DSP monitoring systems
The Genelec DSP loudspeaker systems utilize DSP to allow for all standard AES/EBU formats of digital audio.

- The DSP Series will accept sampling rates ranging from 32kHz to 192kHz.
- The DSP Series will also accept traditional analog signals.

AutoCal™

- AutoCal is an automated loudspeaker system alignment algorithm within GLM™ and GLM.SE™. A factory-calibrated Genelec measurement microphone is included.
- Correctly sets levels, distance compensating delays, phase (for subwoofers) and room response equalization.
- SinglePoint and MultiPoint microphone locations for one, two, or three-person mixing environments.
- Interactive Response Editor provides visual readout of measured and corrected response curves as well as full manual editing of acoustic settings.

GLM

- Genelec Loudspeaker Manager™ (GLM™) is a computer software that provides necessary control of all loudspeakers on the network.
- Up to 25 loudspeakers and 5 subwoofers are definable and controllable via standard CAT5 cabling.
- All functions and settings are stored in GLM System Setup Files or directly into each loudspeaker.

GLM.SE

- Genelec Loudspeaker Manager for Small Environments (GLM.SE™) is a computer software that provides complete control of the GLM.SE™ Monitoring System.
- Standard CAT5 cabling connects the host computer to the SE7261A DSP subwoofer and up to eight 8130A digital input monitors, connected to the subwoofer with standard AES/EBU cabling.
- All functions and settings are stored in GLM System Setup Files or directly into the SE7261A subwoofer.

Since their introduction, Genelec’s DSP loudspeakers and subwoofers and their GLM™ control software have received glowing reviews from worldwide audio press and professional audio people alike. The practicality of the independent control network and the carefully thought-out features and functions of the GLM™ software have been proven in the most demanding and prestigious applications, while the power of the AutoCal™ calibration function has saved the day for many users having to work in unfavourable acoustic environments.

The DSP loudspeaker line consists of two-way models 8240A and 8250A and three-way models 8260A and 1238CF. The matching DSP subwoofers are models 7260A, 7270A and 7271A. All these loudspeakers and subwoofers are equipped with integrated DSP circuitry and can be combined together in various configurations, all conveniently controlled by the GLM™ software.

Compact and easy to set up and use, the Genelec SE™ (Small Environment) DSP loudspeaker system offers the benefits of Genelec’s DSP technology in a compact format. At the heart of the system is the SE7261A DSP subwoofer with DSP processing supporting eight channels of digital audio and network control. The 8130A digital input active loudspeakers are not connected to the network but DSP processing is applied to the high-pass filtered output signal at the subwoofer, allowing the 8130A’s to be aligned and adjusted to perfection.

Access to the benefits of Genelec’s DSP monitoring systems is made easy by the AD9200 Analog to Digital converter. The AD9200 allows the use of the 7200 Series DSP subwoofers with analog signal sources, bringing the full potential of Genelec’s DSP monitoring systems to all applications.

Genelec DSP Systems have won the TEC Award for outstanding achievement in the category of Studio Monitor Technology three times: 2007 (8200/7200 Series), 2008 (GLM.SE System) and 2010 (8260A Three-Way DSP Loudspeaker).
DSP loudspeakers and subwoofers

The 8240A and 8250A two-way DSP loudspeakers are designed for near-field monitoring applications. The three-way models 8260A and 1238CF extend the application range to mid-sized rooms.

The 8260A presents the proprietary Minimum Diffraction Coaxial™ (MDC™) treble/midrange driver perfectly matched with the large DCW™ waveguide. This breakthrough in coaxial design provides improved imaging and overall sound quality on- and off-axis, extremely smooth frequency response leading to outstanding clarity and definition of the inner details of the music. With its high SPL capacity and low frequency reproduction that typically reaches down to 20 Hz after calibration with AutoCal™, the 8260A is the perfect main monitor for most applications. The 1238CF is a compact three-way DSP loudspeaker with excellent directivity characteristics, optimized for systems utilizing one or multiple subwoofers in medium sized control rooms. Using the latest version of GLM software, the 8260A and 1238CF can be combined with other 8200/7200 Series models in the same setup.

The most critical listening conditions require the most advanced monitoring tools. Customers with digital audio production environments will be able to enjoy all the benefits of the new technologies in the Genelec DSP Loudspeakers and Subwoofers. The marriage of an outstanding analog system performance with the breakthrough technologies of DSP, Genelec Loudspeaker Manager™ setup and installation software and AutoCal™ automated self-calibration algorithm allow ultimate refinement of sound reproduction in modern control rooms and an unsurpassed accuracy also in acoustically unfavourable monitoring environments.

To complement the DSP loudspeakers, Genelec has developed three robust DSP subwoofers. Built upon the proven LSE™ (Laminar Spiral Enclosure™) technology of the 7000 Series, the 7260A, 7270A and 7271A deliver the same articulate and precise low frequency reproduction. The DSP subwoofers provide the cornerstone for those control room environments that are equipped with fully digital monitor/buss outputs, with connectivity via four AES/EBU digital inputs and outputs. All standard 7000 series functions are available in Stand Alone mode. Connected to the network through GLM™ software, additional powerful resources become available. When coupled with AutoCal™, Genelec’s automated self-calibration algorithm, enhanced acoustic integration is provided with every loudspeaker in virtually any control room environment.

These DSP systems are, by design, straightforward and easy to use, versatile in configuration and adaptable acoustically to nearly any environment you place them in, providing outstanding clarity and definition with a naturalness that you can immediately trust. And with respect to our customers most valuable asset – time – these systems are up and running quickly and effortlessly.
Genelec SE™ Small Environment DSP system

The SE™ DSP System consists of SE7261A DSP subwoofer + up to 8 x 8130A monitors + GLM.SE™ software.

The Genelec SE™ (Small Environment) DSP System brings a new approach to solving many acoustic issues associated with small recording and mixing environments. Smaller production rooms beg for sensible solutions in monitoring. The SE™ DSP System brings easy to use and affordable Genelec quality to this wide range of customers. The system utilizes the 10” SE7261A DSP subwoofer in combination with the 8130A digital input active monitors. The SE™ System easily configures to all popular audio configurations from subwoofer-assisted stereo to multi-channel reference systems. GLM.SE™ software control of the SE7261A DSP subwoofer provides all necessary network connections to the host computer and supplies extensive DSP resources for the 8130A digital input loudspeakers through its AES/EBU digital outputs.

Genelec Loudspeaker Manager for the SE™ system, GLM.SE™ software, provides a familiar graphical user interface, speeding users through system setup and fully automated AutoCal™ acoustic system calibration. It also provides an efficient working environment for professionals with system setup file support and efficient tools for evaluating audio content. Video editing suites, mobile production trucks, personal music studios and broadcast control rooms all gain control of their monitoring environment with the Genelec SE™ DSP System.
AutoCal™ – fast, easy and consistent acoustic self-calibration

**AutoCal™** provides the industry’s first integrated process for complete automated measurement, analysis, and adjustment of every monitoring loudspeaker in the control network to correctly align and integrate each monitoring loudspeaker into the mixing environment.

- Uses factory-calibrated Genelec acoustic measurement microphone (included)
- AutoCal automatically creates a compensation file for host soundcard
- AutoCal aligns Level and compensates Distance differences
- Acoustic Response Editor provides accurate graphical display of the measured response, filter compensation and the resulting system response for each loudspeaker, with full manual control of acoustic settings
- SinglePoint™ and MultiPoint™ microphone positions provide measurements for one, two or three-person mixing environments

**In GLM™ system**

- The 8240A and 8250A two-way DSP loudspeakers utilize four parametric DSP notch filters and four parametric DSP shelving filters. The three-way models 8260A and 1238CF utilize six notch filters and four shelving filters.
- 7200 subwoofers utilize four parametric DSP notch filters, plus bass roll off controls
- Adjusts correct crossover phase for all subwoofers in the network
- Vertical Axis Trim for situations where loudspeaker acoustic axis cannot be physically optimized (not available with the three-way models)

**In GLM.SE™ system**

- 8130A digital input loudspeaker can utilize two parametric DSP notch filters, plus the room response controls in the loudspeaker hardware
- SE7261A subwoofer utilizes four parametric DSP notch filters, plus bass roll off controls
- Adjusts correct crossover phase for SE7261A subwoofer on the network
GLM™ – Genelec Loudspeaker Manager™

GLM™ software brings the entire DSP system together under computer network control:

- GLM™ provides connectivity for up to thirty loudspeaker and subwoofers, for example twenty-five 8200 Series loudspeakers and up to five 7200 series subwoofers
- Enables unlimited custom User Setups with all settings and functions stored in GLM™ setup files, or one setup stored directly into each loudspeaker for Stand Alone use
- Step-by-step Wizard guides user through complete cabling connections and loudspeaker labeling
- Rapid Cabling setups for most common system configurations
- Manual Cabling setups for customized system configurations
- Groups for both Channels and Loudspeakers may be customized by User
- Solo/Mute function for all Loudspeakers and Groups
- Volume controlled via computer, 3rd party USB devices or customer mixing console or workstation
- Video Display Compensation for compensating inherent video delays in digital video devices
- GLM™ provides interface to AutoCal™ automated acoustic self-calibration algorithm

Genelec DSP systems support three modes of operation:

- Stand Alone: This mode exemplifies the standard operation of Genelec 8000/7000 products with the standard set of room response controls and sensitivity adjustment found on connector panel DIP switches.
- GLM™ Computer Assisted: Once the network is connected and running, all DIP switches on connector panel are ignored. All acoustic parameters of the loudspeakers set through AutoCal™ or User Adjustment are controlled by GLM™. This mode allows user defined setups to facilitate a wide variety of mixing requirements.
- Stand Alone Stored Settings: all acoustic parameters made in GLM™ can be safely stored to all loudspeakers and the network can then be removed, providing users with the confidence of secure and consistent performance when a computer with GLM™ software is not used.
GLM.SE™ – Genelec Loudspeaker Manager™ for Small Environments

GLM.SE™ software brings the entire DSP system together under computer network control

• GLM.SE™ provides connectivity for one SE7261A DSP subwoofer combined with up to eight 8130A digital input loudspeakers
• Enables multiple custom User Setups with all settings and functions able to be stored in GLM.SE™ setup or directly to the SE7261A subwoofer
• Step-by-step Wizard guides user through complete cabling connections and loudspeaker labeling
• Rapid Cabling setups for most common system configurations
• Manual Cabling setups for customized system configurations
• Groups for both Channels and Loudspeakers may be customized by User
• Solo/Mute function for all Loudspeakers and Groups
• Volume controlled via computer, 3rd party USB device or customer console
• Video Display Compensation for inherent video delays in digital video devices
• GLM.SE™ provides interface to AutoCal™ automated acoustic self-calibration algorithm

Genelec GLM.SE systems support three modes of operation:

• Stand Alone: This mode models Genelec 8000/7000 products with standard set of room response controls and sensitivity adjustments found on the connector panel DIP switches.
• GLM.SE™ Computer Assisted: Once the loudspeaker control network is connected and running, all DIP switches on the SE7261A connector panel are ignored. All acoustic parameters of the loudspeakers set through AutoCal™ or User Adjustment are controlled by GLM.SE™. This mode allows very flexible user defined setups to facilitate a wide variety of mixing requirements.
• Stand Alone Stored Settings: All acoustic parameters defined in GLM.SE™ software can be permanently stored in the SE7261A and the network then removed, providing users with the confidence of secure and consistent performance when a computer with GLM.SE software is not used.
### Genelec DSP monitoring loudspeakers and subwoofers

**Specifications in brief**

<table>
<thead>
<tr>
<th>Model</th>
<th>8240A</th>
<th>8250A</th>
<th>8260A</th>
<th>1238CF</th>
<th>7260A</th>
<th>7270A</th>
<th>7271A</th>
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<tbody>
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### Genelec SE™ DSP monitoring system

**Specifications**

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<th>SE7261A</th>
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<td>550 VA</td>
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<td>Height</td>
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<tr>
<td></td>
<td></td>
<td>550 VA</td>
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</table>

### DSP monitoring systems

Contemporary audio production facilities are in transition from analog to digital with Genelec DSP monitoring systems on the forefront. While console technology advances, monitor paths have remained largely analog, with only a few manufacturers offering digital audio monitoring output. Environments with such digital capabilities integrate seamlessly with our DSP Systems.

In response to those customers who wish to interface conventional analog monitoring connections to Genelec DSP and SE™ DSP systems, Genelec offers the AD9200A eight-channel analog to digital converter.

Eight-channel balanced analog input is delivered via a 25-pin DB25 connector wired to the Tascam ProTools industry standard pinout. Digital output consists of four XLR connections, each carrying two channels of AES/EBU audio. The AD9200A converter outputs AES3 format with 24-bit word length and 192 kHz sample rate, providing the same consistent high quality found on Genelec DSP products.

### AD9200A analog to digital converter

**Table of Specifications**

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<th>Specification</th>
<th>Value</th>
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Figure 1. The curves above show the effect of the "Bass Tilt", "Treble Tilt", "Desktop Low Frequency" and "Bass Roll-Off" controls on the free field response of the 8240A.

Figure 2. The upper curve group shows the horizontal directivity characteristics of the 8240A measured at 1 m. The lower curve shows the system's power response.

Figure 3. The curves above show the effect of the "Bass Tilt", "Treble Tilt", "Desktop Low Frequency" and "Bass Roll-Off" controls on the free field response of the 8250A.

Figure 4. The upper curve group shows the horizontal directivity characteristics of the 8250A measured at 1 m. The lower curve shows the system's power response.

Figure 5. The curves above show the effect of the "Bass Tilt", "Treble Tilt", "Desktop Low Frequency" and "Bass Roll-Off" controls on the free field response of the 8260A.

Figure 6. The upper curve group shows the horizontal directivity characteristics of the 8260A measured at 1 m. The lower curve shows the system's power response.

Figure 7. 8240A horizontal directivity plot.

Figure 8. 8240A vertical directivity plot.

Figure 9. 8250A horizontal directivity plot.

Figure 10. 8250A vertical directivity plot.

Figure 11. 8260A horizontal directivity plot.

Figure 12. 8260A vertical directivity plot.

Figure 13. 8260A on-axis free field response up to 40 kHz.
Figure 20. The curves above show the effect of the "Bass Tilt", "Treble Tilt", "Desktop Low Frequency" and "Bass Roll-Off" controls on the free field response of the 8130A.

Figure 21. The upper curve group shows the horizontal directivity characteristics of the 8130A measured at 1 m. The lower curve shows the system's power response.

Figure 22. The curves above show the effect of the "Bass Tilt", "Treble Tilt", "Desktop Low Frequency" and "Bass Roll-Off" controls on the free field response of the 1238CF.

Figure 23. The upper curve group shows the horizontal directivity characteristics of the 1238CF measured at 1 m. The lower curve shows the system's power response.

Figure 18. The curves above show the effect of the "Bass Roll-Off" control on the free field response of the 7260A/SE7261A subwoofers.

Figure 19. The curves above show the effect of the "Bass Roll-Off" control on the free field response of the 7270A/7271A subwoofers.

Figure 20A horizontal directivity plot.

Figure 21A vertical directivity plot.

Figure 22A horizontal directivity plot.

Figure 23A vertical directivity plot.

Accessories

Genelec offers a wide range of mounting hardware, carrying bags, signal cables and other accessories for all Genelec products. Please see our website www.genelec.com for up-to-date information.
Detailed Datasheets of all Genelec models, Quick Setup Guides and other useful information can be downloaded at

www.genelec.com

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