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Company: Cerwin-Vega, Inc!

Division: Cerwin-Vega Pro and Home Products

Rev B

LEGAL WARNING: The following recommendations for placing speakers in a room shown below are only suggestions, and should only be followed at the user's own risk. When attempting anything recommended in this paper, the user must do so at their own risk because Cerwin-Vega, Inc. disclaims all liability for any reason.

PRIOR TO INSTALLATION:

Carefully unpack your speakers and save all of the boxes and all of the packing materials.

At some point, you may need to transport, ship, move or store your speakers.

Note: the following suggestions works best with carpeted floors to produce the best overall sound setup.

There are typically two Golden Ratios used in the audio world when setting up speakers and you should pick the one that works best for your room acoustics as every room is different.

The 1/3rd rule and the 1/5th rule.

Let's start with the 1/3rd Rule.

- PS Audio website has a nice short explanation on "*The Rule of Thirds*" (i.e., 1/3rd) so we will list it here.

PS Audio Quote:

"Using the rule of thirds is simple: place your loudspeakers one third the total distance of the room from the rear wall and your listening position the same one third away from the opposite wall.

For example, let's say you have a room that's 15 feet long and 12 feet wide. The loudspeakers would be placed 5 feet from the rear wall and your couch would be 5 feet out from the opposite wall. That's it."



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The **1/5th Rule**: detailed by the author is shown below.

Placing your front speakers:

All speakers in this setup procedure with the exception of the subwoofer should be elevated to ear level, while this is not always practical to do, it is recommended for the best sound. Use of speaker stands, etc. will be helpful in most cases or accommodating furniture on hand.

As every room is different and all rooms produce standing waves which interact and sometimes interfere with the main sound in certain areas of the standing waves, we suggest the following as a possibly good starting point in your home to position your front speakers for the best overall sound quality for your room setup.

Having carpeted floors really helps to get the best overall audio.

Please refer to Figure 1 shown below. Place your front speakers (Left and Right) at the opposite end of the room from where you be sitting and listening.

FAQ: it is recommended that you also move your sitting position (e.g., couch, chair, etc.) to comply with the 1/5 rule for placement as well.

Be sure to place your receiver behind the front speaker and never in front of them.

Speaker Placement Horizontal (1/5): please see figure 1 below.

This means take the total width of the room and divide by 5 and place accordingly.

Speaker Placement Vertical (1/5): please see figure 1 below.

This means take the length of the room and divide by 5 and place accordingly.

Couch or other seated Position Placement: Please see **figure 1** shown below.

Note: to comply fully with the 1/5 guideline for placement, it is also recommended that you modify your sitting position by moving your couch/chair as follows.

Horizontal (1/5): divide the total width of the room by 5 and place accordingly.

Vertical (1/5): divide the length of the room by 5 and place accordingly.

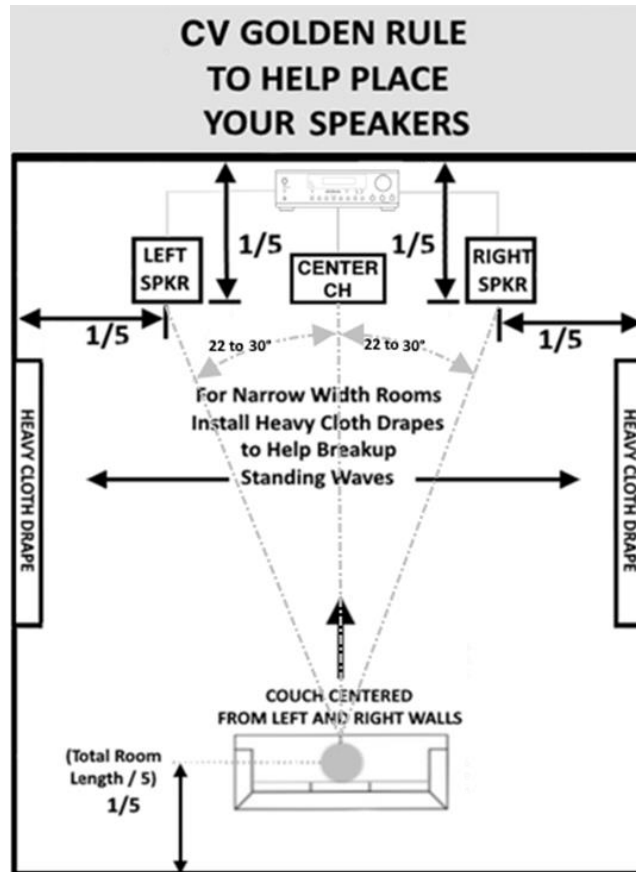


Figure 1: Front Speaker Placement

ADJUSTING THE FRONT SPEAKERS TOW in Angels:

If the initial front speaker setup did not result in optimum sound/position for your room, then you can try the following examples shown in figure 2 below by adjusting the front speakers TOE in angles.

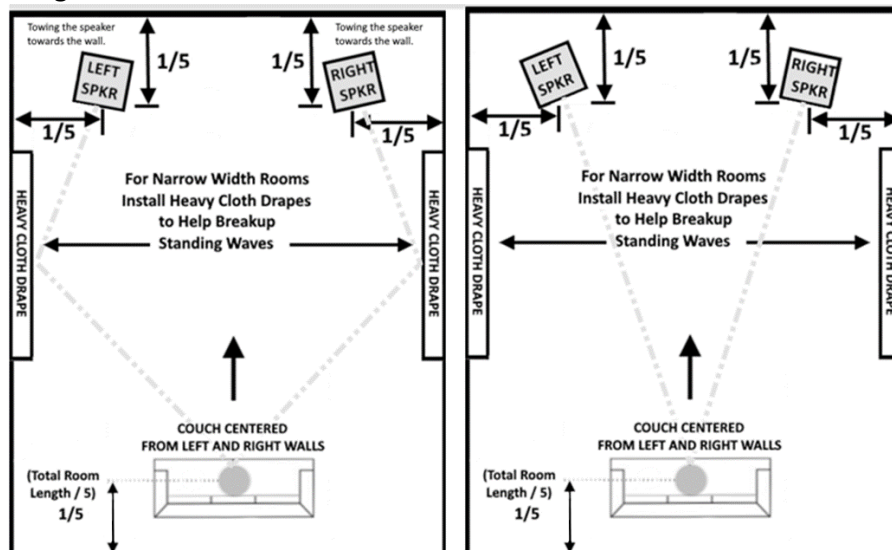


Figure 2: Adjusting Front Speaker TOE

SUBWOOFER POSITIONING:

Your Powered Subwoofer generates omnidirectional low-frequency sound.

As a result, your subwoofer's placement requirements are fairly adjustable and dependent on the acoustic features of your listening space

For small rooms, only use one subwoofer.

For larger rooms, use two subwoofers.

Typical subwoofer placement methods are a trial-and-error method of finding a good spot to position the subwoofer until you are satisfied with placement.

Please reference figure 3 shown below for the following:

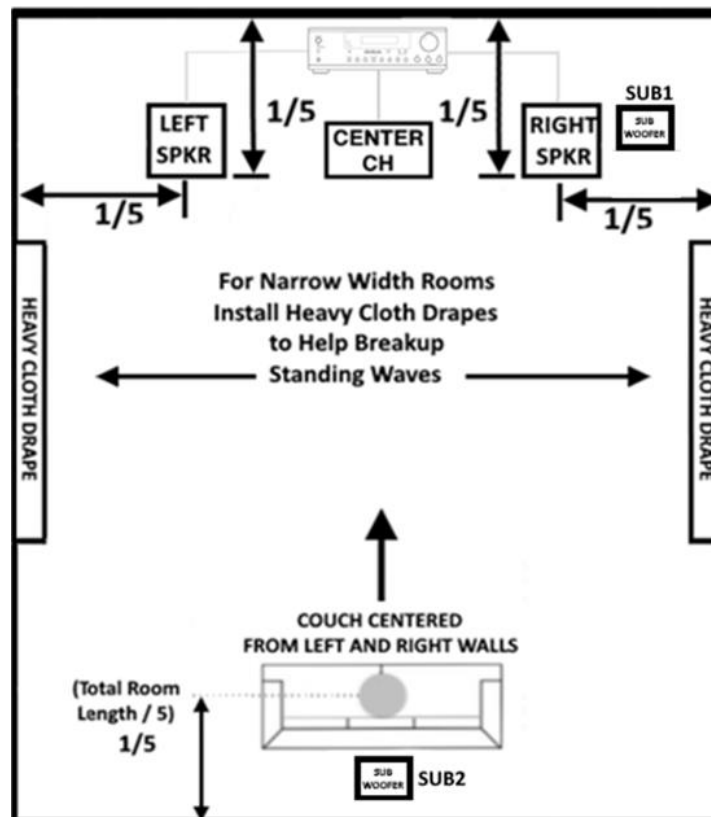


Figure 3: setting up the subwoofer(s)

In bigger room spaces, place the second subwoofer (SUB2) just behind and next to where you'll be sitting.

Traditional subwoofer placement methods would have you to place the subwoofer somewhere between a foot to three or more feet away from the wall or adjoining walls and positioned up near your front speaker either on the left or right side but behind the front speaker line.



And then listening to various music from your seated position and then going back and forth moving the subwoofer to the next possible spot. And then repeat this process until you find the optimum position for your subwoofer.

Alternate Short Cut Method for Subwoofer Placement and Level Adjustment:

Please reference figure 3 above.

SUBWOOFER ALTERNATIVE QUICK PLACEMENT (OLD SCHOOL):

WARNING ONLY USE THIS SUGGESITON AT YOUR OWN RISK!

Note: it is highly recommended that rooms be carpeted as that will aide with overall bass response and also help to dampened or eliminate unwanted audio reflections.

1. Place the subwoofer onto the exact same spot where you plan to sit and listen to the music. If you have a large couch, then position the sub onto the couch exactly where you would normally be sitting (yes, where you would actually be seated) to listen to music or movies while taking great care not to damage the couch and ensuring that the subwoofer will not fall off the couch resulting in damage to itself or its surroundings.
2. Make sure the signal lines are connected and the sound level on the rear of the subwoofer is set to minimum.

Start playing music through the speaker system after turning on the subwoofer (front speakers and subwoofer).

Increase the volume on the subwoofer gradually until the sound is at a moderate, comfortable listening level, then walk up to your front speakers, step behind them, and walk from one side of the room to the other, behind your front speakers while listening closely to the audio from your subwoofer.

During walking from one side of the room to the other in the step above, and stopping periodically and carefully listening to the bass sound from subwoofer for the best position that yields the best overall sounding bass.

Once you have identified the position then note this position on the floor with something like low tack painters' tape to help mark that spot.

Reduce the volume of your sound source (e.g., receiver/power amplifier) to the absolute minimum. Reduce the subwoofer's volume to a bare minimum.

Reduce the volume of your subwoofer.

Turn off your sound source (receiver or power amplifier, for example).

Remove all of the subwoofer's cords (power cord, signal cables, etc.).



3. Carefully move the subwoofer to the spot on the floor where you had just put the low tack painters' tape. That marked spot is the best listening placement on the floor. Place the subwoofer directly on top of that mark and reconnect your subwoofer.
4. Make sure the subwoofer volume level control is at minimum and connect signal leads and power cord, power up the subwoofer and while playing music through your signal cable slowly adjust the sound level until the volume is comfortable to the same level as you had it set while it was sitting on the couch during setup.

If all has gone well you now have the best spot where to place your subwoofer, and if it is not or something still seems to be off, then you can always repeat this process until you have found the best position.

5. Now, that the best spot has been found, slowly adjust the levels on the on the back of the subwoofer and pay close attention to the level of the bass sound until it blends in with the music from your front speakers and you cannot tell where the bass is actually coming from.

Go back to the couch and listen and tweak the volume control as necessary to achieve a good blend of audio with the front speakers. Once this is done then you have completed positioning your subwoofer and sound levels and are now ready to start enjoying your favorite music.

SUBWOOFER OUTPUT LEVEL ADJUSTMENT:

We'll now go through how to establish the correct output level of the subwoofer.

The goal here is to have your subwoofer blend in with the rest of your audio system's background sound. If everything is set up correctly, you should be able to hear the bass sound blended in with the rest of the sound coming from your front speakers, and if adjusted correctly you won't be able to identify whether the base is coming from the subwoofer or the front speakers as it's practically undetectable. Once you have this setup then you are finished setting up the subwoofer.

ADDING A CENTER CHANNEL:

The preference center channel height is at chest height while you are sitting down in your favorite listening position, example such as your couch. Of course, this may not always be possible depending on the size of your room. Position your center channel between your front speakers (please see Figure 1 above) and where possible, elevate the center channel up off of the floor as much as possible without exceeding chest level height.



REFERENCES:

The Rule Of Thirds

September 6, 2011

by Paul McGowan

URL: <https://www.psaudio.com/pauls-posts/rule-thirds/>