GENELEC®

8010A



Operating Manual

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8010A

Active Monitoring System

General description

The bi-amplified Genelec 8010A is an extremely compact two-way active monitoring loudspeaker designed for professional applications. It contains drivers, power amplifiers, active crossover filters and protection circuitry. The MDE™ (Minimum Diffraction Enclosure™) enclosure is made of die-cast aluminium and shaped to reduce edge diffraction. Combined with the advanced Directivity Control Waveguide™ (DCW™), this design provides excellent frequency balance in difficult acoustic environments. If necessary, the bass response of 8010A can be extended with a Genelec subwoofer.

Packing contents

Each 8010A is supplied with a mains cable and this operating manual.

Mounting considerations

Align the monitors correctly
Always place monitors so that their acoustic axes converge at ear height at the listening position (see Figures 1 and 2). Vertical orientation of monitors is preferred, as it minimises acoustical cancellation problems around the crossover frequency.

Maintain symmetry
Check that the monitors are placed symmetrically and at equal distance from the listening position. If possible, place the monitors so that the listening position is on the centerline of the room and the monitors are at an equal distance from the room centerline.

Minimise reflections
Acoustic reflections from objects close to the monitors, like desks, cabinets, computer monitors etc. can cause unwanted colouration and blurring of the sound image. These reflections can be minimised by placing the monitor away from such surfaces.

Minimum clearances

If the monitor is installed in a restricted space such as a cabinet or integrated into a wall structure, sufficient cooling for the amplifier and functioning of the reflex port must be ensured.

A minimum clearance of 2.5 centimeters (1 in) behind, above and on sides of the monitor must be found. The space adjacent to the amplifier must either be ventilated or sufficiently large to dissipate heat so that the ambient temperature does not rise above 35 degrees Celsius (95°F)

Connections

Connect the mains cables only after you have completed connecting audio signal cabling.

The 8010A has a balanced XLR 7 kOhm audio input connector. It can also be connected to an unbalanced RCA line level audio source with a suitable adapter cable your Genelec dealer can provide. As the 8010A contains amplifiers, no power amplifier is needed. Never connect 8010A to the loudspeaker outputs of a power amplifier, integrated amplifier, or receiver.

When all audio connections are completed, connect the monitors to mains with the supplied mains cables. They will switch on automatically.

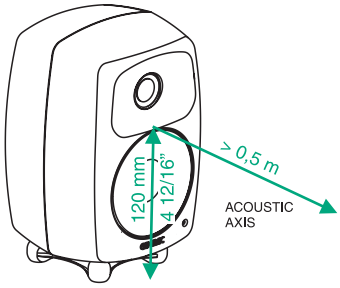


Figure 1. Location of the acoustic axis

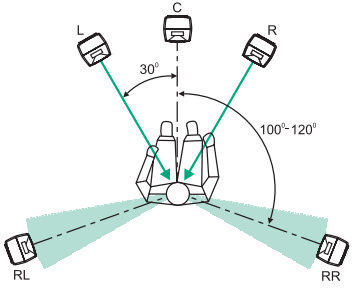


Figure 2. Correct alignment of the monitors in a 5-channel system.

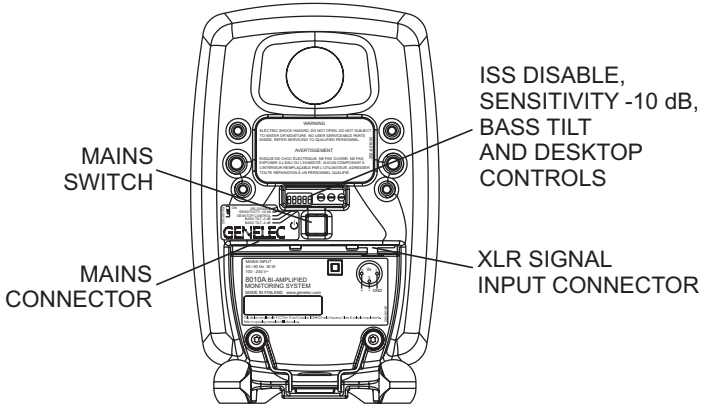


Figure 3. Control and connector layout on the rear panel of a 8010A.

Monitor Mounting Environment	Desktop	Bass Tilt
Flat anechoic response	OFF	OFF
Free standing in a damped room	OFF	OFF
Free standing in a reverberant room	OFF	-2 dB
Near to a wall	OFF	-4 dB
Near field on a reflective surface	ON (-4 dB @ 200 Hz)	-2 dB
In a corner or a cabinet	OFF	-6 dB

Table 1: Suggested tone control settings for various acoustical environments

ISS™ Autostart function

The signal sensing Autostart function of the 8010A powers it up when playback begins. Automatic powering down to standby mode happens after the playback has ended. The power consumption in standby mode is less than 0.5 watts. The monitor will automatically and rapidly start up once an input signal is detected.

There is a slight delay in the automatic powering up. If this is undesirable, the ISS™ function can be disabled by setting the “ISS DISABLE” switch on the back panel to “ON” position. In this mode, the monitor is powered on and off using the power switch on the back panel.

Sensitivity adjustment

The input sensitivity (playback level) of the 8010A has two alternative settings, normal and -10 dB. The normal setting is factory default and the lower, -10 dB setting can be selected by turning the “SENSITIVITY -10 dB” switch on the back panel to “ON”. The output levels are 100 dB @ -6dBu and 90 dB @ -6 dBu respectively. Choose the setting that gives the desired playback level and good resolution of the volume control.

Tone controls

The frequency response of the Genelec 8010A can be adjusted to match the acoustic environment by setting the tone control switches on the rear panel. The controls are “Bass Tilt” and “Desktop”. Table 1 shows some examples of typical settings in various situations. Figure 4 shows the effect of the controls on the anechoic response.

Start adjustment by setting all switches to “OFF” position. Measure or listen systematically through the different combinations of settings to find the best frequency balance.

Bass Tilt

The Bass Tilt control offers three attenuation levels for the bass response of the monitor, usually necessary when the monitors are placed near a wall or other room boundaries. The attenuation levels are -2 dB (switch 1 “ON”), -4 dB (switch 2 “ON”) and -6 dB (both switches “ON”).

Desktop Control

The “Desktop” low frequency control (switch 3) attenuates the bass frequencies by 4 dB at 200 Hz. This feature is designed to compensate for the boost often occurring when the monitor is placed on a table or similar horizontal surface.

Mounting options

The 8010A offers several mounting options: IsoPod™ (Isolation Positioner/Decoupler™) vibration insulating table stand allows tilting the monitor towards the listener. On the rear, there are three pairs of threaded holes compatible with Omnimount®, VESA, and Sanus brackets. For a full list of available options, please consult Genelec's accessories catalogue at www.genelec.com or contact your Genelec dealer.

Maintenance

No user serviceable parts are to be found inside the unit. Any maintenance or repair of the 8010A should only be done by qualified service personnel.

Safety considerations

Although the 8010A has been designed in accordance with international safety standards, the following warnings should be observed to ensure safe operation and to maintain the monitor in safe operating conditions:

- Servicing and adjustment must only be performed by qualified service personnel. The monitor must not be opened.
- Do not expose the monitor to water or moisture. Do not place any objects filled with liquid, such as vases, on the monitor or near it.
- This monitor is capable of producing sound pressure levels in excess of 85 dB, which may cause permanent hearing damage.
- Free flow of air behind the monitor is necessary to maintain sufficient cooling. Do not obstruct airflow around the monitor.
- The amplifier is not completely disconnected from the AC mains service unless the mains power cord is removed from the amplifier or the mains outlet.

Guarantee

This product is guaranteed for a period of two years against faults in materials or workmanship. Refer to supplier for full sales and guarantee terms.

Compliance to FCC rules

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

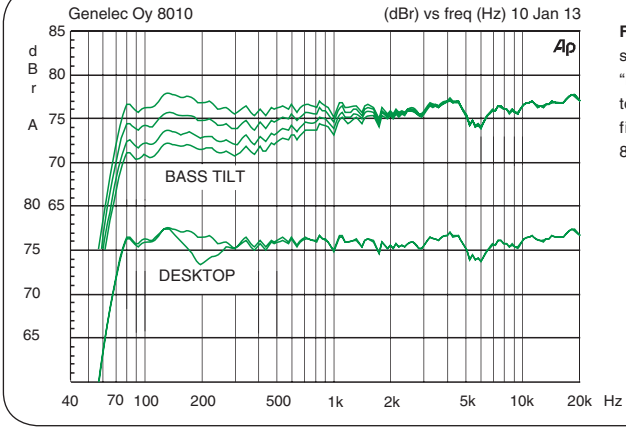


Figure 4. The curves show the effect of the "Bass Tilt" and "Desktop" controls on the free field response of the 8010A

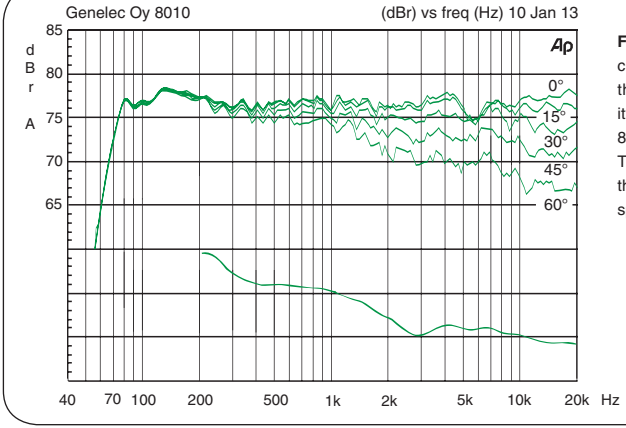


Figure 5. The upper curve group shows the horizontal directivity characteristics of the 8010A measured at 1 m. The lower curve shows the system's power response.

SYSTEM SPECIFICATIONS

Lower cut-off frequency, –6 dB:	≤ 67 Hz
Upper cut-off frequency, –6 dB:	≥ 25 kHz
Free field frequency response (± 2.5 dB):	74 Hz–20 kHz
Max. short term sine wave acoustic output on axis in half space, averaged from 100 Hz to 3 kHz	
at 1 m distance	≥ 96 dB SPL
at 0.5 distance	≥ 102 dB SPL
Maximum long term RMS acoustic output in same conditions with IEC weighted noise (limited by driver unit protection circuit) @ 1 m:	≥ 91 dB SPL
Maximum peak acoustic output per pair on top of console, @ 1 m distance with music material:	≥ 105 dB
Self generated noise level in free field @ 1 m on axis (A-weighted):	≤ 5 dB
Harmonic distortion at 80 dB SPL @ 1 m on axis	
Freq: 70…400 Hz	< 3 %
>400 Hz	< 0.5 %
Drivers:	
Bass	76 mm (3 in) cone
Treble	19 mm ($^3/_4$ in) metal dome
Weight:	1.5 kg (3.3 lb)
Dimensions:	
Height including Iso-Pod™ table stand	195 mm ($7^{11}/_{16}$ in)
Height without Iso-Pod™ table stand	181 mm ($7^1/_8$ in)
Width	121 mm ($4^3/_4$ in)
Depth	115 mm ($4^1/_4$ in)

CROSSOVER SECTION

Input connector: XLR female 7 kOhm:	pin 1 gnd, pin 2 + pin 3 -
Input level for 100 dB SPL output at 1 m:	-6 dBu (Sensitivity -10 dB off)
Level control range relative to max output:	-10 dB (Sensitivity -10 dB on)
Desktop control operating range:	0 to –4 dB @ 200 Hz
Crossover frequency, Bass/Treble:	3.0 kHz
Bass Tilt control operating range in –2 dB steps:	0 to –6 dB @ 100 Hz
The 'CAL' position is with all tone controls and Sensitivity -10 dB function set to 'off'	

AMPLIFIER SECTION

Bass amplifier power with an 8 Ohm load:	25 W
Treble amplifier power with an 8 Ohm load:	25 W
Long term output power is limited by overload protection circuitry	
Amplifier system distortion at nominal output THD+N:	≤ 0.08 %
Mains voltage:	100 - 240 V AC
Voltage operating range:	±10 %
Power consumption	
Standby	<0.5 W
Idle	5 W
Full output	30 W

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