



CouchPotato

**300 Watt
Digital
Powered
Subwoofer**



User's Manual

CP-8 Installation Manual

Dear Valued Customer,

On behalf of everyone here at Earthquake Sound Corporation, thank you for choosing the Couch Potato (model no. CP-8) by Earthquake.

The CP-8 is a self-powered subwoofer that allows the user to deliver massive fast bass into their seating position. By placing the subwoofer close to you, the bass is faster, more powerful and it also carries massive sub harmonic vibrations with it.

With an integral high-power 300 Watts MAX amplifier, the CP-8 subwoofer provides for an RCA input, high level input with a crossed high level output. CP-8 high output level is designed to

match typical satellite speaker systems to enhance the over all sound quality and performance of your system.

The slim enclosure design allows the user to place the CP-8 under the sofa, behind it or under the bed. Now you can have massive bass while using unused space.

Enjoy.

Let's get familiar with Your Couch Potato (CP-8)

- Ⓐ POWER SWITCH (Off/AUTO/On) - Complete with light indicator. When switched to "AUTO" mode, the CP-8 will turn off after 15 minutes if no audio signal is detected.
- Ⓑ PHASE SHIFT - 0 to 180° subwoofer phase shift switch.
- Ⓒ VOLUME CONTROL - Manual adjustment of the subwoofer's sound level. Always start at MIN position and slowly increase the volume to reach the desired subwoofer sound level.
- Ⓓ XOVER FILTER - This 12dB/Oct variable crossover filter is designed to control the subwoofer's cut off frequency (range: 40Hz to 130Hz).
- Ⓔ LINE OUT RCA - High pass filtered RCA output jacks with left and right line output signals. The line out RCAs are not functional when the line in signal is derived from a sub-filtered output of an external processor.
- Ⓕ LINE IN RCA - Input jacks to accept up to 2.3 Volts of audio input signal (mono and stereo).
- Ⓖ HIGH LEVEL OUTPUT - High pass filtered output terminals designed to power up stereo satellite speakers.
- Ⓗ MAIN POWER FUSE - Always replace protection fuse with one with similar value. An extra fuse is provided for your convenience.
- Ⓘ POWER INPUT SELECTOR - The CP-8 operates in 115V or 230V environment. Simply slide the selector to the required power input setting.
- Ⓙ HIGH LEVEL INPUT - Clamp style input terminal accepts high level audio input from main or front system speakers (up to 10 Volts).

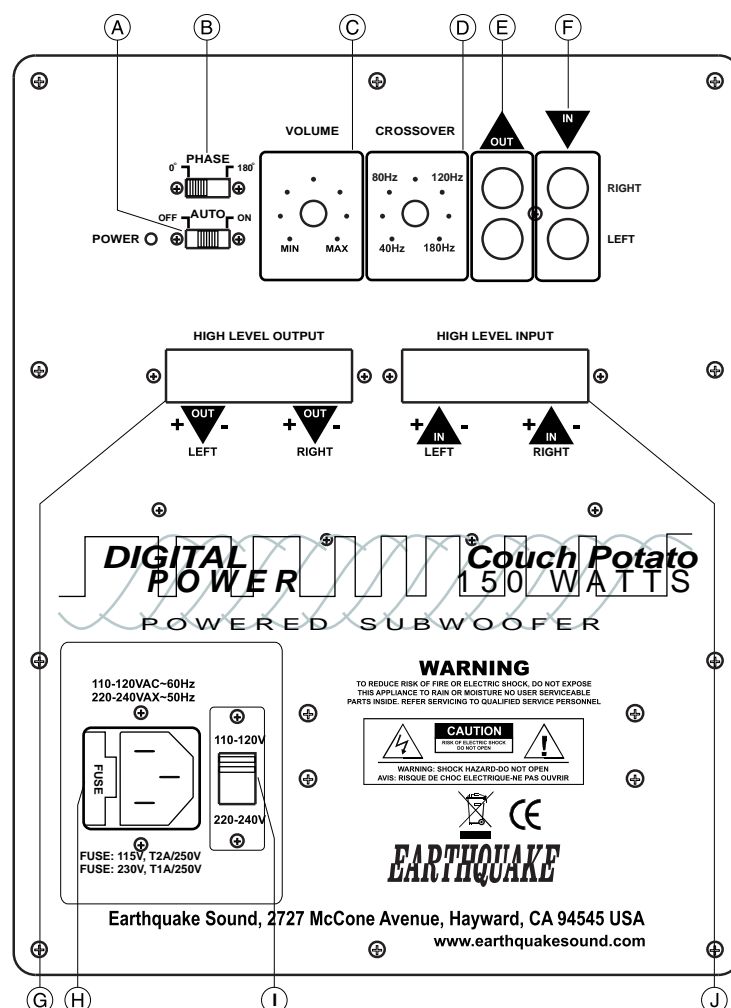


Figure 1.
Key Connection and Controls

CP-8 Installation Manual

Operating & Controlling Your CP-8

Before you make any connections to power up your Couch Potato, please double check the following:

1. The input power switch 110 AC or 220 AC based on your local power.
2. Please make sure that the gain/volume knob is set to minimum.
3. Make sure that the power switch is set to OFF.
4. The crossover should be set to 10 o'clock position.

Connecting Your CP-8

LOW LEVEL INPUT CONNECTION

1. Locate the LINE IN RCA on the CP-8 amplifier (Fig. 1F)
2. Connect the CP-8 to the signal source, i.e. AV receiver. There is no need to have both RCAs to the signal source since the subwoofer is often operated in mono signal. If the receiver does not have adequate signal level, then you may want to use both RCA inputs in order to obtain higher signal level.
3. If needed, connect the LINE OUT RCA (Fig. 1E) to another amplifier to drive satellite speakers (front or rear). The LINE OUT RCA has high pass filtered signal at about 70Hz (5dB/Octave cut off).

HIGH LEVEL INPUT CONNECTION

The CP-8 has a HIGH LEVEL INPUT connection (Fig. 1J). For the best performance, you might consider RCA connection if it is available on your source. If not, then high level input will do.

1. Since bass is mono, you can connect the high level input of any of the front speakers to your CP-8. For ease of wiring, pick the speaker that is closest to the subwoofer. Simply piggy back a wire from the speaker to the subwoofer and you're up and running.

Note: The high level input for satellite speakers is fitted with a high pass filter (70Hz). It is only powered when the main or front speaker signals are driven into the HIGH LEVEL INPUT (Fig. 1J). These terminals are marked with red and black to indicate the (+) & (-) respectively.

2. Adjust the subwoofer low pass filter cut off to near 100Hz at first, slowly bring down the crossing point until you eliminate any emanating vocals from the subwoofer. An ideal crossing point range from 55 to 70Hz.
3. In case the CP-8 becomes out of phase with the satellite speaker, flip the phase switch to correct the problem (maximum bass is only achieved when the sub is in phase with rest of your speakers).

(!) **NOTE:** DO NOT USE HIGH LEVEL AND RCA INPUTS AT THE SAME TIME.

Cautions

- (!) Do not place the subwoofer in an environment exposed to dust, excessive moisture or heat. Direct exposure to sun light will over time deteriorate the enclosure finish and may cause the amplifier to overheat.
- (!) To prevent electrical shock, never open the subwoofer cabinet before disconnecting the power cord from the amplifier's main socket.
- (!) In the event of a blown fuse, replace it with a 1 ampere fuse only. Over fusing voids the warranty and will destroy the amplifier.

Features & Specifications:

AMPLIFIER

- Power Output: 300 Watts
- Frequency Response: 20Hz - 180Hz
- Crossover Frequency: 40Hz - 130Hz
- Crossover Slope: 12dB per Octave
- THD: 0.001% @ 50 Hz.
- Input Impedance: 47,000 ohms
- Input Sensitivity: 50mV to 2.3V
- Power Supply: 115V/230V (50Hz~60Hz)
- Fuse Rating: 1 Amp

SUBWOOFER

- 300 watts 8" subwoofer
- 2" high temperature voice coil
- Durable pressed paper cone
- Long Excursion santoprene surround
- 48oz high density magnet
- 89dB 1W/1M
- FS: 38Hz
- Qts: 0.516

SYSTEM

- Dimensions (H - feet included x W x D):
7" (177.8mm) x 12" (304.8mm) x 24" (601mm)
- Weight: 24.58 lbs / 11.15 kgs

For more technical support, please contact us by:
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The ABC of Home Theater

SPEAKER ARRANGEMENT

Home theater performance depends very much so on product performance, room size and speaker placement. Reading this booklet, following your priorities and these procedures will pay off with a big improvement to sound quality and sonic performance. Basics of speaker placement can help you make the smartest choice for your specific room.

There is no magic bullet in home theater, which is why this is called *custom* home theater. Every speaker has different sonic characteristics, every room has different acoustic properties, everyone's ears hear sound a little differently and your left ear has a different sensitivity than your right ear. So in the end, you may use this booklet as a starting guideline. However, when it comes to actually setting up your speaker system, let your own ears be the judge.

CENTER CHANNEL SPEAKER PLACEMENT

This should be the first speaker you place in your home theater room. The job of a center channel is to anchor dialogue and other on-screen sounds to the screen. Thus, its position depends upon where you put your TV.

Place your center channel directly above or below your TV — centered, make sure the speaker's front edge is precisely aligned with the front edge of your TV screen. This helps in reducing distortion caused by sound reflecting and diffracting off the TV's cabinet.

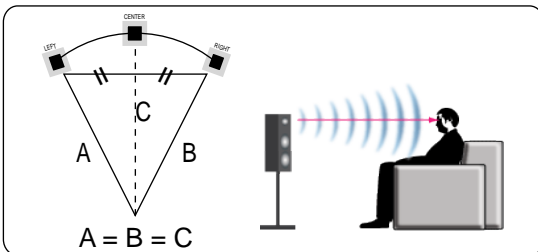


Figure 2. Front Speaker Placement

If possible, the height of the center channel speakers should be as high as your ears in a sitting position, as illustrated above in Figure 2.

FRONT LEFT & RIGHT SPEAKERS PLACEMENT

In a home theater system, front speakers are responsible for movies' sound tracks and dynamic actions. The front speakers need to sync the video event with the audio. For instance, when there is a moving vehicle from the left to the right of the screen, the sound should travel from the left front speaker to the right front speaker.

In a two channel stereo system, the front speakers are responsible for producing all of the sound: staging, imaging, and depth of field. Placing the speakers too close to each other will compromise the stage, while placing them too far from each other will break the images.

Front speakers should be placed at an equal distance from the TV and the primary listening spot (sweet spot). Together with the center channel speaker, they should form a slight arc with all three speakers at exactly the same distance from where you sit, as illustrated in Figure 2.

To make life even easier, the distance between the front center channel speaker to the primary seat should be equal to the distance between the two front left and right speakers.

SPEAKER ELEVATION

The tweeters from all three front speakers should have the same elevation as your ears while seated. Any deviation will work but it may reduce the performance.

Make sure that there are no solid objects (like furniture) blocking the pathway of the sound traveling to your listening location.

SURROUND SPEAKER PLACEMENTS

Surround speakers are there to envelop three dimensional sound that places you in the middle of the action. Ideally, your primary pair of surround speakers should be placed to the left and right of your listening position — either in line with it, or just behind it. They should form a 90°-110° angle with respect to your television. In a 6.1-channel or 7.1-channel system with more than two surround speakers, or if side placement is not available for your surrounds in a standard 5.1-channel setup, consider placement behind your listening position, facing the front of the room. Surround speakers should be placed high enough so that the drivers do not fire directly at your ears when you're sitting down. As a rule of thumb, place them at ear level while you are in standing position. Most people tend to over amplify the rear speakers. This is not recommended as it can over power the front speakers. Most of the time, the rear speakers are relatively quiet. They simply come on when there are special effects.

Since every room has different acoustics, you might need to experiment with the speakers aiming. You may get good results by pointing them at the ceiling or toward the rear corners of the room. If no side or rear walls are available for mounting your speakers, try placing a pair of traditional bookshelf speakers on speaker stands, slightly behind and to the sides of your listening position. Avoid aiming them directly at your listening position. You may also try any of our Sweet spot, IQ Series and Imāge in-ceiling speakers.

Surround speaker placement which is ideal for home theater is not necessarily perfect for multichannel music listening, where a precisely focused rear sound stage is best. If both listening types are important to you, then you can position your surround speakers for a compromise between the two.

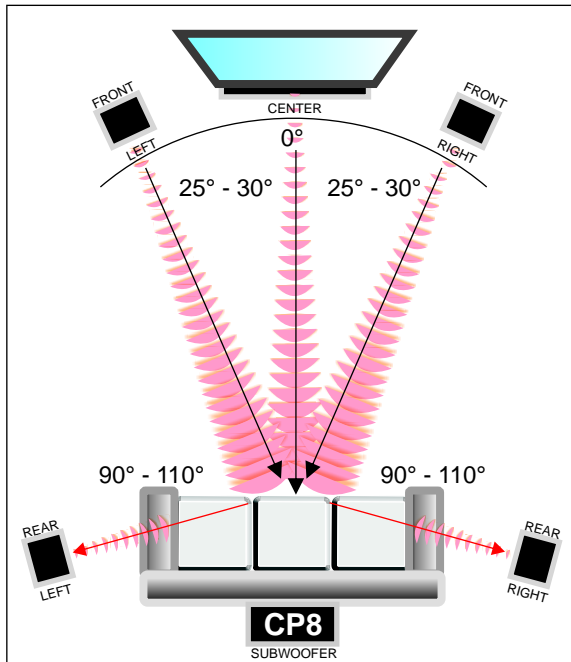


Figure 3. Speaker Placement in 5.1 System
Position the rear left and right speakers 90° - 110° across from the primary listening/seating spot and at about 6 feet from the floor.

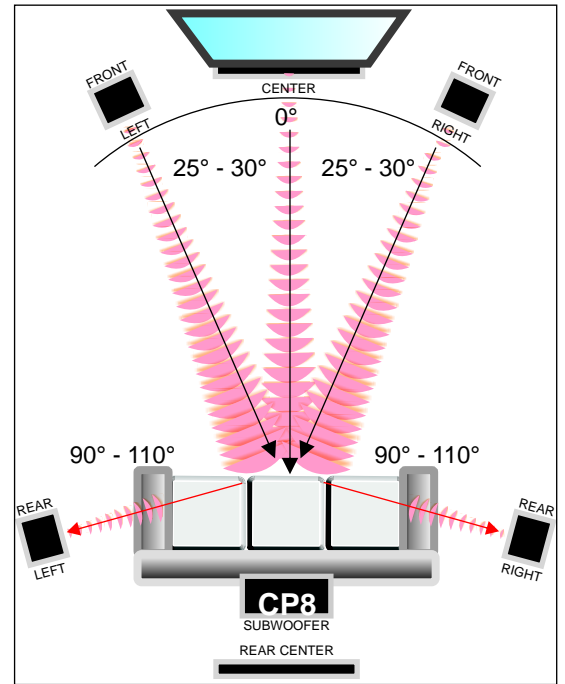


Figure 4. Speaker Placement in 6.1 System
Position the rear center speakers behind from the primary listening/seating spot and at about 6 feet from the floor. Placing the CP-8 subwoofer close to the listening/seating spot delivers more vibrations and subharmonics.

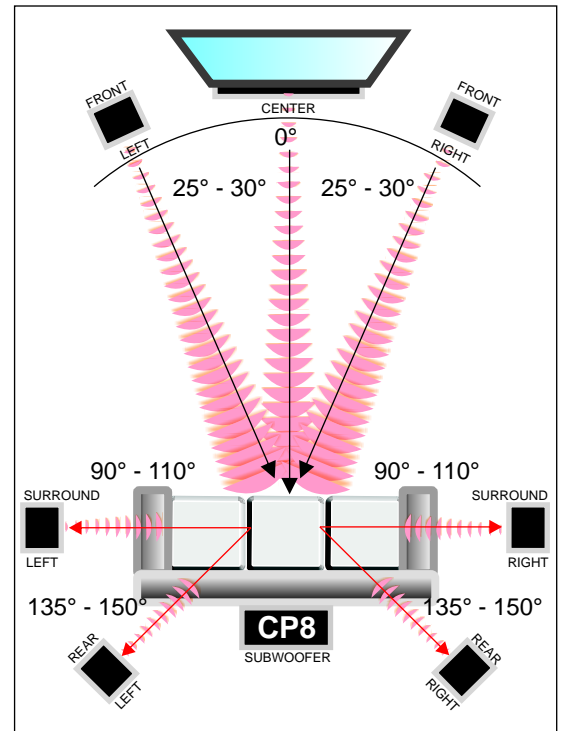


Figure 5. Speaker Placement in 7.1 System
Position the left and right surround speakers at 90° angle and the left and right rear speakers at 135° - 150° angle with respect of the television and about 6 feet from the floor.

SUBWOOFER PLACEMENTS

A powered subwoofer delivers crucial impact in a home theater system although it is one of the least demanding speakers to position. Since low bass frequencies are omnidirectional, you can usually place your subwoofer just about anywhere in your home theater room and still get good results.

Placing your subwoofer near a wall will generally produce more output due to wall reflection. Moreover, if you place your subwoofer in the corner, the output is maximized even more. Keep in mind that even though the bass increases as you place the sub near a wall or corner, the quality of bass may be slightly "boomier" and less controlled. Thus, aim for a spot where you get a compromise between quality and quantity of bass.

One cool technique for placing for your subwoofer is to put your sub in your listening spot (i.e. on your sofa), play some music, move around the room, and listen. Be sure that you bend down closer to the floor as you walk as this will lead to more accuracy as to what you will get. You will probably notice that the bass sounds a little bit different as you move around the room from one location to another. When you reach a spot where the bass sounds best, that may be the location where you want to place the subwoofer.

After finding the best subwoofer placement, you will need to set the phase. Earthquake subwoofers are equipped with 0° - 180° phase control switch. Simply play one of your favorite songs and switch the phase control back and forth. You may need assistance from a friend or family member. Choose the setting that produces the most bass while all your speakers are playing.

Subwoofers have slower responses compared to the rest of the speaker systems. This is strictly Physics. The CP-8 is designed to address this issue. By making the CP-8 slim in profile, it opens up more placement options (i.e. under or behind the sofa, vertically standing against the wall in the corner of the room, etc.) to offset the response delay.

Figure 6 through 9 illustrate the bass response in the room when placing the CP-8 in different location of the room.

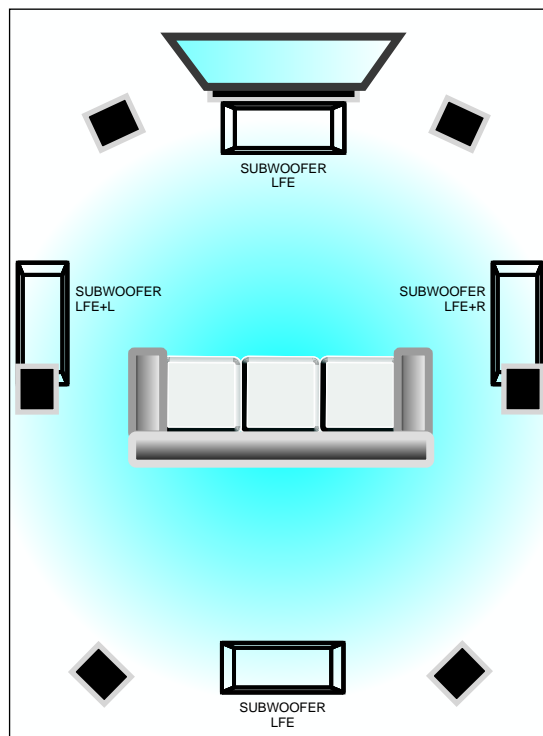


Figure 6. Four (4) CP-8 Arrangement
More bass in the right places

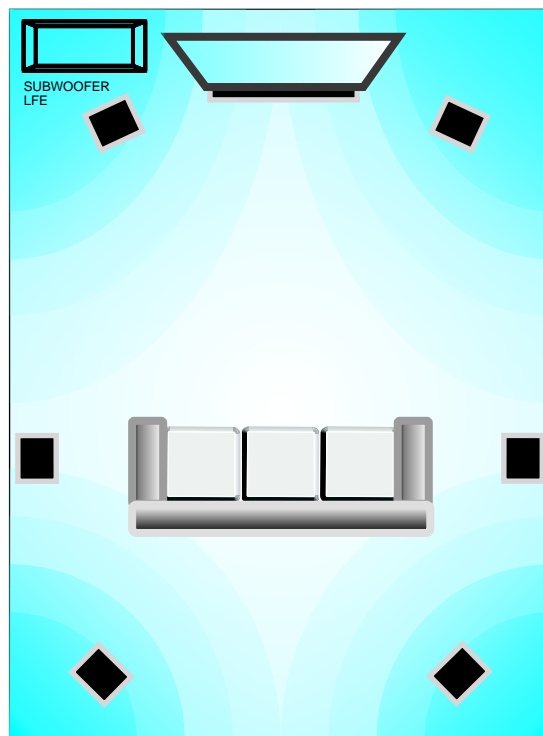


Figure 7. Corner Loading Placement
Ideally, place the seating about 2/3 of the room away from the television.

Trouble Shooting the CP-8

LED DOES NOT LIGHT ON

1. Check for the appropriate AC voltage in power outlet.
2. Inspect the power cable. Never use one that has been altered with.
3. Inspect the fuse[†] (see Fig. 1H on page 2).

[†]The fuse holder slides outward. Simply use a flat screw driver to pry it open. Be sure to use the appropriate fuse size.

LED TURNS ON BUT STAYS RED OR NO OUTPUT

1. If LED does not turn green
Unplug the power for 5 seconds. Position the power switch (Fig. 1A on page 2) to ON and connect the power again. Turn the system on and check if the LED status change to green as it should do so when the amplifier is properly working.
2. If LED is green but there is no output
Turn the power switch (Fig. 1A on page 2) to OFF position. You should see the LED turn red. Set the power switch to the AUTO (center position) and turn the audio source on. If signal were present at the RCA, you should see the LED status light turns green and the subwoofer will turn on and produce output. If LED remains red, then the problem is at the source or the audio cable:
 - a. Trouble shoot the RCA cables by temporarily connecting them to the stereo left and/or right out of the source unit. If the cables are good, the subwoofer must be heard.
 - b. If the cables are okay but no sub out from receiver/processor, check the subwoofer settings at the source. Make sure "ON" or "Ultra" is selected (review the owner's manual of the source unit for setting up the sub output).

HUM NOISE

- Unplug the RCA cables and check for noise
- a. If the noise goes away, then the problem is at the source. Make sure that all units' chassis are grounded together (~18 - 22AWG wire), with the exception to our subwoofer.
 - b. Grounding the loop isolator (on the RCA side) and the cheater plug (on the AC supply side) may be a temporary/quick solution for such problem. However, we always recommend using solution a.
 - c. Avoid using line conditioner or surge protector as it may damage the subwoofer's internal circuitry.
 - d. If the noise is still present even when the RCA cables are unplugged, try changing the AC outlet. If the problem still occurs at this point, contact an Earthquake technician.

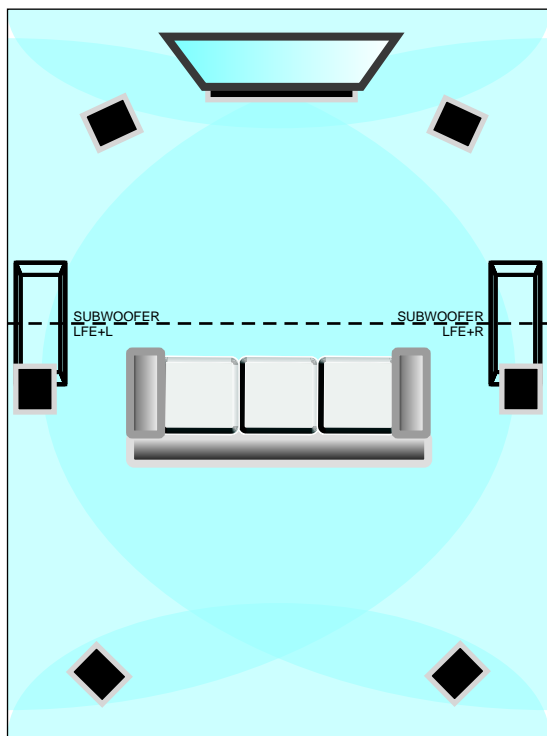


Figure 8. Two (2) CP-8 Arrangements - Seating Based
Placing the two subwoofers on the horizontal axis of the seating area

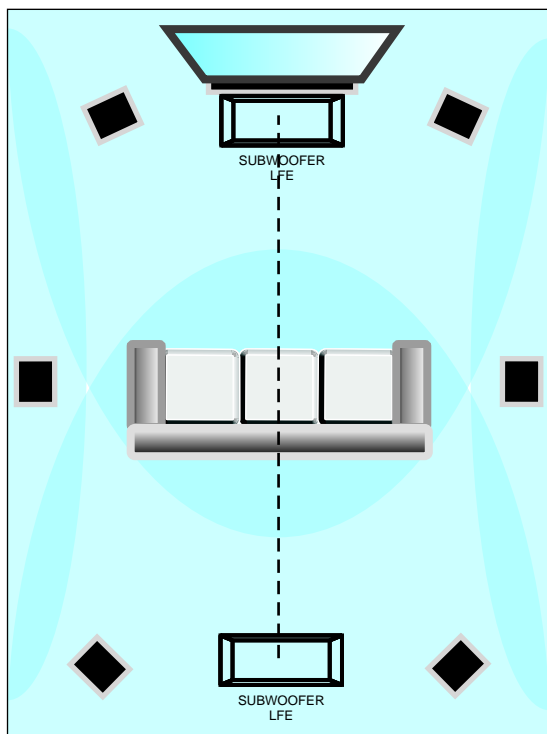


Figure 9. Two (2) CP-8 Arrangements - Seating Based
Placing the two subwoofers on the vertical axis of the seating area

For more technical support, please contact us by:
Phone: 1-800-576-7944
Email: tech@earthquakesound.com



Sound That Will *Move* You

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