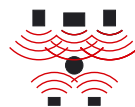


SURROUND



AUDIO

MANUAL

Royal

Magic Moments



www.dali.dk



*D*anish *A*udiophile *L*oudspeaker *I*ndustries

DALI is renowned among music lovers throughout the world for its unique speakers and cables, all constructed and build for uncompromising design and sound requirements. Our ultra-modern factory in Denmark is fully equipped with facilities for development and production of quality speakers.

Dali's principal competence is development and optimisation of known and new technology in the field of audio and acoustics. The result is continuous development and optimisation of new and existing models.

We always keep our goal firmly in view for each and every DALI speaker: To recreate sound experiences in your home that will carry you away, making you forget time and place...

It is important to us that your new DALI speakers be set up and connected optimally. This manual contains our recommendations for setup, connection and maintenance.

Enjoy!



Manual

Congratulations on the purchase of your new DALI Piano speakers. This manual contains information on setup and maintenance of DALI Royal Series.

Running-in

Like any other mechanical system, a speaker needs to be "run in", so you can look forward to a gradual improvement in sound quality over the initial period. Unlike other mechanical systems, a DALI speaker does not wear out - in fact, regular use will extend its lifetime.

Connection

The connection to your amplifier is extremely important for your sound experience.

Always turn off your amplifier before connecting any cables or altering any connections.

Always use cables of the same type and length for left and right speakers. We recommend using speaker cables from DALI, available from your dealer.

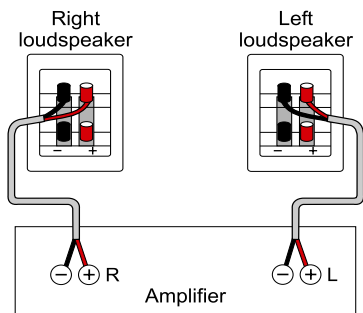


Fig. 1. Stereo connection

A detail that is often overlooked is connection in the correct phase, i.e. the red terminal (+) on the amplifier should be connected to the red terminal (+) on the speaker, and the black terminal (-) on the amplifier should be connected to the black terminal (-) on the speaker. (Fig. 1)

For the perfect sound experience, the right speaker must be connected to the output terminal marked "R" or "Right" on your amplifier and the left speaker to the terminal marked "L" or "Left". If just one speaker in a stereo or surround sound system is not connected in phase, the bass will be weak and the overall sound will be diffuse.

The same guidelines apply irrespective of the number of speakers in your sound system: speakers positioned to the right must be connected to the amplifier output terminal marked "R" or "Right", and any to the left must be connected to "L" or "Left". Surround sound amplifiers have similar output terminals to stereo speakers, usually labelled "Front", "Centre" and "Rear". (Fig. 3) For further information, please refer to the manual.

You must ensure that the cable ends are firmly pushed into the terminals, and that there are no loose wires, which could cause a short circuit and damage the amplifier. (Fig. 2)

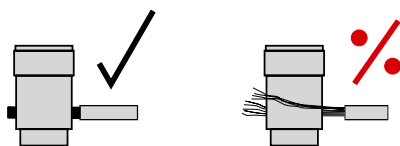


Fig. 2. Terminal connection

When Bi-amping or Bi-wiring is not in use, the two metal connectors between the double terminals must be in place and securely tightened. Find more information about Bi-amping and Bi-wiring at page 5.

Using inferior cables for your new DALI speakers is just the same as putting cheap tyres on a thoroughbred racing car. Using cables from DALI, which have been specially designed, will ensure a perfect sound experience every time.



DALI  **WAVE**

Always switch off your amplifier before adjusting any of the cables!

Bi-wiring and Bi-amping

Bi-wiring or bi-amping improves the sound quality significantly and is highly recommended. Bi-wiring provides greater openness in the sound image and reduces distortion. Bi-amping provides even greater openness in the sound image and adds to increased dynamism.

Bi-wiring

The top terminal pair are connected to the high frequency section of the crossover network, and the bottom terminal pair are connected to the bass section of the crossover network. When employing bi-wiring or bi-amping, the metal links between the terminals should be removed.

In the case of bi-wiring, the speaker cable is connected via a terminal pair on each speaker to the respective output terminals on the amplifier - and then the cable from the speaker's other terminal pair is connected to the same output terminals on the amplifier (Fig. 3).

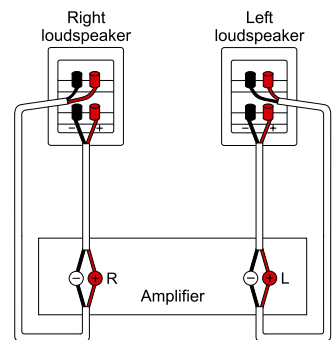


Fig. 3. Bi-wiring

Bi-amping

We recommend using **identical** stereo amplifiers. One amplifier supplies the speakers with the signal for the high frequency section of the crossover network, and the other amplifier supplies the bass section. The left speaker's bass terminals (the bottom ones) should be connected to the left channel on one of the amplifiers, and the right speaker's bass terminals to the right channel on the same amplifier. The same principle should be followed for connecting the high frequency terminals of the speakers.

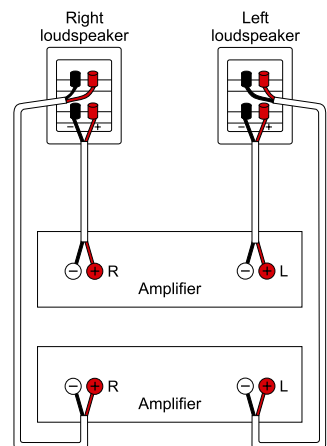


Fig. 4. Bi-amping

Positioning

Once you have connected up your new Royal speakers, you need to begin the process of finding the optimum position for your speakers in relation to your listening position - and adjusting the surround sound amplifier, if applicable. It is worth spending a little time experimenting, as the correct setup and tuning will provide a significantly better sound experience. Here are some useful pieces of advice:

Avoid placing objects between the speakers and your listening position, as obstructions can cause incorrect tonal balance.

Try to ensure that the distance between the left and right speakers is equal to the distance from your listening position to the speakers (Fig. 5). If you have surround sound, the distance between all the speakers should be symmetrically identical (Fig. 8)

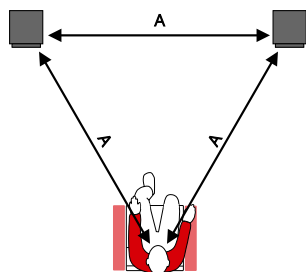


Fig. 5. Stereo positioning

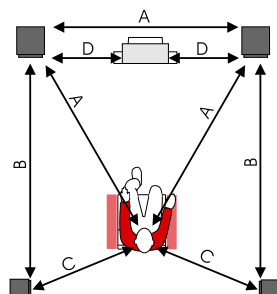


Fig. 6. Surround positioning

DALI Royal has been designed using the Linear Directivity principle, which means that the tonal balance will be perfect, even if your listening position is not quite central. So, it is not necessary to angle the front speakers towards your listening position, unless the front speakers are very far apart.

The Royal Vocal central speaker has been specially designed for positioning close to the TV screen. Should the screen display colour irregularities, move the speaker a few centimetres away.

DALI Royal Tower is designed as a floor-standing speaker, and comes with its own base.



Royal Tower must be mounted on the accompanying base.

DALI Royal Scepter and Menuet are designed for positioning on a stand or shelf. If you position the speakers on a shelf or against a wall, it is important to ensure that sufficient room is allowed for air expelled from the bass port at the back of the casing. Please avoid positioning the speakers on a tightly-packed shelf or right up close against a wall (Fig. 7).

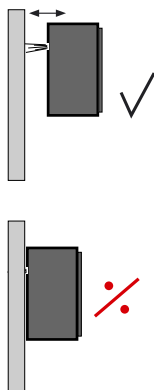


Fig. 7. Positioning against wall

Both Royal Scepter and Menuet provide the best sound experience when positioned at eye level - so that you can just see over the speaker from your listening position. Should that not be possible, however, it is a good idea to tilt the speakers slightly, either upwards or downwards, depending on whether their position is too high or too low. If the speakers are positioned very high - e.g. on top of a high shelf - they should be turned upside down so that the treble is at the bottom. Alternatively, the speakers can be laid on their side with the treble closest to the listening position.

No matter how or where they are positioned, your DALI speakers will give you an extraordinary listening experience, but for critical listening we recommend following the guidelines set out above.

The listening room

Every room has its own distinctive acoustics, which influence the way we experience the sound from a speaker. In actual fact, it's a matter of how the room accommodates the sound and then dampens it. You can influence the acoustics of your listening room in various ways.

Some of the sound you hear comes not from the actual speakers but from reflections from floor, ceiling and walls. These reflections are dampened by objects such as furniture, plants and carpets. If the sound is bright, soft items such as curtains and carpets can help. If the room has large window panes, drawing the curtains will prevent reflections from the glass surfaces.

Remember to allow room for the bass port at the back of the speakers.

Both the amount and quality of the deep bass depend on the size and shape of the room, and the position of the speakers. If positioned near a side or back wall, this will accentuate the bass. A corner location will accentuate it even more, but will also increase the reflections. The decision is yours, so experiment with different positions to find which provides the ideal sound for you.

As a general guide, avoid large, hard reflective surfaces immediately around the speakers, as these will act like an echo effect and weaken the spatial perspective of the sound image. Try placing a tapestry behind the speakers, laying a rug in front or placing a large plant at the side - it's surprising how much this can affect the precision of the sound image.

Once you are happy with the positioning of your speakers, it is important to ensure that they are completely stable. For floor models it is essential that you use the accompanying base.

Power and acoustic pressure

How loud a speaker is able to play and still sound good is completely dependent on the signal it has to reproduce. So, in practice, you cannot define an unequivocal level for use in comparing different speakers.

Obviously, lots of pure, undistorted output from a large amplifier is better than a distorted signal from a small amplifier stretched beyond its capacity. The signal from a distorting (clipping) amplifier contains much more high-frequency information than an undistorted signal, and therefore puts a heavy strain on the treble unit. Consequently, speakers are most often damaged by small amplifiers having to work too hard - and very rarely by large amplifiers, which are practically running idle.

It is worth noting that when the tone controls are turned above the neutral setting this significantly burdens both speakers and amplifier. On a good sound system tone controls should only be used to compensate for poor recordings and not to permanently compensate for weaknesses elsewhere in the system. So, DALI recommends that the tone controls generally be set to the neutral position, and you achieve your desired sound image through correct positioning of the speakers.



Ensuring that you keep the volume low enough so the sound remains clear and undistorted will minimise the strain on both speakers and amplifier.



The DALI Royal family

DALI's Royal family consists of Menuet, Scepter, the floor-standing Tower and the Vocal central speaker. As well as the classic colours, the speakers are also available in glossy white, black or blue.

Ask your dealer about DALI's wide selection of speakers and accessories, including cables.



Specifications

There are countless methods for evaluating speakers. However, none of them actually represent how a speaker really sounds. It is up to the individual to decide whether one speaker sounds better than another. So we only give you the specifications that are of real value to you. The DALI Royal range has been designed to reproduce music as honestly as possible - and we know we have succeeded. Enjoy your new speakers!

Model:	Menuet II	Scepter	Tower	Vocal
Frequency response +/-3dB (Hz)	70 - 25000	60 - 25000	43 - 25000	74 - 25000
Impedance (ohm)	4	4	4	4
Bass Reflex System Resonance (Hz)	63	42,5	39	90
Crossover frequency (Hz)	4200	3600	3000	3200
Rec. amp. power (8 ohm)(W)	25 -100	25 -150	25 - 200	30 - 120
Sensivity (@2.83V/1m) (dB)	86	88	89,5	89
Max. SPL (dB)	102	105	109	107
Placement	Stand	Stand	Floor	TV/Stand
Rec. distance from rear wall (cm)	30-80	10-80	10 - 80	-
Height (cm)	25,7	30,7	84,5	11,8
Width (cm)	15,6	18,6	17,0	36,6
Depth (cm)	18,5	22,0	22,0	19,8
Weight (kg/lb)	4/8.8	4.9/10,8	11.7/25.7	4.5/9.9

The important accessories

Original Dali interconnect and Dali speaker cables are available in your local Hi-Fi shop.

If you wish to go for the ultimate connection, ask for the exceptional WASATCH cables - totally uncompromising in all respects. The very best for your system and your ears!

