



Luna Subwoofer

**Owner's Manual**



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*No loss of fine detail*

## Included in the Delivery is

This box contains one subwoofer and an accessory pack , as well as your „Welcome to the Audio Physic Family“ package containing this Owner’s Manual and the Final Inspection Certificate.

- Box setup
- “Welcome to the Audio Physic Family“ package and a spirit level to optimise
  - Accessory pack:
 

1x	power supply cord
1x	RCA cable for the ground connection (6 metres) - for more information please refer to the chapters on Troubleshooting and Connecting Your Subwoofer
4x	spikes
4x	nuts



## Lieferumfang

Der Karton enthält neben dem Subwoofer eine Zubehörpackung und Ihr „Willkommen in der Familie“-Paket mit dieser Anleitung und der Endkontroll-Urkunde.



- Verpackung**
- „Welcome to the Family-Pack“ mit Dosenlibelle zur Aufstellungsoptimierung
  - Zubehör:
 

1x	Netzkabel
1x	Kabel (Cinch) als Masseverbinder (6 Meter) – nähere Hinweise in den Kapiteln Funktionsstörungen und Anschluss
4x	Spikes
4x	Kontermuttern

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# Welcome

Dear music lover,

We would like to thank you for putting your trust in our products and welcome you to the family of audiophile friends of AUDIO PHYSIC.

You have chosen a top-class product that has been developed in Germany. We would like to congratulate you on this choice and wish you a lot of fun and enjoyment with your product.

In order to earn your trust, we only use the latest technical expertise and top-quality components when manufacturing our loudspeakers and we produce them in accordance with strict quality criteria. These criteria enable us to supply our loudspeakers with a 10 year warranty (2 years for the subwoofer electronics and 10 years for the drivers), which is far longer than the legally prescribed warranty periods. In order to secure this additional service, please fill out the warranty card enclosed with the loudspeaker and return it to us.

Only after several electronic and acoustic test runs, which our quality assurance staff confirm by signing the enclosed certificate, are our loudspeakers allowed to leave the factory in secure packaging. These measures help to ensure that you can enjoy the full experience of the high-quality materials, production and sound of AUDIO PHYSIC loudspeakers in the comfort of your own home.

As a rule, your competent AUDIO PHYSIC dealer will deliver and install your loudspeakers. If you would rather install your product yourself, the following pages provide you with detailed tips and steps to follow in order to safely set up your loudspeakers. **Have fun with your Luna!**

*No loss of fine detail: If you want a close-up first-hand experience of exactly what your new AUDIO PHYSIC loudspeakers can do, we recommend that you try out our Anniversary Sampler CD. These 16 pieces of classical music with flawless quality are bound to put a smile on your face.*



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## General Tips

Depending on the size and weight of your subwoofer, it is a good idea for two people to unpack it. First take out the accessory pack, which is located in a smaller box inside the main box. This pack contains the feet that are important for the operation of your subwoofers and the required parts. Your subwoofer should reach a temperature that is approximately equivalent to room temperature before you connect it to the HiFi system and/or put it into operation. If you do not let your subwoofer reach this temperature, this may result in condensation that may damage the electronics. This particular instruction predominately refers to the winter months in case the loudspeakers were previously stored in a cold room.

## Maintenance

Our loudspeakers and subwoofers are coated in high-quality veneers or high-gloss lacquers. You should avoid using chemical cleaning agents because these may attack the loudspeaker surfaces and make them go matt. As a rule, a fine, soft and damp cloth is all that you need to clean the surfaces. Please ensure that you unplug your subwoofer before cleaning it. If a cleaning agent is required, use this to dampen the cloth and do not directly apply it to the surface. It is best if you test the suitability of the cleaning agent on a less visible part of the cabinet. Please make sure that no liquid spills into the interior of your subwoofer. **The driver does not normally need to be cleaned.** Do not expose the loudspeaker to direct sunlight. The surfaces are sensitive to ultraviolet light and may fade. The device normally does not need to be serviced. If you think that it does need to be serviced, please contact your authorised AUDIO PHYSIC dealer.

## Burning In Your Subwoofer

The LUNA driver is technically tested and burnt in prior to assembly. Your subwoofer will therefore reach its full sound potential after a burn-in period of as little as approx. 15 hours of operation. We recommend that you readjust the basic settings of your subwoofer after this burn-in period, in particular due to the fact that you will become more aware of your subwoofer after a certain period of playing time and it is therefore worth adjusting the subwoofer volume where necessary.

## Stray Magnetic Fields

The magnetic field created by the main magnet of the woofer may to some extent have an effect outside of the loudspeaker. This stray magnetic field may interfere with other devices, particularly televisions and monitors with cathode ray tubes (not LCD or plasma televisions), for example by causing changes in colour in the picture. We recommend that you **place your subwoofer approximately half a metre away from such devices** (and also from magnet tapes, video cassettes, credit cards with magnetic stripes, etc.).

Where possible, **please retain the loudspeaker packaging.** You can then securely transport your subwoofer if you move house.



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## Safety Instructions

1. Only use your subwoofer in dry rooms. If any liquids get into your subwoofer, immediately unplug it and switch off any devices connected to it, for example amplifiers, receivers or multi-channel decoders.  
For your safety, take your subwoofer to a specialist, at best an authorised AUDIO PHYSIC dealer, to be checked.
2. Only use your subwoofer on a stable and level surface.
3. If your subwoofer has been exposed to a cold environment over a long period of time, please wait until it has reached room temperature in order to avoid condensation, which may develop in the case of sudden and large differences in temperature and damage the electronics.
4. If you go away or do not plan to use your subwoofer over a long period of time, disconnect it by unplugging it.
5. Do not leave your subwoofer unattended when in use.
6. Keep your subwoofer, especially the connection terminals, out of reach of small children.
7. If you want to clean the surfaces of your subwoofer, please switch it off before doing so. Before switching it back on, please ensure that there is no moisture on the connection terminals and that the terminals are securely connected.
8. Your subwoofer should only be opened and, where necessary, repaired by an authorised AUDIO PHYSIC dealer. Any repairs to or work on your subwoofer that are not carried out by an authorised AUDIO PHYSIC dealer shall result in a voided warranty. In the case of functional problems that cannot be solved or suspected damage to your subwoofer, unplug the device and take it to your AUDIO PHYSIC dealer to be checked.

## Unpacking and Assembly

1. Carefully open the packaging where it has been taped up.
2. Remove the accessory pack from the box.
3. Carefully remove the loudspeaker, together with its protective foam pads, from the box. It is ideal if two people carry out this step. Make sure that you **do not break off the connection terminals or controls** when removing and handling the loudspeaker.
4. Now remove the top foam cover and carefully slide down the protective foil.
5. Stand the subwoofer upside down, preferably on a soft surface (carpet or a thick towel) so that the surface of the cabinet does not get scratched.
6. Screw the spikes supplied with your subwoofer into the threaded inserts in the base and use the lock nuts to fix them in place.
7. Stand your subwoofer the right way up again. Now follow the recommendations for setting up your subwoofer in the following chapter.

*If you want to further increase the precision and sonic depth of your subwoofer's bass response, try out our high-quality VC feet (for example the VCF II M8 feet in the image on the right). The "Vibration Control" feet are not only an alternative to spikes for high-quality flooring, but also reduce the transmission of vibrations between the loudspeaker and the floor. The result is an audible improvement to the device's realistic sound reproduction. For more information and advice, please contact your dealer.*



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## Setting Up Your Subwoofer

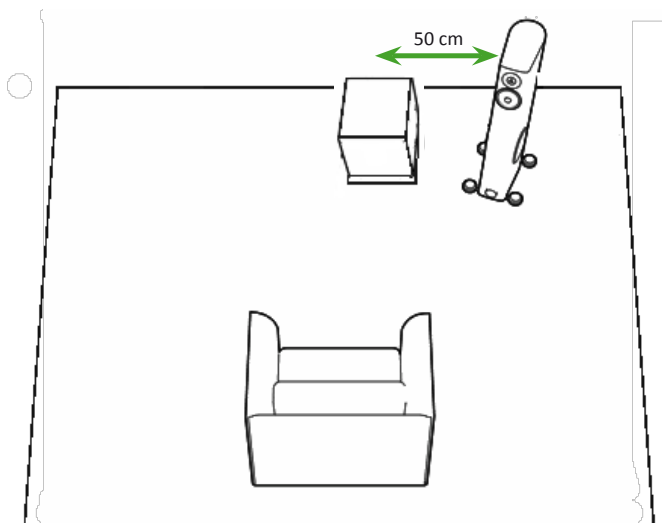
The fact that a subwoofer only reproduces the lowest frequency band means that a number of different setups are possible in your room. It can, for example be placed by a wall, in a corner or in a free-standing position. The acoustic rules that apply to other loudspeakers also apply to subwoofers, meaning that the closer your subwoofer is to a wall or corner, the larger or smaller the increase in lower tones will be. You can, however, use the electronics of the LUNA to compensate for these influences in order to achieve optimal results in all positions. You can find out more about this issue in the chapter “Adjusting Your Subwoofer”. There are, however, some positions that are particularly suited to your subwoofer and make the setup process easier for you.

1. Your subwoofer should generally be placed on a stable and level surface. Unscrew the spikes that you previously attached to your subwoofer until the device is level and all spikes are firmly set on the ground. The spirit level enclosed with your subwoofer will help you to ensure that it is exactly level. Once you have positioned your subwoofer, use the lock nuts to again tighten the spikes. It is important that your subwoofer is level because depending on the bass depth and volume, large forces act on the device when it is in operation. If your subwoofer is not in a level position and on a solid surface, it may move out of position due to an unbalanced distribution of force and strong vibrations.

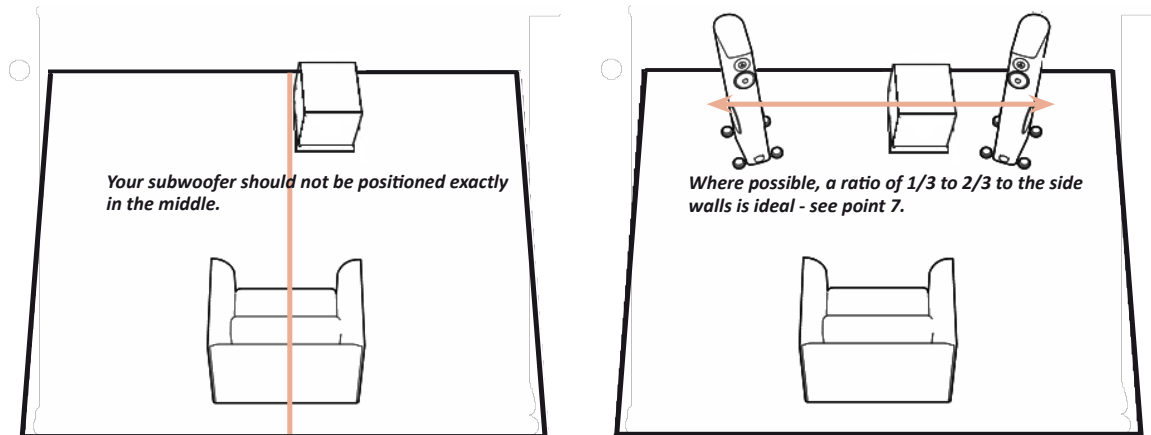


**A handy helper:** The enclosed spirit level will help you to ensure that your subwoofer is in a level position.

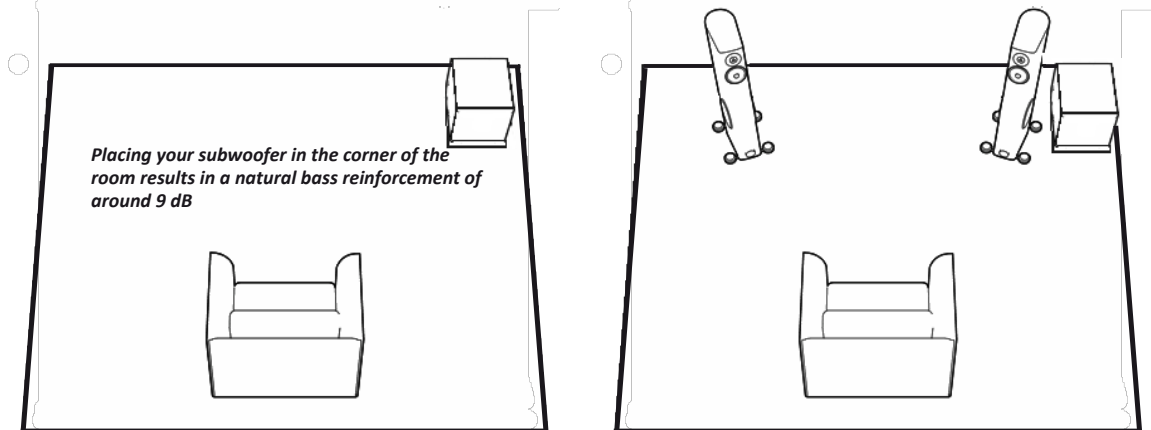
2. The loudspeakers and subwoofer should not be placed directly next to each other. This may lead to unwanted interactions between the devices, for example the loudspeakers causing each other to resonate. A distance of around 50 centimetres between the devices largely prevents these effects.



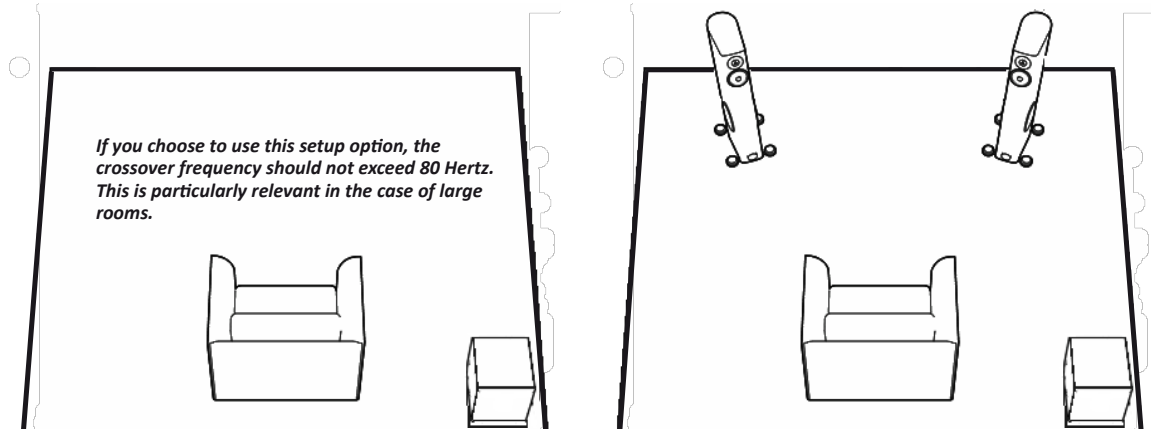
3. If it is possible to position your subwoofer between the main loudspeakers, it should not be placed exactly in the middle between the side walls. An ideal position for your subwoofer is on an imaginary straight line between the loudspeakers. This will simplify the setup process of the subwoofer's phase (please refer to the chapter "Setup").



4. Depending on how close your subwoofer is to the walls, placing it in the corner of the room will result in a broad bass reinforcement of up to 9 decibels. You can use the LUNA's control electronics to compensate for this reinforcement.



5. a. If you position your subwoofer by a side wall or the back wall, be sure to choose a crossover frequency that is as low as possible. This is particularly relevant in the case of large rooms.
5. b. If you only want to use your subwoofer via the LFE channel of a surround system, you can place your subwoofer by the wall or in a corner opposite the main loudspeakers without any problems if you choose a crossover frequency on the receiver that is as low as possible.

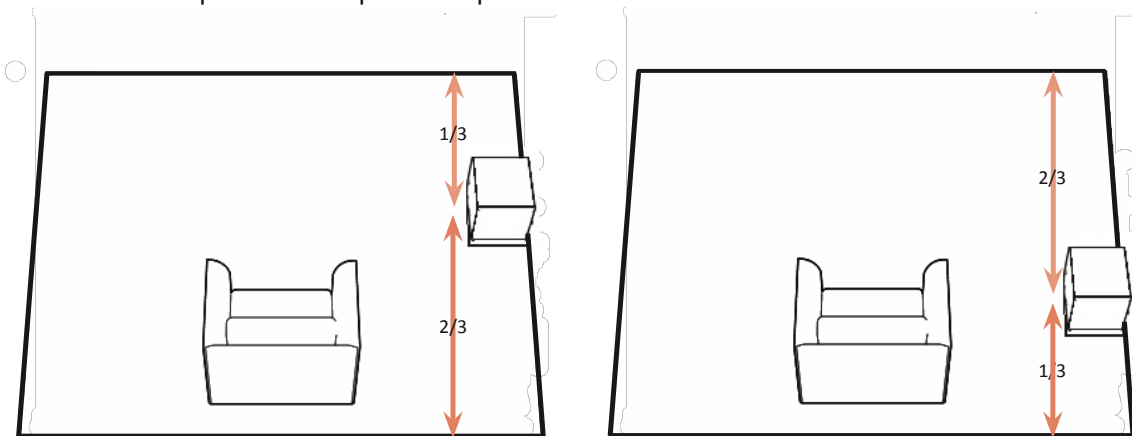


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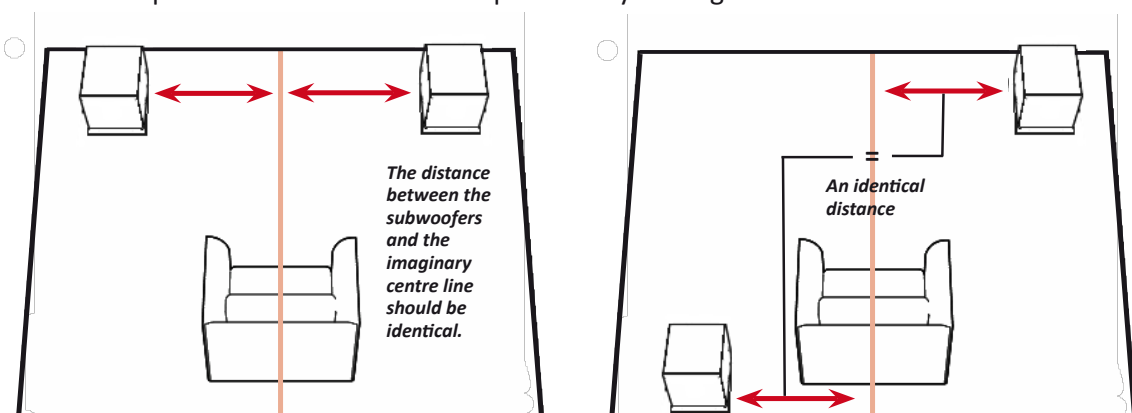
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6. Positioning your subwoofer by a side wall in a one-third to two-thirds ratio is highly recommended in terms of acoustics if, where applicable, your subwoofer cannot be placed between or next to the front loudspeakers for optical or spatial reasons.



7. In rooms in which the lengths of the side walls and the distance between the floor and the ceiling are almost identical, your subwoofer should not be placed in a corner because this may result in particularly strong room modes that disturb the sound reproduction.
8. If you decide to use two subwoofers, we recommend that you place them in symmetrical positions to an imaginary axis extending from the listening position to the central point between the two main loudspeakers. This will result in a particularly homogenous involvement of the room.



9. The sound of a system consisting of passive loudspeakers and an active subwoofer can achieve better contours and more attention to detail when your subwoofer is placed around 30 centimetres above the floor. When deciding whether or not to use such a setup, you should weigh up this improved musicality against the optical consequences of such positioning. This setup up is, however, only successful when your subwoofer can be placed in a fully secure position in which it will not wobble at all.

You can find more tips and tricks about setting up your speakers and background information on the topic of listening in the technical area of our website at: [www.audiophysic.de](http://www.audiophysic.de)

*You are now only a few steps away from impressive sound performance thanks to a high-quality subwoofer that is perfectly adjusted to your room and sound system.*

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## Connecting Your Subwoofer

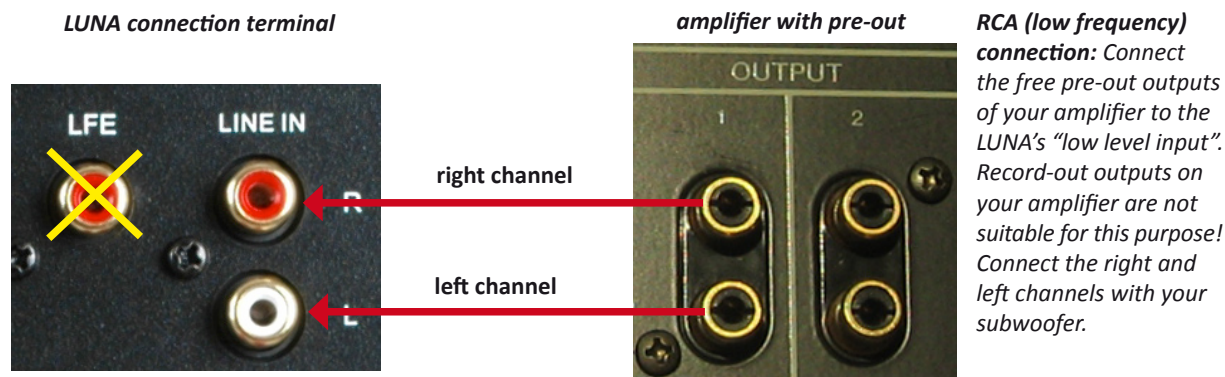
Please switch off all equipment in your HiFi system before you connect your subwoofer. Depending on how you want to use your subwoofer, for example in a stereo or surround sound system, there are a number of different possibilities when it comes to connecting your subwoofer to your system.

### Operating Your Subwoofer in a Stereo Configuration

You can integrate your subwoofer into your stereo music system in a variety of ways. If you have a combination consisting of a preamplifier and a power amplifier with a free „pre-out“ on the preamplifier, you can use this to connect your subwoofer. This also applies to integrated amplifiers or receivers that have an unused pre-out connector. Use an RCA cable of a suitable length to connect the “pre-out” jacks to the LUNA’s “low level input”. “Record-out jacks” are not suitable for this purpose.

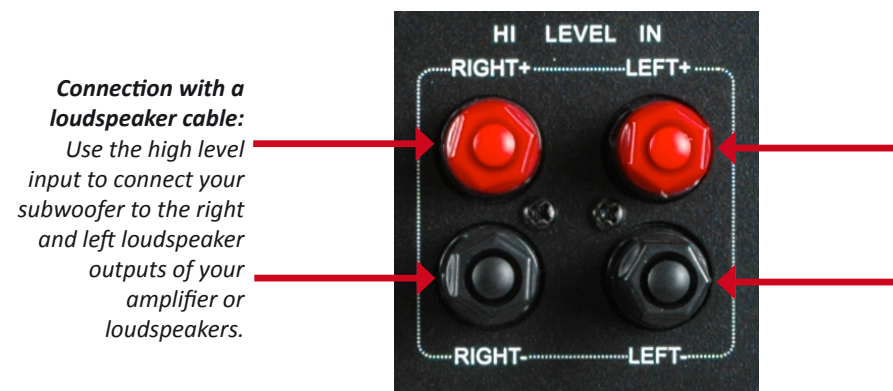
AUDIO PHYSIC recommends that you use the “high level input” to connect your subwoofer.

#### 1) Connecting your subwoofer with an RCA cable:



#### 2) Connecting your subwoofer with a loudspeaker cable:

You can also control your LUNA by using a second loudspeaker output on your amplifier. To do so, you need to connect the loudspeaker outputs, normally marked as “B”, of your integrated or power amplifier with the loudspeaker terminals on your subwoofer. Depending on the setup of your system, you can also connect your subwoofer with cables from the loudspeakers in order to save cable. Loudspeakers mostly accept cables with spades and banana plugs, meaning that this connection method can be used without any problems. Connect the cable from the left loudspeaker with the left “high level input” of your LUNA and connect the right channel with the right input accordingly.



If you hear a clear humming noise once you have activated your subwoofer after connecting it using this method, it is very likely that this is due to a difference in the ground potentials. You can find out how to simply rectify this problem on the following page.

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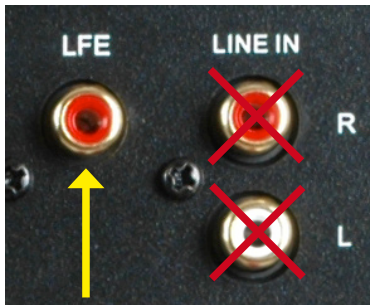
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## Surround Sound Operation

There are also two potential connection methods that can be used to connect your subwoofer with the receiver in a surround sound system. Under no circumstances should you use both methods at the same time to connect your subwoofer.

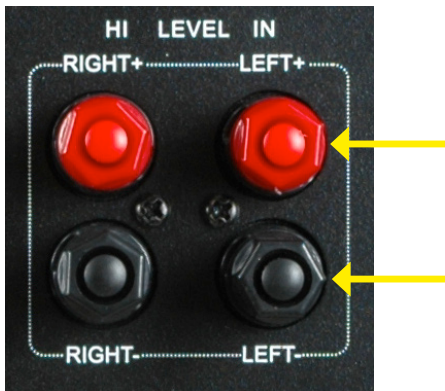
### 1) Connecting your subwoofer with an RCA cable:

To use this method, connect a suitably long RCA cable to the LFE RCA output of your surround sound receiver and then connect this to the LFE input on your subwoofer. You only need to use one connection cable (mono) because LFE is an individual and autonomous sound channel. You can, however, also additionally transmit sound information from the stereo channels from your subwoofer. For more information about this possibility, please consult the operation manual of your receiver.



### 2) Connecting your subwoofer with a loudspeaker cable:

If you have a surround sound receiver with a loudspeaker connection terminal for the LFE channel, you can also use a loudspeaker cable to connect your subwoofer. To do so, connect the LFE loudspeaker output of your receiver to the right or left loudspeaker input of the LUNA.



### A Humming Noise when in Operation Using the High Level Input

Some configurations may cause you to hear a deep low-frequency humming noise after you turn on your subwoofer. This noise **normally does not indicate a technical problem with your subwoofer**. You can rectify this humming noise by using the RCA cable supplied with your AUDIO PHYSIC subwoofer. This cable only establishes a connection using the ground wire. Connect this cable to one of the free RCA jacks on your subwoofer and to any free RCA jack on your amplifier or receiver in order to remove the humming noise.

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## Setting Up Your Subwoofer

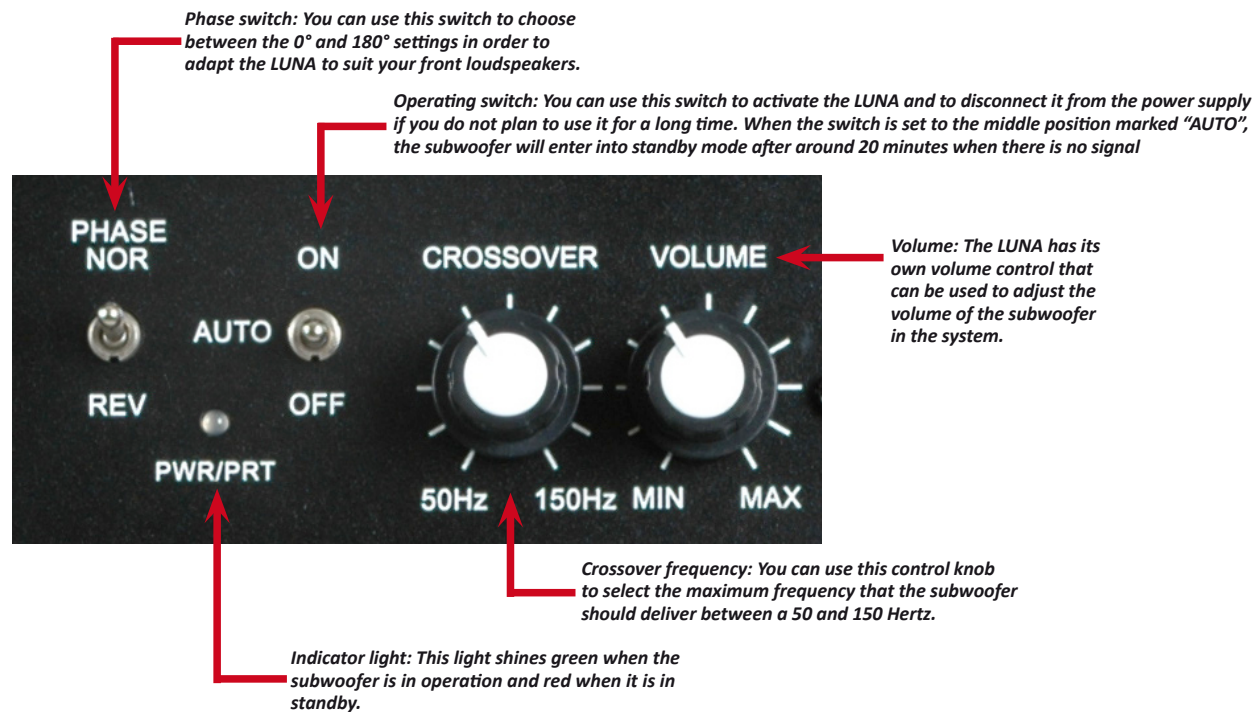
### 1. Activating Your Subwoofer

Use the supplied power cable to connect your subwoofer to a mains socket. Turn on the power switch on the back of your subwoofer (marked with an arrow in the image on the right). The indicator light next to the operating switch will then light up. Move the operating switch to the "ON" position. You should use music that you know well for the next setup steps. Pieces of music involving a singing voice accompanied by only a few natural instruments are particularly suitable.



### 2. Using the Controls to Adjust Your Subwoofer

You can find the controls that you can use to optimally integrate your subwoofer into your HiFi or surround sound system on the connection terminal on the back of the LUNA.



### 3. Operating Your Subwoofer in a Surround sound System Using LFE

If you choose to use the LFE output of your receiver or surround sound processor to control your LUNA, please set up the crossover frequency on your receiver (using the setup menu).

**audio physics**

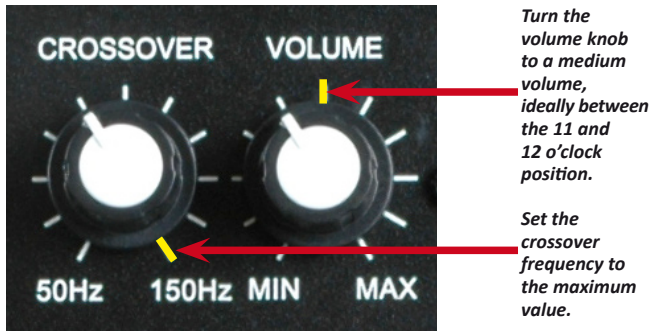
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#### 4. Setting Up the Phase (Stereo/Surround Sound)

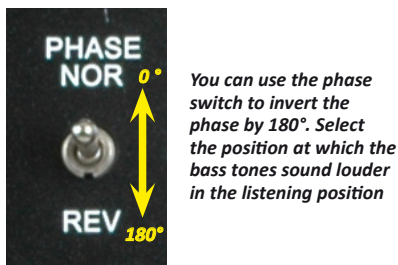
If you choose to use the LFE output of your receiver or surround sound processor to control your LUNA, the phase can normally be adjusted via your receiver (using the setup menu). If you want to adjust the phase on your LUNA, you can use the same process as that used for stereo operation.

To correctly set up the phase, first turn the control dial for the crossover frequency to the maximum value (150 Hertz). Select a medium volume for the LUNA; we recommend that you turn the control knob to the central line.

**Step 1:** Setting the crossover frequency control knob to maximum and volume control knob to a central position



**Step 2:** Now start to play your music. Pieces of music with a large number of low frequency tones are particularly suitable for establishing the phase. While your music is playing, use the phase switch to change the phase setting from 0° to 180° and back several times. The setting at which deep tones can be heard louder **in the listening position** is correct.

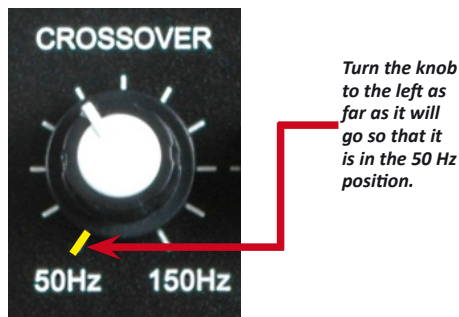


You have now identified the correct setting and can adjust the crossover frequency. This step does not apply if you have chosen to operate your subwoofer using the LFE input.

#### 5. Setting Up the Crossover Frequency and Volume

To identify the correct crossover frequency between your subwoofer and front loudspeakers, you need to adjust the LUNA'S reproduction volume to suit your other loudspeakers. If you found the bass reproduction in the previous step 2 too loud, use the volume knob on the LUNA control panel to turn down the volume of your subwoofer.

**Step 1:** Setting the control knob for the crossover position to minimum



audio physik

No loss of fine detail

Now start to play the music again. For this step, it is best to use a piece of music involving acoustic instruments, ideally a double bass and a male voice (bass or baritone). The song "Fever" by Elvis Presley, for example, is particularly suitable for this setup process and can be found in many music collections. The track can also be accessed on one of a number of different websites if you have the opportunity to do so.

**Step 2:** *Slowly turn the crossover frequency control knob and increase the crossover frequency*



*Increase the frequency in small increments until the voices sound natural and full bodied. Each of the lines surrounding the crossover frequency knob indicates an increase of approx. 10 Hertz.*

Please concentrate on the voice reproduction. Voices will most probably sound thin or cool with the current setting at the lowest crossover frequency. Now increase the crossover frequency in small increments until the voices sound natural and full bodied. If you can clearly hear that the voices are coming from the direction of the subwoofer, this is a sign that the crossover frequency setting is too high. When carrying out this procedure, please also pay attention to the bass reproduction. If the bass tones start to sound inflated and sluggish at a certain point, reduce the crossover frequency somewhat until the sound reproduction is balanced. In this case, you may have to slightly turn the volume of the LUNA back up.

**Step 3:** *Finely adjusting the volume*



*Finely adjust the volume until the sound reproduction of voices and instruments from your subwoofer and front loudspeakers is homogenous.*

If you can clearly hear the subwoofer, turn down the volume at this point until the sound reproduction of the subwoofer no longer clearly stands out from that of the right and left loudspeakers.

**Step 4:** *Finely adjusting the crossover frequency*



*Change the crossover frequency in very small increments until the voices sound contoured and natural.*

**[audio physic]**

*No loss of fine detail*

**For optimal adjustment, AUDIO PHYSIC recommends that you carry out steps 3 and 4 with a variety of different pieces of music and then repeat the adjustment a few days later in order to ensure that you have identified the suitable crossover frequency and correctly completed all adjustments.**

## 6. Recommended Software for the Adjustment Process

These albums and pieces of music will help you to identify the settings for the basic adjustment particularly quickly:

Elvis Presley	“Elvis Is Back”	Sony Music	Track 2
Tom Jones	“Praise & Blame”	Universal	Tracks 2,8
W.A. Mozart / Gardiner	“The Magic Flute”	Universal	Disc 2, Tracks 7-8

## Troubleshooting Solutions for Functional Problems

Below you can find some tips on how to deal with certain disturbances that may occur when using your LUNA.

- You cannot switch on the LUNA. / The indicator lamp does not light up.

*Possible causes:*

- The LUNA is not connected to the power supply.
- The mains fuse is damaged.

*Solution:*

- Check the power cable and the plug. Try using another plug socket where necessary.
- Replace the mains fuse. Please ensure that you unplug the power cable before doing so!

- There is no sound despite the fact that the subwoofer is activated.

*Possible causes:*

- The polarity of a channel has been inverted if the high level input is being used.
- The input cables are not connected or are damaged.
- The electronics have entered into standby mode for safety reasons due to overheating.

*Solution:*

- Ensure that the cable is connected with the correct polarity.
- Please check the cable.
- Switch off your LUNA and wait until it has cooled down.

- You can hear a humming noise after you turn on your subwoofer (in the case of cables connected using the high level input).

*Possible cause:*

- There are different ground potentials between the components.

*Solution:*

- Use the RCA cable (that only has a ground contact) supplied with your subwoofer to connect one of the RCA jacks (low level input/LFE) of your subwoofer with any free RCA jack on your amplifier or receiver.

In the case of other problems for which you cannot clearly identify the cause, please contact your authorised AUDIO PHYSIC dealer.



*No loss of fine detail*

## 7. Technical Specifications

	LUNA
Height	40.0cm
Width	36.0cm
Depth	36.0cm
Width x depth	38.0 x 38.0cm
Weight	approx. 19kg
“High level input” input impedance:	>600 ohms
“Low level input” input impedance:	30 kOhm
Frequency response	30Hz - 150Hz
Loudspeaker Systems	
Woofer	260mm

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