

GENELEC®

8351B
Smart Active Monitor

Operating Manual
操作手册



Introduction

Thank you for choosing Genelec! Fulfilling your dreams by offering the most truthful sound reproduction has been the source of our enthusiasm since 1978. Already over one million Genelec monitors are in use around the world - welcome to our story!

Genelec monitors are designed to last long our spare part support extends far into future. They are hand-built in Iisalmi, Finland, using certified sustainable methods. They are individually tested and calibrated for the highest performance. They have also all been designed for low power consumption in use and in standby.

Please register your monitor at

<http://www.community.genelec.com/>

and receive an extended five-year warranty for spare parts. For more information about our service and technical support, please visit

<http://www.genelec.com/customer-service>.

System Characteristics

Each 8351B is supplied with a mains power cable, five-meter GLM network cable and this operating manual. The Genelec 8351B is suitable for all professional monitoring applications calling for very high precision and reliability. The 8351B combines many remarkable Genelec technologies to provide the benefits of a point source and controlled directivity over an extraordinarily wide audio bandwidth. The 8351B may be oriented horizontally or vertically. Listening distances can vary from less than one meter to more than 4 meters, depending on the room size and maximum sound level requirements.

Genelec Loudspeaker Manager™ (GLM™) Software and GLM User Kit

The GLM software tailor-fits the 8351B to your room. It is downloadable free of charge at www.genelec.com/glm. Check regularly for updates and new features, and consider using the cloud-based GLM services for the most up-to-date methods. A GLM User Kit, comprising a USB adapter device and measurement microphone, enables precise acoustic calibration and operation of the GLM loudspeaker management network.

Minimum Diffraction Coaxial (MDC™)

The minimum diffraction coaxial transducer MDC design implements a coaxial driver with unparalleled acoustic directivity control. A powerful midrange transducer surrounds a high output tweeter transducer, enabling a high resolution response extending to ultrasonic frequencies. The MDC minimizes acoustic diffraction, produces a flat frequency response on the acoustical axis, and a neutral off-axis sound character.

Directivity Control Waveguide (DCW™) and Acoustically Concealed Woofers (ACW™)

The 8351B has an exceptionally large Directivity Control Waveguide extending over the whole enclosure front. The midrange transducer cone forms a part of this DCW. Two woofers radiate low frequencies through openings at the enclosure edges and sum acoustically placing bass on the same acoustical axis with the coaxial transducer. This unique design enables directivity control of all audio down to low bass frequencies.

Smart Active Monitoring (SAM™)

Smart Active Monitors automatically tune several parametric filters in themselves to precisely compensate for room colorations using Genelec Loudspeaker Manager (GLM) software. This enables SAM monitors to sound neutral and achieve precise stereo imaging in all acoustical environments, improving accuracy of monitoring.

Audio Inputs

The 8351B inputs support balanced analog line-level audio and AES/EBU digital audio. At maximum sensitivity, -6 dBu analog and -30 dBFS digital audio signals produce 100 dB SPL level at one meter distance in free space.

The analog input is selected when a digital signal is not present. The digital input is selected automatically when a digital signal is present even when the signal is silent. The GLM software can select either input.

When the digital audio source can adjust level, it is advantageous to lower the output level of the 8351B using the rear panel controls or the GLM Master Fader. This enables a higher output level at the source with more resolution while taking full advantage of the impressively low self-generated noise of the 8351B.

An AES/EBU digital audio signal carries two channels in one cable. A channel is selected using the DIP switches or GLM software. The DIGITAL OUT carries an unaltered copy of the input, enabling daisy-chaining of up to four monitors.

Power Management

The mains power input supports any mains voltage (100-240 VAC, 50-60 Hz) and the 8351B always delivers full power even when the mains voltage fluctuates. When powered with a generator, inverter or UPS device, we recommend filtering the mains power to remove harmonics.

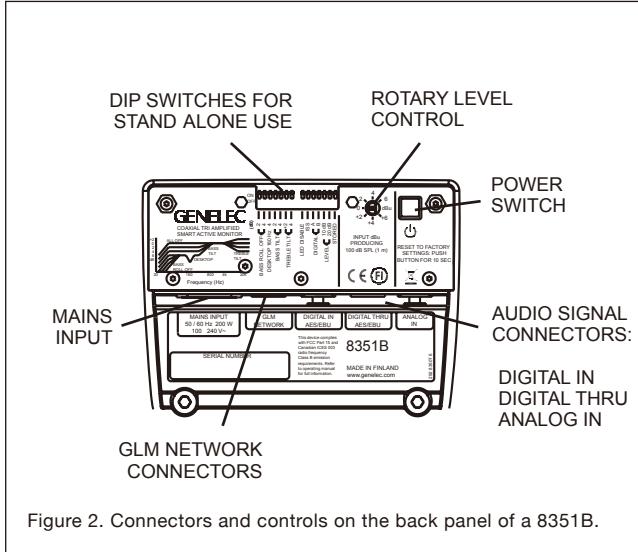
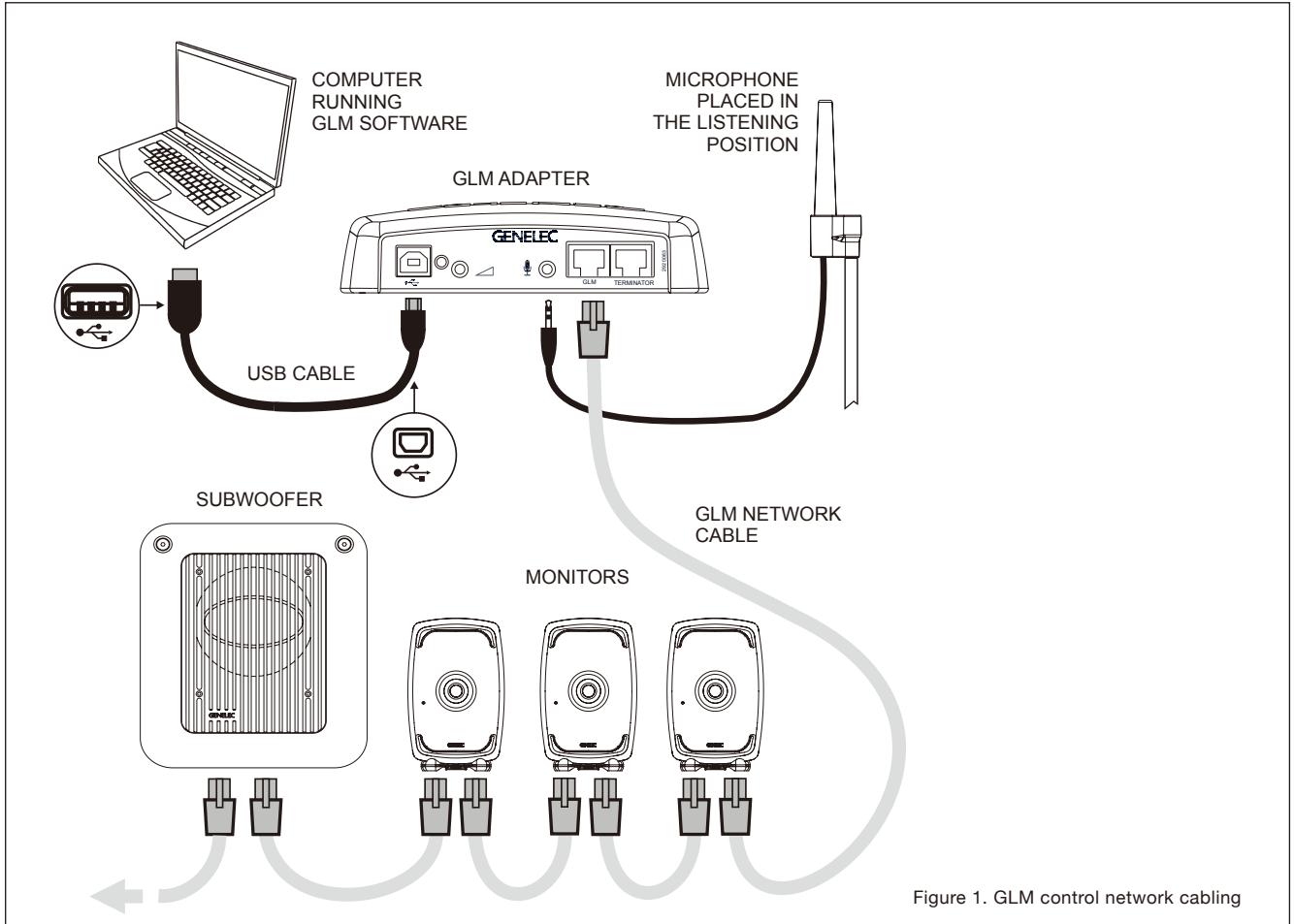
The energy saving function Intelligent Signal Sensing (ISS™) puts the monitor to power reduced sleep mode when no signal is present. Upon sensing an input, the monitor wakes up. The function is activated using GLM software or the ISS dip switch on the monitor. With GLM the time before entering the sleep mode can be adjusted, the ISS dip switch activates a fixed 60 minute time.

Setup Using The GLM™ Control

Genelec recommends setting up the 8351B and other SAM monitors using GLM. This is described in the GLM System Operating Manual. Although it can be used without GLM and the network, the 8351B reaches its full potential with this method. GLM software runs on Mac or Windows computers. GLM also works as a monitor controller, for switching between sets of loudspeakers, soloing, muting, invoking calibrated levels, etc.

Setup with the GLM User Kit consists of the following steps:

1. Connect a CAT5 (RJ45) cable to each monitor (and subwoofer) and finally to the GLM Adapter device (see Figure 1).
2. Connect the GLM Adapter device to computer USB connector.
3. Using a microphone stand, place the Genelec measurement microphone (in GLM Kit) at the listening location. Point microphone upwards. Place the microphone top at the ear



height for typical listener.

4. Connect the microphone to the microphone input in the GLM Adapter device.
5. Download and install the GLM software at the Genelec web site (www.genelec.com). Follow instructions in the software to measure and set up your monitors.
6. If you plan not to use a computer for managing monitors, store settings in monitors with GLM software (menu item "Store | Store the Current Group Settings...").

Enable stored settings by turning the DIP switch "Stored" on the monitor to ON after the network has been disconnected.



Figure 3. Connector panel detail.

The CONTROL NETWORK RJ-45 connectors are not Ethernet LAN compatible. Do not connect to Ethernet LAN.

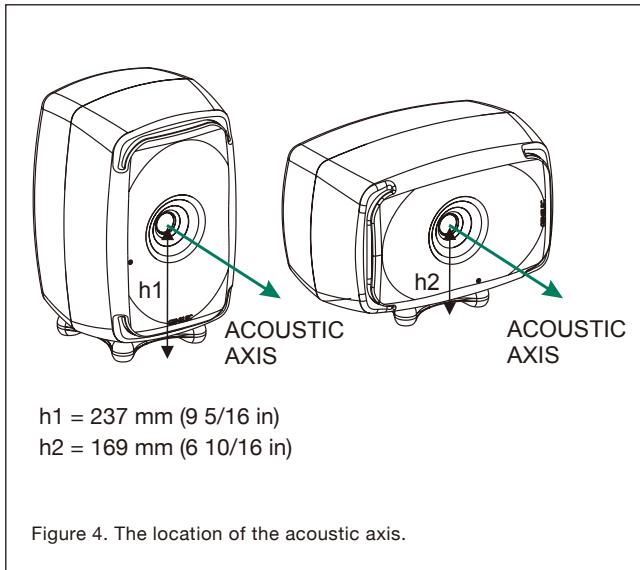
Stand-alone Mode: Setup Without Using The GLM

You can adjust the 8351B without GLM using the controls on the back of the monitor. These stand-alone settings are limited and provide some fundamental compensations for room acoustic effects, input selections and input sensitivity. To use, disconnect the GLM management network and set the DIP switch "Stored" to OFF position.

Stand-Alone Functionality

Bass Roll-Off Control

The Bass Roll-Off setting reduces bass level for spaces with strong low frequency reverberation. It reduces output near the



low cut-off. Attenuation can be selected by combining settings on one or more switches.

Desktop reflection compensation

The desktop control reduces frequencies near 160 Hz by 4 dB. This compensates the boost when the monitor is placed on a meter bridge or table.

Bass Tilt Control

The Bass Tilt control offers three attenuation levels for the response below 800 Hz. This control is used when monitors are placed near wall or room corner. Attenuation can be selected by combining settings on one or more switches.

Treble Tilt Control

The Treble Tilt control adjusts the high frequencies above 5 kHz. It corrects bright or dull sound and compensates high frequency loss when a monitor is placed behind a screen.

LED Disable

This switch turns off the front panel LED light.

ISS

This switch activates and deactivates the ISS power saving function when the 8351B is used in a Stand Alone mode. The default time for going to power save mode is 60 minutes, but this can be adjusted in the GLM software.

Digital

The Digital switch selects the digital audio signals A and B carried in one AES/EBU cable. Turning on both switches reproduces the sum of the signals. When both are selected, a 6 dB attenuation is applied to avoid an overload.

Level

The Level switches reduce the monitor output in 10 dB steps (-10 dB, -20 dB and both switches -30 dB). The switches combine with the rotary level adjustment. The total adjustment range is 42 dB. GLM software enables wider level adjustment.

Stored

The Stored switch selects between the controls on the monitor back panel (OFF position) or applying the settings stored in the monitor using the GLM software (ON position).

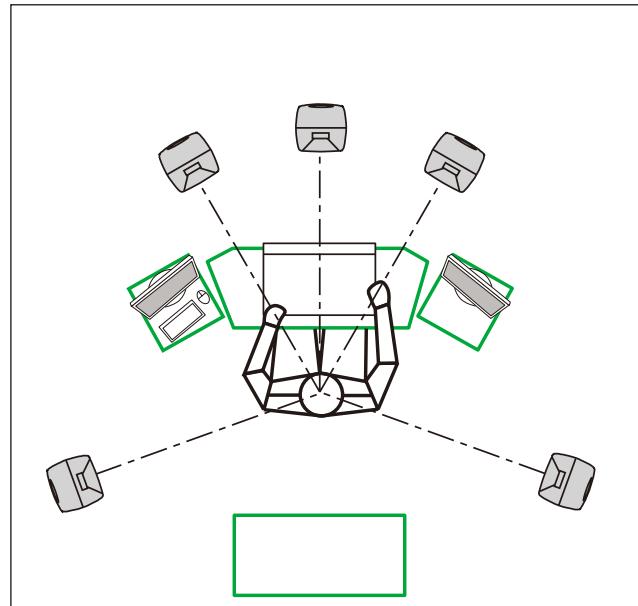


Figure 5. Symmetrical layout and keeping the acoustic axis clear from obstructions minimizes reflection surfaces and maintains accurate localisation because reflections are symmetrical.

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.

Operating Environment

This product is 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). To prevent condensation after the product has been in a cool environment, wait at least one hour before opening the packaging and connecting the mains power.

Cooling of the 8351B must be ensured. The minimum clearance behind, above and on both sides of the monitor is 50 mm (2 in). When 8351B is installed in a recess, the recess space must be ventilated sufficiently to remove the heat.

Mounting and Placing Monitors

Mounting Options

The Isolation Positioner/Decoupler™ (Iso-Pod™) stand allows tilting of the monitor and isolates vibrations. As delivered from the factory, the Iso-Pod retainer spring is attached to the bottom of the enclosure for vertical orientation. If you want to use the monitor in horizontal position, remove the retainer spring and reattach it

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

to the side mounting threads (see fig. 6). Never use the iso-Pod without the retainer spring as this may cause the monitor to fall.

Aim the acoustic axis of the monitor towards the listening position (see Figure 4). Place monitors symmetrically and at equal distances from the listening position. Preference should be made in placing the listening position on the left-right centerline of the room (see Figure 5). If a monitor is placed far (1.0-2.2 m, 3-7 ft) from the acoustically hard wall behind the monitor, a reflection from the wall may reduce bass output. Avoid these distances.

Place monitors away from acoustically reflective surfaces. Reflections from desks, cabinets, computer monitors and such objects can colour audio and blur sound images. Place monitors on stands behind and above a mixing console as this usually improves audio compared to placing monitors on a meter bridge.

Ceiling and wall mounts are available through Genelec dealers. Monitor mounts attach to four M6 x 10 mm threaded holes on the enclosure back. Consult the Genelec Accessories Catalogue at www.genelec.com or distributor/dealer for information.

Front Panel Light

The light on the front panel is normally green. Red and yellow colours indicate special situations. See Table 2.

Use with Subwoofers

Genelec recommends 7300 series subwoofers and the W371 Adaptive Woofer System for 8351B. Consult the on-line Genelec Product Selection Tool at www.genelec.com.

Maintenance

Do not open the monitor enclosure. Opening the monitor may lead to loss of the monitor calibration and may damage components. There are no user serviceable parts inside. Maintenance or repair can only be done by Genelec certified service.

Safety Considerations

The 8351B follows international safety standards. To ensure safe operation, the following warnings and precautions must be observed:

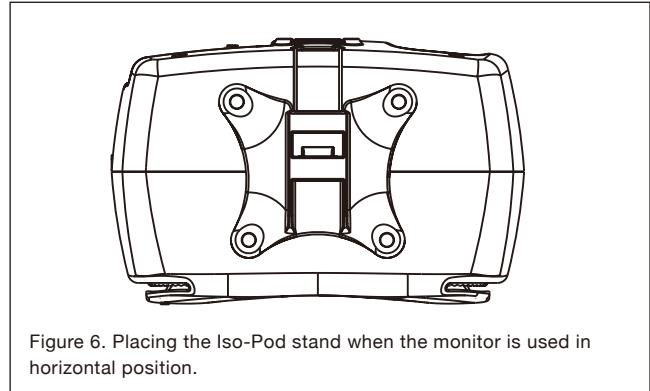


Figure 6. Placing the Iso-Pod stand when the monitor is used in horizontal position.

- Servicing and adjustment must only be performed by certified Genelec service personnel. The monitor enclosure must not be opened.
- Use the product only with a mains cable having a protective ground terminal and with a mains connection with a protective earth terminal. Failing to do so may lead to personal injury.
- To prevent fire and electric shock, do not expose the unit to water or moisture.
- Do not place objects filled with liquid, such as vases, on the monitor or near it.
- Note that the device is not disconnected from the AC mains service unless the power cable is removed from the monitor or the mains outlet.
- Free flow of air behind and around the monitor maintains sufficient cooling. Do not obstruct airflow around the monitor.

WARNING!

The 8351B is capable of producing sound pressure levels in excess of 85 dB, which may cause hearing damage. Sound exposure level integrated over eight contiguous hours should be limited to $L_{eq}=80\text{dB(A)}$ to reduce the risk of permanent hearing damage. For each 3 dB increase in this sound level, half this exposure time.

Guarantee

The Genelec 8351B is guaranteed for two years against manufacturing faults or defects altering performance. You can get an additional three-year guarantee covering spare part costs by registering your product at www.genelec.com. Refer to your point of purchase for full sales and guarantee terms.

Compliance to FCC Rules

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. 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 can void the user's authority to operate the equipment under FCC rules.

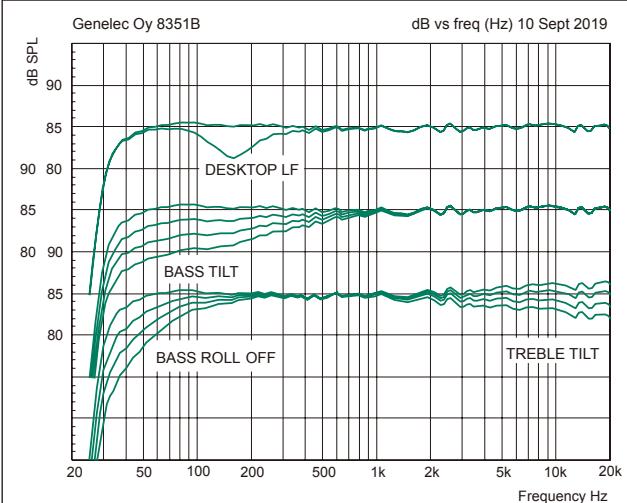


Figure 9. The curves above show the effect of the “Bass Tilt”, “Treble Tilt”, “Desktop Low Frequency” and “Bass Roll-Off” controls on the free field response of the 8351B.

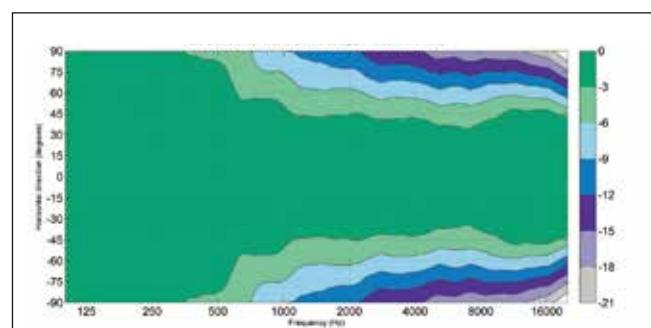


Figure 7. The curves above show the horizontal directivity characteristics of the 8351B (monitor in vertical orientation).

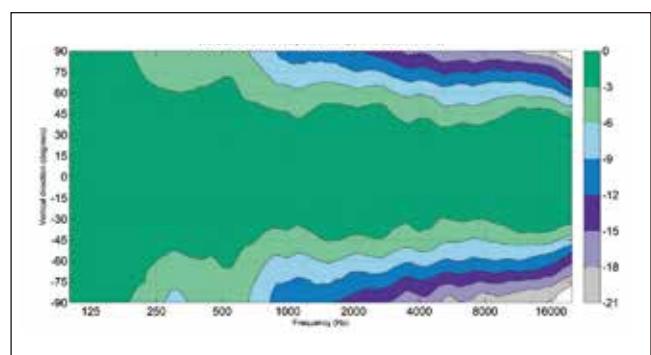


Figure 8. The curves above show the vertical directivity characteristics of the 8351B (monitor in vertical orientation).

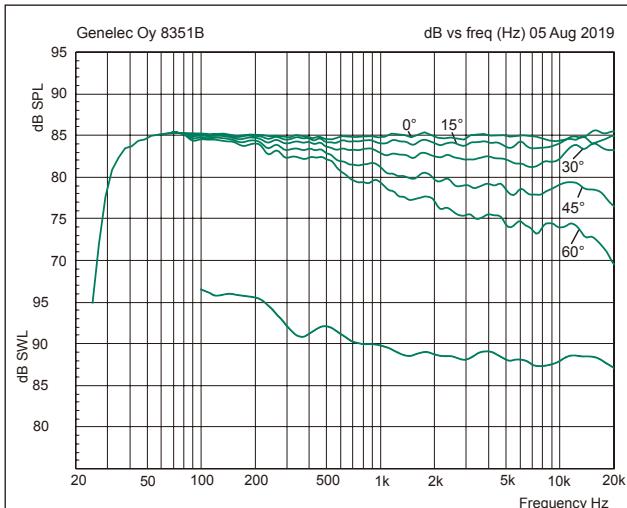


Figure 10. Frequency responses at 0, 15, 30, 45 and 60 degree horizontal angles (monitor in vertical orientation) and power response in full space. Input level -20 dBu.

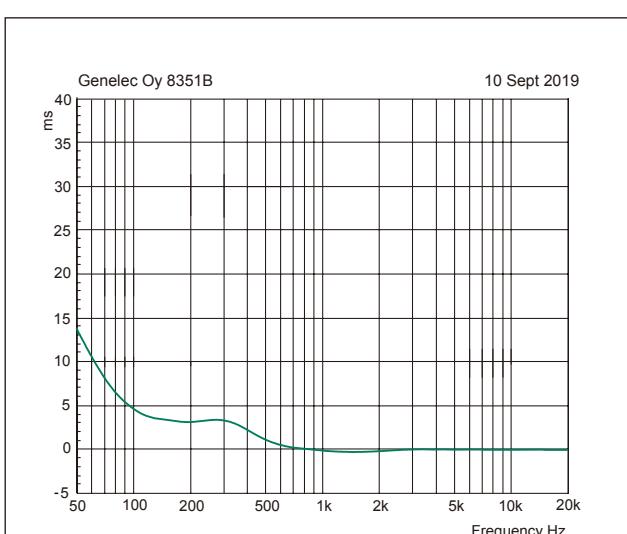


Figure 11. The curve above shows the delay variation of the 8351B as a function of frequency.

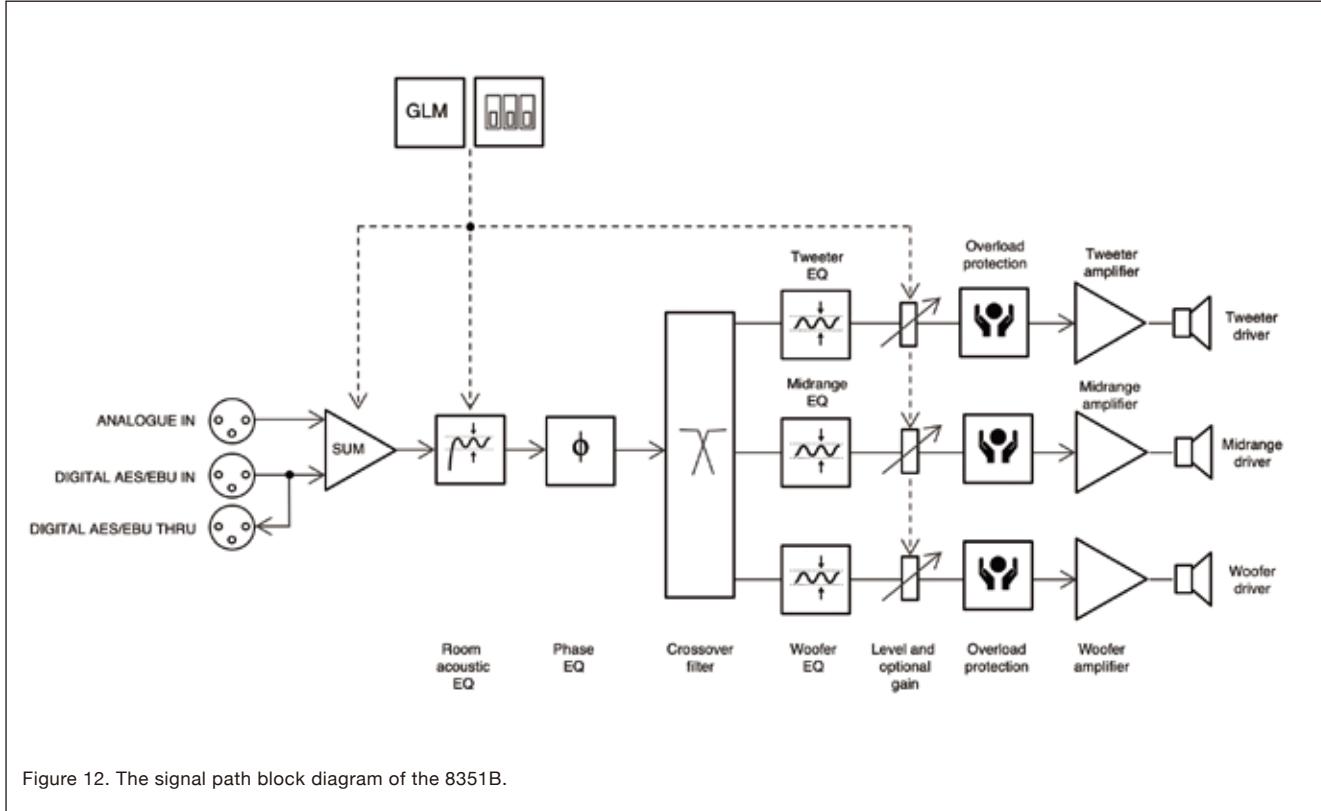


Figure 12. The signal path block diagram of the 8351B.

SYSTEM SPECIFICATIONS

Lower cut-off frequency, -6 dB	< 32 Hz
Upper cut-off frequency, -6 dB	> 43 kHz
Accuracy of frequency response, ± 1.5 dB	38 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	≥ 113 dB SPL
Maximum long term RMS acoustic output in the same conditions with IEC weighted noise (limited by driver protection circuit) at 1 m	103 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 Midrange Treble	Dual 218 x 101 mm ($8\frac{5}{8}$ x 4 in) obround cones 130 mm (5 in) cone (coaxial) 25 mm (1 in) metal dome (coaxial)
Weight	14.3 kg (31 lb)
Dimensions Height including IsoPod stand Height without IsoPod Width Depth	454 mm (17 $\frac{1}{8}$ in) 433 mm (17 in) 287 mm (11 $\frac{1}{3}$ in) 278 mm (11 in)

AMPLIFIER SECTION

Bass amplifier short term output power Midrange amplifier short term output power Treble amplifier short term output power (Long term output power is limited by driver protection circuitry)	250 W 150 W 150 W
Amplifier system THD at nominal output	<0.05%
Mains voltage	100-240 VAC 50/60 Hz
Power consumption ISS active Idle Full output (short term)	< 1 W 16 W 250 W

SIGNAL PROCESSING

	8351B
Analog signal input connector XLR female, balanced 10 kOhm	pin 1 gnd pin 2 non-inverting pin 3 inverting
Maximum analog input signal Analog input sensitivity (100 dB SPL at 1 m) Analog input sensitivity control	+25.0 dBu -6 dBu Adjustable from +36 to -6 dBu
Digital signal input connector XLR female 110 Ohm Digital signal output / Thru connector XLR male 110 Ohm	AES/EBU Single Wire AES/EBU Single Wire
Digital audio input Word length Sample rate Digital input sensitivity (100 dB SPL at 1 m) Digital input maximum attenuation using DIP switches Digital input maximum attenuation using GLM software	16 - 24 bits 32 - 192 kHz -30 dBFS 42 dB 120 dB
Control network Type Connection	Proprietary GLM™ network 2 RJ45, CAT5 cables
Crossover frequencies Bass/Mid Mid/Treble	320 Hz 2800 Hz
GLM™ software frequency response adjustment* Parametric notch filters Shelving filters	16 2 LF and 2 HF
System room response calibration	Genelec GLM 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

介绍

感谢您选择真力！通过为您提供最精准的声音再现实现您的梦想，是真力自1978年成立以来的不懈追求。如今，世界上已经有超过一百万只真力监听音箱正在使用中——欢迎加入我们！

真力监听音箱经久耐用，并长期提供维修备件。音箱在位于芬兰伊萨尔米的工厂制造，并一直秉承可持续发展和绿色环保的理念。在出厂前逐一经过严格检测和校准，使其工作在最佳状态。所有音箱在使用或者待机时，都具有低功耗的特点。

请扫描音箱包装上的二维码，注册您的音箱。注册之后，将获得长达5年的硬件质量保修。更多信息请参考：https://www.genelec.cn/?page_id=17021

系统特征

每只8351B配备1条电源线，1条5m GLM网线以及此本说明书。真力8351B适用于所有高精度、高可靠性要求的专业监听场合。8351B集成了真力多项核心技术，以开创性的同轴设计配合大面积指向性控制波导，得到了点声源重放的精准声像定位，扩大了最佳聆听区域。8351B既可以水平摆放，也可以垂直摆放。典型的聆听距离在不到一米至超过四米的宽阔范围内，取决于房间尺寸和最大声压级的要求。

GLM™ (真力音箱管理) 软件和GLM测试套件

使用GLM音箱管理软件可以使8351B与房间环境精确耦合。您可以在https://www.genelec.cn/?post_type=products&page_id=24634免费下载GLM软件，并可以定期访问以获得最新版本使用最新功能，另外可以考虑使用基于云端的GLM服务，该服务使用最新的计算方法。GLM测试套件包含GLM适配盒和校准话筒，可以对GLM音箱管理网络中的音箱进行精确的声学校准和控制。

MDC™最小衍射同轴技术

MDC™最小衍射同轴单元使得同轴单元具有优秀的指向性控制特性。高输出的高音单元外环绕了一圈强大的中音单元，保证了超高频部分平直的频率响应。MDC设计尽可能地减少了声波衍射问题，在声轴上和离轴方向都能得到平直的频率响应。

DCW™指向性控制波导和ACW™声学隐藏式单元

8351B拥有在传统音箱设计中难以实现的超大型指向性控制波导，延伸至整个前面板。中频单元的盆体同时构成了高频指向性波导的一部分。两个低频单元通过面板上下的开口辐射低频，并和中高音同轴单元构成声学中心重合的同轴结构。这一独特设计可以使指向性受控的频段扩展至低频。

SAM™智能有源监听技术

智能有源监听音箱可以使用真力音箱管理软件进行自动校准设置，通过自动调整内置的多组参量均衡滤波器，精确补偿房间声学带来的染色。得益于此，真力SAM音箱可在各种声学环境中获得自然的响应和精确的立体声像定位，从而提高监听的精确性。

音频输入

8351B支持平衡线路模拟输入和AES/EBU格式数字输入。在灵敏度设置为最高的情况下，当模拟输入信号为-6dBu或者数字输入信号电平为-30 dBFS时，可在自由场中距离音箱1米处得到100dB SPL的声压级。

当未连接数字信号时，音箱将自动选择模拟输入。当连接数字信号时，即使音源没有播放任何内容，音箱也将自动选择数字输入。输入源切换可以在GLM软件里设置。

在使用电平可调的数字音源时，更优的方式为使用音箱背面的音量旋钮或者GLM软件主界面上的主推子降低输出电平，而非降低音源的音量。这样音源可以利用更高的电平输出以获得更高数字精度，同时完整利用8351B底噪极低的优势，获得更高的动态范围。

AES/EBU数字音频信号在一根线缆传输两个通道。使用拨档开关或GLM软件设定每只音箱使用的信号通道。DIGITAL OUT（数字环出）用于输出与数字输入接口相同的信号，最多允许以菊花链方式连接4只监听音箱。

电源管理

8351B电源输入支持全球通用电压(100-240VAC, 50-60Hz)，并且即使在不同电压环境中，8351B都可以获得最大输出。当使用发电机、逆变器或UPS等设备供电时，我们建议使用额外设备来滤除电源杂波。

ISS™智能信号监测功能可在无信号输入时让音箱进入休眠模式。在监测到输入信号后，音箱将自动回到工作状态。该功能需要通过GLM软件或者监听音箱上的ISS拨档开关激活。进入休眠模式的等待时间可以通过GLM软件进行调整。使用拨档开关开启ISS功能时，默认进入休眠的等待时间为60分钟。

使用GLM进行音箱设置

真力建议使用GLM软件设置8351B和其他SAM音箱。《GLM系统使用手册》详细描述了设置方法。尽管8351B可以脱离GLM软件进行使用，但仅在使用GLM软件进行设置的情况下，才能发挥出其最佳性能。GLM软件可在Mac或者Windows系统的计算机上运行。GLM还可以作为监听控制器使用，用于在多组音箱之间切换，独听(Solo)，静音(Mute)，将音量一键调整为校准电平等。

GLM测试套件的使用包括以下步骤：

1. 使用5类网线(RJ45接头) 将每只音箱(包括超低音音箱)串接起来，最终连接到GLM适配盒(见图1)；
2. 将GLM适配盒通过USB线连接到电脑；
3. 使用话筒支架，将真力校准话筒(包含在GLM套件中)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(https://www.genelec.cn/?post_type=products&page_id=24634)下载并安装最新的GLM软件，根据软件提示进行音箱设置和校准；
6. 如果您不需要随时在电脑上运行GLM软件来控制音箱，您需要将GLM所做的设置存储到音箱中：点击GLM软件菜单选项中的“Store (保存) | Store the Current Group Settings (保存当前编组设置)”。拔掉用于音箱管理的网线之后，您需要将音箱背后的拨档开关“Stored (保存)”拨置ON，来启用刚才所保存的GLM设置。

GLM控制网络接口(RJ45网线接口)不适用于有线局域网(Ethernet LAN)。请勿将其连接至路由器、交换机等局域网设备。

单机模式：脱离GLM进行音箱设置

脱离GLM时，您仍可以使用音箱背面的拨档开关来调整8351B的设置。单机模式的设置功能相对有限，仅能提供房间声学补

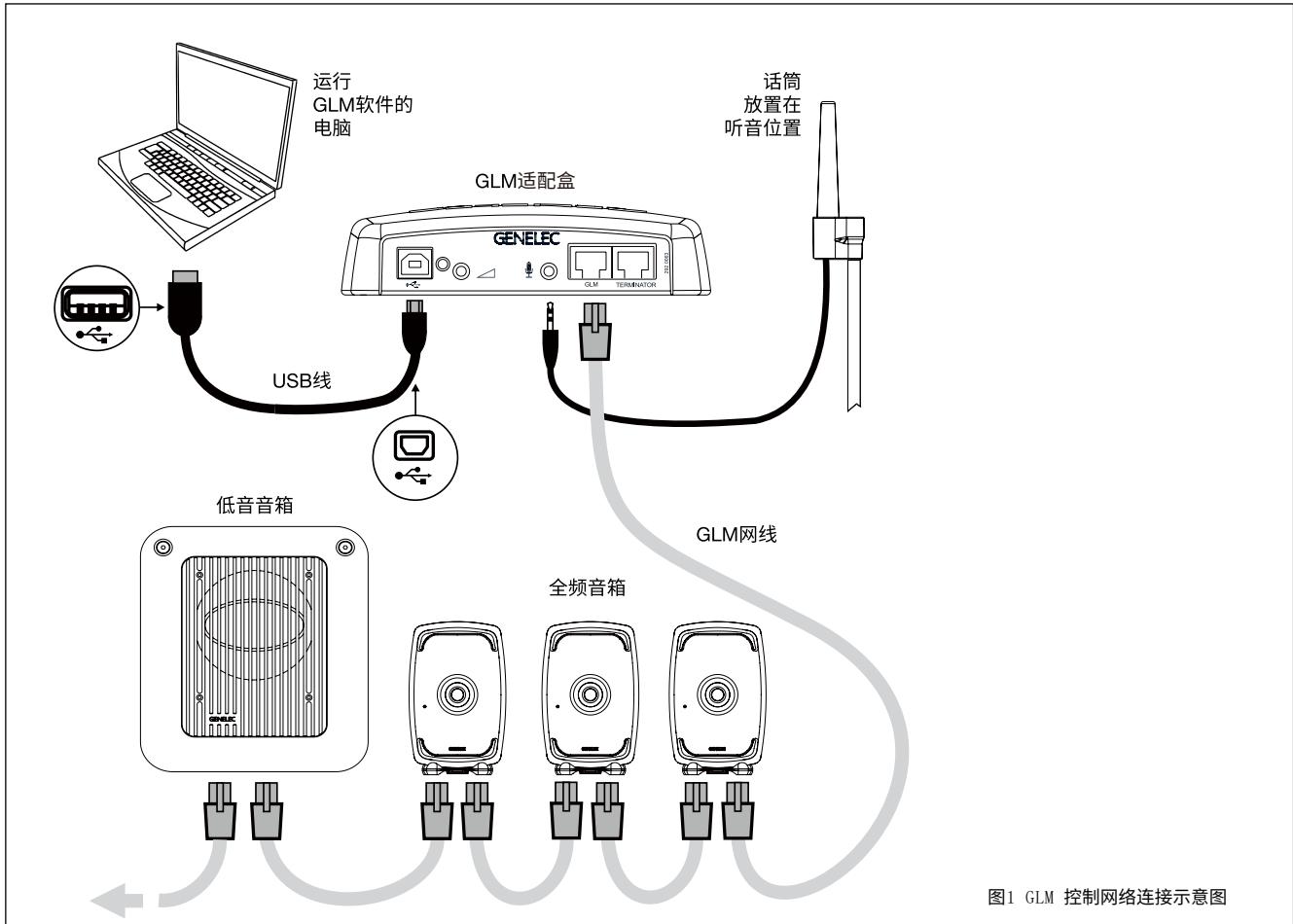


图1 GLM 控制网络连接示意图

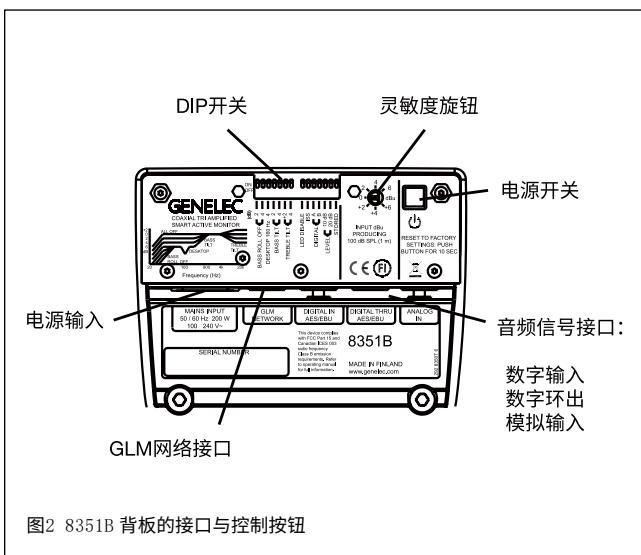


图2 8351B 背板的接口与控制按钮

偿、输入源选择和输入灵敏度调整。如需使用此模式，请确保GLM音箱管理网络断开，同时将“Stored”拨档开关调至OFF状态。

单机控制功能

低频滚降（Bass Roll-Off）控制

在低频混响较强的空间内，低频滚降（Bass Roll-Off）设置可衰减低频电平。它衰减低频截止点附近的频率。可以通过使用一个开关或组合使用多个开关达到衰减目的。



图3 接口面板详图

在低频混响较强的空间内，低频滚降（Bass Roll-Off）设置可衰减低频电平。它衰减低频截止点附近的频率。可以通过使用一个开关或组合使用多个开关达到衰减目的。

桌面反射补偿

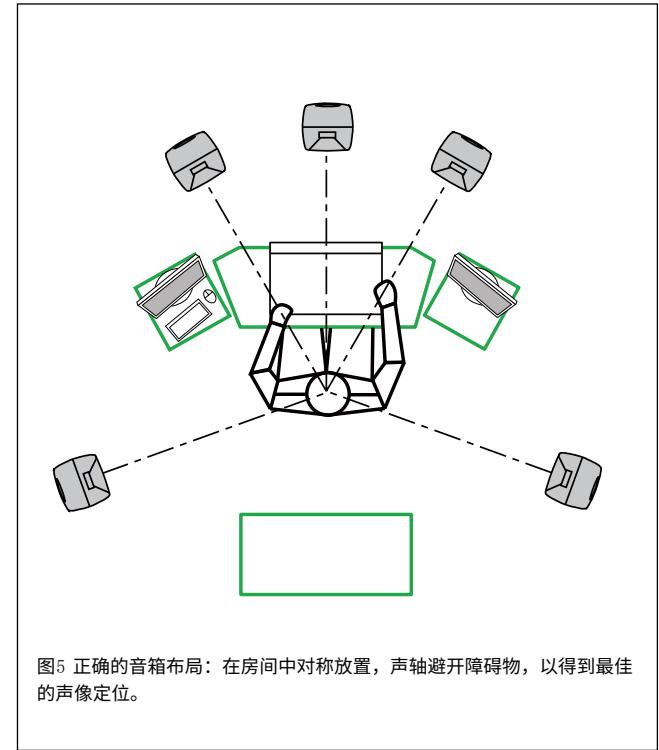
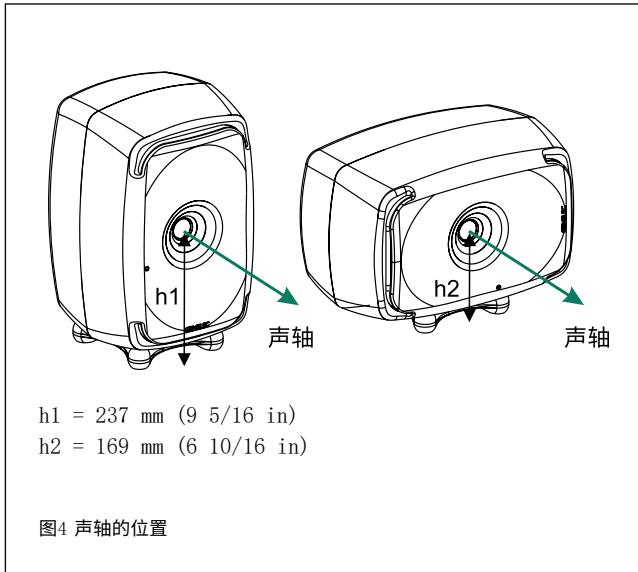
使用桌面反射补偿功能，可在160Hz左右的频率衰减4dB。当音箱放置在调音台表桥或者桌面上时，使用该设置可以补偿这种摆位带来的低频隆起。

低频搁架（Bass Tilt）控制

低频搁架（Bass Tilt）为800Hz以下的低频响应提供三种衰减设置。通常当音箱靠近房间墙壁或角落时，需要启用此设置。可以通过使用一个开关或组合使用多个开关达到衰减目的。

高频搁架（Treble Tilt）控制

高频搁架（Treble Tilt）可调节5kHz以上的高频。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

此拨挡开关可以熄灭前面板的LED指示灯。

智能信号监测ISS

当8351B在单机模式下使用时，此拨挡开关用于开启或关闭ISS自动休眠功能。默认进入休眠模式的等待时间为60分钟，该时间可通过GLM软件进行调整。

数字 (Digital)

数字拨挡开关用于选择AES/EBU线缆中承载的A和B通道信号。将两个开关都调至ON时，音箱将混合A和B通道信号进行重放，此时会衰减6dB以防信号过载。

电平 (Level)

电平拨挡开关可以以10dB步进衰减音箱的输出 (-10dB、-20dB或两个拨挡开关都打开为-30dB)。此设定与灵敏度旋钮可同时叠加使用，最大调整幅度为42dB。使用GLM软件可进行更宽阔的电平调整。

存储 (Stored)

存储开关 (Stored) 在OFF状态时，音箱使用背面板拨挡开关的设置；此开关在ON状态时，音箱使用GLM软件校准后存储在音箱内部的设置。

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，请静候至少1小时后再开箱通电使用。

必须保证8351B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。如果音箱采用嵌入式安装，需保证有效的通风以供散热。

音箱的安装和摆放

安装选项

Iso-Pod™桌面隔振音箱垫可以调节音箱的俯仰角度以及隔离振动。音箱垫的金属支架出厂默认安装在箱体底部，用于垂直摆放。如果音箱需要水平摆放，请卸下金属支架的固定螺丝，将其安装在箱体侧面的螺纹孔上（见图6）。切勿在未固定螺丝的情况下使用Iso-Pod，这可能导致音箱掉落。

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
消声室放置	关闭	关闭	关闭	关闭
在吸声室自由放置	关闭	-2 dB	关闭	关闭
在混响室自由放置	关闭	-4 dB	关闭	关闭
放在反射面上， 用于近场监听	关闭	-2 dB	关闭	-4 dB
靠角落放置	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

音箱的声轴需指向听音位置（见图4）。将音箱对称摆放，确保每只音箱与听音位置等距。最好将听音位置设置在房间左右的中轴线上（见图5）。当音箱距离其后方的实墙1.0-2.2米时，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，因此请避免采用上述的距离摆放音箱。

请将音箱远离声学反射面放置。音箱周围的桌面、柜体、电脑显示器等类似物体带来的反射声，会造成有害的声染色，并使声像定位变得模糊。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后上方音质更佳。

您可以从真力经销商处选购吊顶和壁挂安装配件。通过箱体背板的四个M6 x 10毫米螺纹孔安装音箱挂架。可通过查阅真力网站www.genelec.com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

前面板指示灯通常为绿色。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。

配合超低音音箱使用

真力推荐您选择7300系列超低音音箱或者W371母带低音系统。更多有关系统设置与搭配的信息，请参考《真力监听音箱设置指南》，也欢迎咨询真力中国分公司或当地经销商。

颜色	状态
绿色长亮	正常工作状态
绿色闪烁	GLM 正在调整该音箱
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	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

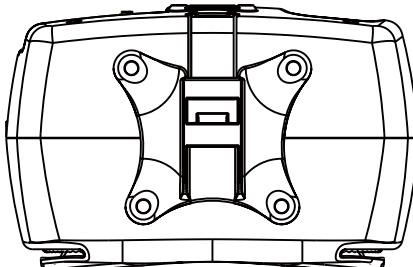


图6. 当监听音箱横置使用时,如图所示在音箱底部放置Iso-Pod。

维护

切勿拆开音箱箱体。拆开音箱箱体可能导致出厂校正失效以及元件受损。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

8351B严格按照国际安全标准设计,但您仍需注意以下警告和注意事项,确保安全操作:

- 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。

- 切勿阻挡音箱周围的气流。确保音箱后方有足够的空气流动,使音箱能够充分冷却。

警告!

8351B可以产生超过85dB的声压级,这可能会引起永久性听力损伤。若聆听时间超过8小时/天,请将声压级控制在80dB(A计权)以内,以降低永久听力损伤的风险。声压级每增加3dB,聆听时间应当减半。

质保

真力8351B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。详细质保条款请您咨询当地经销商。

FCC符合性声明

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

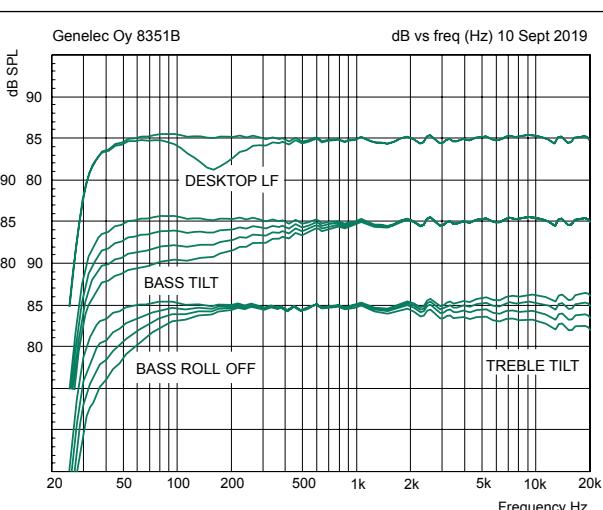


图7.以上曲线是在自由声场中对8351B分别使用了低频搁架控制(Bass Tilt),高频搁架控制(Treble Tilt),桌面补偿/Desktop Low Frequency)和低频滚降控制(Bass Roll-off)后的频率响应曲线。

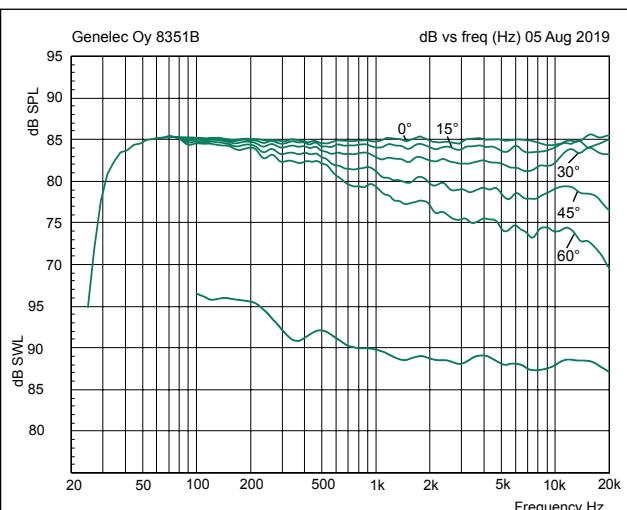


图8.以上曲线是当音箱垂直摆放,输入电平为-20dBu时,在自由声场中偏离声轴不同角度(0°、15°、30°、45°和60°)测得的频率响应曲线。

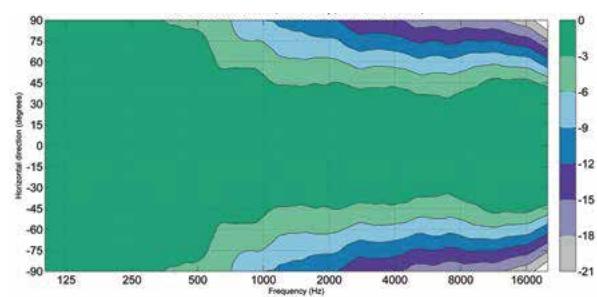


图9 上图表示8351B 的水平面指向特性(音箱垂直摆放时)。

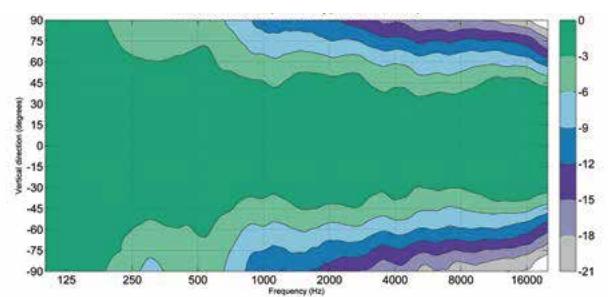


图10 上图表示8351B 的垂直面指向特性(音箱垂直摆放时)。

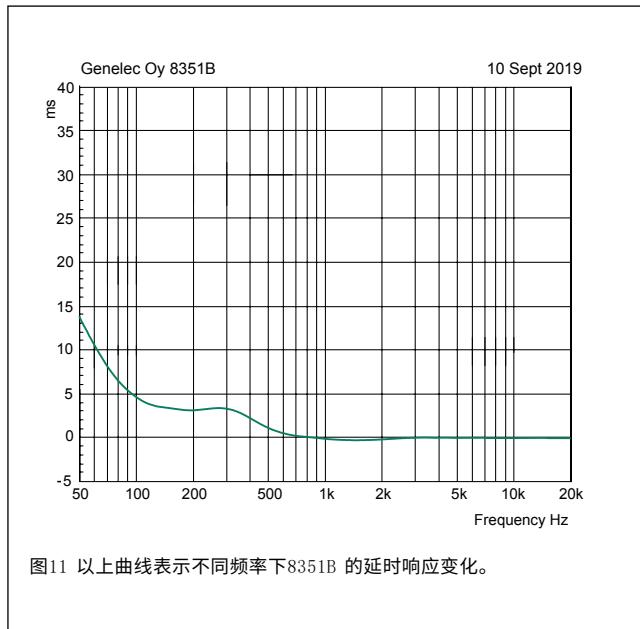


图11 以上曲线表示不同频率下8351B 的延时响应变化。

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。

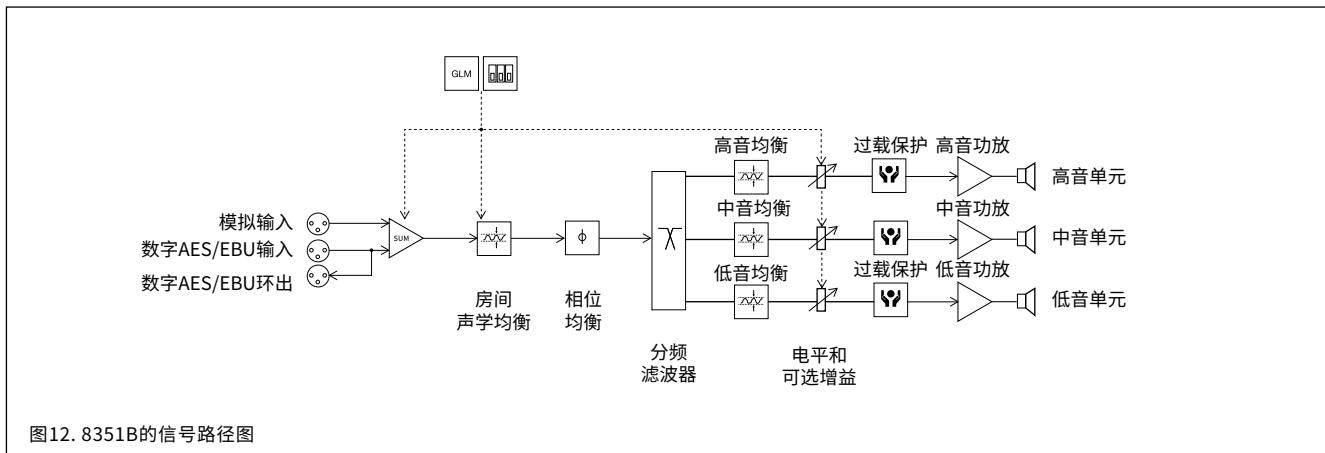


图12. 8351B的信号路径图

系统参数	
低频截止频率	< 32 Hz
高频截止频率	> 43 kHz
频率响应精确度	38 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	≥ 113 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	103 dB SPL
在听音室内, 使用音乐素材进行测试, 在距音箱1米处每对音箱最大峰值声学输出。	118 dB
自由场内自身噪声电平 @ 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 中音 高音	双218 x 101毫米(8 5/8 x 4英寸)椭圆型 130毫米(5英寸)锥体(同轴) 25 毫米 (1 英寸)金属球顶(同轴)
重量	14.3千克 (31磅)
尺寸: 高度 (含Iso-Pod防振底座) 高度 (不含Iso-Pod防振底座) 宽度 深度	454毫米 (17 7/8 英寸) 433毫米 (17 英寸) 287毫米 (11 1/2 英寸) 278毫米 (11 英寸)

功放部分	
低音功放短期输出功率	250瓦
中音功放短期输出功率	150瓦
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
在标称输出功率下功放系统失真参数	<0.05%
电源电压	100-240 VAC 50/60 Hz
功耗: 待机 空闲 满输出 (短期)	< 1 W 16 W 250 W

信号处理

模拟信号输入接口: 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	+25.0 dBu
模拟输入灵敏度 (100 dB SPL 在1米处)	-6 dBu
模拟输入灵敏度控制	调整范围为从+36到-6dBu
数字信号输入接口: XLR母座 (110 欧)	AES/EBU 单线
数字信号输出／环出接口: XLR公座 (110 欧)	AES/EBU 单线
数字信号输入: 量化精度 采样范围	16 - 24 bits 32 - 192 kHz
数字输入灵敏度 (100 dB SPL at 1 米)	-30 dBFS
使用拨档开关时, 数字信号输入最大衰减范围 使用GLM软件时, 数字信号输入最大衰减范围	42 dB 120 dB
控制网络 类型	专用的真力GLM网络
连接方式	2条5类网线
分频点 低频／中频 中频／高频	320 Hz 2800Hz
GLM软件频率响应调整	
参量陷波滤波器	16
系统房间响应自动校准	使用真力GLM管理套件进行自动或手动校准, 也可使用音箱背板的独立控制开关 (DIP开关)

* GLM™真力音箱管理软件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。