

GENELEC®

8340A

Operating Manual

操作手册



Introduction

Congratulations and a thank you for the purchase of this Genelec Smart Active Monitor (SAM) system. This manual addresses the stand-alone setup and use of the 8340A SAM monitor. These monitors can also be set up and used with the Genelec Loudspeaker Manager GLM™ and the proprietary Genelec monitor control network and software, offering much more versatile acoustic settings and features. Use with the GLM™ is described in the GLM™ System Operating Manual.

All Genelec SAM systems are designed to integrate easily into all professional environments, supporting both standard analog line level audio and AES/EBU formatted digital audio signals.

The 8340A is suitable for professional monitoring tasks demanding high precision and reliability of monitoring. The Minimum Diffraction Enclosure™ (MDE™) and advanced Directivity Control Waveguide™ (DCW™) technologies provide excellent frequency balance even in difficult acoustic environments.

Each monitor is supplied with a mains cable, one 5 m GLM network cable and an operating manual.

Energy saving Intelligent Signal Sensing (ISS™) can be turned on to put the monitor automatically into a deep sleep state where the product consumes less than one Watt of power. Upon sensing an input signal the monitor automatically wakes up to full operation. The wait until entering the ISS power save can be configured using the GLM software. When the ISS is active you can have your monitoring system ready for action at all times.

System setup using GLM™ Control Network

Although the 8340A can be used without the GLM™ software and control network, they only reach their full potential when set up and calibrated using the GLM™ software. Genelec Loudspeaker Manager GLM™ and the proprietary Genelec monitor control network and software offer automated acoustic equalization and alignment for any reproduction system from simple stereo to very complex 3D immersive audio setups including also one or more subwoofers. GLM setup is fast and accurate. The settings can be controlled with a computer or be permanently stored in the monitors to make the setup available at all times even when a computer is not in use. Genelec recommends setting up SAM monitoring systems using GLM. You can find a detailed description of the setup and the use of GLM™ in the GLM™ System Operating Manual.

The setup is fast and consists of the following steps:

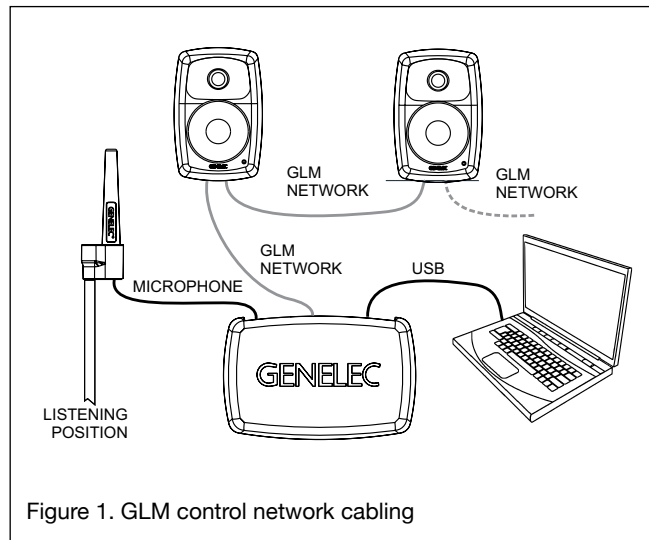


Figure 1. GLM control network cabling

- Connect a CAT5 (RJ45) cable between each monitor (and subwoofer) and finally to the control network input of the GLM Adapter device (see Figure 1).
- Connect the GLM Adapter device to computer USB connector.
- Using a microphone stand, place the Genelec measurement microphone at the listening location with the microphone pointing upwards and the microphone top at the height of the engineer's ear. The microphone is a part of the GLM User Kit.
- Connect the microphone cable to the microphone input in the GLM Adapter device.
- Download the GLM software at the Genelec web site (www.genelec.com).
- Install the GLM software and follow the instructions in the software to measure and set up your monitors.
- If you plan to not use a computer for controlling the monitors, use the GLM software to write the setting into the monitors (use menu item "Store | Store the Current Group Settings...").

While the GLM network is disconnected the settings stored using the Genelec Loudspeaker Manager software can be selected in use by setting the STORED switch ON.

Setup without using the GLM

When GLM is not available, you can use the settings on the monitor for system setup. These settings are limited but provide the basic acoustical calibrations and input selection. To use this method, set the STORED switch OFF.

Connect the MAINS INPUT to the mains supply. These products support any mains voltage globally (100-240 VAC, 50-60 Hz) so they can be plugged in anywhere. If the mains power is provided with a generator, inverter or certain lower-quality UPS devices, we recommend filtering of the mains power voltage harmonics and taking care that the voltage

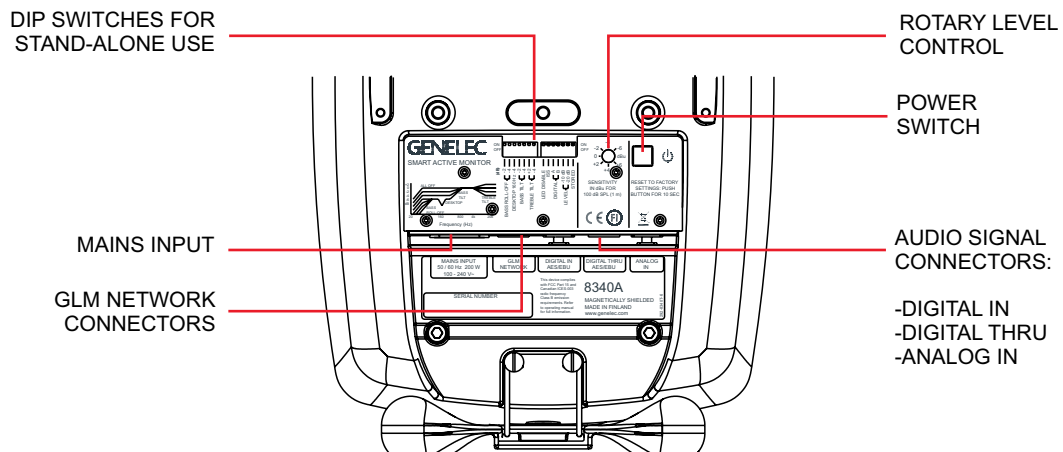


Figure 2. Connectors and controls on the back panel of a 8340A.

supply is stable.

The ANALOG IN connector is used for analog audio signals. The maximum input level is +25 dBu. These monitors produce 100 dB SPL sound level at 1 meter in free space for an analogue input signal of -6 dBu.

The DIGITAL IN AES/EBU female XLR connector is for AES/EBU formatted digital audio input signals. This input is selected automatically when a valid digital audio signal is present. Analog input is selected when the AES/EBU signal input is disconnected. The AES/EBU input supports two channels in a single cable). When the digital source device controls the digital output level, it may be advantageous to lower the level on the monitor's controls, which will enable the use of a higher digital signal level with more digital resolution. With digital inputs the audio is referenced to 0 dBFS (dB relative to the digital full scale, the largest level that can be represented in the AES/EBU signal). These monitors produce 100 dB SPL sound level at 1 meter in free space for a digital input signal of -30 dBFS. The DIGITAL OUT male XLR carries an unaltered copy of the digital signal fed into the digital in connector. This enables daisy-chaining up to four monitors.

The CONTROL NETWORK RJ-45 connectors are used with Genelec Loudspeaker Manager™ (GLM™) network. These connectors are not Ethernet LAN compatible. Do not connect to Ethernet LAN.

Stand-Alone Control Functions

Bass Roll-Off Control

Bass Roll-Off control attenuates the monitor's output near the

Monitor Mounting Position	Treble Tilt	Bass Tilt	Bass Roll-Off	Desktop
Flat anechoic response	None	None	None	None
Free standing in a damped room	None	-2 dB	None	None
Free standing in a reverberant room	None	-4 dB	None	None
Near field on a reflective surface	None	-2 dB	None	-4 dB
In a corner	None	-4 dB	-4 dB	None

Table 1. Suggested Tone Control settings for some typical monitor placement positions.

cut-off frequency. Attenuation levels of -2 dB, -4 dB or -6 dB (both switches ON) can be selected.

Desktop 160 Hz

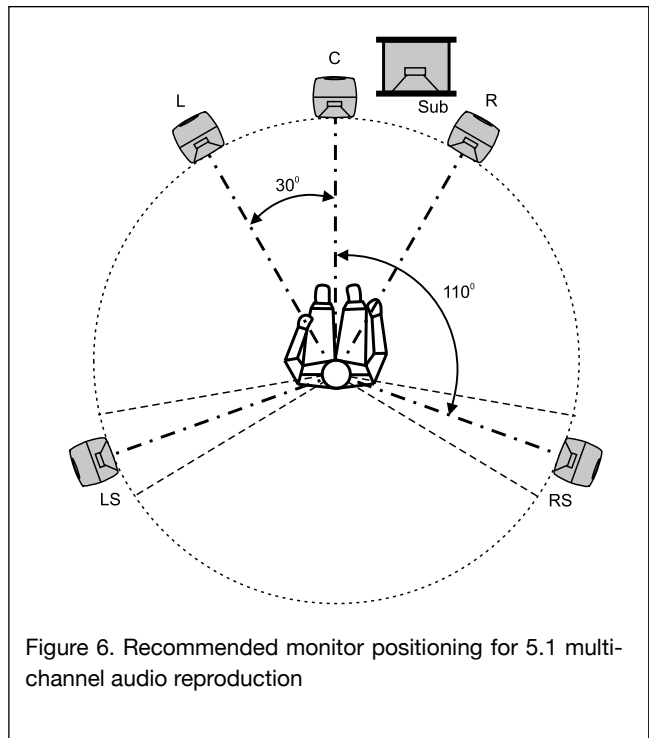
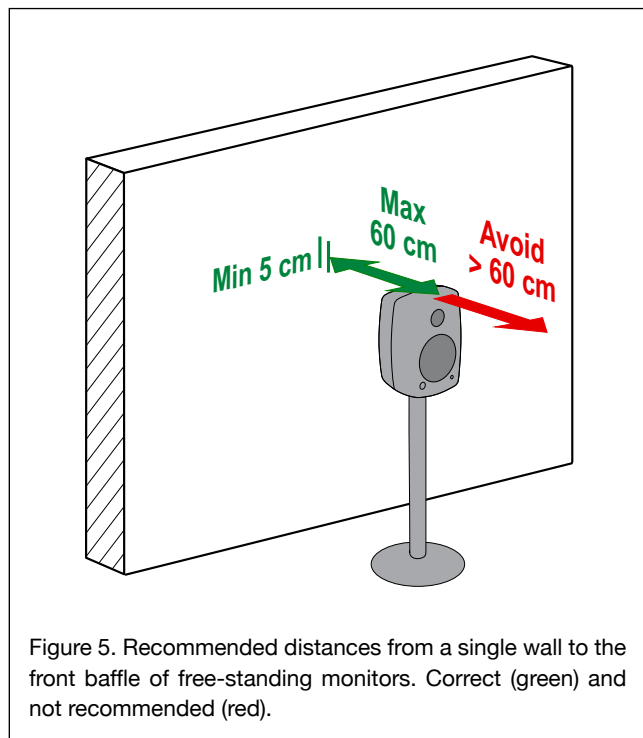
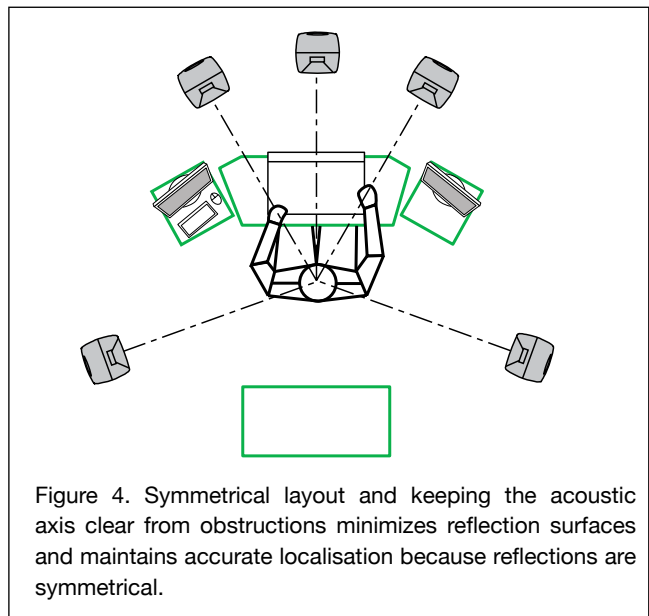
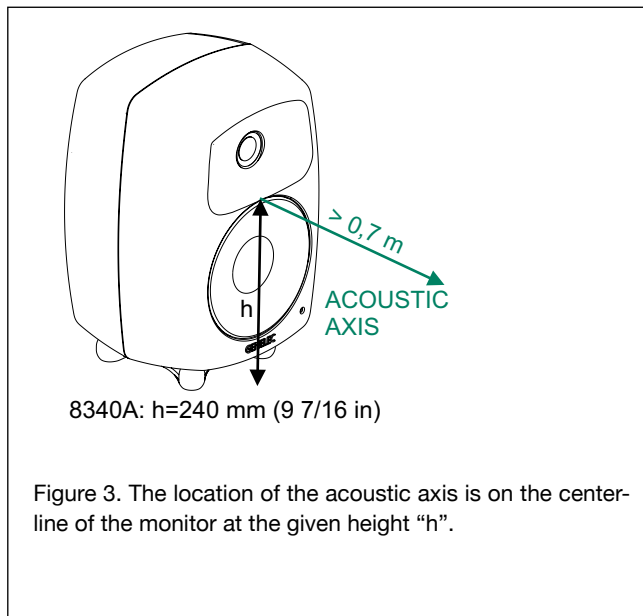
The desktop low frequency control (switch 5) attenuates the bass frequencies around 160 Hz by 4 dB. This feature is designed to compensate for the boost often occurring at this frequency range when the monitor is placed upon a meter bridge, table or similar reflective surface.

Bass Tilt Control

The Bass Tilt control switches (switches 3 and 4) offer three attenuation levels for the bass response below 800 Hz, usually necessary when the monitors are placed near room boundaries. The attenuation levels are -2 dB, -4 dB and -6 dB.

Treble Tilt Control

Treble Tilt control allows adjusting the treble response above 5



kHz by +2 dB, -2 dB or -4 dB, which can be used for correcting an excessively bright or dull sounding system or to compensate for high frequency level loss if the monitor is placed behind a screen.

LED Disable

This switch shuts off the front panel LED light.

ISS

This switch activates or deactivates the ISS automatic power saving function. The default time for ISS activation is 60 minutes, but can be adjusted in GLM.

Digital

The Digital switch selects the digital audio channels on the AES/EBU. Turning both switches on reproduces the sum of the A and B channels. A 6 dB of attenuation is applied to avoid

Colour	Indication
Solid green	Normal state, normal operation
Blinking green	GLM is adjusting the monitor
Green blink every 10 sec.	Monitor is in an ISS power saving sleep state
Red blink	Power amplifier overload protection is active (audio is modified because of protection)
Solid red	Monitor is muted
Yellow	Monitor is not in the active (playing) group
Yellow blinking	Overheat protection is active (audio is modified because of protection)

Table 2. Monitor front panel light indications summary

overloading the monitor. If the AES/EBU cable is operated in dual-wire mode, the monitor detects this automatically and the channel selection switches have no effect.

Level

The Level switches scale down the monitor output level in 10 dB steps. The effects of these switches add up and combine with the effect of the rotary level adjustment control. The combined total setting range is 42 dB.

Stored

Stored switch selects the use of the controls on the monitor's back panel or the settings stored inside the monitor memory using the GLM system calibration software. Setting the Stored switch to OFF position selects the settings defined by the monitor's own controls. Setting the Stored switch to ON position selects the use of internally stored GLM settings. Using the Stored option overrides all adjustments done with the monitor's own controls.

Operating Environment

These monitors are designed for indoor use only. The permissible ambient temperature is 15-35 degrees Celsius (50-95°F) and relative humidity 20% to 80% (non-condensing). When the product has been stored or transported in cool environment and is taken into a warm room, wait 0.5-1 hours before opening any packing to prevent condensation of humidity before connecting to mains power. Sufficient cooling must be ensured. The minimum clearance is 50 mm (2 in) behind, above and on both sides of the monitor. The space must be ventilated sufficiently to dissipate the heat.

Mounting and Placing Monitors

Mounting Options

The vibration insulating Isolation Positioner/Decoupler™ (Iso-Pod™) table stand allows tilting of the monitor for correct alignment of the acoustic axis. The stand can be attached to three points on the enclosure, allowing vertical and two horizontal positions. Aim the monitor so that its acoustic axis point towards the listening position (see Figure 3). Vertical orientation is preferable, as this eliminates acoustical cancellation problems around the crossover frequency. Place the monitors symmetrically at equal distances from the listening position. If possible, place the listening position on the left-right centerline of the room (see Figure 4). When a monitor far away (1 to 2.2 m, 3-7 ft) from the acoustically hard wall behind the monitor, an acoustic reflection from the wall may cause cancellation of low frequencies and reduce bass output.

Acoustic reflections from objects like desks, cabinets, computer monitors etc. can cause unwanted colouration and blurring of the sound image. Minimise these by placing the monitors away from acoustically reflective surfaces. Putting the monitors on stands behind and above a mixing console usually improves the response over placing monitors on a meter bridge. Symmetrical positioning of the sound reflecting objects maintains a balanced soundstage (see Figure 4).

A wide variety of ceiling and wall mounts are available through your Genelec dealer. The 8340A can be fitted with König & Meyer monitor mounts using two M6 x 10 mm threaded holes on the enclosure back. There is an M10 x 10 mm threaded hole in the base of the monitor. Do not use this thread for mounting the monitor on a microphone stand. Monitor stands typically have an incompatible 3/8" UNC thread. A wide selection of accessories is available for Genelec monitors. Consult the Genelec Accessories Catalogue at www.genelec.com or your local distributor/dealer for information.

Front Panel Light

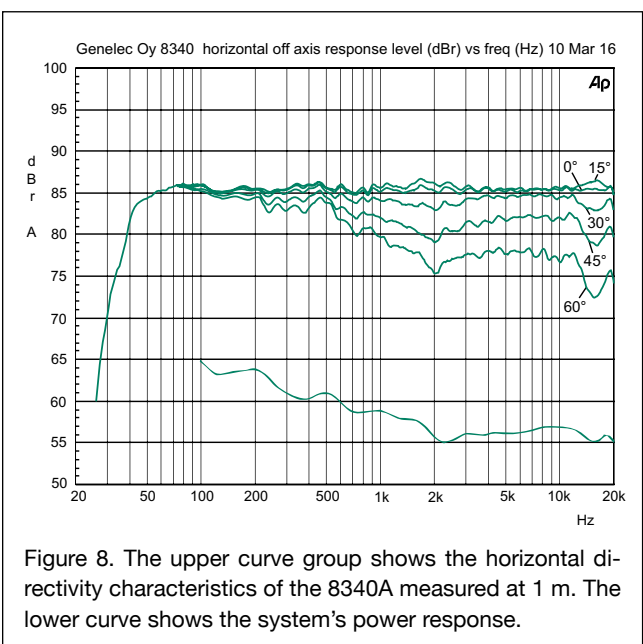
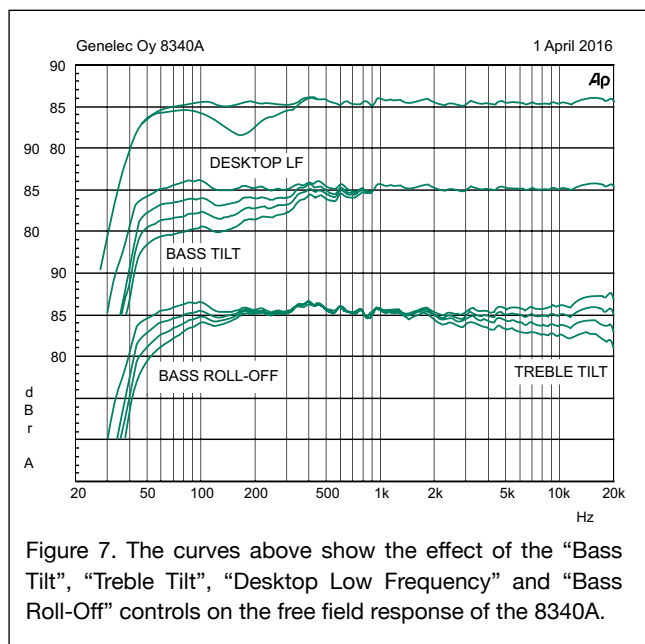
Normally, the light on the front panel is green, indicating normal operational mode. Red and yellow colours are used to indicate special situations. See Table 2 above.

Use with Subwoofers

Genelec recommends using the 7300 series subwoofers. For more detailed system configuration and matching products, please consult the on-line Genelec Product Selection Tool at www.genelec.com.

Maintenance

There are no user serviceable parts inside the monitor. Maintenance or repair must only be done by a Genelec certified service.



Safety Considerations

Although the 8340A has been designed in accordance with international safety standards, to ensure safe operation and to maintain the monitor under safe operating conditions, the following warnings and precautions must be observed:

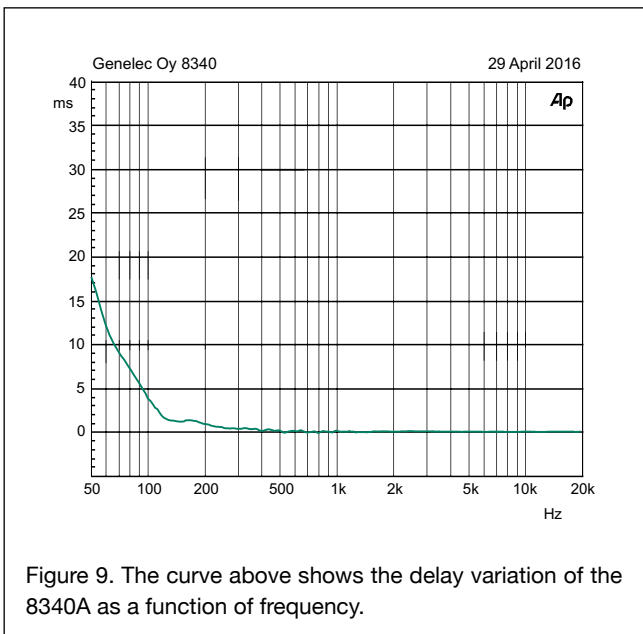
- Servicing and adjustment must only be performed by a certified Genelec service. The monitor enclosure must not be opened.
- Do not use this product with an unearthed mains cable or a mains connection without the protective earth contact as this may lead to personal injury.
- To prevent fire or electric shock, do not expose the unit to water or moisture.
- Do not place any objects filled with liquid, such as vases on the monitor or near it.
- Note that 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.
- Free flow of air behind the monitor is necessary to maintain sufficient cooling.
- Do not obstruct airflow around the monitors.

WARNING!

These monitors are capable of producing sound pressure levels in excess of 85 dB, which may cause permanent hearing damage.

Guarantee

The Genelec 8340A is guaranteed for two years against



manufacturing faults or defects altering performance. Refer to the reseller for full sales and guarantee terms.

Compliance to FCC Rules

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.

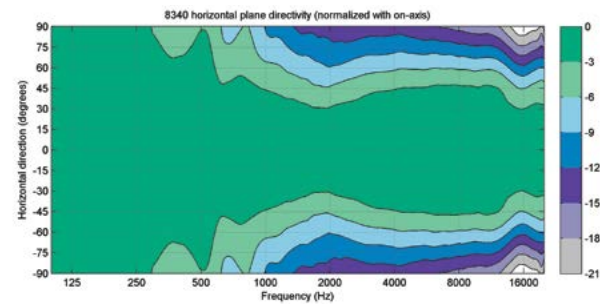


Figure 10. The curves above show the horizontal directivity characteristics of the 8340A.

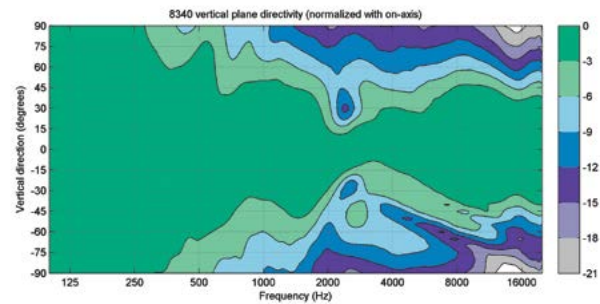


Figure 11. The curves above show the vertical directivity characteristics of the 8340A.

SYSTEM SPECIFICATIONS	
	8340A
Lower cut-off frequency, -6 dB	< 38 Hz
Upper cut-off frequency, -6 dB	> 22 kHz
Accuracy of frequency response, ± 1.5 dB	45 Hz – 20 kHz
Maximum short term sine wave acoustic output on axis in half space, averaged from 100 Hz to 3 kHz at 1 m	≥ 110 dB SPL
Maximum long term RMS acoustic output in the same conditions with IEC weighted noise (limited by driver protection circuit) at 1 m	100 dB SPL
Maximum peak acoustic output per pair in a listening room with music material at 1 m	≥ 118 dB
Self generated noise level in free space at 1 m on axis (A-weighted)	≤ 5 dB
Harmonic distortion at 90 dB SPL at 1 m on axis Freq: 50...100 Hz > 100 Hz	< 2 % < 0.5 %
Drivers Bass Treble All drivers are magnetically shielded	165 mm (6½ in) cone 19 mm (¾ in) metal dome
Weight	8.4 kg (18.5 lb)
Dimensions Height Width Depth Height with Iso-Pod™	350 mm (13⅓ in) 237 mm (9⅜ in) 223 mm (8⅞ in) 365 mm (14⅜ in)

AMPLIFIER SECTION

	8340A
Bass amplifier short term output power	150 W
Treble amplifier short term output power	150 W
(Long term output power is limited by driver protection circuitry)	
Amplifier system THD at nominal output	<0.01%
System Signal to Noise ratio, A-weighted	
Bass	> 109 dB
Treble	> 110 dB
Mains voltage	100-240 VAC 50/60 Hz
Power consumption	
ISS active	< 1 W
Idle	12 W
Full output (short term)	180 W

SIGNAL PROCESSING SECTION

	8340A
Analog signal input connector XLR female, balanced 10 kOhm	
Maximum analog input signal	pin 1 gnd
Analog input sensitivity (100 dB SPL at 1 m)	pin 2 non-inverting,
Analog input gain selection, rotary control	pin 3 inverting
	+25.0 dBu
	-6 dBu
	Adjustable from +6 to -6 dBu
Digital signal input connector XLR female 110 Ohm	AES/EBU Single Wire
Digital signal output / Thru connector XLR male 110 Ohm	AES/EBU Single Wire
Digital audio input	
Word length	16 - 24 bits
Sample rate	32 - 192 kHz
Digital input sensitivity (100 dB SPL at 1 m)	-30 dBFS
Digital input gain sensitivity, rotary control	Adjustable from +6 to -6 dBu
Control network	
Type	Proprietary GLM™ network
Connection	2 RJ45, CAT5 cables
Crossover frequency	2.6 kHz
GLM™ software frequency response adjustment*	
Parametric notch filters	16
Shelving filters	2 LF and 2 HF
System room response calibration	Genelec GLM AutoCal™ AutoCal™, GLM™ manual, Stand-alone*

* The notch and shelving filters adjustments, AutoCal™ and GLM™ manual system calibration features are part of the Genelec Loudspeaker Manager (GLM™) software

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介绍

感谢您选择 Genelec 真力智能有源音箱 (SAM™)。本手册将为您介绍 8340A 脱离真力音箱管理软件 (GLM™) 使用时的使用方法。您也可以使用 GLM 软件通过其专有的控制网络对音箱进行设置, 以获得更多的功能和声学设置选项。有关 GLM 的使用说明请见《GLM™ 系统使用手册》。

真力 SAM 系列音箱可以轻松集成到所有专业场合中, 支持标准线路模拟输入和 AES/EBU 格式数字输入。

8340A 适用高精度、高可靠性要求的专业监听场合。借助最低衍射箱体 (MDE™) 和先进的指向性控制波导技术 (DCW™), 即使在复杂的声学环境中, 音箱也能为您提供平直的频率响应。

每只音箱配备 1 根电源线, 1 根长度 5 米的 GLM 网线, 以及此本操作手册。

智能休眠功能 (ISS™) 启用后, 可使音箱自动进入休眠状态, 此状态下消耗的功率小于 1 瓦。当检测到输入信号时, 音箱将自动回到工作状态。可通过 GLM 软件调整进入休眠的等待时间。当启用 ISS™ 功能时, 您的音箱将随时待命。

使用 GLM 进行音箱设置

尽管 8340A 可以脱离 GLM 系统进行使用, 但仅有经过 GLM 软件设置和校准, 才能发挥出其最佳性能。从简单的立体声系统到复杂的 3D 沉浸式音频系统, 从仅使用一只超低音箱到使用多只超低音箱, 真力 GLM 系统能为任何重放系统提供自动声学校准。GLM 软件使用便捷, 校准精准。相关设置可以通过电脑控制, 也可以存储到音箱中, 无需随时在电脑上运行 GLM 软件。真力建议使用 GLM 软件设置 SAM 系列音箱。有关 GLM 软件使用的详细说明请见《GLM 系统使用手册》。

GLM 系统使用便捷, 包括以下步骤:

1. 使用 5 类网线 (RJ45) 将每只音箱 (包括超低音箱) 串接起来, 最终连接到 GLM 适配盒 (见图 1);
2. 通过 USB 线将 GLM 适配盒连接到电脑;
3. GLM 用户套件中包含一支校准话筒。使用话筒支架, 将真力校准话筒置于听音位置。校准话筒朝上, 话筒顶部与听音者耳朵齐平;
4. 将话筒连接到 GLM 适配盒的话筒输入接口;
5. 从真力官方网站 (www.genelec.cn) 的“服务支持 > GLM 软件下载”页面) 下载最新的 GLM 软件;

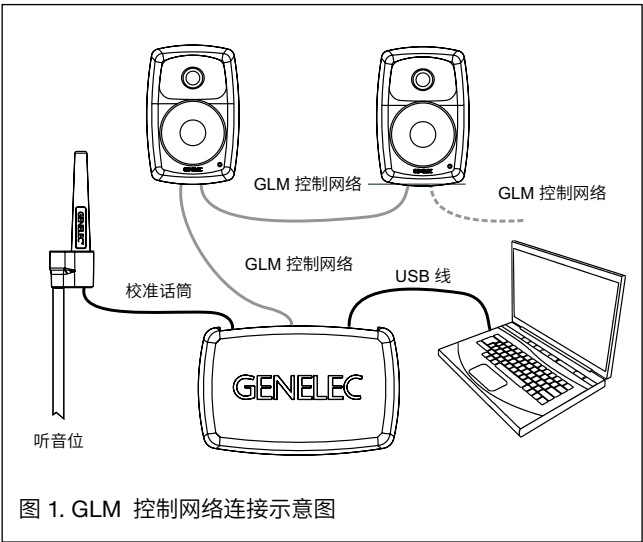


图 1. GLM 控制网络连接示意图

6. 安装最新的 GLM 软件, 根据软件提示进行音箱设置和校准;
7. 如果您不需要随时在电脑上运行 GLM 软件来控制音箱, 可以将 GLM 设置存储到音箱中 (利用菜单选项中的“编组预设 (Group Preset) > 保存到音箱 (Store to Loudspeakers)”)。

断开 GLM 控制网络后, 您需要将音箱背板上的“保存 (Stored)”拨档开关拨至“ON”, 来启用刚才所保存的 GLM 设置。

脱离 GLM 进行音箱设置

脱离 GLM 时, 您仍可以通过调整音箱背板上的设置来调整系统设置。这些设置功能相对有限, 仅能提供基本声学校准和输入源选择功能。如需使用此模式, 请确保将“保存 (Stored)”拨档开关拨至“OFF”。

电源输入 (MAINS INPUT) 接口用于连接电源。音箱支持全球通用电压 (100-240 伏交流电, 50-60 Hz), 可以用于不同电源规格的环境。当使用发电机、逆变器或低质量 UPS 等设备供电时, 我们建议使用额外设备来滤除电源杂波, 并注意电压供应是否稳定。

模拟输入 (ANALOG IN) 接口用于输入模拟音频信号。最大模拟信号输入电平为 +25 dBu。当模拟输入信号为 -6 dBu 时, 可在自由声场中距离音箱 1 米处得到 100 dB SPL 的声压级。

数字输入 (DIGITAL IN) 卡侬母座接口用于输入 AES/EBU 格式数字音频信号。当连接有效的数字信号时, 音箱将自动选择数字输入。当数字信号的线缆断开时, 音箱将自动选择模拟输入 (一

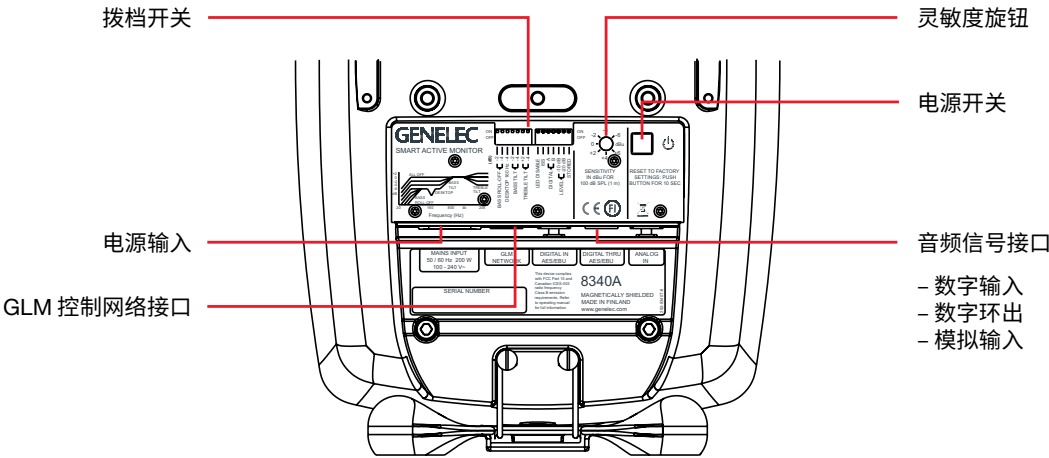


图 2. 8340A 背板的接口与控制开关

根 AES/EBU 线缆支持传输 2 个通道)。当使用音量可调的数字音源时，更优的方式是降低音箱的音量而非降低音源的音量，这种方式使得音源的输出电平更高，从而充分获得更高的数字精度。使用数字输入时，参考电平为 0 dBFS (dB 相当于数字信号满量程，用于表示 AES/EBU 信号的最大电平)。当数字输入信号电平为 -30 dBFS 时，可在自由声场中距离音箱 1 米处得到 100 dB SPL 的声压级。数字环出 (DIGITAL OUT) 卡侬公座接口用于将数字输入信号完整地输出给下一只音箱，最多允许以菊花链方式连接 4 只音箱。

控制网络 RJ45 接口 (GLM NETWORK) 仅适用于连接真力音箱控制网络，不兼容以太网。请勿将其连接至路由器、交换机等以太网设备。

单机控制功能

低频滚降 (Bass Roll-Off) 控制

低频滚降 (Bass Roll-Off) 可以衰减低频截止点附近频率的电平。衰减电平的设置包括 -2 dB、-4 dB 以及 -6 dB (两个开关均拨至“ON”)。

音箱安装摆位	高频搁架控制	低频搁架控制	低频滚降控制	桌面补偿
消声室	关闭	关闭	关闭	关闭
在经过声学处理的房间内自由摆放	关闭	-2 dB	关闭	关闭
在混响室内自由摆放	关闭	-4 dB	关闭	关闭
摆放在反射面上，用于近场监听	关闭	-2 dB	关闭	-4 dB
摆放在角落	关闭	-4 dB	-4 dB	关闭

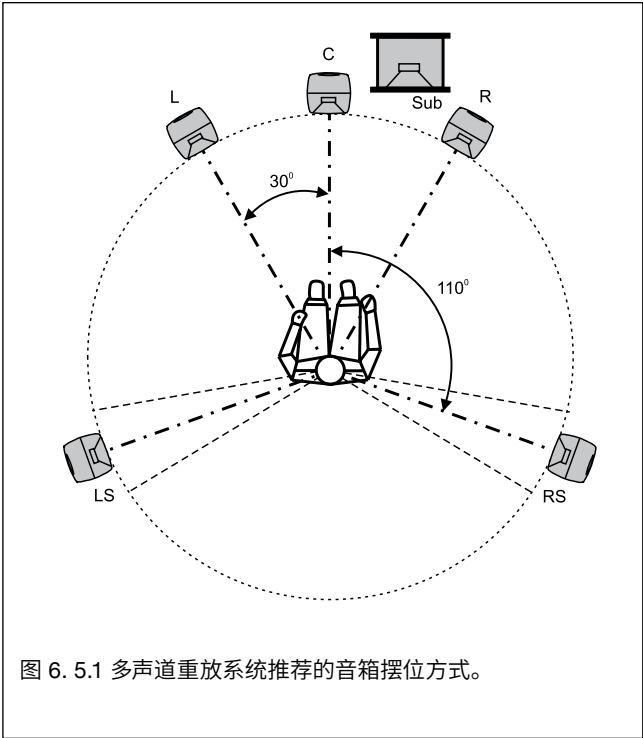
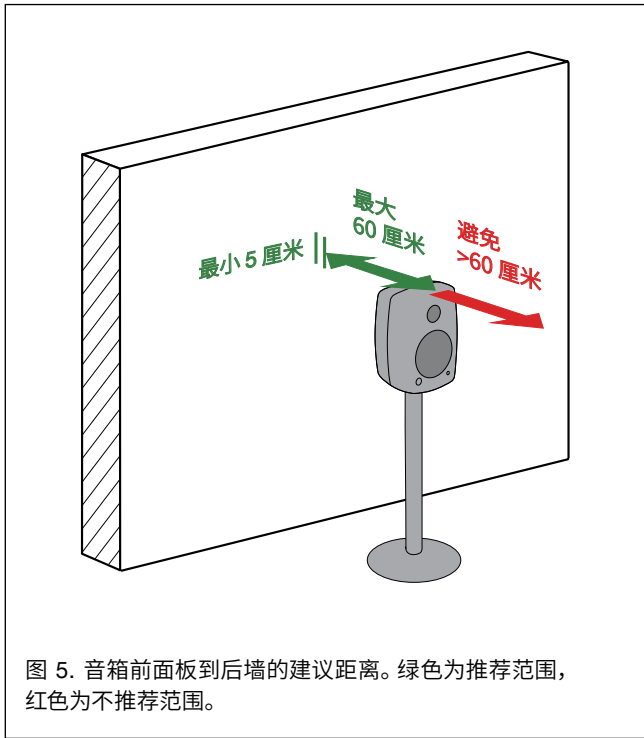
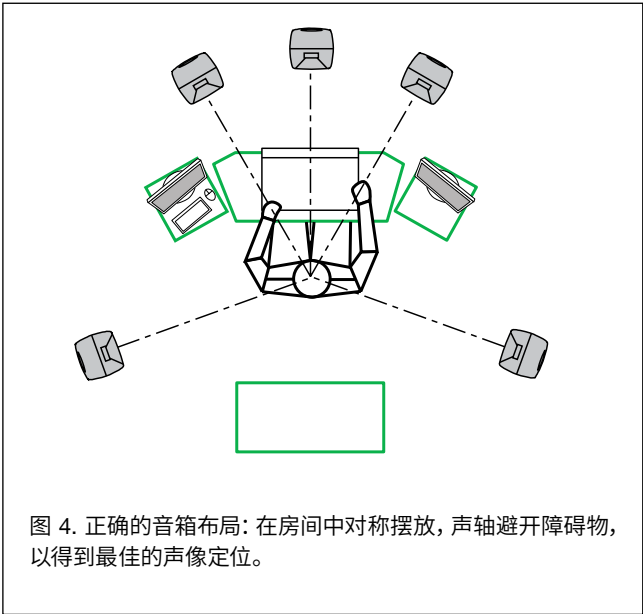
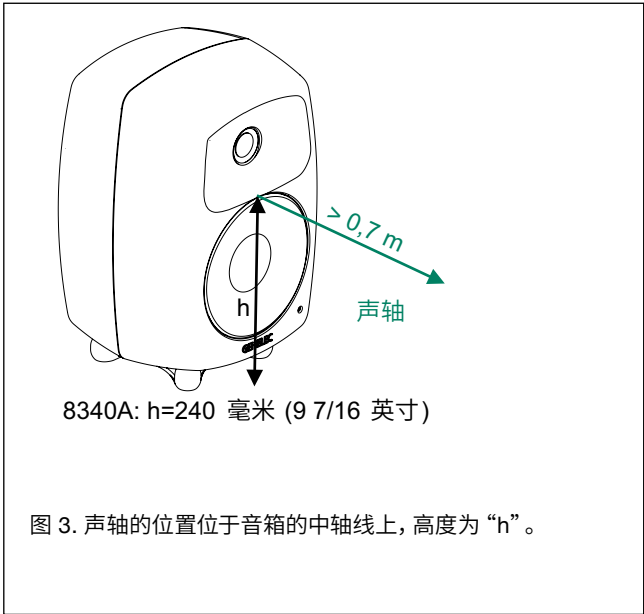
表 1. 在不同声学环境下的频率响应调节建议

桌面补偿 (Desktop 160)

使用桌面补偿功能 (第 5 个开关)，可将 160 Hz 左右的频率衰减 4 dB。当音箱放置在调音台表桥、桌面或类似反射面上时，使用该设置可以补偿这种摆位带来的低频隆起。

低频搁架 (Bass Tilt) 控制

低频搁架 (Bass Tilt) (第 3 个和第 4 个开关) 为 800 Hz 以下的低频响应提供了三种不同程度的衰减设置。通常当音箱靠近房间边界时，需要启用此设置。衰减电平的设置包括 -2 dB、-4 dB 以及 -6 dB。



高频搁架 (Treble Tilt) 控制

高频搁架 (Treble Tilt) 可调节 5 kHz 以上的高频，设置包括 +2 dB、-2 dB 以及 -4 dB。当音响系统的高频过分明亮或暗淡时，或者音箱置于透声幕后导致高频衰减时，需要启用此设置进行补偿。

关闭 LED (LED Disable)

此拨挡开关可以关闭前面板的 LED 指示灯。

智能休眠 (ISS)

此拨挡开关用于开启或关闭 ISS 智能休眠功能。默认进入休眠的等待时间为 60 分钟，该时间可通过 GLM 软件进行调整。

颜色	状态
绿色长亮	正常工作状态
绿色闪烁	GLM 正在调整音箱
绿色每 10 秒闪烁一次	音箱处于休眠状态
红色闪烁	功放过载保护启动（音频信号因此受到改变）
红色长亮	音箱静音
黄色长亮	音箱未在当前编组
黄色闪烁	过热保护启动（音频信号因此受到改变）

表 2. 音箱前面板 LED 指示灯状态

数字 (Digital)

数字拨挡开关用于为音箱选择播放 AES/EBU 线缆中承载的通道信号。将两个开关都拨至“ON”时，音箱将混合 A 和 B 通道的信号进行播放，此时会衰减 6 dB 以防信号过载。在双线模式下传输 AES/EBU 数字信号时，音箱会自动检测并禁用数字拨挡开关的通道选择功能。

电平 (Level)

电平拨挡开关能够以 10 dB 步进来衰减音箱的输出。此设定与灵敏度旋钮可同时叠加使用，最大调整幅度为 42 dB。

保存 (Stored)

保存拨挡开关用于选择音箱背板上拨挡开关的设置或使用 GLM 软件校准后存储在音箱内部的设置。开关在“OFF”状态时，音箱使用背板上拨挡开关的设置；开关在“ON”状态时，音箱使用 GLM 软件校准后存储在音箱内部的设置。打开保存开关，其他拨挡开关会暂时失效。

使用环境

此产品仅限室内使用。允许的环境温度为 15-35°C (50-95°F)，相对湿度为 20% 至 80%（未凝结）。为了防止冷凝，当此产品从温度较低的储存或运输环境转移至温暖的环境中时，请静候 0.5 至 1 小时后再通电开机使用。必须保证音箱周围有足够的冷却散热空间。音箱后方、上方以及侧方需留有最小 50 毫米（2 英寸）的净空。请确保空间通风良好以供散热。

音箱的安装和摆放

安装选项

使用隔振底座 (Iso-Pod™) 可以调整音箱倾斜角度，使声轴保持正确的指向。底座可以安装于箱体背板上的三个不同安装点，实现垂直或水平放置。请将音箱的声轴指向听音位置（见图 3）。垂直放置音箱是最佳选择，它能消除分频点附近的声学抵消问题。请将音箱对称摆放，确保每只音箱与听音位置的距离相等。最好将听音位置设置在房间左右的中轴线上（见图 4）。当音箱远离其后方的实墙时（1-2.2 米，3-7 英尺），墙面的反射会造成低频的抵消，减少特定范围的低频在监听位置上的声压级。

音箱周围的物体会产生声学反射，例如桌面、柜体、电脑显示器等，这会引来不必要的声染色和模糊的声像定位。将音箱远离声学反射面放置，可以最大程度减少声学反射。相比将音箱放置在调音台表桥上，使用支架将音箱放置在调音台的后上方音质更佳。在房间中，对称摆放产生声反射的物品，有助于稳定声场平衡（见图 4）。

您可以从真力经销商处选购吊顶和壁挂安装配件。8340A 可通过背板上的四个 M6 x 10 毫米螺纹孔适配 König & Meyer 音箱挂架。箱体底部还有一个 M10 x 10 毫米螺纹孔。音箱支架通常是与之不适配的 3/8 英寸粗牙螺纹。所以切勿通过该孔将音箱安装在话筒支架或者音箱支架上。此外，真力还提供多种配件供选择。可通过查阅真力网站 www.genelec.cn 上的《真力配件目录 (Genelec Accessories Catalogue)》或者咨询经销商获取更多信息。

前面板指示灯

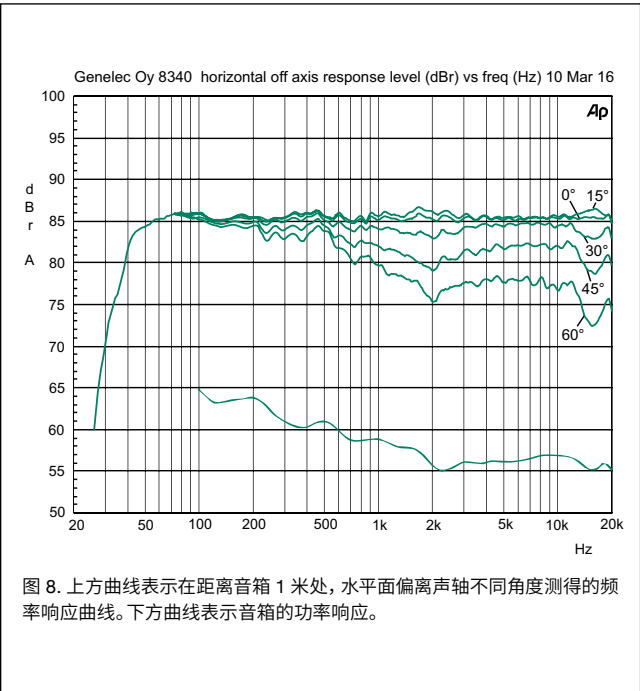
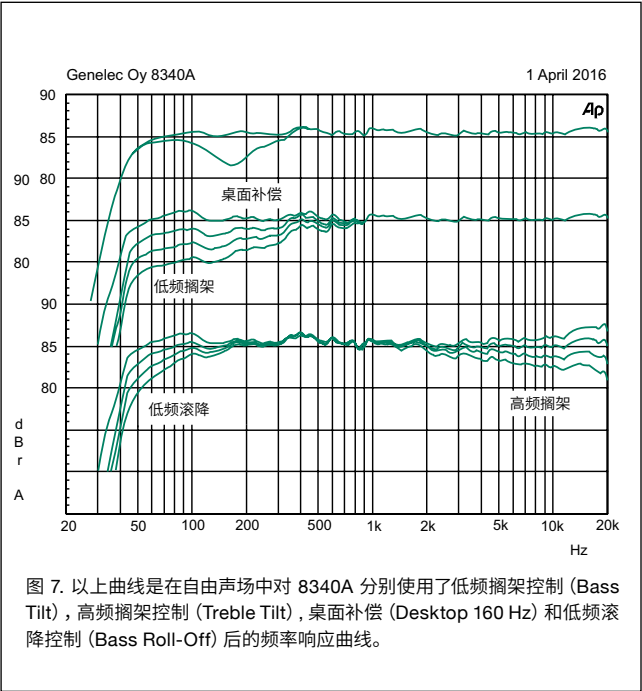
音箱在正常工作状态，前面板指示灯为绿色。当音箱处于特殊状态时，指示灯会变为红色或黄色。详情请见表 2。

配合超低音箱使用

真力推荐选择 7300 系列超低音箱。更多有关系统设置与搭配的信息，请参照真力官网 www.genelec.com 中的“产品选择工具 (Genelec Product Selection Tool)”。

维护

音箱内部没有任何用户可调整的部分。任何关于音箱的维护或维修都应由真力授权的维修服务人员来完成。



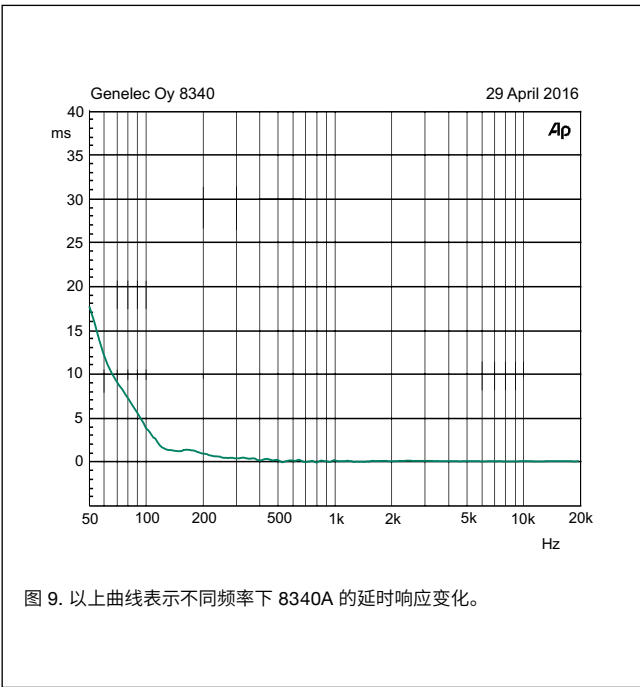
安全注意事项

尽管 8340A 已经按照国际安全标准设计, 仍应注意以下警告和注意事项, 确保安全操作以及安全的音箱工作条件:

- 切勿自行拆开音箱。任何关于音箱的维护或维修都应由真力授权的维修服务人员来完成。
- 切勿使用未连接保护地的电源, 这可能会危及人身安全。
- 切勿将音箱暴露在水中或潮湿环境, 这可能会导致火灾或触电。
- 切勿在音箱上或其附近摆放装有液体的物品, 例如花瓶。
- 请注意, 本设备采用电源插头作为断开装置。除非将电源线从音箱上或电源插座上拔掉, 否则设备并未完全与交流电源断开连接。
- 确保音箱后方有足够的空气流动, 使音箱能够充分冷却。
- 切勿阻挡音箱周围的气流。

警告!

音箱可以产生超过 85 dB 的声压级, 这可能会引起永久性听力损伤。



质保

真力 8340A 针对材料和工艺上的质量问题提供 2 年的质保服务。通过扫描包装箱上的二维码注册您的音箱, 可将质保期延长至 5 年。详细质保条款可在 www.genelec.cn 的“服务支持 > 维修与延保服务”页面查看。

FCC 符合性声明

注意：该设备已经过测试，符合 B 类数字设备的限制，且符合 FCC 标准第 15 部分的要求。这些限制旨在提供合理的保护，防止在住宅区安装时产生有害干扰。该设备会产生、使用并辐射射频能量，如果未按照说明安装和使用，则可能对无线通信造成有害干扰。但是，我们无法保证在特定安装中不产生干扰。如果设备对无线电和电视的接收产生有害的干扰，用户可通过开关该设备进行验证，我们建议用户采用下述一种或多种手段消除干扰：

- 重新调整天线的方向和位置。
- 增加该设备与接收器之间的距离。
- 将该设备和接收器分别连接到不同电路的插座上。
- 向经销商或有经验的无线电/电视技术人员寻求帮助。
- 任何未经制造商许可的改动都将让用户丧失在 FCC 规定下操作设备的权力。

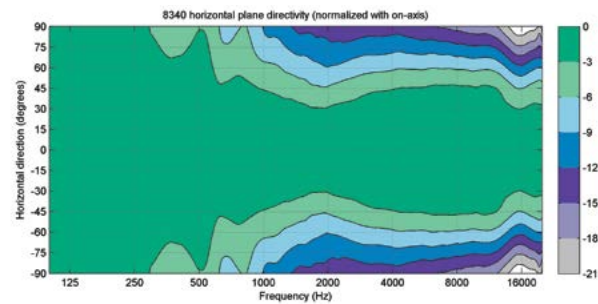


图 10. 上图表示 8340A 的水平面指向特性。

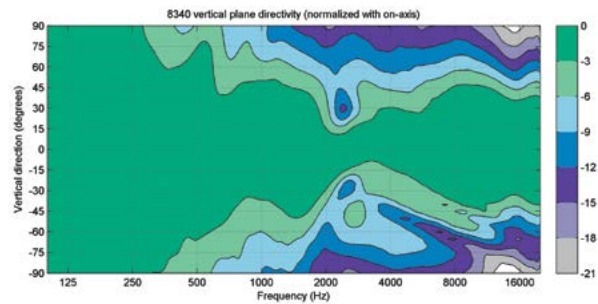


图 11. 上图表示 8340A 的垂直面指向特性。

系统参数	
	8340A
低频截止频率, -6 dB	< 38 Hz
高频截止频率, -6 dB	> 22 kHz
频率响应精确度, ± 1.5 dB	45 Hz – 20 kHz
半开放空间内, 轴上最大短时正弦波声学输出, 100 Hz - 3 kHz均值 @1 米	≥ 110 dB SPL
在相同条件下, 使用 IEC 计权噪声测试最大长期 RMS 声学输出 (受驱动单元保护电路限制) @1 米	100 dB SPL
在听音室内, 使用音乐素材进行测试, 每对音箱最大峰值声学输出 @1 米	≥ 118 dB
自由声场内自身噪声电平 @1 米 轴上 (A 计权)	≤ 5 dB
总谐波失真 @90 dB SPL @1 米, 轴上。 频率: 50...100 Hz > 100 Hz	< 2 % < 0.5 %
驱动单元 低音 高音 所有驱动单元均带有磁屏蔽特性	165 毫米 (6½ 英寸) 锥体 19 毫米 (¾ 英寸) 金属球顶
重量	8.4 千克 (18.5 磅)
尺寸 高度 宽度 深度 高度 含隔振底座 (Iso-Pod™)	350 毫米 (13⅓/₁₆ 英寸) 237 毫米 (9⅝ 英寸) 223 毫米 (8⅓/₁₆ 英寸) 365 毫米 (14⅝ 英寸)

功放部分	
	8340A
低音功放短期输出功率 高音功放短期输出功率 (长期输出功率受驱动单元保护电路限制)	150 瓦 150 瓦
在标称输出功率下功放系统失真参数	< 0.01 %
系统信噪比 (A 计权) 低频 高频	> 109 dB > 110 dB
电源电压	100-240 伏交流电 50/60 Hz
功耗 待机 (ISS) 空闲 满输出 (短期)	< 1 瓦 12 瓦 180 瓦

信号处理部分	
	8340A
模拟信号输入接口: 卡侬 (XLR) 母座 (平衡式 10k 欧姆)	针脚 1: 地 针脚 2: 正极 针脚 3: 负极
最大模拟信号输入电平 模拟输入灵敏度 (100 dB SPL @1 米) 使用灵敏度旋钮时, 模拟输入灵敏度	+25.0 dBu -6 dBu 调整范围为从 +6 到 -6 dBu
数字信号输入接口: 卡侬 (XLR) 母座 (110 欧) 数字信号输出 / 环出接口: 卡侬 (XLR) 公座 (110 欧)	AES/EBU 单线 AES/EBU 单线
数字信号输入 量化精度 采样范围 数字输入灵敏度 (100 dB SPL @1 米) 使用灵敏度旋钮时, 数字输入灵敏度	16 - 24 bits 32 - 192 kHz -30 dBFS 调整范围为从 +6 到 -6 dBu
控制网络 类型 连接方式	专有的 GLM 控制网络 2 个 RJ45 接口, 5 类网线
分频点	2.6 kHz
GLM™ 软件频率响应调整* 参量陷波滤波器 搁架滤波器	16 段 2 段低频、2 段高频
系统房间响应校准	使用真力 GLM™ 软件进行自动或手动校准, 也可使用音箱背板上的拨档开关

* 真力音箱管理软件 (GLM™) 包含陷波滤波器和搁架滤波器的调整, AutoCal™ 自动校准和 GLM 手动系统校准功能。



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