XLR analogue input
- 2 x XLR AES/EBU input/output
- 2 x RJ45 control network
- 9.4 kg / 20.8 lb

8250
- 110 dB
- 32 Hz - 23 kHz (-6 dB)
- ± 1 dB (38 Hz - 20 kHz)
- 1.8 kHz
- Woofer 150 W
- Tweeter 120 W
- Woofer 8 in
- Tweeter 1 in + DCW™
- H 452 x W 286 x D 278 mm
- H 17 13/16 x W 11 1/4 x D 10 15/16 in
- 1 x XLR analogue input
- 2 x XLR AES/EBU input/output
- 2 x RJ45 control network
- 14.6 kg / 32 lb

8260
- 113 dB
- 23 Hz - 40 kHz (-6 dB)
- ± 1 dB (29 Hz - 21 kHz)
- 490 Hz, 2.6 kHz
- Woofer 150 W
- Midrange 120 W
- Tweeter 120 W
- Woofer 10 in
- Coaxial Mid/Tweeter
- MDC™ 5 / 3/4 in + DCW™
- H 593 x W 357 x D 347 mm
- H 23 3/8 x W 14 1/16 x D 13 5/8 in
- 1 x XLR analogue input
- 2 x XLR AES/EBU input/output
- 2 x RJ45 control network
- 27.5 kg / 60.5 lb
## SAM Studio Subwoofers

### 7260
- **SNR**: 108 dB
- **Frequency Range**: 19 Hz - 100 Hz (-6 dB)
- **Phase Response**: ± 3 dB (19 Hz - 100 Hz)
- **Woofer**: 120 W
- **Dimensions**: H 527 x W 462 x D 363 mm
- **Weight**: 27 kg / 59 lb

### 7270
- **SNR**: 112 dB
- **Frequency Range**: 19 Hz - 100 Hz (-6 dB)
- **Phase Response**: ± 3 dB (19 Hz - 100 Hz)
- **Woofer**: 250 W
- **Dimensions**: H 625 x W 555 x D 490 mm
- **Weight**: 51 kg / 112 lb

### 7271
- **SNR**: 118 dB
- **Frequency Range**: 19 Hz - 100 Hz (-6 dB)
- **Phase Response**: ± 3 dB (19 Hz - 100 Hz)
- **Woofers**: 500 W
- **Dimensions**: H 755 x W 803 x D 490 mm
- **Weight**: 82 kg / 180 lb
Three-way SAM Studio Monitors

Based on the highly successful and much respected 1037 and 1038, the 1237 and 1238 three-way SAM studio monitors feature on-board intelligence that allows them to automatically adapt to various acoustic environments. Both models benefit from a powerful new rack-mountable Remote Amplifier Module, RAM L, which can also be removed from the monitor’s enclosure for flush mounting installations. The RAM L amplifier unit can easily be installed in a 3U height standard 19 inch rack. The 1237 and 1238 are the perfect solutions for powerful and accurate monitoring in mid to large size production environments.

### 1237
- **Gain**: 118 dB
- **Frequency Response**: 32 Hz - 22 kHz (-6 dB)
- **SPL**: ± 2.5 dB (37 Hz - 20 kHz)
- **Dimensions**: H 680 × W 400 × D 380 mm
- **Connections**: 1 x XLR analogue input, 2 x XLR AES/EBU input/output, 2 x RJ45 control network
- **Weight**: 42 kg / 93 lb
- **Power Handling**: Woofer 500 W, Midrange 250 W, Tweeter 200 W
  - **Frequency Response**: 450 Hz, 3.0 kHz
  - **SPL**: 42 kg / 93 lb

### 1238
- **Gain**: 121 dB
- **Frequency Response**: 30 Hz - 22 kHz (-6 dB)
- **SPL**: ± 2.5 dB (35 Hz - 20 kHz)
- **Dimensions**: H 810 × W 480 × D 420 mm
- **Connections**: 1 x XLR analogue input, 2 x XLR AES/EBU input/output, 2 x RJ45 control network
- **Weight**: 57 kg / 126 lb
- **Power Handling**: Woofer 500 W, Midrange 250 W, Tweeter 200 W
  - **Frequency Response**: 420 Hz, 3.0 kHz
  - **SPL**: 42 kg / 93 lb

### 1238CF
- **Gain**: 117 dB
- **Frequency Response**: 50 Hz - 20 kHz (-6 dB)
- **SPL**: ± 2 dB (57 Hz - 20 kHz)
- **Dimensions**: H 610 × W 470 × D 235 mm
- **Connections**: 42 kg / 93 lb
- **Power Handling**: Woofers 2 x 8 in, Midrange 5 in, Tweeter 1 in + DCW™
  - **Frequency Response**: 420 Hz, 2.8 kHz
  - **SPL**: 42 kg / 93 lb

1234 SAM Main Studio Monitor

Based on the highly successful 1034, the 1234 integrates the state-of-art SAM technology, complete with a new Genelec-designed Remote Amplifier Module, the RAM XL. Achieving accurate and powerful sound reproduction in demanding recording and mixing environments, the 1234 SAM System represents the best in modern, high performance, large main monitoring systems.

1236 Flagship SAM Main Studio Monitor

Genelec’s new 1236 Smart Active Monitoring (SAM™) system and its individually calibrated Remote Amplifier Module RAM XL are designed to achieve extreme performance requirements for the most demanding recording and mixing environments. The 1236 SAM system is a masterpiece of modern technology, providing the highest possible performance in large format, flush-mounted main monitoring systems. All parts of the system are designed, assembled, tested, and individually calibrated in the Genelec factory in Finland to achieve such magnificent performance.

- **Specifications:**
  - **SPL:** 130 dB
  - **Frequency Range:** 17 Hz – 26 kHz (-6 dB)
  - **Phase Shift:** ± 2 dB (21 Hz - 20 kHz)

- **Features:**
  - **Woofers:** 2 x 1000 W
  - **Midrange:** 800 W
  - **Tweeter:** 400 W (all Class D)
  - **RAM XL:**
    - **Dimensions:** H 37 3/4 x W 46 1/2 x D 25 5/8 in
    - **Weight:** 11.2 kg / 25 lb
  - **Connectivity:**
    - **1 x XLR analogue in
    - **2 x XLR AES/EBU input/output
    - **2 x RJ45 control network

- **Dimensions:**
  - **1236 SAM:**
    - **Dimensions:** H 960 x W 1180 x D 650 mm
    - **Weight:** 182 kg / 401 lb
  - **RAM XL:**
    - **Dimensions:** H 37 3/4 x W 46 1/2 x D 25 5/8 in
    - **Weight:** 11.2 kg / 25 lb
# Product Performance

<table>
<thead>
<tr>
<th>Monitors</th>
<th>-6 dB LF Extension</th>
<th>Maximum SPL at 1 m *</th>
<th>Room volume up to</th>
<th>Subwoofers for 2 channels</th>
<th>Subwoofers for 5 channels</th>
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<tbody>
<tr>
<td>8320</td>
<td>55 Hz</td>
<td>100 dB</td>
<td>65 m³</td>
<td>7350</td>
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<td>45 Hz</td>
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<td>85 m³</td>
<td>7260</td>
<td>7270</td>
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<tr>
<td>8250 / 8351</td>
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<tr>
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<td>125 m³</td>
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<tr>
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<td>125 m³</td>
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<tr>
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<td>17 Hz</td>
<td>130 dB</td>
<td>400 m³</td>
<td>2x 7073</td>
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</table>

*) Maximum short term sine wave acoustic output on axis in half space, averaged from 100 Hz to 3 kHz at 1 m distance.

# Listening Distance Recommendations

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<th>0.5</th>
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<td>113</td>
<td>112</td>
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</table>

**Not recommended**

When too close to the monitor, the drivers - tweeter or midrange/tweeter - are not summing together properly at the crossover point, which affects the perceived frequency response balance.

**Recommended**

The long-term sound pressure levels (SPL) displayed take into consideration an average room reverberation time (RT60) of 0.3 sec. Note: at extremely long distances the SPL may become too low for the application.
GLM System - Quick Start

1) Download and install the GLM 2.0 software from www.genelec.com and connect the GLM Network Adapter.

3) Place the Genelec measurement microphone at the listening position at typical ear height and connect it to the GLM Network Adapter.

4) Start the GLM 2.0 software and follow the instructions in order to define your monitors' location and setup configuration.

5) Follow the instructions to automatically calibrate the system using GLM AutoCal.

Once the calibration is done, you can use the GLM 2.0 software to control your monitoring system conveniently. If needed, you can also store all settings in each individual monitor and subwoofer and disconnect the GLM network.
Designed to Adapt
Genelec Smart Active Monitoring (SAM™) Systems

Networked Smart Active Monitor (SAM™) systems feature automatic calibration to the acoustic environment.

Directivity Control Waveguide (DCW™) for flat on- and off-axis response.

Minimum Diffraction Enclosure (MDE™) for uncoloured sound reproduction.

Each transducer is driven by its own optimized amplifier.

Active crossover operating at low signal levels.

Sophisticated drive unit protection circuitry for safe operation.

Advanced reflex port design for extended low frequency response.

Highly efficient Laminar Spiral Enclosure (LSE™) provides accurate low frequency reproduction.

Minimum Diffraction Coaxial (MDC™) transducer reproduces outstanding sound image.

Versatile mounting options for all installation needs.

Vibration decoupling Iso-Pod™ stand improves sound image definition.

Intelligent Signal Sensing (ISS™) for power consumption reduction in stand-by mode.

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Detailed Datasheets of all Genelec models, Quick Setup, Guides and other useful information can be downloaded at www.genelec.com

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the sonic reference

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