



MONOPRICE®

Premium 5.1-Ch. Home Theater System with

Subwoofer

INTRODUCTION

Congratulations on your purchase of the Premium 5.1 Channel Home Theater Speaker System from Monoprice! When setup and used properly, these speakers will give you years of superior sound reproduction.

For best results, please read this entire manual prior to installation and use. To avoid personal injury or damage to your valuable equipment you should pay extra attention to the safety warnings and guidelines. Keep this manual in a safe place for future reference.

PACKAGE CONTENTS

After receiving the product, please inventory the contents to ensure you have all the proper parts, as listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

- 4x Satellite speakers
- 1x Center channel speaker
- 1x Subwoofer
- 1x User's manual

SUPPORT

If you experience any trouble or difficulty in setting up or operating this speaker system please contact Monoprice Technical Support for assistance.

<https://www.monoprice.com/home/chat.asp>

Tech Support Live Chat Availability

Monday - Friday: 6:00am - 7:00pm PT

Saturday & Sunday: 9:00am - 6:00pm PT

Customer Service Live Chat Availability

Monday - Friday: 6:00am - 7:00pm PT

Saturday & Sunday: 9:00am - 6:00pm PT

SAFETY WARNINGS

For best results, and to avoid personal injury or damage to your valuable equipment, carefully read and follow these safety warnings.

- Do not expose these speakers to moisture of any kind. Do not place items containing liquids, such as vases or drinking glasses, on or near these speakers.
- If operating this speaker system in a humid environment, ensure that no condensation occurs. Condensation could cause damage to the speaker cones and could cause a short in the subwoofer's amplifier, which in turn could cause fire or severe electric shock.
- To avoid damage or discoloration of the speaker cabinet, do not place or install these speakers where they will be exposed to direct sunlight.
- Do not place or install these speakers near a heat source, such as a fireplace, stove, or space heater.
- Ensure that there is at least 8" (20cm) of free space in the back of the subwoofer to allow for heat dissipation from the amplifier.
- Do not pick up or carry the subwoofer by the port on the front. Do not stick any objects inside the port.
- When picking up the subwoofer take care not to touch the exposed speaker cone on the bottom of the unit.
- Power off and unplug all Audio/Video components when making wired connections. Only apply power after all connections have been made.
- Double-check all connections prior to applying power to ensure that speaker polarity is properly made and that there are no stray wire strands, which could short the connections, either on the back of the speakers or the AV receiver/amplifier.
- Do not defeat the purpose of a polarized or grounded power plug by using a "cheater" plug. If the power cord will not fit in your AC outlet, please contact an electrician to have the obsolete plug replaced.
- Do not allow the power cord to be walked on or pinched. Do not run the power cord under a rug, as doing so could cause a fire.
- Ensure that your AC power outlet provides voltage within the range specified on the back panel of the subwoofer.

- When removing cords or cables, do not pull on the cable. Always grasp the connector/plug head when removing cords or cables.
- Install the subwoofer in a place where the power plug can be readily accessible, so that you can quickly unplug the unit in the event that a safety incident occurs.
- Do not use full volume until after the speakers have been fully broken-in.
- If you hear distortion reduce the volume until the distortion is no longer audible. Distortion can sound like a buzzing, scratching, or hammering sound. Distortion can damage or destroy the delicate speaker coils.
- To avoid annoying feedback, ensure that any turntable is isolated from the vibrations produced by the speakers and subwoofer.
- Extreme bass frequencies and volume can distort the image on a nearby television. If this occurs, move the subwoofer further away from the TV.
- Do not use cleaning fluids, solvents, or other chemicals to clean the speaker cabinets. Do not use paper towels or other abrasive materials or cleaners. Use only a soft, dry cloth. For best results, use a microfiber cleaning cloth.
- Do not use excessive volume when listening to this speaker system. If you experience pain, discomfort, or dizziness, reduce volume immediately. Prolonged exposure to excessive volume can cause permanent hearing damage.
- Do not disassemble or attempt to service these speakers or subwoofer.

SPEAKER BREAK-IN

In the same way that a new car requires a break-in period before it can be safely operated at high engine RPMs, speakers require a break-in period before they can be safely operated at maximum volume levels. Proper break-in ensures that the moving parts of the speaker (the cone and cone suspension) are allowed to flex and soften, losing the initial stiffness and allowing the speaker to move through its full intended range. After the break-in period, the speakers will produce richer and fatter sounding lows, warmer and smoother sounding mids, and cleaner and more accurate highs, without any hint of distortion.

The best way to break-in speakers is simply to play normal music or watch movies at moderate volume levels. The amount of time required for speaker break-in varies based on the operating environment, but is typically in the area of 50~80 hours. It will take a bit longer in a cold or dry environment and a little less time in a warm or humid environment.

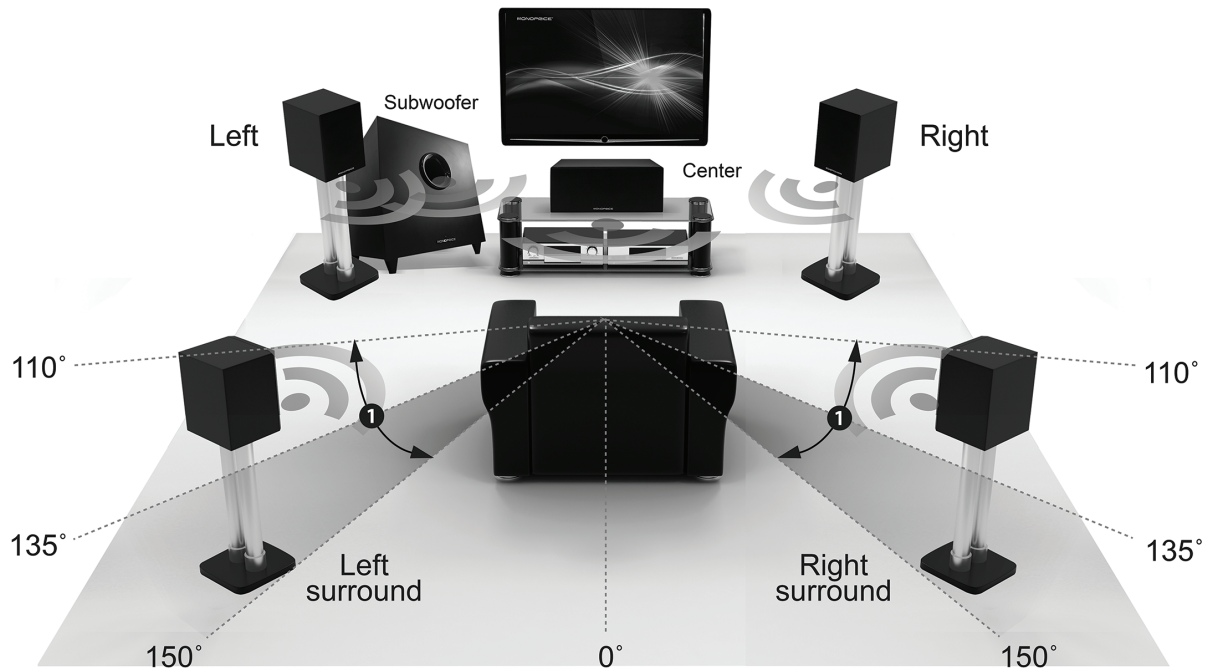
Note that the break-in period does not have to be continuous.

SPEAKER PLACEMENT

Before making any connections, you should examine your listening room and decide where you will place each speaker. Some basic "rules of thumb" for the proper placement of a 5.1 surround speaker system are:

Front Main Speakers

- The left and right front main speakers should be the same distance from their respective side walls.
- The left and right front main speakers should be the same distance from the center of your video screen.
- The distance between the left and right front main speakers should be about 2/3 the distance from the front main speakers to your listening area. For example, if you sit about 12 feet from the wall on which the front main speakers are mounted, the left and right front main speakers should be about 8 feet apart.
- The minimum distance between the left and right front main speakers is about 6 feet.
- The front main speakers should be angled about 30° to point to the center of your listening location.
- The front main speakers should be mounted at about the same height as your ears when seated in your listening location.
- The front main speakers have ports on the rear and will sound best when they can be placed a few inches away from the wall.



❶ Monoprice recommends surround speaker placement between 110° and 150°, with the optimum range being 135° to 150°.

Center Channel Speaker

- The center channel speaker should be mounted in the center, at an equal distance from the left and right front main speakers.
- If you have a perforated projection screen that does not muffle sound, place the center channel speaker exactly in the middle, angling it up or down as necessary to point directly at ear level in the ideal listening location.
- If you do not have a perforated projection screen, place the center channel speaker above or below the video screen, angling it slightly up or down to point directly at ear level in the ideal listening location.
- If you do not have a video screen to worry about, the center channel speaker should be mounted at ear height.
- The front of the center channel speaker should be even with the front of the video screen.
- The center channel speaker has a port on the rear and will sound best when it can be placed a few inches away from the wall.

Surround Speakers

- The left and right surround speakers should be mounted slightly behind the ideal listening location (about 110°~150°). Refer to the diagram on the previous page as an example.
- The left and right surround speakers should be about 4~6 feet further apart than the distance between the left and right front main speakers.
- The left and right surround speakers should be mounted about 2 feet above ear level.
- The left and right surround speakers should be angled horizontally and vertically to point to the ideal listening location.
- The surround speakers have ports on the rear and will sound best when they can be placed a few inches away from the wall.

Subwoofer

- Do not place the subwoofer in a corner as it will result in a "boomy", unnatural sounding bass.
- Do not place the subwoofer directly against a wall or cabinet. There should be some room around the subwoofer for the sound to develop and reflect itself around the room.
- Although bass is omnidirectional, a location in the front center is generally ideal.

Tip: One good way to determine the best initial location for the subwoofer is to first place it at your ideal listening location. While playing music with solid bass content, walk around the room until the bass sounds best, then move the subwoofer to that location and fine tune from there.

Using the above guidelines plan the location for each speaker. This should be considered an initial location to be adjusted based on listening tests in the ideal listening location after the speakers have been broken-in. The placement of the subwoofer in particular is dependent on experimentation and listening tests. If possible, do not make any permanent mounting choices until after you have had a chance to listen to the speakers in the proposed positions and made any fine tuning adjustments necessary to produce the best sound.

The ideal speaker placement is one in which the left and right are mirror images of each other. Of course, in the real world such exact symmetry is rarely achieved. Real world speaker placement is an exercise in compromise between the ideal and the realistic, with your ears as the final arbiter.

SPEAKER CONNECTIONS

Warning! To prevent possible personal injury and/or damage to your equipment, turn off and unplug all equipment before making connections!

Preparation

Before attempting to make any connections it is best to look at the situation, get all the necessary materials together, and then make all the connections at once.

First, look at the back of your amplifier or receiver to determine what options it offers for making connections. Amplifiers and receivers typically employ either 5-way binding posts, spring-loaded terminals, or a combination of both for the speaker connections. For subwoofers, many amplifiers and receivers offer one or two line level RCA connectors.

A 5-way binding post can accept bare speaker wire, spade plugs, pin plugs, and banana plugs, while spring loaded terminals can accept either bare speaker wire or pin plugs. Refer to the documentation that came with your amplifier or receiver to determine the maximum size/gauge speaker wire the speaker terminals can accept.

At the speaker end, the satellite and center channel speakers feature spring loaded binding posts, which can accept bare speaker wire (up to 9 AWG) or pin plugs. The subwoofer offers two types of connections. The ideal connection is through the two line level RCA jacks, while spring loaded terminals can be used to accept speaker level inputs, if line level is not possible. The spring-loaded terminals can accept bare speaker wire (up to 8 AWG) or pin plugs.

While all the speaker level options work with bare speaker wire, making bare speaker wire connections is less than ideal. Using banana or pin plugs is highly recommended for several reasons. Plugs are easier to connect, don't run the risk of stray wire strands shorting the connections, allows for use of heavier gauge speaker wire in most cases, and it is much easier to identify the polarity from a color coded ring on a plug than from a subtle marking along the length of a wire.

Regardless of how you choose to make the connection you will need some speaker wire. The thickness, or gauge, of the wire needed depends primarily on the distance over which the signal will be sent. The following table serves as a guideline for determining the minimum wire gauge to use:

Distance (feet)		
	8 ohms	4 ohms
18 AWG	10	5
16 AWG	20	10
14 AWG	35	18
12 AWG	60	30
10 AWG	100	50

In general you should use the heaviest gauge speaker wire that will fit in the connectors (remember, the smaller the AWG number, the heavier/thicker the wire). Using banana or pin plugs can allow for a heavier gauge wire than most binding posts or terminals will accept.

Rather than using fixed length speaker wires, it is best to get a roll and cut the wires to the length you will need them. This ensures that there is a minimum amount of excess wire. However, even if your amplifier is off-center, the lengths of wire used for each speaker pair (front mains or surrounds) should be identical. This keeps the impedance on each channel the same, which ensures that the volume levels, frequency ranges, and tonalities are identical. Any excess wire should be snaked back and forth, but not coiled to avoid creating an inductor/antenna for stray radio signals.

Before making the actual connections, cut each length of wire to size. Note the markings on the wire that differentiate between each conductor. Sometimes the marking clearly identifies a positive and negative side. Some common clearly positive and negative markings or identifiers are:

Positive	Negative
Red	Black
Copper	Silver
+ + +	- - -

In many cases, the mark is a single stripe on the jacket of one of the connectors. In this case the side with the stripe is generally considered the positive side, but it really does not matter as long as you are consistent in always using the stripe as positive or always using it as negative.

If you plan to use banana and/or pin plugs (highly recommended) install the plugs on the wire, taking care to match the polarity of the plug (usually identified by a red or black stripe around the plug body) with the polarity of the wire. Once you have constructed each wire assembly, double check each end to ensure the polarity matches that of the other end on the same conductor.

If you will not be using bare wire for any of the connections, strip about 3/8" insulation from the wire end and twist it to prevent stray strands.

Connecting the Satellite and Center Speakers

Although the order in which speakers are connected does not matter, it is easier to keep track of things if you connect speakers one at a time. For each satellite speaker, and for the center channel speaker, perform the following:

1. Connect the black/negative side of the wire to the black/negative spring-loaded binding post on the back of the speaker. To make the connection, push down on the binding post to reveal a hole in the side of the terminal. Insert the bare wire or pin plug into the hole and release the binding post to lock it into place. Pull gently on the wire to ensure that the connection is mechanically sound.
2. Connect the red/positive side of the wire to the red/positive spring-loaded binding post on the back of the speaker. Pull gently on the final connection to ensure that it is mechanically sound.
3. Connect the black/negative side of the wire to the black/negative connection for this speaker location on the back of the amplifier/receiver.
4. Connect the red/positive side of the wire to the red/positive connection for this speaker location on the back of the amplifier/receiver.
5. Visually inspect the connections on the speaker to ensure that the positive and negative polarities are properly connected. If using bare speaker wire, inspect to ensure that no stray wire strands are present.
6. Visually inspect the connections on the back of the amplifier for proper polarity and the absence of stray wire strands.

Repeat steps 1-6 for each of the satellite speakers and for the center channel speaker.

Connecting the Subwoofer

There are several different ways to connect the subwoofer. The method you choose is determined primarily by the presence of a dedicated subwoofer output on your amplifier/receiver. The connection methods are presented in order of preference.

Connecting to a Dedicated Subwoofer Output

A dedicated subwoofer output is usually one or two RCA jacks marked "Subwoofer", "Sub Pre Out", or something similar on the back of the amplifier/receiver. Refer to the manufacturer's documentation for reference. Subwoofer outputs are monophonic, so if you have two subwoofer outputs they are intended to drive two separate subwoofers.

To make this connection you will need a cable with a single RCA plug on one end, which splits into two RCA plugs on the other end. This this can be either a single cable or a cable combined with a splitter.

1. Insert the two RCA plugs at the one end of the cable into the two RCA input jacks on the back of the subwoofer. Because the signal is a mono signal split into two outputs, there are no polarity issues to worry about.
2. Insert the single RCA plug at the other end of the cable into the subwoofer output jack on the back of the amplifier/receiver.

Connecting to a Stereo Preamp Output

If your amplifier/receiver lacks a dedicated line level subwoofer output, the next best option for connecting the subwoofer is to use line level preamplifier outputs. These outputs should not be confused with line level outputs intended to connect components, such as tape decks or DVD recorders, to the amp. Preamplifier outputs will usually be marked as "Pre-amp Out" or something similar. Refer to your amp's owner's manual to determine which, if any are the pre-amp outputs.

To make this connection you will need a stereo RCA patch cable of the appropriate length.

1. Insert the black/negative side of one end of the cable into the black/negative RCA jack on the back of the subwoofer.
2. Insert the red/positive side of that end of the cable into the red/positive RCA jack on the back of the subwoofer.
3. Insert the black/negative side of the other end of the cable into the black/negative pre-amplifier RCA jack on the back of the amplifier/receiver.
4. Insert the red/positive side of that end of the cable into the red/positive pre-amplifier RCA jack on the back of the amplifier/receiver.

Connecting to a Stereo Speaker Output

If your amplifier/receiver lacks both a dedicated subwoofer output and pre-amp outputs, you can still make a connection using the speaker level inputs on the subwoofer.

To make this connection will need two equal lengths of two-conductor speaker wire. Prepare these wires in the same way you prepared the wires for connecting the satellite and center channel speakers, using either bare speaker wire or pin plugs.

1. Connect the black/negative side of one speaker wire to the black/negative left channel spring loaded terminal on the back of the subwoofer.
2. Connect the red/positive side of that end of the wire to the red/positive left channel spring loaded terminal on the back of the subwoofer.
3. Connect the black/negative side of the other end of the speaker wire to the black/negative left channel output for the Front/Main speakers on the back of the amp. This can be connected in parallel to the actual front main speakers.
4. Connect the red/positive side of that end of the wire to the red/positive left channel output for the Front/Main speakers on the back of the amp.
5. Repeat steps 1-4 for the right channel connection.
6. Visually inspect the connections at each end to verify correct polarity and the absence of stray wire strands.

SETUP

Once all connections have been made and inspected, check the volume levels of the amplifier/receiver and the subwoofer, setting them to the minimum as necessary. Plug in and power on all equipment, including the subwoofer.

Amplifier/Receiver Settings

If your amplifier/receiver has a speaker size setting, set it to "Small".

Subwoofer Settings

Power: The power switch on the subwoofer has both an AUTO and a fully ON position. When the switch is set to AUTO, the subwoofer will automatically power on when it detects an audio signal and, after several minutes of inactivity, will automatically go into standby mode. When the switch is set to the ON position the subwoofer will remain powered on at all times, until the switch is set to the OFF position.

Note: If you will be away, or if the subwoofer will go unused for a lengthy period, set the power switch to the OFF position.

Low-Pass Filter: The low-pass filter determines how well the bass from the subwoofer blends with the mids and highs from the satellite and center channel speakers. Because the satellite and center channel speakers have a frequency response that starts at about 110Hz, we want the subwoofer to handle all frequencies up to 110Hz. A good starting point is to set the low-pass filter at 110Hz and then adjust it slightly up or down according to how it sounds to your ears.

Volume: The overall volume of the subwoofer will increase or decrease with the volume of the other speakers. The volume control on the subwoofer is therefore used to match the audio output level of the satellite and center channel speakers so that they blend into one smooth, continuous sound. In general, unless your musical material is particularly bass heavy or light, once you have set the volume on the subwoofer you shouldn't need to adjust it again.

Phase: Depending on the location of your subwoofer, the sound that reaches your ideal listening location could be out of phase with the sound from the rest of the system. If the bass sounds out of time, muddy, or attenuated, try flipping the phase switch to the other position. The default, which will provide the best bass sound most of the time, is with the phase set to 0°.

As the speaker system breaks in you may find you need to make minor adjustments to the low-pass filter and volume level to ensure the proper blend between the speakers.

Satellite speakers: Front mains, center channel and surround speakers

Issue	Possible Cause	Remedy
There's no sound	The speaker cables are not properly connected.	Make sure the speaker cables are connected properly.
The sound is very quiet.	The speaker cables are not connected properly.	Make sure the speaker cables are connected properly: L (left) to L, R(right) to R, "+" to "+" and "-" to "-".

SUBWOOFER

Issue	Possible Cause	Remedy
The POWER switch is set to ON but the subwoofer doesn't work.	The power cable is not connected correctly.	Set the power switch to off, then make sure the power cable is connected properly.
There's no sound	The VOLUME control is set to 0.	Turn up the level on the volume control
	The subwoofer cable/speaker wires are not connected properly.	Make sure the subwoofer cable/speaker wires are connected properly
The subwoofer sound is too quiet	The source material doesn't contain much bass.	Try playing source material that contains more bass information.
	Bass sounds are being cancelled out by standing waves.	Try to reposition the subwoofer, or break up parallel wall surfaces by placing large objects such as sofas, bookshelves, etc. along the wall
	Subwoofer is out of phase	Switch the phase control setting and verify improvement.

SPECIFICATIONS

Speaker Type	2-way full range-bass reflex
Tweeter Driver	3/4" Aluminum Dome
Mid-Range Driver	3" Polypropylene
Frequency Range	110Hz to 20KHz (+-3dB)
Crossover Frequency	3.5KHz
Maximum Input Power	100 watts
Recommended Amplifier Power	20-100 watts
Sensitivity	88 dB/2.83V/1m
Impedance	8 ohms nominal
Connectors	Spring loaded terminals
Dimensions (HxWxD)	6.9" x 4.3" x 4.3"
Weight	2.9 lbs

CENTER SPEAKER

Speaker Type	2-way full range-bass reflex
Tweeter Driver	3/4" Aluminum Dome
Mid-Range Driver	3" Polypropylene
Frequency Range	110Hz to 20KHz (+-3dB)
Crossover Frequency	3.5KHz
Maximum Input Power	100 watts
Recommended Amplifier Power	20-100 watts
Sensitivity	88 dB
Impedance	8 ohms nominal
Connectors	Spring loaded terminals
Dimensions (HxWxD)	4.3" x 10.2" x 4.3"
Weight	3.0 lbs

SUBWOOFER

Speaker Type	Bass Reflex with front-firing port
Woofer Driver	8" Injected Cone
Frequency Range	30Hz to 150Hz -10dB
Variable Low-Pass Filter	40Hz to 150Hz @ 18dB/octave
Variable Phase Control	0° or 180°
Amplifier Power Output	200 watts @ THD≤0.5 %
Inputs	Stereo line level and speaker level
Dimensions (HxWxD)	12.6" x 12.6" x 12.6"
Weight	19.8 lbs.

Note: Specifications are subject to change