BM9S

Owners Manual

dynaudioacoustics

IF IT'S THERE - YOU'LL KNOW IT

Contents

Inhalt

Operating Guide

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. WARNING: To reduce the risk of fire or electric shock, this apparatus should not be exposed to rain or moisture and objects filled with liquids, such as vases, should not be placed on this apparatus.
16. To completely disconnect this equipment from the mains, disconnect the power supply cord plug from the receptacle.
17. The mains plug of the power supply cord shall remain readily operable.

WARNING

RISK OF ELECTRIC SHOCK!
DO NOT OPEN!

To reduce the risk of electric shock, do not remove the back panel and do not expose the apparatus to rain or moisture. No user serviceable parts inside. Refer servicing to qualified personnel.

Safety signs

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Signal words

CAUTION	Indicates in combination with a safety sign a potentially hazardous situation which, if not avoided, could result in minor or moderate injury or damage to equipment.
WARNING	Indicates in combination with a safety sign a potentially hazardous situation which, if not avoided, could result in death or serious injury.
DANGER	Indicates in combination with a safety sign a hazardous situation which, if not avoided, will result in death or serious injury.

About this operating manual

Used signs and symbols

In this operating manual following signs and symbols are used:

Note	Additional information is provided, which is important to fully understand the BM9S and how to operate it.
▶	The arrow will identify steps to be performed. Please follow the instructions carefully.
1. **2.** **3.**	Multiple steps that should be performed consecutively are numbered. Please follow these instructions carefully.
italics	The result of a step is printed in italics. This may help you verify the success of a step.
bold	Controls are printed in bold type face.

How this operating manual is structured

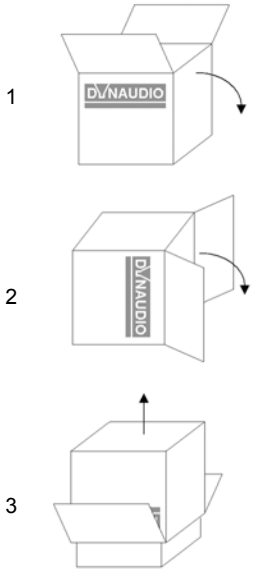
This operating manual is divided in three main chapters, in which you can find all the information needed to operate the BM9S successfully:

Before operation: Learn all about unpacking and connecting the subwoofer. The controls and connections on the back panel are also described here.

Operation: In this chapter you will learn how to operate the subwoofer in general and how to position it properly for optimum performance.

Optimizing settings/Troubleshooting: Here detailed explanations can be found how to optimize the settings in order to achieve the maximum sound quality.

You will find this chapter titles on top of each page for your quick navigation.



Unpacking

Unpacking the subwoofer

1. Unpack the subwoofer on a clean, even and soft area; floor carpeting is very suitable.
2. The packaging should be opened from the top. Remove all accessories that come packed with the subwoofer (such as AC power cord and grille). Do not remove the top part of the protective material.
3. With the protective material still in place but with accessories removed, carefully tilt the packaging on its side and tilt again to turn it upside-down. Ensure that no part of the top-cover is obstructing the opening at the top.
4. The outer packaging can now be lifted away from the subwoofer itself. Remove the protective material that now is on top.
5. Open the bag and remove such from around the base of the subwoofer.
6. Again, carefully tilt the subwoofer on its side and again to turn it onto its feet. Note that the top part of the protective material will now come off easily so ensure that the subwoofer doesn't drop or slide away in the process.

Check that the contents are complete:

Subwoofer: The factory-set power requirements (refer to label on rear of subwoofer) should correspond for the region where the subwoofer was purchased. Refer also to chapter "Important Safety Instructions" on page 1.

Front baffle grille.

AC mains lead. The supplied lead should be suitable for the region where the subwoofer was purchased.

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Grille

The subwoofer can be operated without the grille. However, it is recommended that the grille is mounted during normal use to help prevent accidental damage or dirt settling on the cone of the loudspeaker. With subwoofers, the influence of the grille on the sound is virtually negligible.

To remove the grille:

▶ Gently pull the grille at all corners.

To fit the grille:

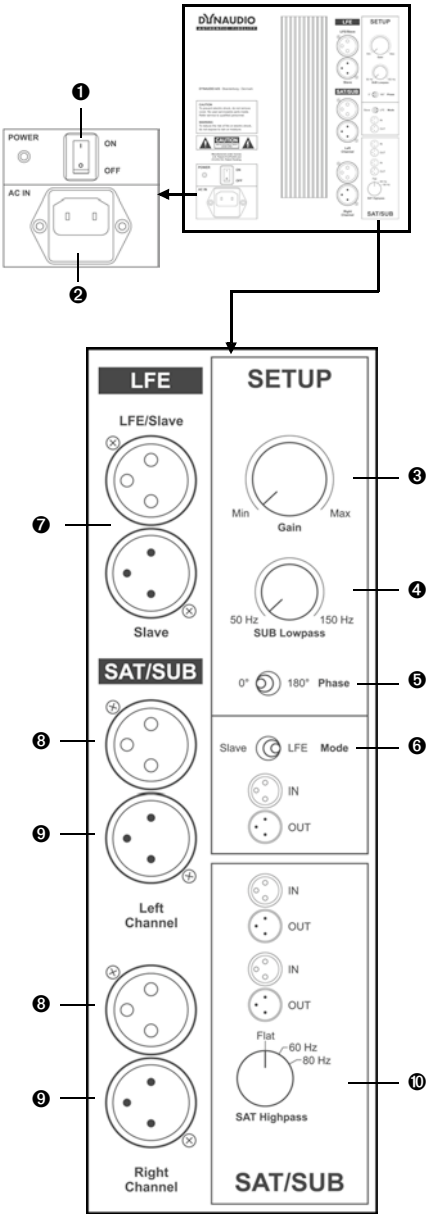
▶ Line up the studs with the corresponding front baffle holes.

▶ Gently push the grille in at all corners.

Note:

Be careful when mounting the grille not to touch the cone of the loudspeaker itself.

Controls and connections



❶ **POWER ON/OFF**
Main power switch (to switch the subwoofer manually on and off).
LED shows operation mode:
red = subwoofer switched on and in mute mode
green = subwoofer is activated

❷ **AC IN**
Mains power input.

❸ **Gain**
Subwoofer volume level.

❹ **SUB Lowpass**
Subwoofer lowpass frequency: continuously variable from 50 to 150 Hz.

❺ **Phase**
Phase setting: phase can be set to 0° or 180°.

❻ **Mode**
Subwoofer operation mode **LFE** or **Slave**.
LFE: setting for normal use and Master use.
Slave: setting for second and all following subwoofers.

❼ **LFE IN/OUT**
LFE/Slave IN: input for LFE signal.
Slave OUT: output to next subwoofer if installed.

❽ **SAT/SUB IN**
Input for full bandwidth signal. This signal will be processed according to the **SAT Highpass** setting and provided at the **SAT/SUB OUT**.

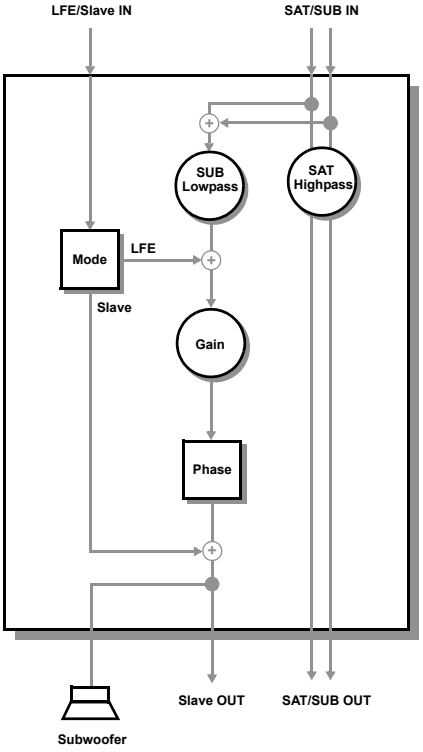
❾ **SAT/SUB OUT**
Output for satellite system to be connected. This signal is processed according to the **SAT Highpass** setting.

❿ **SAT Highpass**
Allows cutting off low frequencies of the signal provided at the **SAT/SUB OUT**.
Flat: signal is not processed
60: cut-off frequency at 60 Hz
80: cut-off frequency at 80 Hz

Terminal pinout ❼, ❽, ❾
1 = 0
2 = +
3 = –

Connecting the subwoofer

CAUTION
DAMAGE OF DEVICE DUE TO IMPROPER CONNECTION! ▶ Set the mains power switch to OFF before connecting the BM9S. ▶ Only switch the subwoofer on (mains power switch to ON) after all connections and set up steps have been properly completed.



Subwoofer inputs

The BM9S provides two different signal inputs:

LFE/Slave IN

This input allows the LFE (Low Frequency Effect) channel to be connected.

The signal is:

reproduced by the subwoofer

routed to the **Slave OUT** for a second subwoofer to be connected.

The **SUB Lowpass** control has no impact on this input.

SAT/SUB IN

This input allows the connection of a full bandwidth signal.

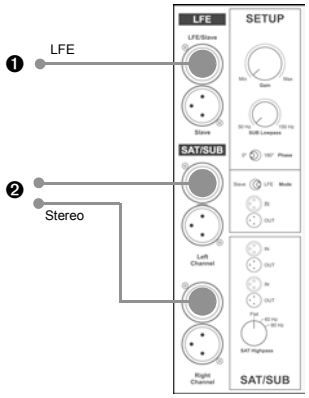
The signal is:

reproduced by the subwoofer,

routed to the **SAT/SUB OUT** terminals. Low frequencies are cut-off according to the **SAT Highpass** setting,

routed to the **Slave OUT** for a second subwoofer to be connected. High frequencies are cut-off according to the **SUB Lowpass** setting.

Connecting a single subwoofer



❶ Connecting as LFE channel

▶ Connect subwoofer to **LFE/Slave** input.

❷ Connecting as subwoofer for satellites

▶ Connect full bandwidth signal to **SAT/SUB** input. Sub reproduces sum of right and left signal.

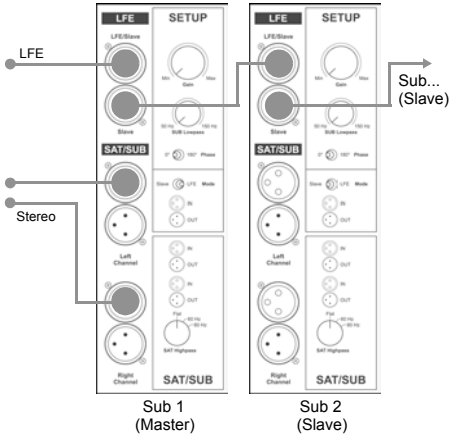
▶ Set the **Mode** switch to **LFE**.

Note:

You can also use both connection types. The signals will be combined in the BM9S and routed accordingly. This allows the BM9S to reproduce both the LFE channel information as well as the bass range of the connected satellite system.

Use **Slave** mode if you want to use an external bass management system.

Multiple subwoofer connections



The BM9S can be used stand-alone or together with multiple subwoofer units. Using multiple units may be helpful if the listening room is quite large or has difficult acoustic conditions.

When using two or more subwoofers, the first one (designated “Master”) controls the following subs (designated “Slave“) via a subwoofer cable.

Connecting multiple subwoofers

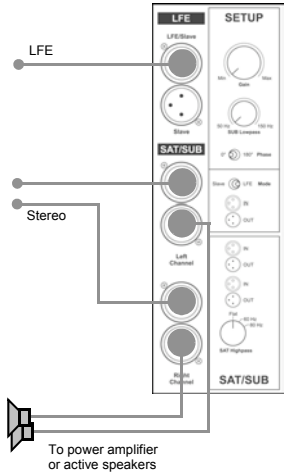
1. Connect the first subwoofer as described before.
2. Set **Mode** switch of first subwoofer to **LFE**.
3. From the **Slave OUT** of the first subwoofer connect a XLR cable to the **LFE/Slave IN** of the following subwoofer. This one now becomes the slave.
4. Set the **Mode** switch of the second subwoofer to **Slave.**

▶ Further subwoofers can be connected in the same way. Set the **Mode** switch of all following subwoofers to **Slave** respectively**.**

Note:

When using multiple subwoofers in a Master-Slave setup, it is recommended that the subwoofers are all the same model.

If you wish to use multiple subwoofers with full individual control, set the Input switch for all to the “Master” position. From the source subwoofer output, use a Y-connector.



Connecting loudspeakers

If your source provides bass management, you can use the BM9S LFE input alone in LFE or SLAVE mode, depending on the management system capabilities. Avoid double processing if possible.

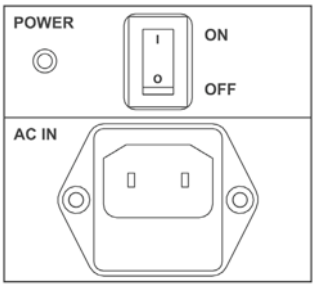
Connecting speakers

1. Connect the subwoofer as explained in “Connecting a single subwoofer” on page 7.
2. From the Subwoofer **SAT/SUB OUT** connect a XLR cable to the inputs of the power amplifier you use for your speakers.

Note:

The signals connected to the inputs are provided at the **Slave OUT** for connecting another subwoofer. See page 7 to learn more about connecting multiple subwoofers.

Switching the subwoofer on/off (POWER ON/OFF)



Once you have ensured yourself that all necessary connections have been made, the subwoofer and the connected components can be switched on.

▶ Switch the subwoofer ON with the main **POWER** switch on the rear panel.
The status LED on the rear of the subwoofer will light up red.

Automatic mode

After switching on the BM9S is in automatic mode:

When a music signal is detected, the internal amplifier is activated automatically.
The status LED on the back of the subwoofer will light up green.
As long as a music signal is available on the subwoofer’s input, it will remain switched on.

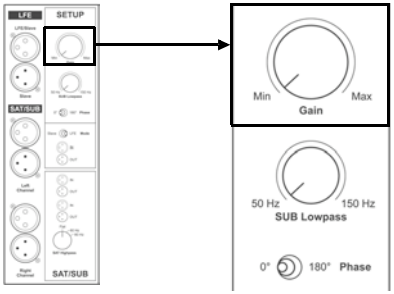
After 15 to 20 minutes of not sensing any input music signal, the subwoofer will switch itself to Standby mode automatically.
The status LED on the back of the subwoofer will light up red

Note:

▶ To switch the subwoofer completely off, set the main POWER switch to the OFF position.

Adjusting the volume (Gain)

	CAUTION
	HIGH SOUND LEVELS! ▶ To avoid auditory defects do not listen to high sound levels over a longer period of time.



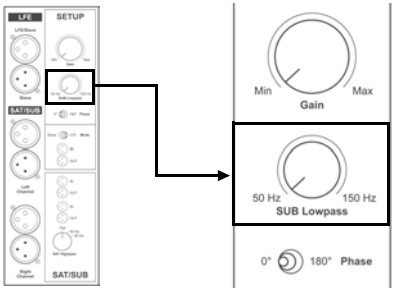
The correct volume setting is an important aspect in achieving a well balanced speaker combination.

▶ Adjust the **Gain** control, until correct setting is reached.

Note:

You cannot adjust the volume, when subwoofer is in slave mode. In this case the volume is controlled by the setting of the master subwoofer.

Selecting the subwoofer cut-off frequency (SUB Lowpass)



The **SUB Lowpass** control allows the frequency range of the subwoofer to be defined. Above the selected frequency the sound level decreases rapidly. The correct setting of this cut-off frequency is important for a well balanced combination of subwoofer and speakers.

Selecting the cut-off frequency

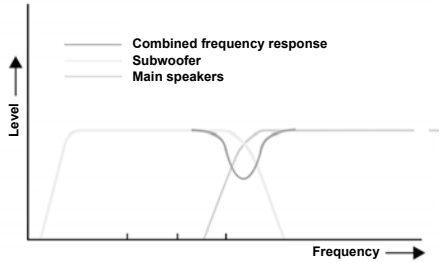
▶ Set the **SUB Lowpass** control to the desired frequency between 50 and 150 Hz.

Note:

The SUB Lowpass only works on SAT/SUB input.

Perhaps subwoofer cut-off frequency is already set in the bass management of your source. Please refer to the operating manual of your source. In general use only one bass management system.

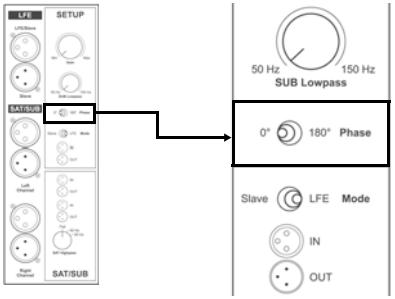
Please also heed the instructions given in the operating manual of your loudspeakers.



Setting the phase (Phase)

With the phase settings you can adjust the phase relationship between the subwoofer and main speakers. If either subwoofer or main speaker are slightly out of phase in relation to the other, it can result in decreased bass output in the frequency response area where they overlap each other.

The phase relationship between subwoofer and satellite speakers is very dependent on relative distance, construction and working principles of the main speakers. The figure on the left shows a case whereby phase of the subwoofer and main speakers are incorrect in the critical overlap area, thus significantly reducing acoustic output in the listening room in that area.



Finding the correct phase setting:

1. Play a bass-rich track which also covers the overlap area.
2. Toggle the **Phase** switch between 0° and 180°.
   Choose the setting for which you experience the most bass.

Note:

You can not set the phase if the subwoofer is in slave mode. In this case the phase is controlled by the setting of the master subwoofer.

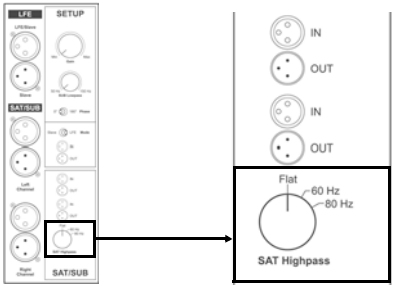
Setting the satellite cut-off frequency (SAT Highpass)

Depending on the bass capabilities of the speakers, the frequency range of subwoofer and speakers can overlap between 50 Hz and 150 Hz. A bump or a gap in the frequency response and thus a lower sound quality will be experienced if the system is not matched properly. In addition, small speakers and low powered amplifiers will particularly be affected by the low frequency signals, which again has a negative effect on the sound quality. Therefore it makes sense to limit the bass range of the connected speakers (called “satellites” in this case) by a highpass filter. The BM9S provides three settings to achieve this:

Flat = no limitation

60 Hz = frequencies below 60 Hz are cut-off

80 Hz = frequencies below 80 Hz are cut-off



Setting the cut-off frequency

▶ Switch **SAT Highpass** control to needed position.

Troubleshooting

There may be various reasons why the subwoofer doesn't function properly in a system without it being faulty. The checklist below will help solve problems you may encounter. Before consulting your Dynaudio Acoustics dealer, check this list first.

Check this first:

- ▶ Check if all signal cables are connected properly.
- ▶ Check settings in bass management menu of the connected source.
- ▶ Carefully and gradually increase the subwoofer volume level on the source.
- ▶ Carefully and gradually increase the subwoofer volume level on the subwoofer Gain control.

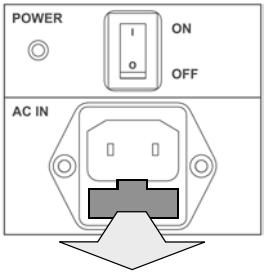
Problem	Cause	Solution
The subwoofer switches itself off while music is being played.	There is hardly any low-frequency signal available in the signal. This can happen if the music or movie itself does not contain very low frequencies (e.g. long dialogues).	▶ The subwoofer will switch on automatically as soon as low frequent music signals are detected. ▶ Switch subwoofer off and on again by means of the main POWER switch.
The subwoofer will not switch on at all.	AC mains cable has become disconnected (LED does not lit) Mains switch on the back is switched to OFF (LED does not lit)	⚠ Make sure to switch the system off first before making any changes! ▶ Reconnect mains cable. ▶ Switch mains back on. ▶ Check if all signal cables are connected properly.
The subwoofer will not switch on automatically.	No signal is present on either of the subwoofer's inputs (LED lights red).	⚠ Make sure to switch the system off first before making any changes! ▶ Check if all signal cables are connected properly. ▶ Check if the subwoofer output on the source is engaged.
Subwoofer is switched on but no sound from the subwoofer.	No signal is present on either of the subwoofer's inputs. In the source's bass-management set-up, subwoofer has been disabled. Subwoofer volume level has been turned down all the way on the source. Subwoofer volume level has been turned down all the way with the subwoofer's control.	⚠ Make sure to switch the system off first before making any changes! ▶ Check if all signal cables are connected properly. ▶ Check settings in bass management menu of the source. ▶ Carefully and gradually increase the subwoofer volume level on the source. ▶ Carefully and gradually increase the subwoofer volume level on the subwoofer Gain control.

Changing the fuse

WARNING

RISK OF FIRE!

▶ For continued protection against risk of fire, replace only with same type fuse and rating.



The fuse is placed on the rear of the subwoofer below the mains power input. It can be changed without removing the amplifier module.

Changing the fuse

1. Switch off the mains power switch and unplug the power cable.
2. Pull out the fuse holder
3. Replace fuse with same type and rating
4. Push fuse holder back firmly until it is locked into position.

Technical Specifications

Parameter	Data
System	Active subwoofer
Bass principle	Closed
Frequency response	29 Hz to 250 Hz (+/-3 dB)
Inputs LFE/Slave SAT/SUB	 XLR right/left full bandwidth, XLR
Input impedance + branch – branch	 20 kOhm 10 kOhm
Sensitivity	75 mV_{RMS} to 5 V_{RMS}, adjustable
Max. input voltage	10 V_{RMS}
Outputs Slave SAT/SUB	 XLR right/left, Highpass filtered, XLR
Output impedance	100 Ohm (each branch)
XLR Pinout	1: 0 / 2: + / 3: –
Mode selector	LFE, Slave (Phase and volume controls are bypassed in slave mode).
Phase adjustment	0°, 180°
SAT Highpass	Flat, 60 Hz, 80 Hz,
SUB Lowpass	50 Hz to 150 Hz
Auto ON/OFF Automatic ON (LED green) Automatic mute (LED red)	 when signal is detected at input when no signal is detected for 15 to 20 min.
Amplifier power	200 W, 4 Ohm
Power consumption Standby max.	 16 W 325 W
Woofer Cone Coil	 240 mm/10″, one piece molded MSP (Magnesium Silicate Polymer) cone 100 mm/4″, pure aluminium voice coil
Dimensions, external (height x width x depth) Cabinet volume Weight	29,4 cm x 28,9 cm x 31,8 cm (incl. feet and grille) 15,9 liters 10 kg
Mains	100-120 V, 50/60 Hz, Fuse T3.15 A 220-240 V, 50/60 Hz, Fuse T1.6 A

Warranty

Dynaudio Acoustics provides a transferable one-year limited manufacturer's warranty.

This warranty only covers faults or defects in material and production. Damage caused as a result of abuse, misuse or defective associated electronics is not covered by the warranty.

All warranty claims must be accompanied by a copy of the original purchase invoice and warranties are only valid in the country or market of original origin and distribution. Should warranty service be required, it must be arranged for in the country of purchase by an authorized Dynaudio Acoustics dealer.

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IF IT'S THERE - YOU'LL KNOW IT