



SPEAKER SYSTEM

S112V/S115V/S215V
SM10V/SM12V/SM15V

SUBWOOFER

SW115V/SW118V/SW218V

Owner's Manual
Bedienungsanleitung
Mode d'emploi
Manual de instrucciones
取扱説明書

Thank you for choosing the YAMAHA speaker system. In order to take maximum advantage of the speaker's features and ensure maximum performance and longevity, please read this manual carefully before using the speaker system. Keep the manual in a safe place for future reference.

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PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

* Please keep this manual in a safe place for future reference.



WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

Do not open

- Do not open the device or attempt to disassemble the internal parts or modify them in any way. The device contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

Water warning

- Do not expose the device to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.



CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

Location

- If you use a stand, check the stand's specifications and make sure that it is sturdy enough to support the weight of the speaker. You may need to limit the number of people around the placed stand, in order to avoid toppling the device or causing damage to the internal components.
- If you use the TS-80 and TS-90 speaker stands manufactured by Ultimate Systems (sold separately) to support the S112V/S115V/SM10V/SM12V/SM15V speaker models, be sure to keep the following cautions.
 - Use the speaker stands with their legs fully opened.
 - Place only one speaker on each speaker stand.
 - Tighten fastening screws securely.
 - Remove the speakers from the stands before moving the stands or adjusting their height.
 - Add weight such as sand bags around the stand legs to prevent them from falling over.
 - Use the stand at a maximum height of 140 cm.
- If you use a metal socket of the SW115V/SW118V subwoofer to allow mounting of a satellite speaker, use a pole shorter than 90cm with an outer diameter of 35mm.
- When transporting or moving the device, always use two or more people.
- Before moving the device, remove all connected cables.
- Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not place the device in an unstable position where it might accidentally fall over.

Connections

- Before connecting the device to other devices, turn off the power for all devices. Before turning the power on or off for all devices, set all volume levels to minimum.
- Use only speaker cables for connecting speakers to the speaker jacks. Use of other types of cables may result in fire.
- Be sure to observe the amplifier's rated load impedance (see page 4), particularly when connecting speakers in parallel. Connecting an impedance load outside the amplifier's rated range can damage the amplifier.

Handling caution

- Do not use the device for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.
- Do not operate the device if the sound is distorting. Prolonged use in this condition could cause overheating and result in fire.
- Always turn AC power to the power amplifier on last in any audio system to avoid speaker damage. When turning power off, the power amplifier should be turned off first for the same reason.



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.

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 6). 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.

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. They 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 SW115V/SW118V/SW218V sub woofer, the Poly Switch protects the woofer and a similar routine should be followed if its output is lost.

- In any system using two or more speakers, be sure to match the connection polarities of all speakers to the amplifier(s) – e.g. always connect “+” to “+” and “-” to “-”. If the polarities are not properly matched the speakers will be driven out of phase and the sound will suffer.
- Use only Neutrik NL4FC plugs for connecting Speakon connectors.

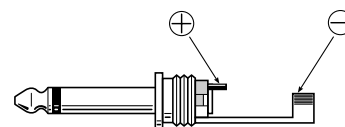
Yamaha cannot be held responsible for damage caused by improper use or modifications to the device.

- * Illustrations in this manual are for explanatory purposes only, and may not match the actual appearance of the product during operation.
- * Company names and product names used in this Owner's Manual are trademarks or registered trademarks of their respective owners.

Connecting the Speakers

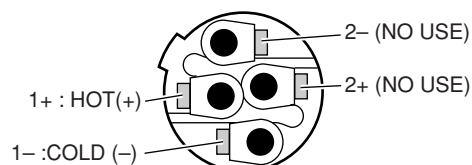
■ Phone Plug Wiring

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

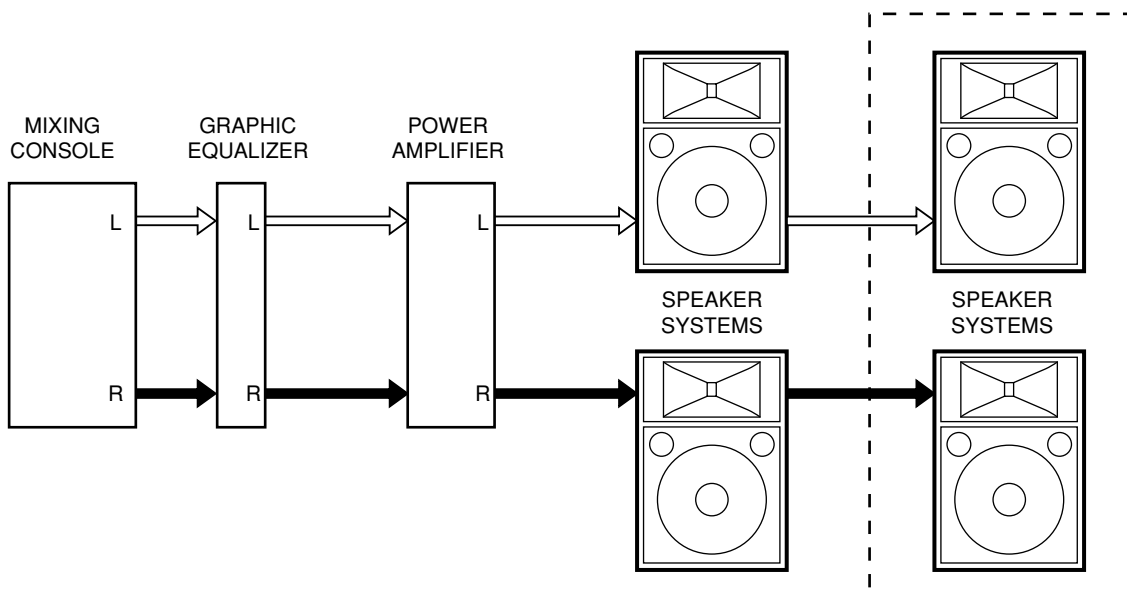
If you will be using the Neutrik connectors for speaker input, wire the plugs as shown to the right. Be sure to use proper speaker cable — NOT shielded instrument or line cable — for all speaker connections.



Neutrik NL4FC connector

■ Full-range Connection

Each speaker features four input/parallel connectors—two 1/4" phone jacks and two Neutrik NL4AMP connectors. Use either a phone jack or a 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).

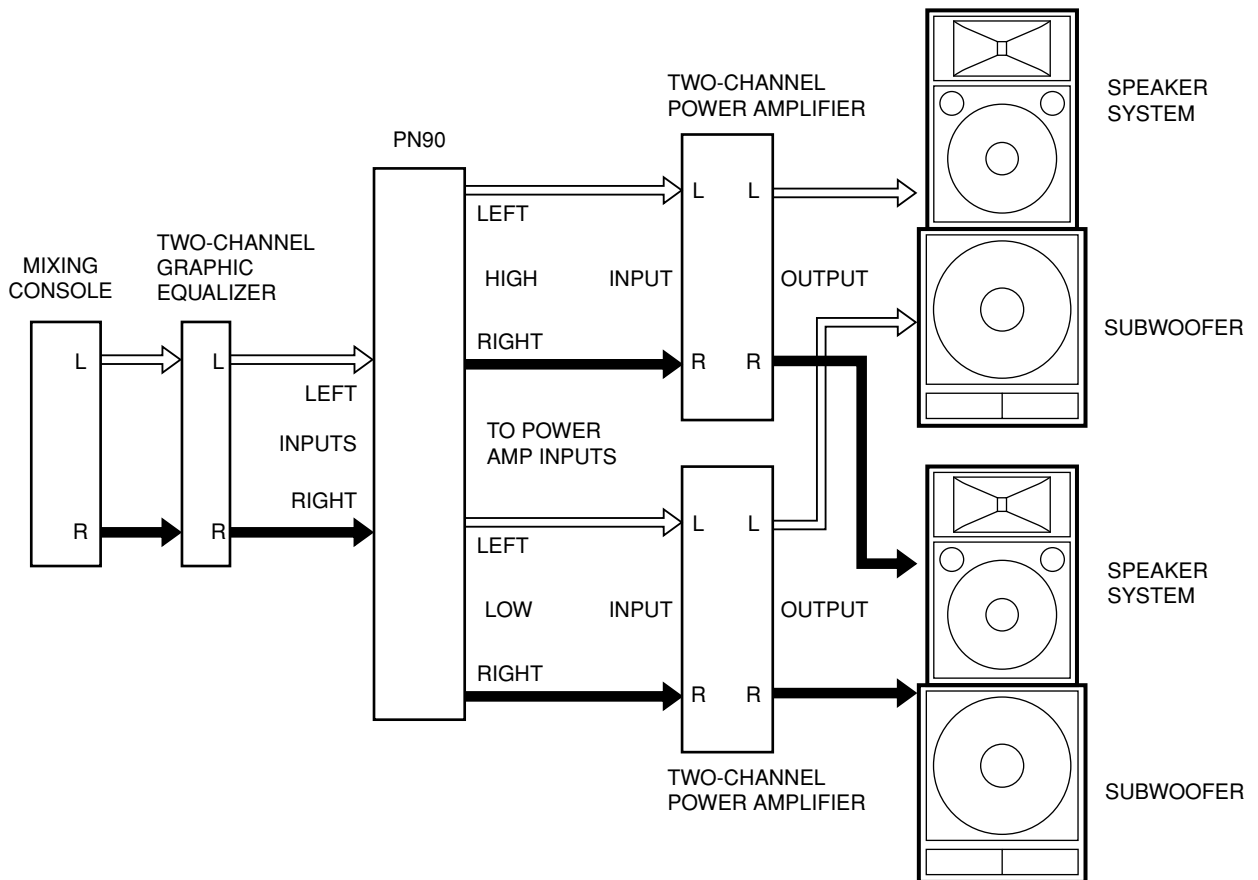


Impedance Considerations

When connecting speakers in parallel be sure to check the rated load impedance of the power amplifier. Most power amplifiers are capable of safely driving speakers with minimum impedance of 8 ohms or 4 ohms. A pair of parallel-connected 8-ohm speakers have a total impedance of 4 ohms. The S112V/S115V/SM10V/SM12V/SM15V/SW115V/SW118V are 8-ohm speakers, and two of these can safely be paralleled on one output. The S215V/SW218V, however, has an impedance of 4 ohms and should not be parallel-connected with another S215V/SW218V or any other model. These models can be connected in parallel, however, if you are using a power amplifier that can safely drive load impedances of 2 ohms or lower.

■ Subwoofers and the PN90 Crossover Network

Adding subwoofers to speaker systems like the one shown in the diagram can provide superior dynamic range and overall sound quality. After dividing the line-level audio from the preamplifier or mixing console into separate frequency bands via the PN90 crossover network, the separate frequency bands are sent to separate power amplifiers.



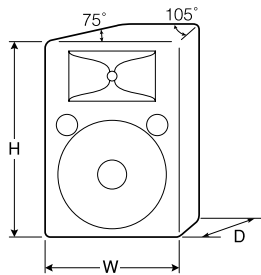
Precautions for operating the PN90

- Do not connect the PN90 between the power amplifier and speakers. The high voltage levels produced can damage the PN90.
- Use the PN90 with a load impedance of between 7.5 and 30kΩ. (Rated load impedance is 15kΩ)
- The polarity of the LOW signal is inverted at the crossover point between the LOW and HIGH signals. Compensate for this by reversing the polarity when connecting the power amplifier output jacks to a subwoofer. Note that you must reverse the polarity between the power amplifier and subwoofers rather than between the PN90 and power amplifier to prevent damage to the connected device.
- The PN90's connectors are unbalanced phone jacks. Use shielded audio cable with phone plugs to connect to the PN90. Do not use speaker cable.
- Adjust the level of the LOW and HIGH signals using the power amplifier volume controls.

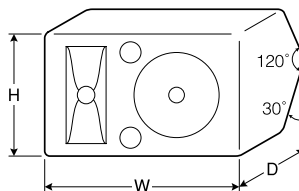
Specifications

Model		SM10V	S112V	SM12V	S115V	SM15V	S215V
Enclosure		Bass reflex type					
Speaker Unit	LF	10" cone	12" cone		15" cone		15" cone × 2
	HF	1" V.C. driver	2" V.C. driver				
Frequency Response		70Hz-20kHz	60Hz-16kHz		55Hz-16kHz		42Hz-16kHz
Power Capacity	NOISE*	125W	175W		250W		500W
	PGM	250W	350W		500W		1000W
	MAX	500W	700W		1000W		2000W
Nominal Impedance		8Ω					4Ω
Sensitivity		96dB SPL (1W, 1m)	97dB SPL (1W, 1m)		99dB SPL (1W, 1m)		99dB (1W, 1m)
Nominal Dispersion	Horizontal	40°	90°	40°	90°	40°	90°
	Vertical	60°	40°	90°	40°	90°	40°
Crossover Frequency		1.8kHz	2kHz		1.7kHz		1.5kHz
Input Connectors		1/4" phone jack × 2, SPEAKON Neutrik NL4MP × 2					
Dimensions (W×H×D)		560×353×277	420 × 632 × 333	632 × 414 × 351	489 × 719 × 377	719 × 483 × 343	495 × 1167 × 597
Weight		13.4kg	20.8kg	21.4kg	29.4kg	28.0kg	47.2kg

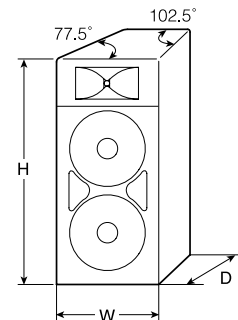
S112V/S115V



SM10V/SM12V/SM15V



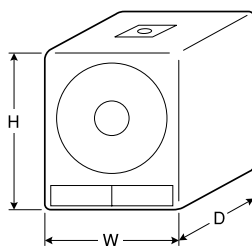
S215V



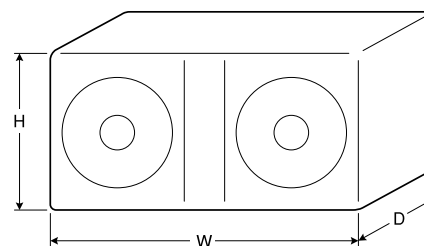
Model		SW115V	SW118V	SW218V
Enclosure		Bass reflex type		
Speaker Unit		15" cone	18" cone	18" cone × 2
Frequency Response		35Hz-2kHz	30Hz-2kHz	30Hz-2kHz
Power Capacity	NOISE*	250W	300W	600W
	PGM	500W	600W	1200W
	MAX	1000W	1200W	2400W
Nominal Impedance		8Ω		4Ω
Sensitivity		95dB SPL (1W,1m)	96dB SPL (1W,1m)	98dB SPL (1W,1m)
Recommended Crossover Frequency		90Hz, 12dB/oct.		
Input Connectors		1/4" phone jack × 2, SPEAKON Neutrik NL4MP × 2		
Dimensions (W×H×D)		506 × 611 × 532	610 × 728 × 641	1221 × 578 × 659
Weight		28.2kg	39.0kg	65.4kg

Specifications and descriptions in this owner's manual are for information purposes only. Yamaha Corp. reserves 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.

SW115V/SW118V



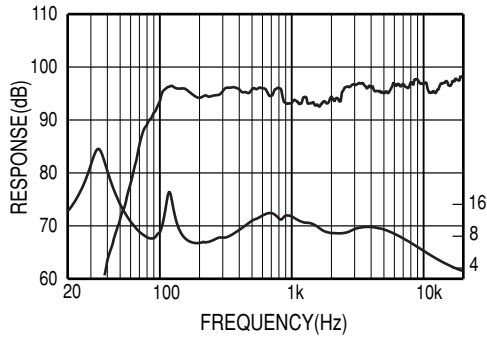
SW218V



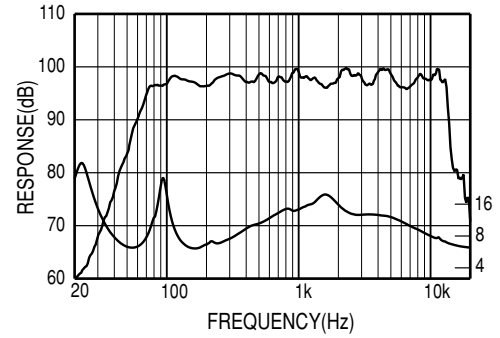
*: EIA RS-426
Unit: mm

■ Frequency Response/Impedance

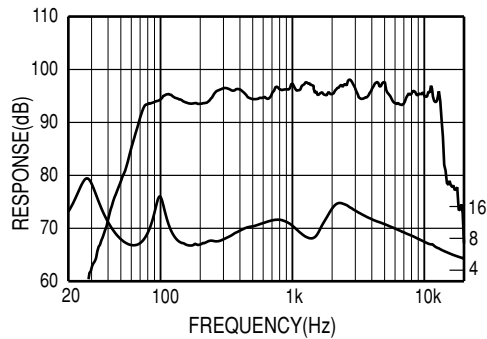
• SM10V



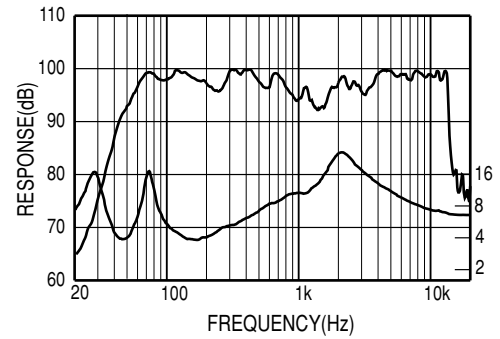
• S115V/SM15V



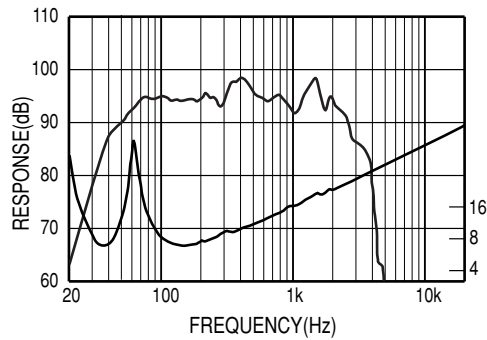
• S112V/SM12V



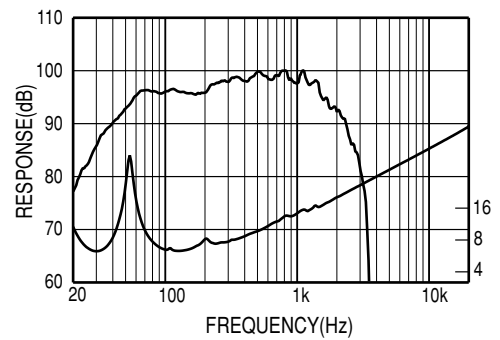
• S215V



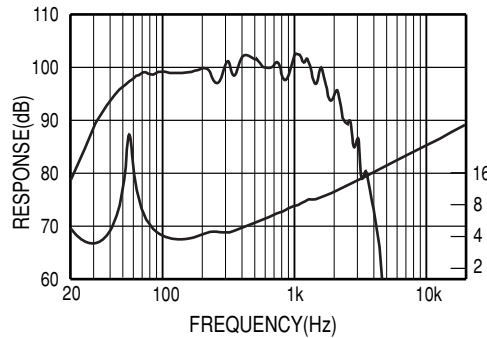
• SW115V



• SW118V



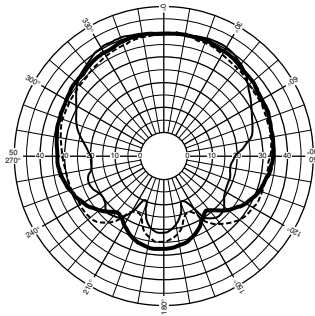
• SW218V



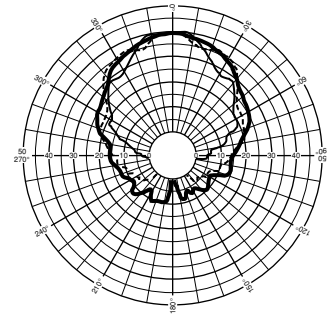
■ Horizontal Directivity

• SM10V

- 500Hz ———
- 1kHz - - - - -
- 2kHz ———

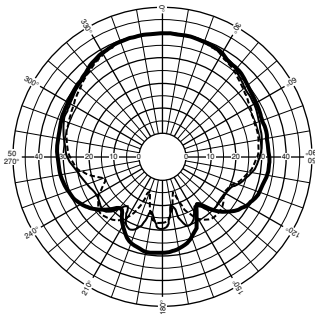


- 4kHz ———
- 8kHz - - - - -
- 16kHz ———

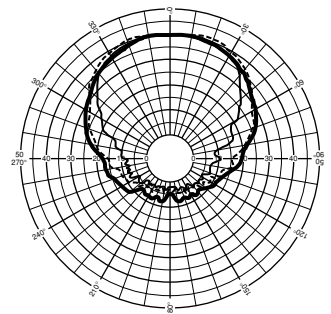


• S112V/SM12V

- 500Hz ———
- 1kHz - - - - -
- 2kHz ———

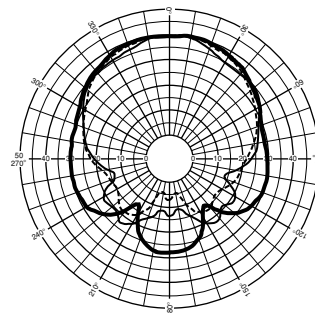


- 4kHz ———
- 8kHz - - - - -
- 16kHz ———

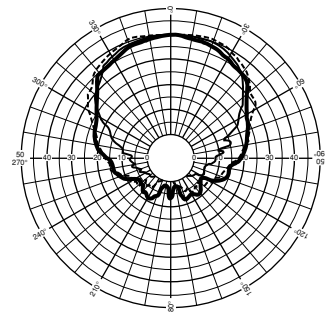


• S115V/SM15V

- 500Hz ———
- 1kHz - - - - -
- 2kHz ———

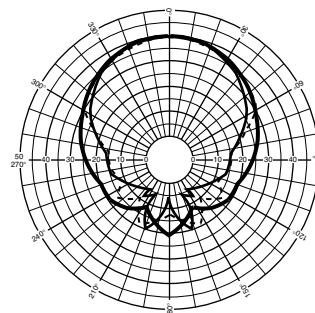


- 4kHz ———
- 8kHz - - - - -
- 16kHz ———

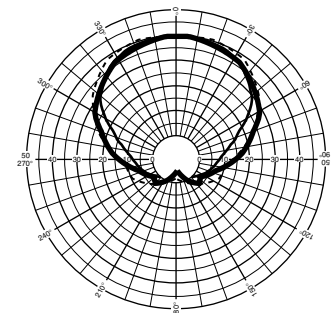


• S215V

- 500Hz ———
- 1kHz - - - - -
- 2kHz ———



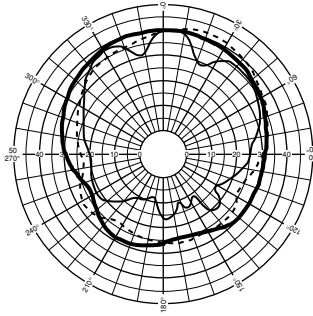
- 4kHz ———
- 8kHz - - - - -
- 16kHz ———



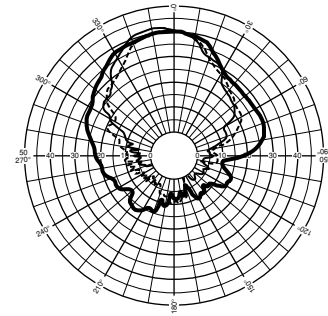
■ Vertical Directivity

• SM10V

- 500Hz ———
- 1kHz - - - - -
- 2kHz ———

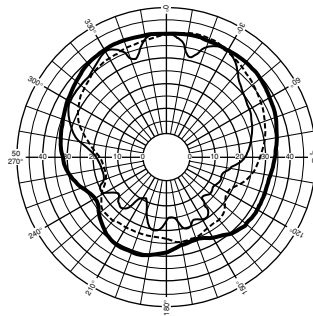


- 4kHz ———
- 8kHz - - - - -
- 16kHz ———

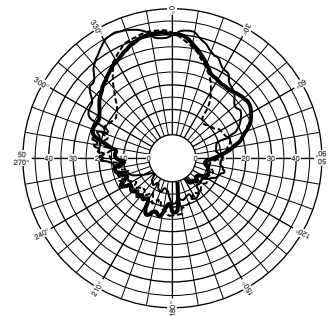


• S112V/SM12V

- 500Hz ———
- 1kHz - - - - -
- 2kHz ———

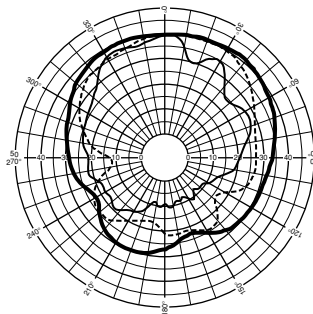


- 4kHz ———
- 8kHz - - - - -
- 16kHz ———

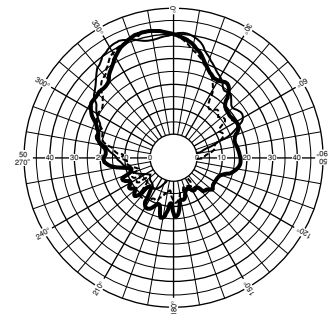


• S115V/SM15V

- 500Hz ———
- 1kHz - - - - -
- 2kHz ———

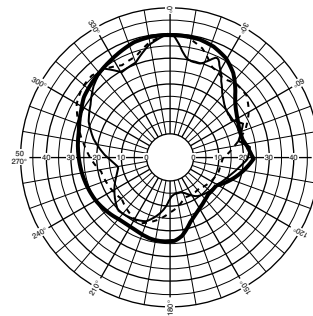


- 4kHz ———
- 8kHz - - - - -
- 16kHz ———

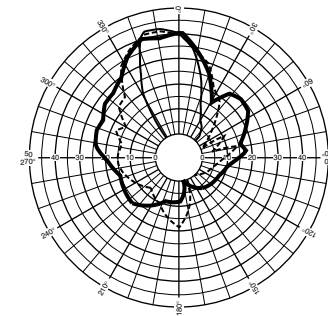


• S215V

- 500Hz ———
- 1kHz - - - - -
- 2kHz ———



- 4kHz ———
- 8kHz - - - - -
- 16kHz ———



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