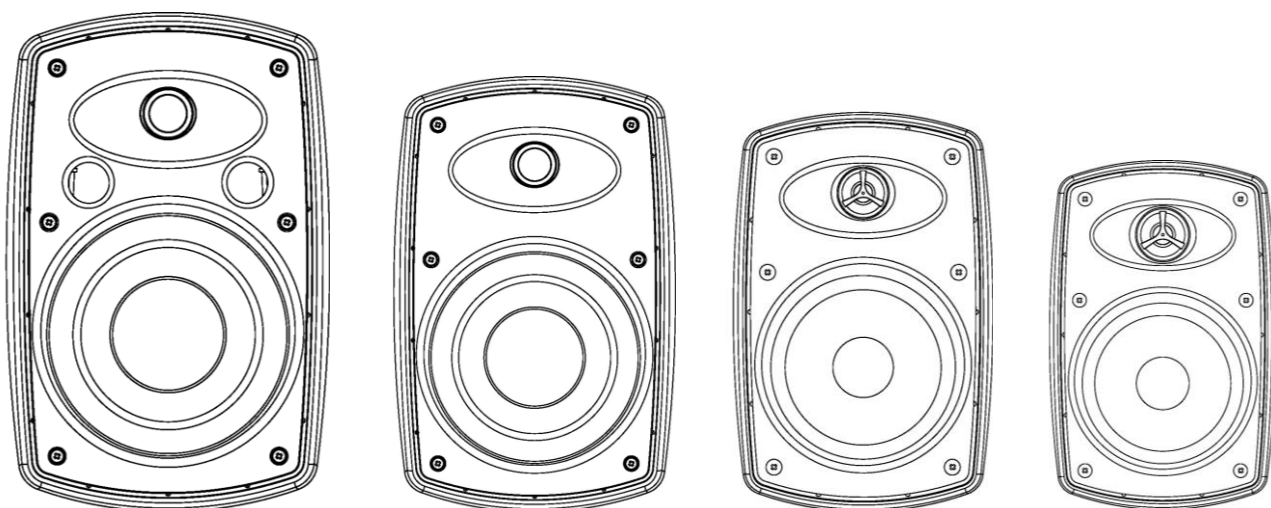




Monoprice™
INDOOR/OUTDOOR WEATHER-RESISTANT SPEAKER

P/N
8" - 44884/44885 6.5" - 44886/44887
5.25" - 44888/44889 4" - 44890/44891

User Manual

SAFETY WARNINGS AND GUIDELINES

Please read this entire manual before using the Monoprice™ Indoor/Outdoor Weather-Resistant Speaker, paying extra attention to these safety warnings and guidelines. Please keep this manual in a safe place for future reference.

- Turn off and unplug all equipment prior to making electrical connections, including speaker wire connections.
- Do not expose this speaker to excessively high heat sources, like a fireplace, stove, radiator, etc.
- Do not place or install this speaker in an area where it can be exposed to excessive amounts of oil, smoke, or combustible vapors.
- Reduce the volume before changing the audio input source (e.g., changing radio stations or CDs).
- When using this speaker as part of a constant voltage speaker system, make sure that the total power settings of the connected speakers are no more than 80% of the RMS output power of the amplifier.
- When using this speaker as part of a constant voltage speaker system, do not set the tap dial to the 8Ω position. Doing this can damage the speaker and/or the amplifier.
- Most speaker damage is caused by clipping, which leads to audio distortion. If this happens, reduce the volume until the audio becomes clear.
- Make sure that the speaker wire connections are properly polarized. Inverted polarization can result in unnatural or reduced loudness and quality, especially in the bass.
- When installing this speaker outdoors, use an outdoor-rated speaker wire.
- Do not use chemical cleaners or solvents to clean this speaker. Use only a soft cloth moistened with warm water.
- This speaker has no user-serviceable parts. Do not attempt to open, service, or modify it.

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INTRODUCTION

Thank you for purchasing the Monoprice™ Indoor/Outdoor Weather-Resistant Speaker. This speaker features a built-in step-down transformer, allowing it to be used as part of a 70V constant voltage speaker array. It also features a standard 8Ω tap, allowing it to be used with a standard power amplifier. It has an IP65 weather-resistant rating, allowing it to be used outdoors in all weather conditions and near pool areas. A multi-position bracket for mounting the speaker is included.

PACKAGE CONTENTS

Take an inventory of the package contents to make sure you have all the items listed below.

Please contact Monoprice Customer Service for a replacement if anything is missing or damaged.

- 1x Speaker
- 1x Mounting Bracket
- 2x Bracket Knobs

CONSTANT VOLTAGE (70V) VS 8Ω SPEAKER SYSTEMS

This unit is designed to operate in either a constant voltage or 8Ω speaker system, so it is important to identify which type of system you have and set the switch at the back of the speaker to the correct one. Select the 8Ω setting for traditional stereo systems. For constant voltage systems, select the 70V setting that delivers the desired output volume for the rest of your installed speakers, making sure the wattage does not exceed your amplifier capability as explained below.

A constant voltage speaker system differs from a traditional 8Ω speaker system in that it uses a step-up transformer at the audio source to raise the voltage and lower the transmission line current. At the speaker end, a step-down transformer converts the signal to a normal speaker-level voltage. This reduces power loss on transmission, allowing the use of longer speaker wire runs using smaller gauge wires. Additionally, a constant voltage speaker system allows for the use of multiple speakers on each channel without the need for complicated impedance calculations and configurations. In a constant voltage system, all speakers on a given channel are connected in parallel and the complicated impedance calculations are replaced by simple wattage calculations.

If you want to connect 2 speakers per channel in a traditional 8Ω speaker system, you must either link them in series, resulting in an overall 16Ω impedance, or in parallel, resulting in an overall 4Ω impedance. In the 1st case, the 16Ω impedance effectively halves the amplifier's output power, resulting in lower overall volume. In the latter case, the 4Ω impedance means that your amplifier must work harder and be rated as stable at 4Ω. Adding a 3rd speaker to the mix would complicate it further, producing either a 24Ω or 2.67Ω overall impedance. Very few amplifiers are stable under 2Ω loads; this is usually not an option.

On the other hand, with a constant voltage system, you consider the RMS output wattage of the amplifier first. This should be reduced by 20% to compensate for insertion loss. For example, if using a 100W amplifier, the total load from the speakers should not exceed 80W.

Each speaker on a given channel is set to a total value that does not exceed the rated power of <20%. There is no need to worry about making the total as close as possible to the limit; ensure that the total does not exceed the limit. If all speakers are set to the same wattage value, they will all have the same volume level. If one speaker is set to a higher wattage value, it will be louder than the others, while a speaker set to a smaller value will be quieter. This allows compensation for the environment in which the speaker is placed: an outdoor speaker would need to be louder than a speaker placed in a small room.

INSTALLATION

This unit is IP65-rated, so it is protected against dust and low-pressure water contact. To get the longest life out of this speaker, it is still important to mount it where it can be best protected from the long-term effects of the outdoors. Choose places that are free of direct water runoff, such as under eaves and overhangs for the best protection. Avoid mounting it where it faces the sun directly, as direct UV light on the speaker driver's face can cause premature wear.

NOTE: This unit is water-resistant, not water-proof. Do not mount it underwater. This speaker is also heavy and should not be mounted directly to drywall, lath, and plaster walls unless there is a stud/supporting material behind it, where the mounting screws can penetrate deep enough for proper support.

SPEAKER WIRING

To wire your system, please use a good-quality, speaker-grade audio cable with polarization coding (usually identified with a marking on the cable) as per the gauge recommendation found below. The side of the cable that has the coding (a ridge, or "+" marking) usually denotes a positive polarity.

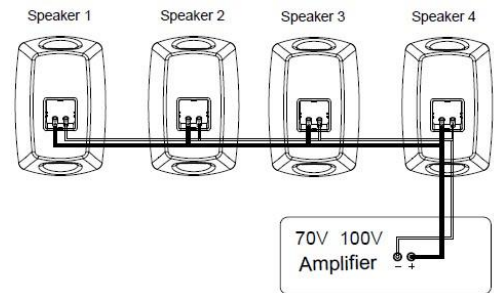
If installing the speakers outdoors, make sure to use an outdoor-rated speaker wire. Also, make sure to use the proper gauge wire to match the distance you need to run the wire. For distances under 25 feet, an 18-gauge speaker wire is acceptable. For distances of 25 feet to 50 feet, increase the wire size to 16 gauges. For distances greater than 50 feet, be sure to use at least a 14-gauge or greater speaker wire.

CONSTANT VOLTAGE (70V) SPEAKER SYSTEM

These wiring instructions assume the use of a 70V constant voltage amplifier. Before making each speaker wire connection, strip about ¼" insulation from the end of each conductor, then twist the strands to prevent stray strands from causing a short.

1. Power off, unplug all equipment to be connected, and identify the speaker number of your array.
2. Determine the amplifier's RMS (not peak) output power, then multiply by 0.8. This is the Maximum Wattage Value (MWV) for each speaker array. (If the amplifier's RMS output power is 100W, the MWV of each array is 80W. That is $100W \times 0.8 = 80W$)
3. Divide the MWV of each speaker array by the number of speakers to determine the Maximum Wattage Setting (MWS) for each speaker. (If the MWV of each speaker array is 80W and each array has 5 speakers, the MWS for each speaker is 16W. That is $80W \div 5 = 16W$)
4. Turn the tap dial at the speaker's back to a wattage value that is less than the calculated MWS for each speaker in Step 3.

5. Link the wire running from the amplifier's negative terminal to the speaker's negative terminal.
6. Link the wire running from the amplifier's positive terminal to the speaker's positive terminal.
7. Connect the positive terminals on each additional speaker to the 1st speaker's positive terminal.
8. Connect the negative terminals on each additional speaker to the 1st speaker's negative terminal.
9. Repeat Steps 7 and 8 until all speakers are connected.

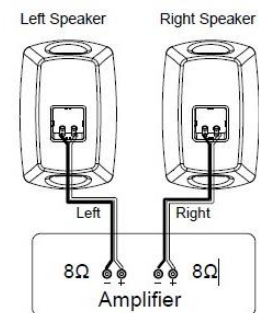


Most constant voltage speaker installations will consist of multiple speakers per channel, with all speakers connected in parallel, as shown in the diagram above.

NOTE: Connecting a 70V amplifier to a speaker set to the 8-ohm setting will damage the speaker. Always set the speaker voltage tap to the proper system type before connecting the speaker wires.

8Ω SPEAKER SYSTEM

For standard 8Ω stereo speaker installations with only 2 speakers, link as described in the diagram. When connecting more than 2 speakers to a standard 8Ω stereo amplifier, use an impedance-matching speaker selector to avoid complex series/parallel wiring. Before making each speaker wire connection, strip about ¼" insulation from each end of each conductor, then twist the strands to prevent stray any from causing a short.



1. Power off and unplug all equipment to be connected.
2. Link the wire running from the amplifier's negative terminal to the 1st speaker's negative terminal.
3. Link the wire running from the amplifier's positive terminal to the 1st speaker's positive terminal.
4. Repeat Steps 2 and 3 with the second speaker.

LISTENING TEST

1. Set the volume on your amplifier to the minimum setting.
2. Plug in and turn your amplifier on, then start audio playback from your audio source.
3. Slowly increase the volume until it is at a comfortable listening level.
4. Check each speaker if the audio can be heard and if the relative volume levels are about the same.

Congratulations! Your speaker system is installed and ready for use.

TECHNICAL SPECIFICATIONS

P/N	44884
Product Color	White
IP Rating	IP65
Woofer Size	8"
Woofer Cone Material	Polypropylene
Woofer Magnet Size	17.5 oz
Tweeter Size	1"
Tweeter Material	Silk dome
Tweeter Magnet Material	Neodymium
Speaker Enclosure Material	ABS
Frequency Response	30 Hz - 20 KHz
Power Handling RMS	60W
Power Handling Max	120W
Sensitivity	89 dB
Impedance	8Ω
Transformer	50W – 25W – 12.5W – 6.25W – 8 Ω
Dimensions	14.8" x 9.6" x 9.4" (378 mm x 244 mm x 240 mm)
Weight	Speaker: 10.0 lbs Bracket: 1.2 lbs

P/N	44885
Product Color	Black
IP Rating	IP65
Woofer Size	8"
Woofer Cone Material	Polypropylene
Woofer Magnet Size	17.5 oz
Tweeter Size	1"
Tweeter Material	Silk dome
Tweeter Magnet Material	Neodymium
Speaker Enclosure Material	ABS
Frequency Response	30 Hz - 20 KHz
Power Handling RMS	60W
Power Handling Max	120W
Sensitivity	89 dB
Impedance	8Ω
Transformer	50W – 25W – 12.5W – 6.25W – 8 Ω
Dimensions	14.8" x 9.6" x 9.4" (378 mm x 244 mm x 240 mm)
Weight	Speaker: 10.0 lbs Bracket: 1.2 lbs

P/N	44886
Product Color	White
IP Rating	IP65
Woofer Size	6.5"
Woofer Cone Material	Polypropylene
Woofer Magnet Size	9.9 oz
Tweeter Size	1"
Tweeter Material	Silk dome
Tweeter Magnet Material	Neodymium
Speaker Enclosure Material	Polypropylene
Frequency Response	50 Hz - 20 KHz
Power Handling RMS	50W
Power Handling Max	100W
Sensitivity	90 dB
Impedance	8Ω
Transformer	32W – 16W – 8W – 4W – 8 Ω
Dimensions	11.8" x 7.7" x 7.5" (302 mm x 196 mm x 193 mm)
Weight	Speaker: 7.0 lbs Bracket: 0.8 lbs

P/N	44887
Product Color	Black
IP Rating	IP65
Woofer Size	6.5"
Woofer Cone Material	Polypropylene
Woofer Magnet Size	9.9 oz
Tweeter Size	1"
Tweeter Material	Silk dome
Tweeter Magnet Material	Neodymium
Speaker Enclosure Material	Polypropylene
Frequency Response	50 Hz - 20 KHz
Power Handling RMS	50W
Power Handling Max	100W
Sensitivity	90 dB
Impedance	8Ω
Transformer	32W – 16W – 8W – 4W – 8 Ω
Dimensions	11.8" x 7.7" x 7.5" (302 mm x 196 mm x 193 mm)
Weight	Speaker: 7.0 lbs Bracket: 0.8 lbs

P/N	44888
Product Color	White
IP Rating	IP65
Woofer Size	5.25"
Woofer Cone Material	Polypropylene
Woofer Magnet Size	10.9 oz
Tweeter Size	0.5"
Tweeter Material	Mylar dome
Tweeter Magnet Material	Iron-ferrite
Speaker Enclosure Material	Polypropylene
Frequency Response	80 Hz - 20 KHz
Power Handling RMS	40W
Power Handling Max	80W
Sensitivity	89 dB
Impedance	8 Ω
Transformer	16W – 8W – 4W – 2W – 8 Ω
Dimensions	9.9" x 6.4" x 6.4" (252 mm x 163 mm x 163 mm)
Weight	Speaker: 5.3 lbs Bracket: 0.5 lbs

P/N	44889
Product Color	Black
IP Rating	IP65
Woofer Size	5.25"
Woofer Cone Material	Polypropylene
Woofer Magnet Size	10.9 oz
Tweeter Size	0.5"
Tweeter Material	Mylar dome
Tweeter Magnet Material	Iron-ferrite
Speaker Enclosure Material	Polypropylene
Frequency Response	80 Hz - 20 KHz
Power Handling RMS	40W
Power Handling Max	80W
Sensitivity	89 dB
Impedance	8 Ω
Transformer	16W – 8W – 4W – 2W – 8 Ω
Dimensions	9.9" x 6.4" x 6.4" (252 mm x 163 mm x 163 mm)
Weight	Speaker: 5.3 lbs Bracket: 0.5 lbs

P/N	44890
Product Color	White
IP Rating	IP65
Woofer Size	4"
Woofer Cone Material	Polypropylene
Woofer Magnet Size	7.9 oz
Tweeter Size	0.5"
Tweeter Material	Mylar dome
Tweeter Magnet Material	Iron-ferrite
Speaker Enclosure Material	Polypropylene
Frequency Response	100 Hz - 20 KHz
Power Handling RMS	30W
Power Handling Max	60W
Sensitivity	88 dB
Impedance	8 Ω
Transformer	16W – 8W – 4W – 2W – 8 Ω
Dimensions	7.6" x 4.9" x 5.0" (195 mm x 126 mm x 127 mm)
Weight	Speaker: 3.6 lb Bracket: 0.3 lbs

P/N	44891
Product Color	Black
IP Rating	IP65
Woofer Size	4"
Woofer Cone Material	Polypropylene
Woofer Magnet Size	7.9 oz
Tweeter Size	0.5"
Tweeter Material	Mylar dome
Tweeter Magnet Material	Iron-ferrite
Speaker Enclosure Material	Polypropylene
Frequency Response	100 Hz - 20 KHz
Power Handling RMS	30W
Power Handling Max	60W
Sensitivity	88 dB
Impedance	8 Ω
Transformer	16W – 8W – 4W – 2W – 8 Ω
Dimensions	7.6" x 4.9" x 5.0" (195 mm x 126 mm x 127 mm)
Weight	Speaker: 3.6 lb Bracket: 0.3 lbs

CUSTOMER SERVICE

The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problems with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website **www.monoprice.com** or via email at **support@monoprice.com**. Check the website for support times and links.

TECHNICAL SUPPORT

Monoprice™ is pleased to provide free, live, online technical support to assist you with any questions you may have about installation, setup, troubleshooting, or product recommendations. If you ever need assistance with your new product, please come online to talk to one of our friendly and knowledgeable Tech Support Associates. Technical support is available through the online chat button on our website **www.monoprice.com** or through email by sending a message to **tech@monoprice.com**. Check the website for support times and links.

To download the latest drivers, firmware, manuals, etc., go to **www.monoprice.com** and type **44884**, **44885**, **44886**, **44887**, **44888**, **44889**, **44890**, or **44891** into the search bar. If available, support files are linked at the bottom of the product page.

DISPOSAL AND RECYCLING INFORMATION



The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electrical and electronic products via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your unwanted product, please contact your local authorities, waste disposal service, or the shop where you purchased the product.



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