YAMAHA

SPEAKER SYSTEMS

R112/R112C
R115/R115C
R215/R215C
R12M/R12MC
R15M/R15MC

SUBWOOFER

R118W/R118WC

ENGLISH

汉语

Owner's Manual

Thank you for choosing a YAMAHA speaker system. In order to take full advantage of the superior performance and features provided by these speakers while ensuring maximum reliability and longevity we urge you to read this manual thoroughly before setting up and using your speakers. Also, please keep the manual in a safe place for future reference.

Contents

使用手册

感谢您购买 YAMAHA 扬声器系统。为了充分发挥这些扬声器的全部优点和卓越的性能，并确保可靠性和长寿命，建议您在设定和使用扬声器之前，请仔细阅读本使用手册并妥为保管，以备今后查阅。

目录

Precautions

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WARNING

In case an abnormality occurs during operation

- If you notice any abnormality, such as smoke, odor, or noise, turn the power amp off immediately. Remove the power cord from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.

CAUTION

Installation

- When choosing a location for your speakers, avoid the following:
  - Direct sunlight, high temperatures (such as near heaters), or excessively low temperatures.
  - High humidity.
  - Areas subject to excessive dust accumulation and vibration.
  - Non-level or unstable surfaces.
- To prevent short circuits or breakage of cables, always disconnect cables prior to moving system equipment.
- When using two or more speaker systems, be sure match the polarity (+/–) of the speaker system connectors to those at the amplifier. If the polarities do not match, the sounds produced by the speakers will interfere with each other, making it impossible to achieve a well-balanced sound field.
- This unit is heavy. Use two or more people to carry it.

Operation

- To avoid damage to your speakers and other parts of your system, when you turn on your system, ALWAYS turn the power amp on last! This will avoid loud, damaging pops that will annoy your audience, and blow your speakers. When you power down, the amplifier should ALWAYS be turned off first to avoid the same problems.
- Always turn the power switches of system components OFF prior to connecting or disconnecting cables. Failure to do so may result in damage to speakers as well as to connected equipment.
- Do not output distorted sounds for long periods of time, as this will cause the speaker to heat up, leading to a fire hazard.

To protect your speakers

When choosing a power amplifier to use with your speakers, make sure that its power output matches the speakers' power capacity (refer to the Specifications on page 7). Even if the amplifier's power output is lower than the speakers' PGM (program) power capacity, the speakers may be damaged when clipping of a high input signal occurs.

The following may cause damage to speakers:

- Feedback caused when using a microphone.
- Continuous high sound pressure level produced by electronic instruments.
- Continuous high-power output distorted signals.
- Popping noises caused by turning on equipment, or by connecting or disconnecting system components while the amplifier is turned on.

This product, when used in combination with amplification and/or additional loudspeakers, may be capable of producing sound levels that could cause permanent hearing loss.

DO NOT operate at high volume levels or at a level that is uncomfortable. If you experience any discomfort or ringing in the ears, or suspect an hearing loss, you should consult an audiologist.

Poly Switch

All full-range loudspeakers are fitted with a self-resetting poly switch that protects the high-frequency driver from damage caused by excessive power.

If a loudspeaker cabinet loses high-frequency output, immediately remove power from the unit and wait for two to three minutes. The should allow the poly switch to reset. Re-apply power and check the performance of the high-frequency driver before continuing with the power reduced to a level that does not cause the poly switch to interrupt the signal.

On the R118W/R118WC sub woofer, the Poly Switch protects the woofer and a similar routine should be followed if its output is lost.

Connection Examples

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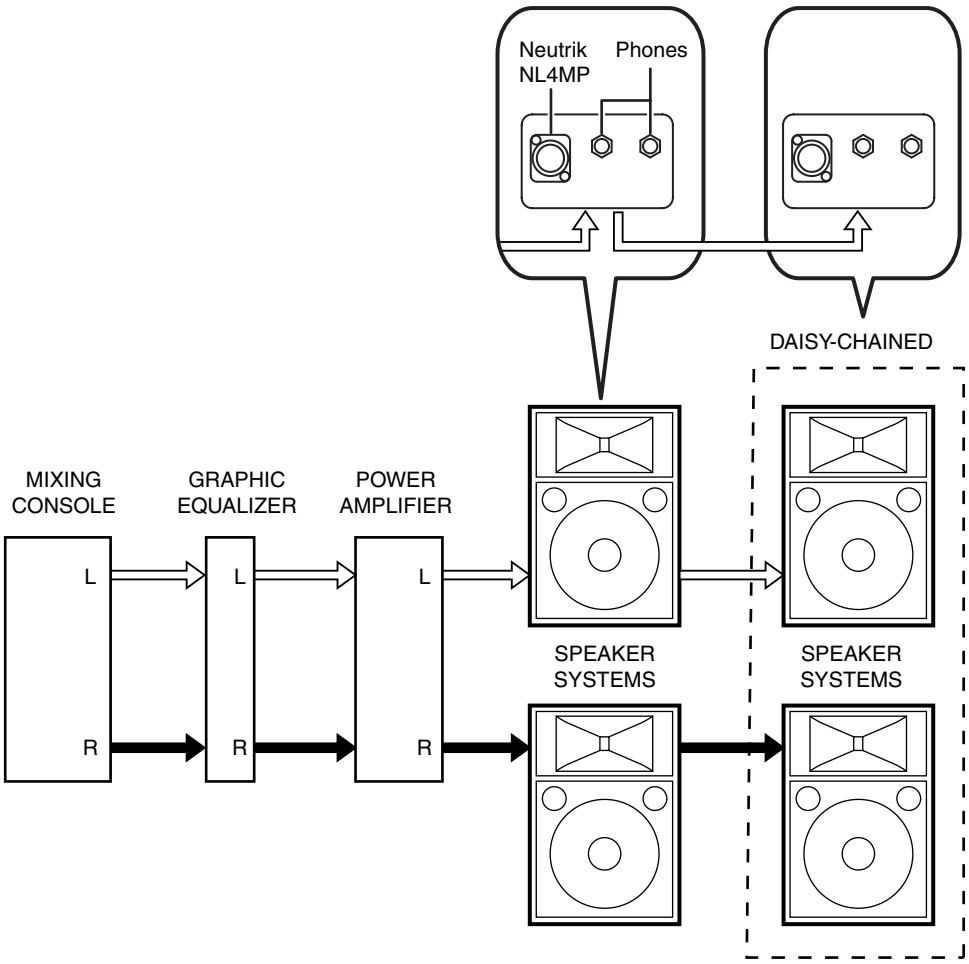
■ Full-range Connection

Each speaker features three input/parallel connectors – two 1/4" phone jacks and one Neutrik NL4MP connector. Use either a phone jack or the Neutrik connector to receive input from your sound system/power amplifier. One of the spare connectors can be used to parallel-connect an additional speaker (keeping in mind the impedance considerations mentioned below).

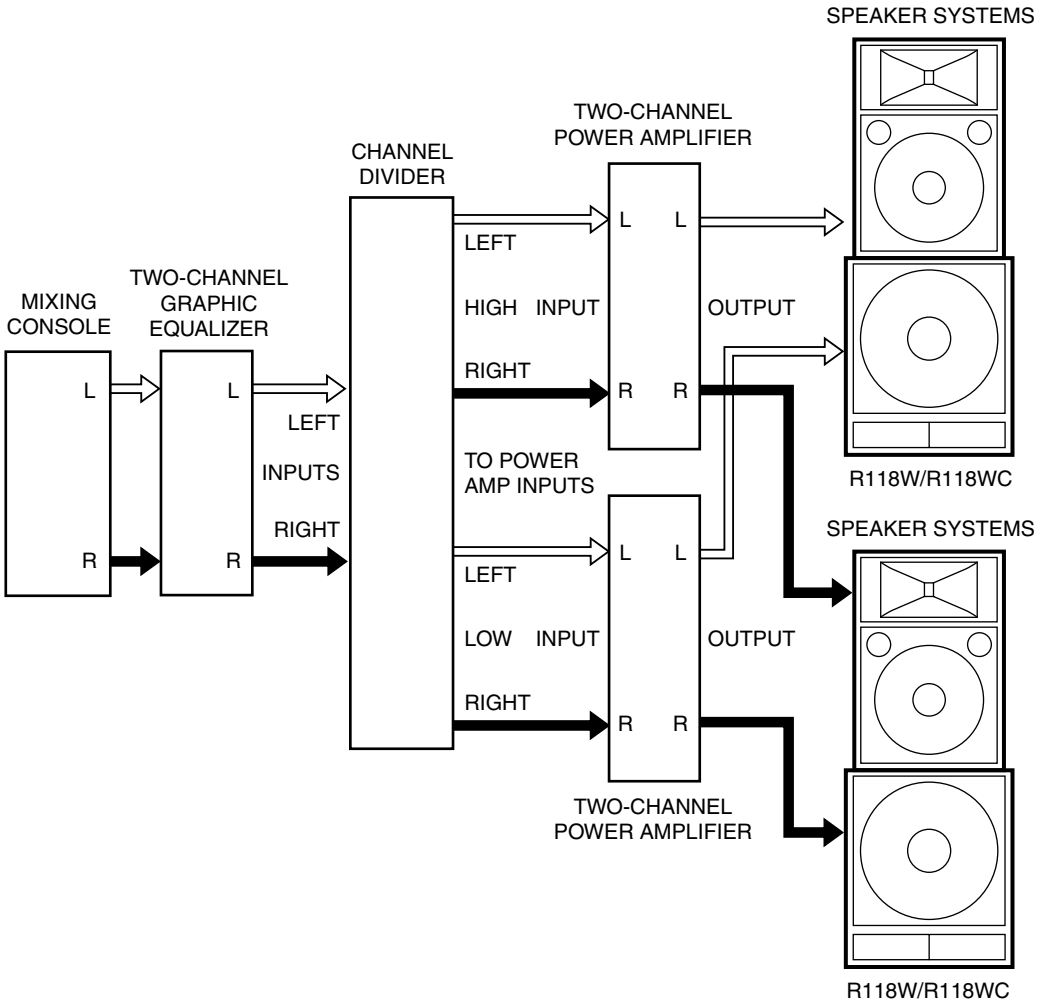


Impedance Considerations

We do not recommend connecting more than two 8-ohm speakers in parallel. Two parallel-connected 8-ohm speakers have a total impedance of 4 ohms, which is the minimum that should be connected to one amplifier output channel. The R112/R112C, R115/R115C, R12M/R12MC, R15M/R15MC and R118W/R118WC are 8-ohm speakers, and two of these can safely be paralleled on one output. The R215/R215C, however, has an impedance of 4 ohms and should not be parallel-connected with another R215/R215C or any other model.

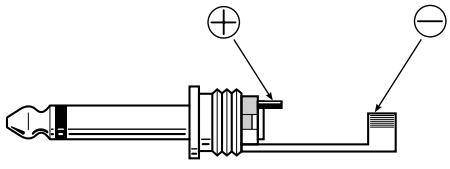
■ Using a Channel Divider and Subwoofers

Using a channel divider in a multi-way system like the one shown in the diagram can provide superior dynamic range and overall sound quality. The channel divider divides the line-level audio from the preamplifier or mixing console into separate frequency bands that are then sent to separate power amplifiers. The power amplifiers drive speaker systems selected for optimum performance in the corresponding frequency ranges.



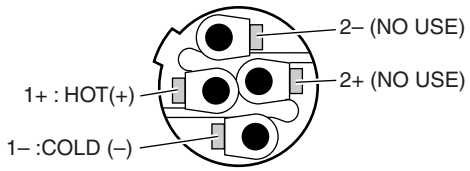
■ Phone Plug Wiring

Phone plugs for connection to the phone jack inputs should be wired as shown to the right. Be sure to use proper speaker cable – NOT shielded instrument or line cable – for all speaker connections.



■ Neutrik NL4FC Plug Wiring

If you will be using the Neutrik connectors for speaker input, wire the plugs as shown to the right. Be sure to use proper speaker cable – NOT shielded instrument or line cable – for all speaker connections.



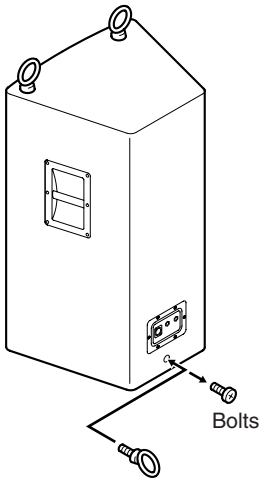
Neutrik NL4FC connector

■ Speaker Cable Selection

Speaker cables must carry a significant amount of current in order to drive a high-power speaker system. For this reason it is important to use heavy-gauge speaker cable for all speaker connections. Other types of cable can dramatically limit performance as well as being a fire hazard.

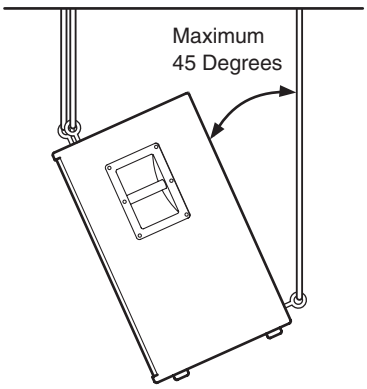
Suspended Installation

1 The R112/R112C and R115/R115C can be used in suspended "flying" rigs by using optional long eye bolts (M10) and an appropriate suspension wire. For this type of installation replace the three bolts on the top and back of the speaker with the long eye bolts.



M10 long eye bolts (Optional)

2 Refer to the diagram to the right for suspended installation details. Make sure that all wire and fittings used – including the ceiling structure – are strong enough to support the speakers.



Suspension Cautions

- Installation should be carried out by experienced personnel.
- Some fittings may deteriorate due to wear or corrosion over extended periods of time. The installation should be checked thoroughly at regular intervals for safety.
- Use only the specified M10 long eye bolts.
- Always suspend the speakers using all three long eye bolts.
- Never use the speakers' handles as suspension points.

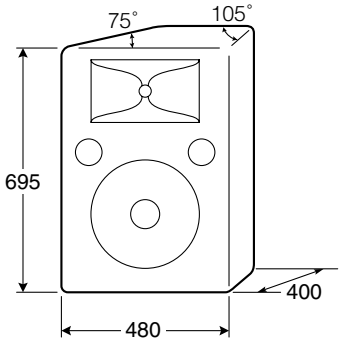
Specifications

Model		R112/R112C	R12M/R12MC	R115/R115C	R15M/R15MC	R215/R215C	R118W/ R118WC
Type		2Way Bass reflex					Bass reflex
Speaker Unit	LF	12" Cone		15" Cone		15" Cone × 2	18" Cone
	HF	1.75" v.c.Comp. Driver					—
Frequency Range		55 Hz - 20 kHz (–10 dB)		50 Hz - 20 kHz (–10 dB)		40 Hz - 20 kHz (–10 dB)	35 Hz - 3 kHz (–10 dB)
Power Capacity	NOISE*	200 W		250 W		500 W	250 W
	PGM	400 W		500 W		1000 W	500 W
	MAX	800 W		1000 W		2000 W	1000 W
Nominal Impedance		8 ohms				4 ohms	8 ohms
Sensitivity		97 dB SPL (1W,1 m)		98 dB SPL (1W,1 m)			97 dB SPL (1W,1 m)
Nominal Dispersion	Horizontal	90˚	40˚	90˚	40˚	90˚	—
	Vertical	40˚	90˚	40˚	90˚	40˚	—
Cross Over Frequency		1.7 kHz				1.5 kHz	—
Input Connectors		SPEAKON NL4MP × 1, 1/4" Phone Jack × 2					
Dimensions (W × H × D)		480 × 695 × 400 mm	675 × 450 × 380 mm	520 × 765 × 470 mm	745 × 490 × 400 mm	520 × 1175 × 600 mm	562 × 811 × 639 mm
Weight		26.5 kg	24.0 kg	35.0 kg	30.5 kg	69.0 kg	49.5 kg
Color		Black					
Mounting Screw		M10 3points	—	M10 3points	—	—	—

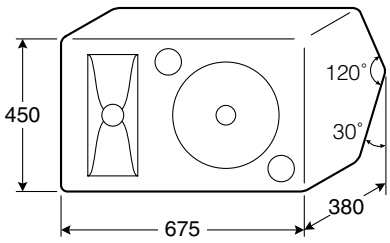
*: EIA RS-426

Specifications and descriptions in this owner's manual are for information purposes only. Yamaha Corp. reserve the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

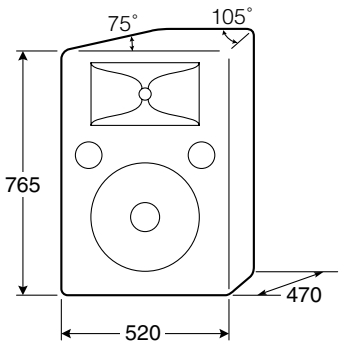
R112/R112C



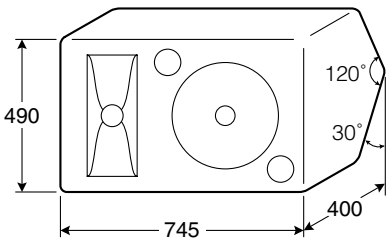
R12M/R12MC



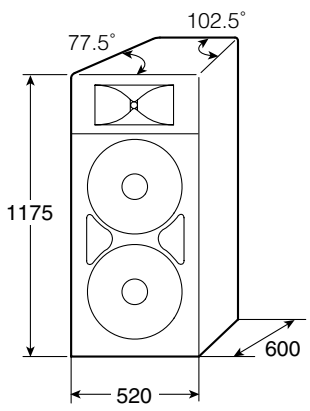
R115/R115C



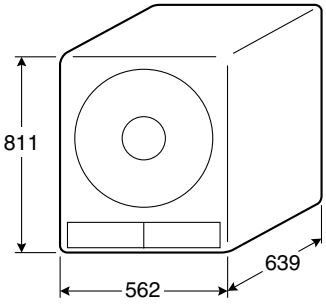
R15M/R15MC



R215/R215C



R118W/R118WC



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Technical Data

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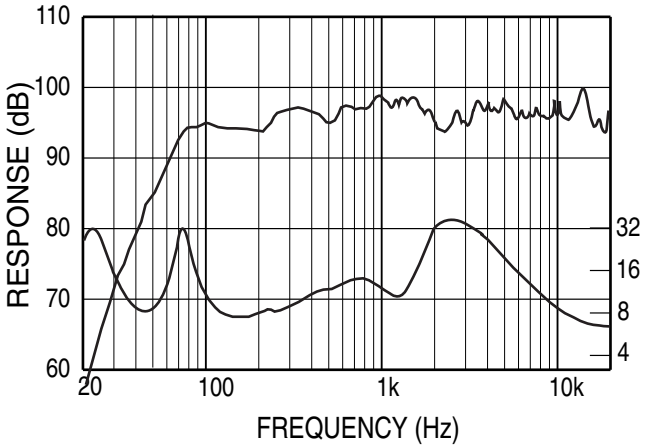
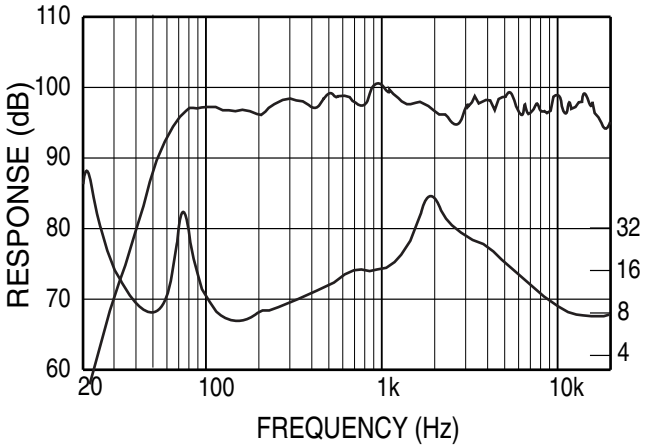
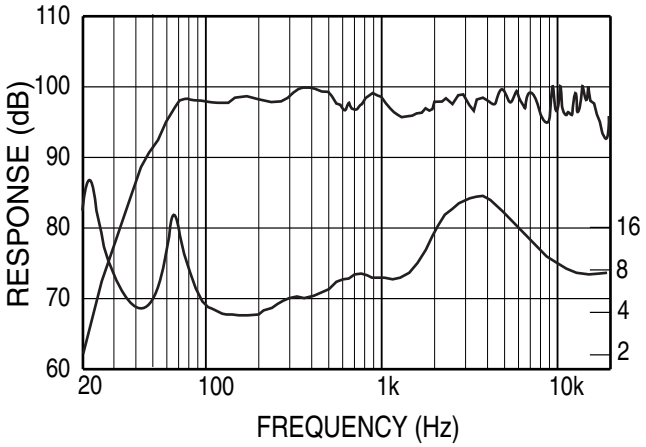
R112/R112C/R12M/R12MC



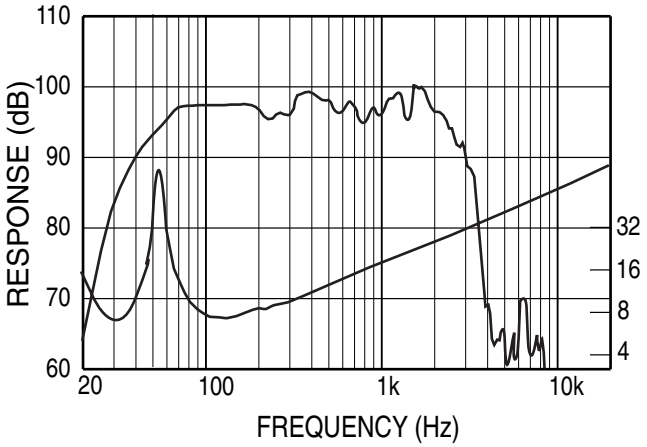
R115/R115C/R15M/R15MC



R215/R215C



R118W/R118WC



注意事项

警告

在操作期间发生异常现象时

- 若您发现任何异常现象，诸如烟雾、异味或噪声，应立即关闭功率放大器。从 AC 电源插座拔出电源线，与经销商联系修理。若在这种情况下使用本机，则会引起火灾或电击的危险。

注意

安装

- 当选择扬声器的地点时，应避免下列地点：
  –承受直射阳光、高温（诸如加热器）或温度极低的地点。
  –高湿度的地点。
  –承受积尘和振动的地点。
  –不平坦或不稳定的表面。
- 为了防止短路或电缆断路，应始终在移动系统设备之前拔出电缆。
- 当使用两个或更多的扬声器系统时，务必使扬声器系统的连接器的极性（＋／－）与放大器上的连接器匹配。若极性不匹配，扬声器发出的声音会互相影响，所以不能实现平衡的声场。
- 本机很重，请安排两人以上进行搬运。

操作

- 为了避免损坏扬声器和系统的其他零部件，应始终最後接通放大器！这能够避免让听众烦恼的响亮、有损伤性的爆破声，并可避免冲击扬声器。当您降低功率时，应始终首先关闭放大器以避免相同的问题。
- 在连接或拔出电缆之前，应始终首先关断系统组件的电源。若不遵守，则会损坏扬声器和连接的设备。
- 切勿长时间输出失真的声音，否则会引起扬声器积聚热量，会引起火灾的危险。

保护扬声器

当选择用于扬声器的功率放大器时，应确认其功率输出与扬声器功率容量匹配（参阅第 14 页上的规格）。即使放大器的功率输出低于扬声器的 PGM（编程）功率容量，当出现高输入信号时的削波会损坏扬声器。

下列原因会损坏扬声器:

- 当使用麦克风时引起的反馈
- 由电子乐器产生的持续高声压级
- 持续大功率输出失真信号
- 在接通放大器期间，由接通设备或连接及断开系统组件而引起的喀啦噪声。

当组合使用放大和 / 或附加扬声器时，本产品产生的声级会引起永久性听觉损失。

切勿以高音量级或者以让人不舒服的音量级进行操作。若您在车中听到不舒服或回响，或者怀疑听觉损失，请与听觉病矫治专家洽谈。

复合开关

所有的全音域扬声器均安装自动复位的复合开关，当出现过量功率时，该开关可保护高频驱动器以避免损坏。

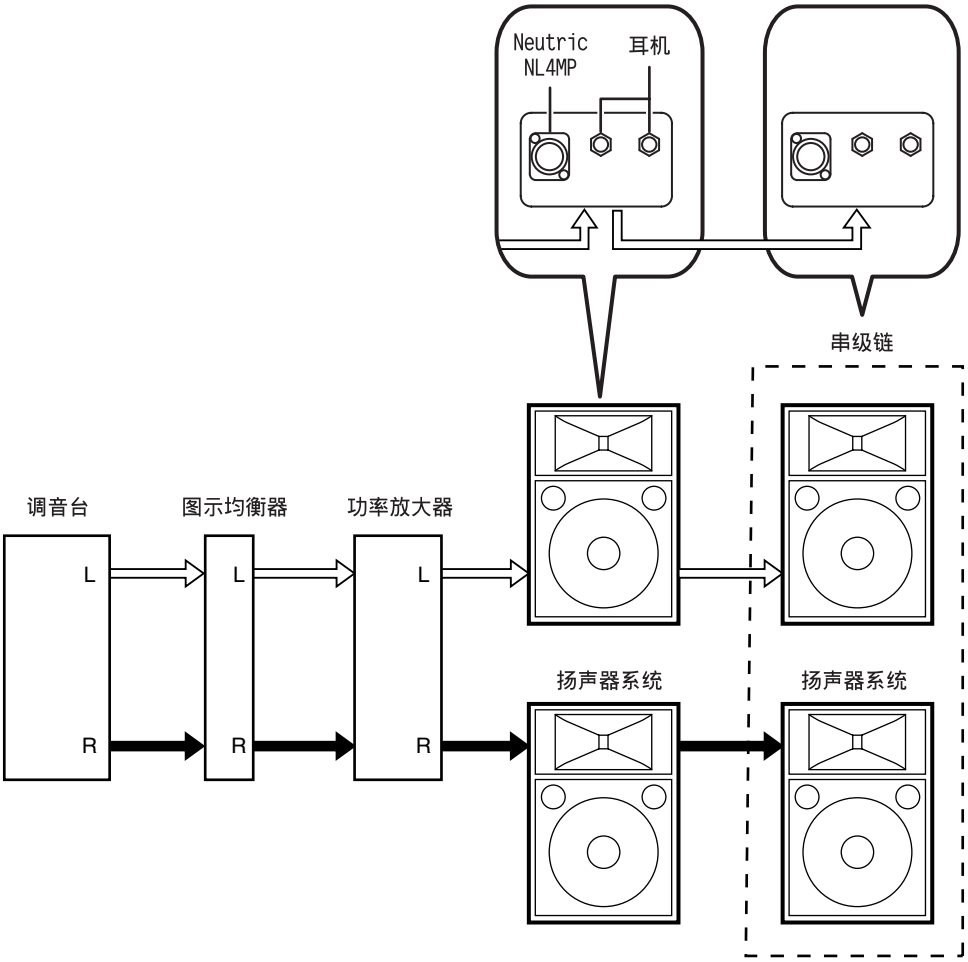
若扬声器箱损失高频输出，便立即去除来自本机的功率，并等待 2 ～ 3 分钟后，复合开关便复位，在继续操作之前再次施加功率并检查高频驱动器的性能，使功率降低至不会使复合开关中断信号的电平。

在 R118W/R118WC 副低音扬声器上若失去输出，复合开关会保护低音扬声器和相同路径。

连接例

■ 全音域连接

每个扬声器备有 3 个输入 / 并联连接器－ 2 个 1/4" 耳机插口以及 1 个 Neutric NL4MP 连接器。使用耳机插口或 Neutric 连接器可接收来自音响系统 / 功率放大器的输入。备用连接器之一可用于并联附加扬声器（请牢记下述的 " 阻抗考虑因素 "）。

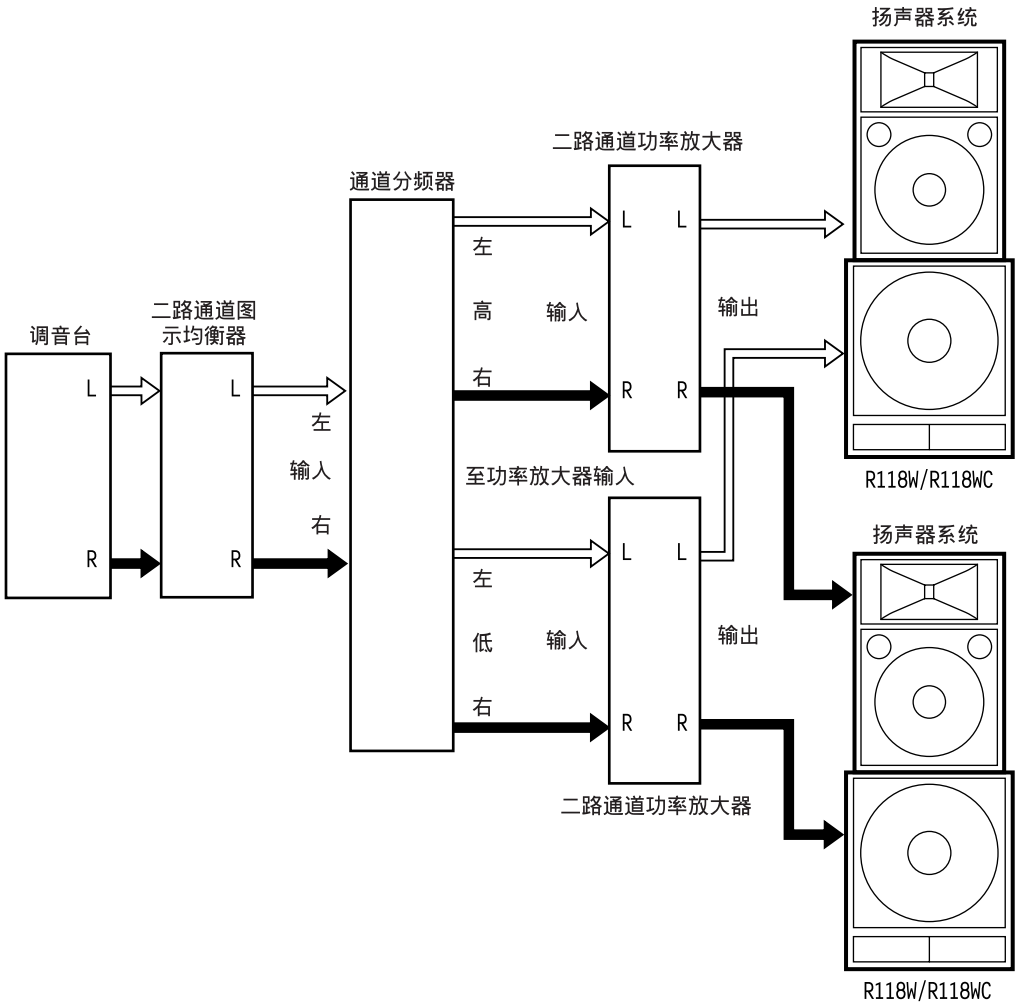


阻抗考虑因素

我们建议不要并联 2 个以上的 8 Ω扬声器。2 个并联的 8 Ω扬声器具有 4 Ω总阻抗，这是连接至 1 个放大器输出通道的应达到的最低值。R112/R112C、R115/R115C、R12M/R12MC、R15M/R15MC 和 R118W/R118WC 为 8 Ω扬声器。可将这两种与输出安全地并联。然而，R215/R215C 具有 4 Ω阻抗，不应将其与其他 R215/R215C 或任何其他机型连接。

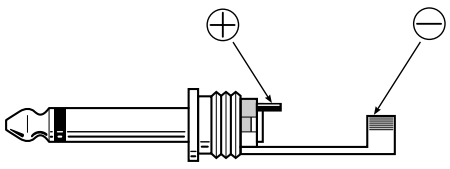
■使用通道分频器和副低音扬声器

在多路系统中使用图中所示的通道分频器，可达到卓越的动态范围和总体音质，该通道分频器可将来自预放大器或调音台的线路电平音频分配至分离频带，然后输送至分离功率放大器。功率放大器为达到相应频率范围内的最佳性能而驱动选用的扬声器系统。



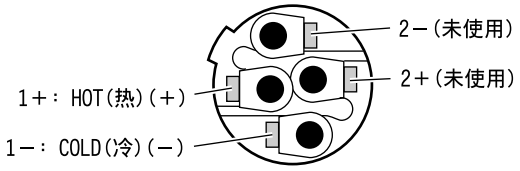
■耳机插头接线

对于耳机插头与耳机插口输入连接，应按照右图所示进行接线。务必使用适当的扬声器电缆，对所有的扬声器连接不得使用屏蔽的装置或线路电缆。



■Neutrik NL4FC 插头接线

若您准备将 Neutrik 连接器用于扬声器输入，应按照右图所示进行接线。务必使用适当的扬声器电缆，对所有的扬声器连接不得使用屏蔽的装置或线路电缆。



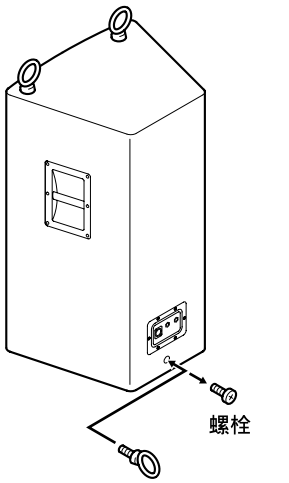
Neutrik NL4FC连接器

■扬声器电缆选择

扬声器电缆必须承受大量电流以便驱动大功率扬声器系统。因此，对所有的扬声器连接应使用粗直径扬声器电缆颇为重要。其他型号的电缆的性能会明显受限制，并会引起火灾危险。

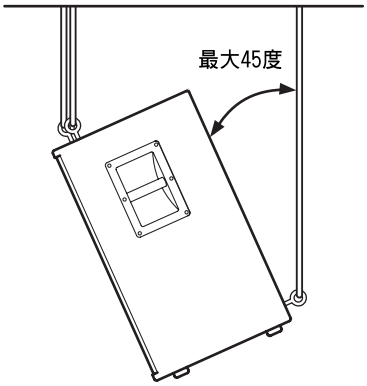
悬挂安装

1 使用选购件长吊环螺栓 (M10) 和适当的悬挂金属丝，对 R112/R112C 和 R115/R115C 可采用悬挂方式。这种安装方式用长吊环螺栓取代扬声器顶部和背面的 3 个螺栓。



M10长吊环螺栓(选购件)

2 欲知悬挂安装详情，请参阅右图。应确认所有使用的金属线和配件（包括天花板结构）足以支承扬声器。



悬挂注意事项

- 安装必须由经验丰富的人员担任。
- 某些配件因长期使用会出现劣化和锈蚀现象。为安全起见，应定期仔细检查安装情况。
- 仅可使用指定的 M10 长吊环螺栓。
- 应始终使用 3 根长吊环螺栓以便悬挂扬声器。
- 切勿将扬声器手柄用作为悬挂点。

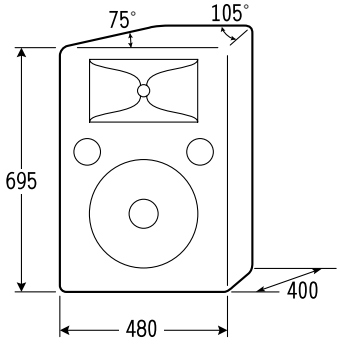
规格

型号		R112/R112C	R12M/R12MC	R115/R115C	R15M/R15MC	R215/R215C	R118W/R118WC
型式		2路低音反射					低音反射
扬声器部	LF	12" 锥形		15" 锥形		15" 锥形×2	18" 锥形
	HF	1.75" 压缩驱动器					
频率范围		55 Hz – 20 kHz (–10 dB)		50 Hz – 20 kHz (–10 dB)		40 Hz – 20 kHz (–10 dB)	35 Hz – 3 kHz (–10 dB)
功率容量	NOISE*	200 W		250 W		500 W	250 W
	PGM	400 W		500 W		1000 W	500 W
	MAX	800 W		1000 W		2000 W	1000 W
标称阻抗		8 Ω				4 Ω	8 Ω
灵敏度		97 dB SPL (1W,1 m)		98 dB SPL (1W,1 m)			97 dB SPL (1W,1 m)
标称扩散角度	水平	90 度	40 度	90 度	40 度	90 度	—
	垂直	40 度	90 度	40 度	90 度	40 度	—
分隔频率		1.7 kHz				1.5 kHz	—
输入连接器		SPEAKON NL4MP × 1, 1/4" 耳机插口×2					
尺寸（宽×高×深）		480 ×695 × 400 mm	675 ×450 × 380 mm	520 ×765 × 470 mm	745 ×490 × 400 mm	520 ×1175 × 600 mm	562 ×811 × 639 mm
重量		26.5 kg	24.0 kg	35.0 kg	30.5 kg	69.0 kg	49.5 kg
颜色		黑色					
安装螺钉		M10 3点	—	M10 3点	—	—	—

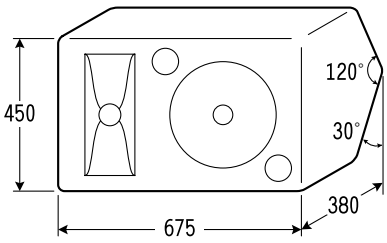
*EIA RS-426

在本使用手册中的规格和说明仅用作为信息。雅马哈公司保留在任何时候对产品和规格进行变更和改进的权利，恕不事先通知。因为各地的规格、设备或选购件可能不相同，请与您的雅马哈经销商确认。

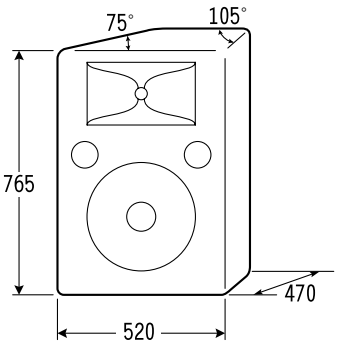
R112/R112C



R12M/R12MC



R115/R115C



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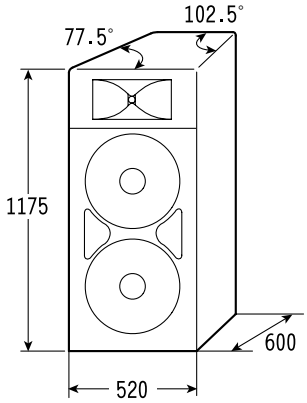
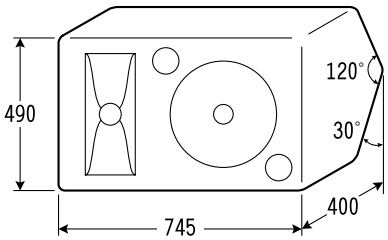


R15M/R15MC



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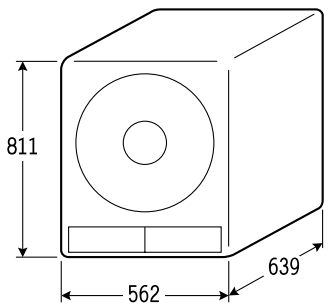
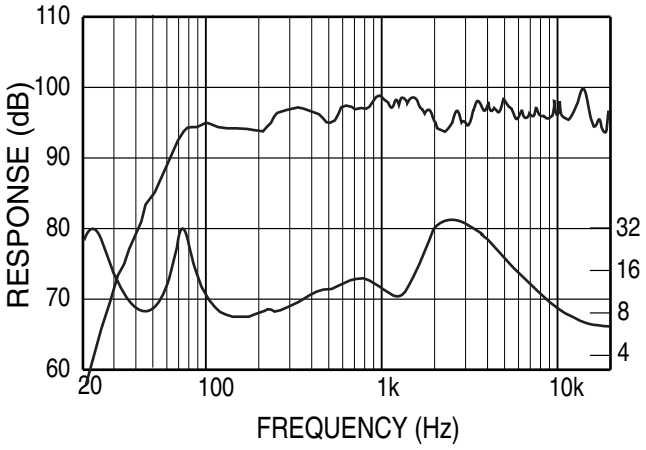
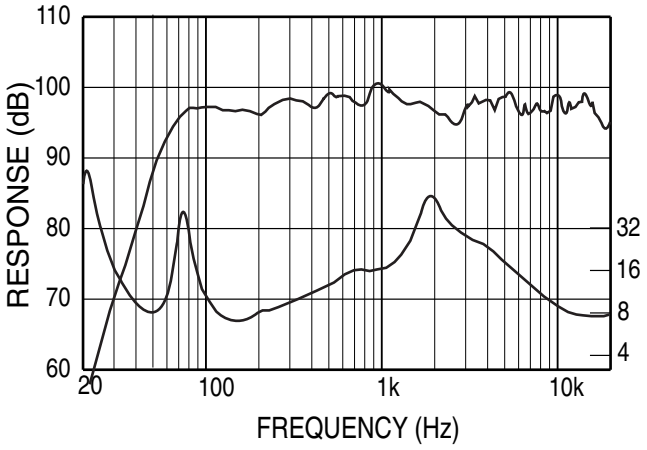


技术资料

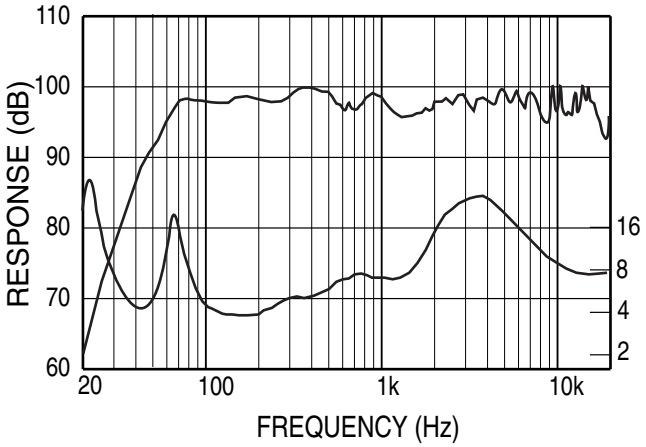
R112/R112C/R12M/R12MC



R115/R115C/R15M/R15MC



R215/R215C



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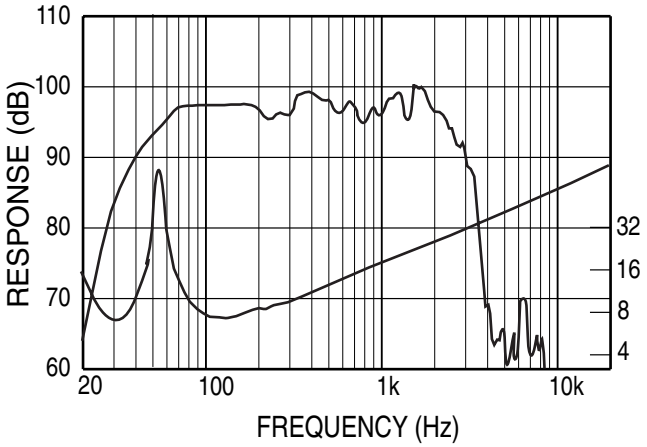

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