



## SPEAKER SYSTEMS

**R112/R112C**

**R115/R115C**

**R215/R215C**

**R12M/R12MC**

**R15M/R15MC**

## SUBWOOFER

**R118W/R118WC**

### *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.

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### *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。

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# Precautions

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## WARNING

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### 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

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### 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.

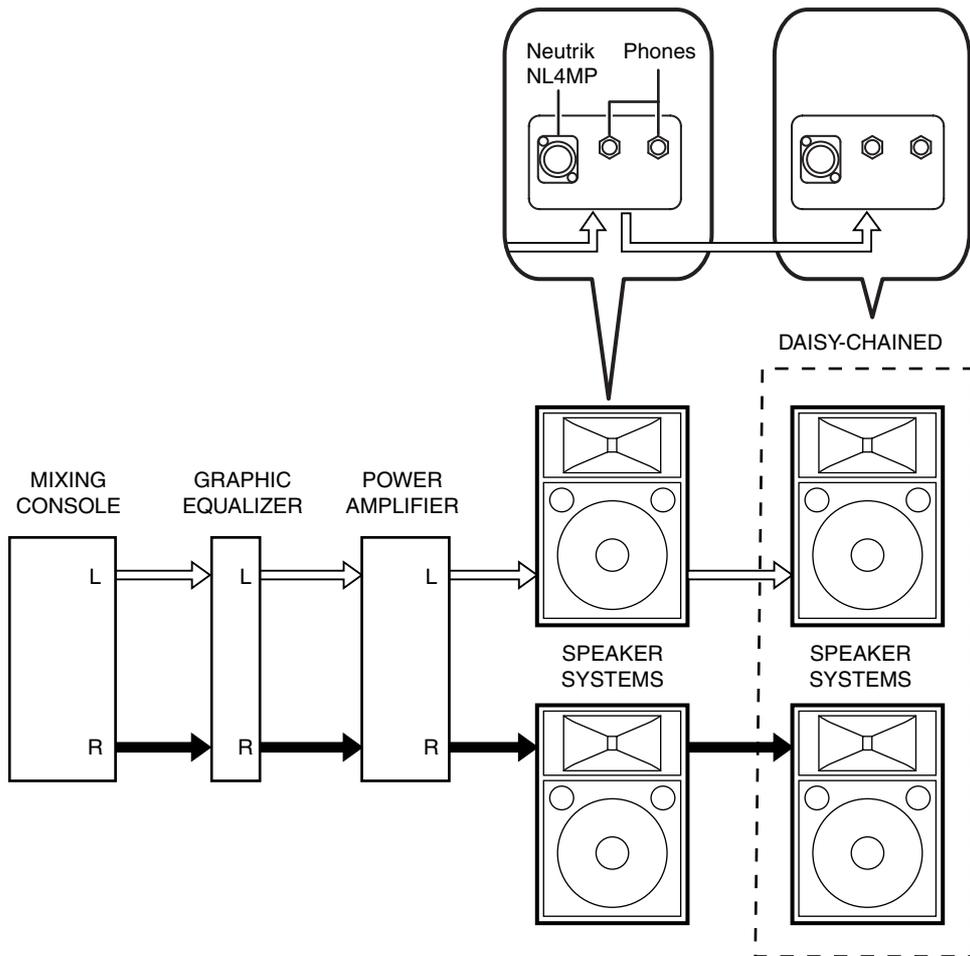
If a loudspeaker cabinet loses high-frequency output, immediately remove power from the unit and wait for two to three minutes. This should allow the poly switch to reset. Re-apply power and check the performance of the high-frequency driver before continuing with the power reduced to a level that does 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

## ■ 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).

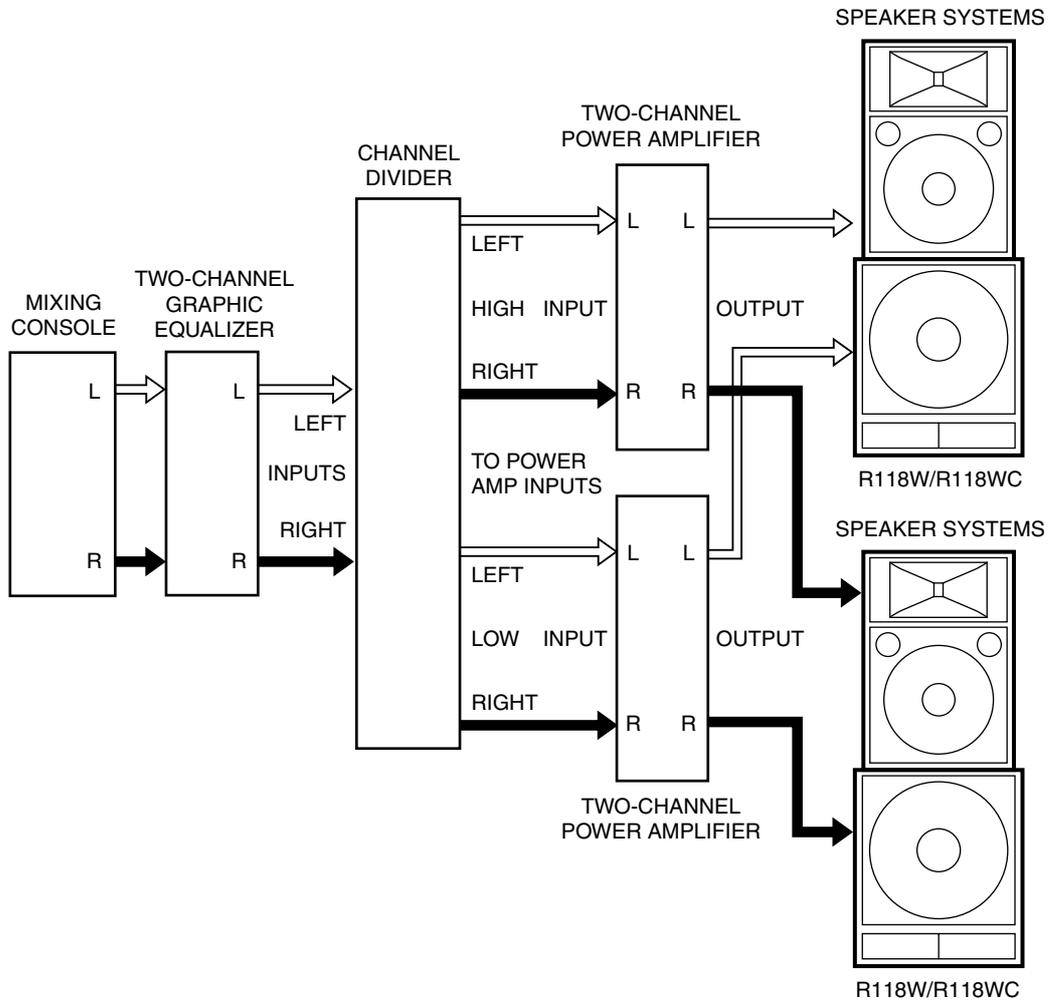


### Impedance Considerations

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.

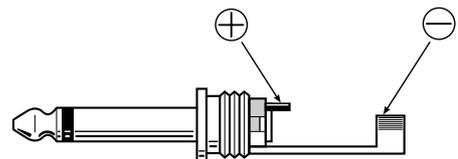
## ■ Using a Channel Divider and Subwoofers

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.



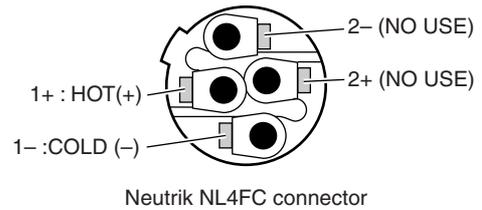
## ■ Phone Plug Wiring

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.

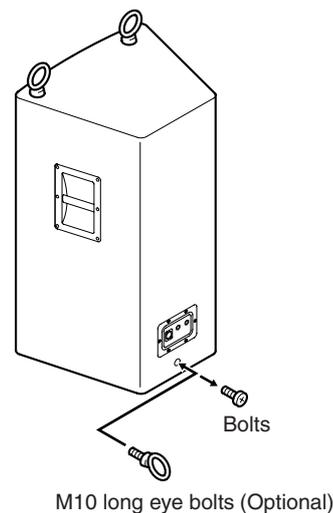


## ■ Speaker Cable Selection

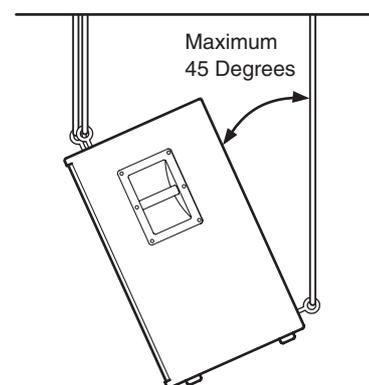
Speaker cables must carry a significant amount of current in order to drive a high-power speaker system. For this reason it is important to use heavy-gauge speaker cable for all speaker connections. Other types of cable can dramatically limit performance as well as being a fire hazard.

# 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.



**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

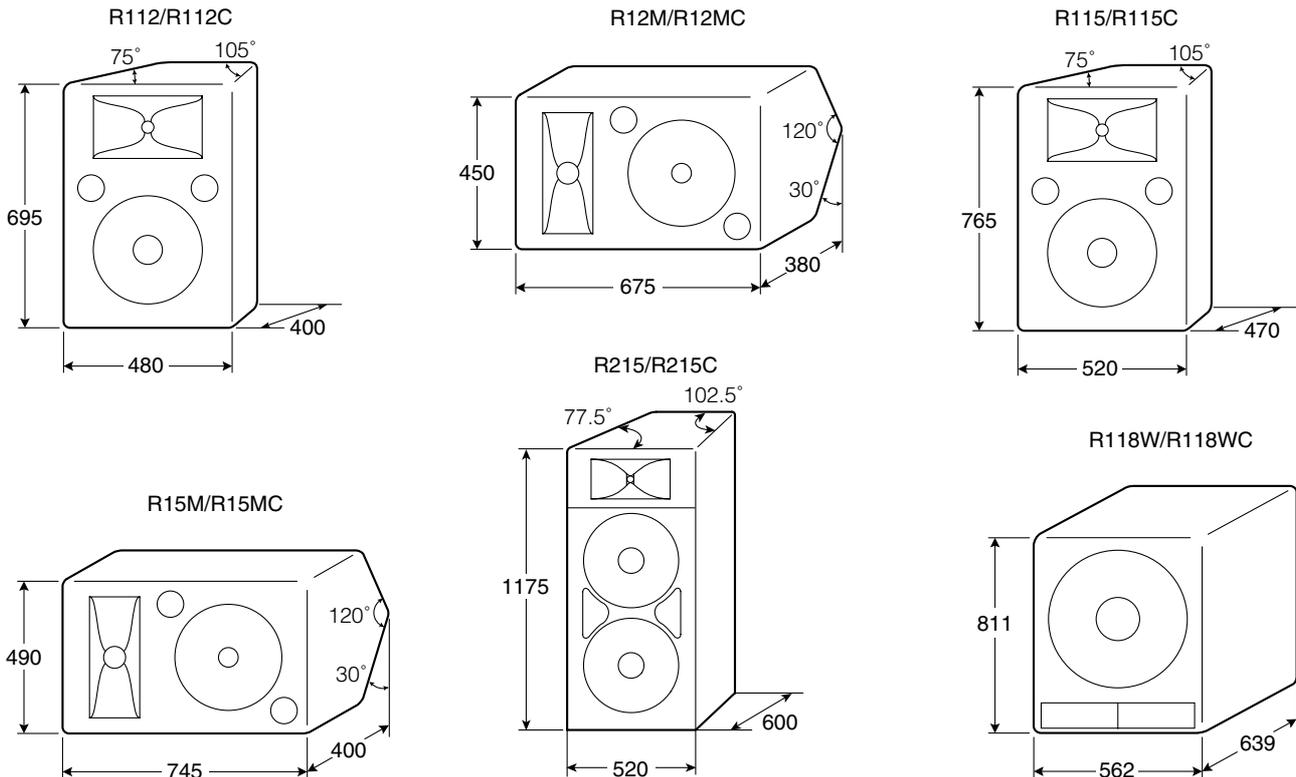
- Installation should be carried out by experienced personnel.
- Some fittings may deteriorate due to wear or corrosion over extended periods of time. The installation should be checked thoroughly at regular intervals for safety.
- Use only the specified M10 long eye bolts.
- Always suspend the speakers 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

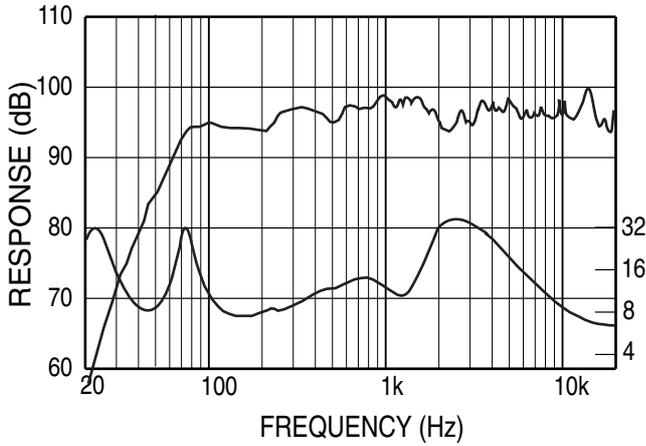
Specifications and descriptions in this owner's manual are for information purposes only. Yamaha Corp. reserve the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your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



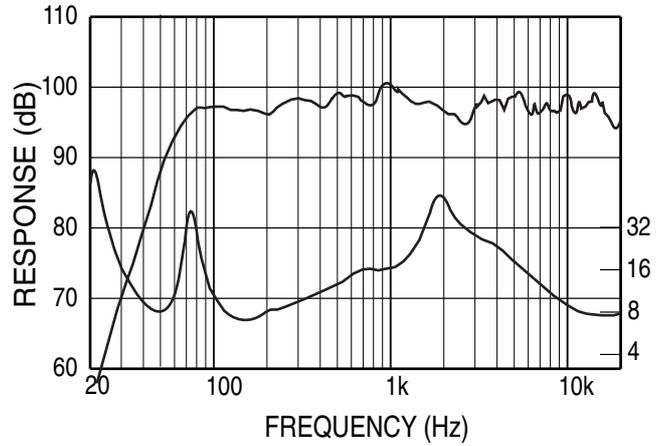
# Technical Data

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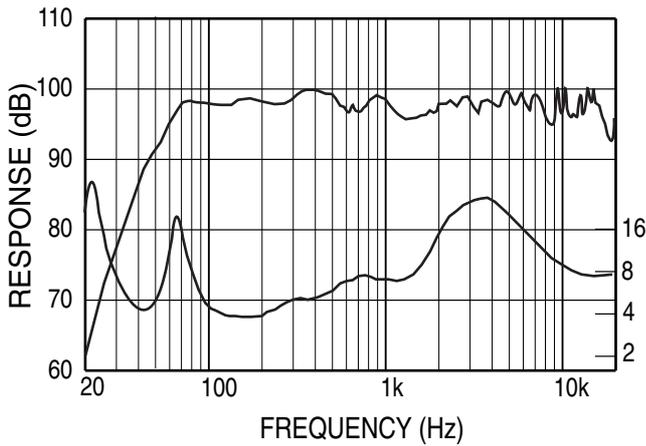
**R112/R112C/R12M/R12MC**



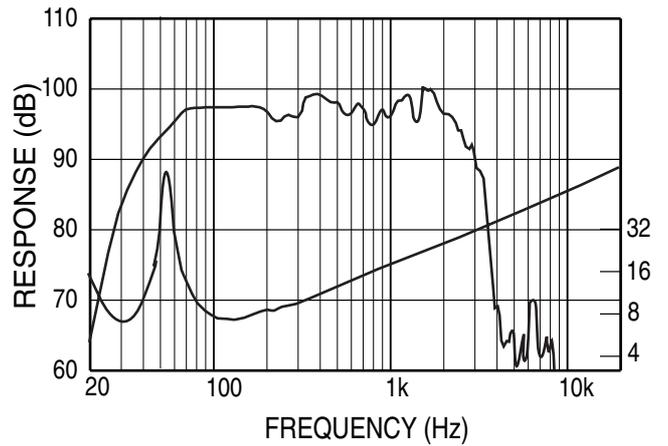
**R115/R115C/R15M/R15MC**



**R215/R215C**



**R118W/R118WC**





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