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## Ceiling speaker wiring guide

It's a pretty daunting task when deciding which ceiling speakers to have - you're spending a lot of money and want to get it right (preferably the first time!). Then you have to consider how they will be installed - most of the time, you will leave it to an electrician on site. Many will have done this kind of work sooner, but it's good to have an idea in their own mind as to how you want your ceiling speaker system to be installed. We also got it where some electricians haven't had experience with audio equipment - and we always suggest asking them before they do any work if they have (for starters - it's a sign of a decent electrician if you know it!) If you are not sure, then we have some practical and simple guides that are generic to use for a wide range of audio equipment when installing ceiling speakers - many that incorporate products that we sell as well. Simple stereo speaker This one is quite simple. If you have your amplifier and connect to a single stereo speaker (where left and right audio is played on a single speaker), you only need two 2-core speaker cable functions. Connect one cable to the left output of the amplifier and the other to the right. Then, on the speaker, just make sure it goes from red to red and from black to black. (We told you it was going to be easy...) Two speaker system It is similar to the unique stereo configuration, but this allows you to listen with one speaker being its left output, and the other its right output. With your on-site amplifier again, and the speaker cable you have, connect a 2-core cable spin to the left output of your amplifier, and the other cable to your right. This time, instead of separating, you will essentially connect your left cable to the terminals on your designated left speaker, and your right cable to the designated right speaker. Make sure the polarity is correct and ready! You could even argue that this is simpler than a stereo speaker setup! Four speaker system Some part of our systems allow you to run up to four speakers from an amplifier (some even six speakers - the Sonos Amp with Sonos by Sonance In-Ceiling Speakers are unique that way). However, this is when it gets a little more complicated and also the question that customers most commonly ask - how do I connect to all four? Simply daisy-chain from first pair to second pair (left to left, right to right). Now our diagram above goes a step further - and we have a very very good reason for that. If you said you were going from left to left and from right to right, then you could end up having one side of your room all with left speakers and the other side all with right speakers. Technically there's no problem with that -- but what we've found in is that if you cross your speakers at one end of the room... You can get a truer stereo sound in your entire space! Look up - we've put our trio in the middle. If you move them into that space, they leave get the same left and right stereo audio wherever they are because of how we've placed the speakers. If you place speakers two on the left and two on the right, and you put your sofa to the right side of the room, you would only hear more than the correct audio output would be. With many of our systems, you can connect to a TV via auxiliary input, so you really benefit from having four speakers positioned in the previous design! Using a speaker switch If you have two pairs of speakers or a couple of speakers with a single stereo speaker - listen, you can find this unre interesting! You have your speakers and want to have them in two areas, such as a kitchen and a restaurant, or an en suite bedroom/bathroom - any two areas that are somehow adjoining. How do you do that? With a simple three-way speaker switch, of course! Using the diagram above, and with live examples of the back of a Systemline E50/E100 amplifier, and a Systemline WM15 wall switch, you can roughly see how this works. Instead of going directly to your first pair of speakers, you'll go from your amplifier to the switch. You take the amplifier outputs and go to the inputs on the switch as shown - then your outputs on your switch will run out to your speakers! The three-way switch on the wiring diagram shows a rotary switch, with one side, for example, coming out as your kitchen, and the other is the dining room speakers, and you can switch between the two, or have them all on (or off) together. With the real-life WM15 pictured below, it's a rocker switch, but it achieves the same effect for you. Whoever decides, if you decide to use a switch, the option is there! You could also consider multihabitation speakers using your home broadband via WiFi - we have many multihabitation solutions that can be controlled and controlled wirelessly via an app! Lithe Audio - LitheLink Finally, Lithe Audio has something when using its own Bluetooth ceiling speakers, called LitheLink. In short, they are 3.5mm audio cable connections that join up to three master speakers together, meaning you can actually run up to 3, 4, 5, or 6 speakers in total if you wish. 3 speakers - 2 masters and 1 slave / 3 masters 4 speakers - 2 masters and 2 slaves / 3 masters and 1 slave speakers 3 masters and .2 Slavers 6 Speakers 3 Masters and 3 Slaves Theist all available options if you want to buy these packages at BuyClever, and they are great from adjoining rooms, or larger for spaces if needed. They all come with the necessary cables you need! Ceiling speakers are designed to be a permanent audio solution that will provide you with excellent and aesthetically pleasing sound many years. That's why it's critical that you've chosen the right speaker quality, as well as think about how they'll be installed. Have you read our guide on how much ceiling speaker projects cost? This will give you an idea of whether they are right for you. To install the roof ceiling you should be able to get access behind the walls/ceilings to wire the speaker cable, and once everything is installed, we don't want there to be unwanted surprises! We have chosen 10 things that each installer/client should consider before installing the speaker on the ceiling. We've also made a beginner's guide to ceiling speakers in the form of a series of YouTube videos that covers everything you need to know about ceiling speakers in 3 easy-to-digest videos. 1. How many ceiling speakers do I need in a room? For the most part, ceiling speakers are sold in pairs, in order to configure them as a left and right stereo pair. One of the most important things about audio is the consistency of sound. For larger spaces, we think we balance audio levels better, it's sensible to add 4 speakers smaller than 2 larger speakers. If you're turning on your ceiling speakers with Sonos, you'll need to use the Sonos Amp. Each Sonos Amp can power up to 4 mono-ceiling speakers (8 ohms impedance) or 6 Sonos speakers on the ceiling, so many people choose to install 4 or 6 ceiling speakers in a square configuration as long as there is plenty of room to do this. Note, however, that all ceiling speakers connected to the same Sonos Amp will play the same music at the same volume. If you're looking for independent control between rooms, you'll need one Sonos Amp per room, so keep this in mind when considering the number of Sonos Amps you need. How does the Sonos ecosystem work? &gt;&gt; See Sonos Amp 2. Where should I place the ceiling speakers and how far? It is best to place the ceiling speakers at the same distance from each wall, along the length of the room and at least 2 meters away from each other for the best stereo separation effect. If the speakers will be less than 2 meters away from each other, you may want to consider a single stereo ceiling speaker, located in the center of the ceiling of the room. We understand that some customers may have awkwardly shaped the designs of the rooms, which can make it difficult to know where the best place to position them would be. In this scenario, it may be worth choosing a ceiling speaker with an angleable tweeter to direct the sound to the most livable areas of the rooms. For more information, contact our team of specialists who can study your floor plan and see what would be better, where. 3. Do the ceiling speakers need mains power? No, ceiling speakers are usually passive speakers, which means they don't have built-in amplifiers, and instead receive their power through the speaker cable running from an external amplifier. This is achieved by wiring each ceiling speaker to the junction posts on the amplifier. use Sonos Amp for a better user experience. Sonos allows the user to assign each Amplifier their respective room name and the audio can be grouped or played individually wirelessly to any or all rooms using the easy-to-use Sonos app. Sonos Amp itself then requires a mains power connection and a Connection. Read our quick overview on the Sonos Amp &gt;&gt; If you don't have the ease of running the speaker cable behind the ceiling, you can get ceiling speakers that simply require network power and are controlled via bluetooth. No amplifiers, no wires. Check out the Lithe Audio ceiling speakers. Or read our Lithe Audio Bluetooth ceiling speaker review. 4. Do I need mono or individual stereo ceiling speakers? Traditionally, ceiling speakers are designed to work with amplifiers that understand a left or right channel only, so you would always buy a couple of ceiling speakers, to set up as a stereo pair. This remains the case, as this is how they will connect to the Sonos Amp. However, in some cases, it is simply not practical to install a pair of ceiling speakers for lack of ceiling space. This is particularly common in bathrooms or other smaller rooms. To overcome this, the unique stereo speaker was born to offer a left and right channel of a single speaker, preserving space and opening options to have music in more rooms. A single Sonos Amp is capable of powering 4 mono-ceiling speakers or 2 single-ceilinged stereo speakers (or 3 pairs if using the Sonos speaker itself) To wire a single stereo speaker, you must connect 2 cables to it, not 1, unless you are using 4 core speaker cables (more details below). We usually see the error of installers installing a single cable for a single speaker, and this unfortunately is not correct. Below you can see a diagram on how to connect the ceiling speakers. 5. What speaker cable should I use with my ceiling speakers? For most installations, we recommend 16-gauge 2-core speaker cable, being industry standard and sufficient for most installations. We can supply this cable on 50 meter reels with free next day delivery if you need it quickly. The only time you need to run a better quality cable is if a single cable is more than approximately 35 meters. The audio signal can degenerate if it travels too much affecting the sound quality. In this case, we suggest upgrading to 14 gauge. The cable must be installed in a parallel configuration. View Speaker Cable What is the 4-core speaker cable? The 4-core speaker cable is four-core speaker cable included in an outer case. This type of cable is particularly useful for individual stereo installations, as only one cable is required instead of two. 6. Do ceiling speakers need fire hoods? A fire hood wraps around the back of the speaker to prevent fire from spreading into the ceiling vacuum. This is a legal requirement for any ceiling speakers that are being installed where there is a habitable upstairs to preserve the integrity of your roofs in the event of a fire. Another advantage of a speaker hood is that they provide a back box shape to improve sound and prevent a certain amount of sound leakage. That means you can keep your upstairs neighbors happier for longer if you turn up the volume! Please check with your builder/installer builder/installer a fire hood is required for your ceiling speakers in your particular building. The Low Smoke/Zero Halogen speaker cable may also be needed. Read our dedicated blog about whether you need a fire hood &gt;&gt; View speaker hoods 7. Can ceiling speakers be installed in high humidity environments, such as a kitchen or bathroom? Most of the ceiling speakers we supply are resistant to steam and moisture, which means that as long as they don't get wet, they are great in a bathroom and kitchen environment. Please check with your electrician if you are not sure. Or, if you want peace of mind having a fully waterproof ceiling speaker that can be installed inside a shower cabinet or above the bathtub, the AWC265-T2 Audio Monitor is perfect in this environment. Check out our best selections for ceiling speakers in the bathroom. 8. Can I paint ceiling speakers to match my room? All ceiling speakers on our website have white grilles with spray paint, allowing you to pair the speaker with your environment. 9. How thin should the ceiling speakers be? If the amount of depth you have in the ceiling vacuum (behind the drywall) is very low, options are available for thin, ultra-thin ceiling speakers. The least amount of mounting depth you will need is 36 mm, otherwise the ceiling speakers will not be feasible on your property. Please use our filter on our website to find the right speaker for you. View ceiling speakers 10. Can I voice control my ceiling speakers? Yes, this is now possible with the help of an Amazon Echo or Google Home device. Simply connect your device to the desired room you want to help you control your system with voice, help Alexa or Google Assistant discover your Sonos devices in the Sonos app, and follow the on-screen settings to get started. Then try saying Alexa, play my favorite Spotify playlist. Watch our blog How to get the most out of Alexa at Sonos&gt;&gt; View Amazon Echo Dot If you're in the middle of a ceiling speaker project or considering one in the future, we'd love to help! We offer a completely free floor plan marking service so we can suggest the best positions for ceiling speakers, let you know how many would be needed, recommended models and a cost indication. Simply call us at 0800 677 1100, chat with us using the widget at the bottom of the screen, or send your floor plan to info@smarthomesounds.co.uk and our specialists will be happy to help. See all the ceiling speakers by Jonathan, Sonos specialist Learn more about ceiling speakers... how much will my ceiling speaker project cost? How to choose the perfect ceiling speakers for you &gt;&gt; Sonos & amp; Ceiling speakers for your extension, renovation or &gt;&gt; a complete beginner guide for ceiling speakers &gt;&gt; Need a helping hand with your ceiling speaker project? We can help Smart Home Sounds is a UK Sonos specialist dedicated to filling homes with the joy of music, one room at a time! We provide expert advice on the entire Sonos range, from the Sonos One to a Sonos wireless home theater system with PLAYBAR, SUB, and 2 x PLAY:1s all with free next day delivery and an extended 6-year warranty. Warranty.