

SURROUND



AUDIO

MANUAL AW 8 & 10



Magic Moments



Denmark

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 built 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 AW 8/10 subwoofer. This manual contains information on setup and maintenance of DALI AW 8/10.

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, regular use will in fact extend your loudspeakers lifetime.

Positioning

Finding the best possible position for your subwoofer is just as important as correct connection and adjustment, so please experiment with room placement, just as you would with any loudspeaker.

Unfortunately, there are no shortcuts to find the best placement. You must experiment and listen for the best position in your room. We offer the following guidelines to assist you in this process.

The subwoofer should be placed on an even floor, either directly on the feet (included) or on spikes (sold separately). Make sure that spikes do not puncture speaker cables, power cords, interconnects, etc. The subwoofer must not rock back and forth, as this can cause distortion at high levels. If the floor is uneven, place objects under the feet/spikes to restore balance, so that the subwoofer cannot rock back and forth.

Placement on a line roughly halfway between the left and right front speakers usually works well. Placement along a side wall can in some rooms yield good results. Note that it is not necessary to angle the subwoofer in towards the listening position.

The subwoofer should normally be placed near a wall. Moving the subwoofer away from the wall will reduce bass output. Placement in a corner will increase bass output. Note that moving the subwoofer will have the

most effect in the midbass region, acting as a kind of tone control. The rear panel volume control increases or reduces bass output in a more linear manner.

In the recommended set-up with two subwoofers, each subwoofer should be placed near the corresponding main speaker, for instance in a corner behind the speaker.

Connecting AW 8/10

If supplementing your stereo or surround sound system with AW 8/10, the subwoofers with active crossover network and amplifier, you have various connection options. You can choose from four options:

Amplifier with separate subwoofer output terminal (Fig. 1)

If you have an amplifier with a separate subwoofer output terminal, you can connect this to the line input terminals on AW 8/10. Your front speakers are operated directly by the amplifier and so must not be connected to AW 8/10. Surround sound amplifiers generally have a separate subwoofer output terminal.

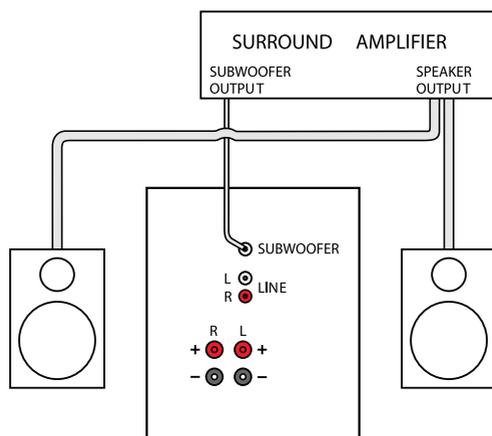


Fig. 1

Amplifier without preamplifier/subwoofer output terminal (Fig. 2)

You should only employ the passive solution if you do not have a preamplifier output terminal on your amplifier. AW 8/10 is operated by the speaker signal from your amplifier/surround sound receiver.

Connect the front speakers to the speaker output terminals on AW 8/10

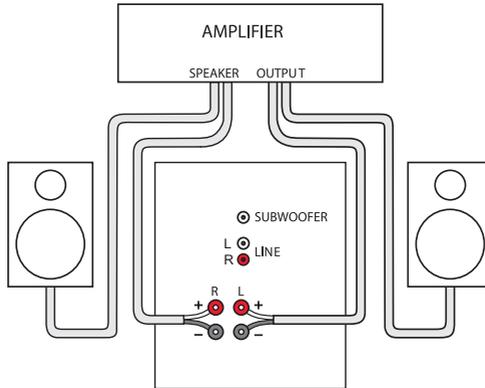


Fig. 2

Amplifier with separate preamplifier output terminal and detachable power amplifier (Fig. 3)

AW 8/10 is operated by a signal from your preamplifier/surround decoder. AW 8/10 operates the front speakers via the built-in active crossover network and a separate power amplifier.

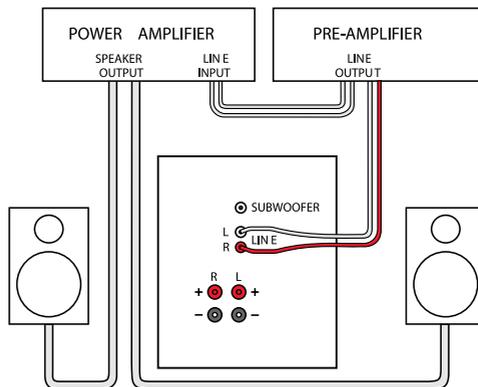


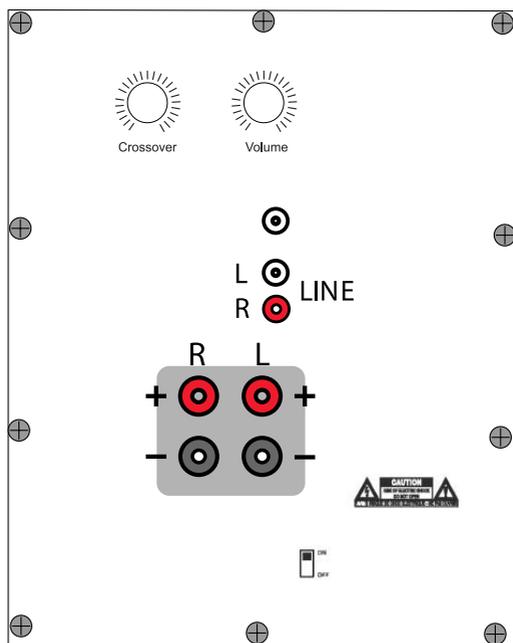
Fig. 3

In many cases one AW 8/10 in one of the listed setups will provide a good solution, but the absolute perfect solution is two AW 8/10 in stereo setup. This solution should be connected in exactly the same way, but you only connect the left channel to one input terminal on the left AW 8/10 and the right channel to one input terminal on the right AW 8/10. In other respects, follow the instructions given above - simply with separate channels. If necessary, obtain advice from your dealer.

Tuning AW 8/10

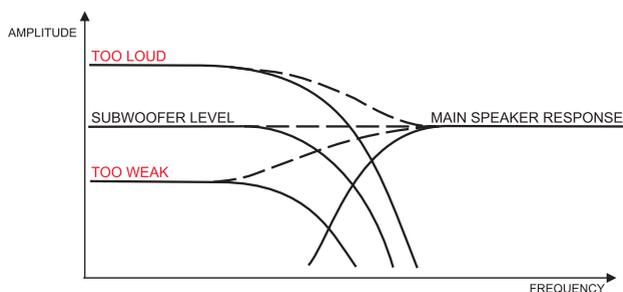
Once you have chosen the connection you wish to use, you must begin the task of tuning the system. Following the procedure below will help you to achieve good results. Use a piece of music that you know well, ideally with rhythmic bass tone content such as bass drums, electric bass or similar.

Begin by setting "Volume" and "Crossover Frequency" to the central position ("12 o'clock"). Set the "Phase" change-over switch to position 180°, and set both "Auto Shut Off" and "Power" to the "ON" position.



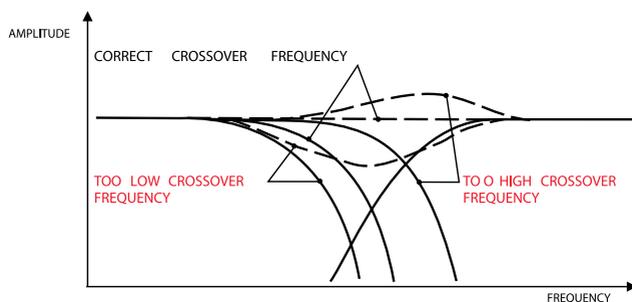
Setting level

Adjust the volume on your AW 8/10 so the bass sound matches the level from the front speakers. Adjust it so that you can hear the sound contribution from AW 8/10 - but without the bass being too dominant. The bass should be stable and precise. If you set the volume too high, there is a risk of the subwoofer being overloaded, which would have a detrimental effect on the vital playback of mid-range tones from the front speakers.



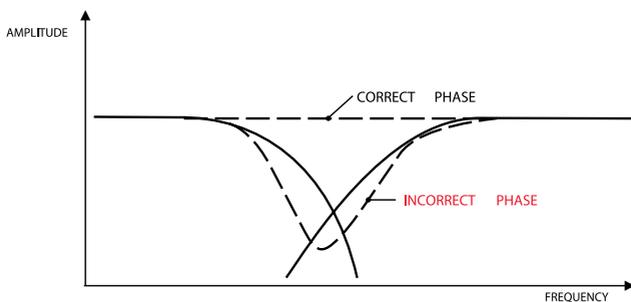
Choice of crossover frequency

Once the volume level is set you can tackle the equally important adjustment of the crossover between the front speakers and AW 8/10. You do this by adjusting the "Crossover Frequency" up and down until you can hear the bass running evenly and with no gaps. You may need to readjust the volume slightly for this adjustment.



Phase setting

In most cases you will achieve the best results with "Phase" set to 180°. However, this will depend on the front speakers you are using. Once again, your ears must be the judge. Use the trial-and-error method for both settings - and you may also want to try readjusting the volume and crossover frequency. In all cases it is a good idea to listen to the system for several days and readjust as required. The same setting will not always be ideal for both surround sound and 2-channel stereo. So it is useful to make a note of your preferred settings for each type.



The "Power" button is the main switch for the system. It is best to switch off the system completely when it is not going to be in use for long periods. **When making any changes to connections, always shut down the system completely.**

Overloading

When playing at a loud volume, listen out for possible dissonance and distortion. AW 8/10 is protected against temporary overloading, but if you often play at a loud volume, you should use a permanent lower setting for the volume level on AW 8/10. If you position AW 8/10 in a corner, this will increase the bass level.

Important cables

There is one area where you can significantly influence the sound quality - the cables between amplifier and speaker. This is a case where the rule 'any chain is only as strong as its weakest link' definitely applies. The fine and detailed signal from the amplifier must be conveyed to the speakers with minimum loss. The table below shows the maximum length your cables should be.

Cable cross section	AWG	Maximum length	
1,0 mm ²	18 (17)	15 meter	50 feet
1,5 mm ²	16	22 meter	75 feet
2,0 mm ²	14	30 meter	100 feet
3,0 mm ²	12	45 meter	150 feet

AWG: American Wire Gauge

DALI recommends using cables of at least 1.0 mm² in cross section. However, it is not just the cross section that is crucial to the sound. The actual structure of the cable and the materials employed can have a great influence on the sound image. We therefore recommend that you only use cables manufactured for this purpose. You can purchase DALI Wave cables from your authorised dealer, who will also be able to advise you on the best type for your requirements. Here is a cross section of the DALI Wave cables:

DALI White Wave:	1,5 mm ²
DALI Red Wave:	3,0 mm ²
DALI Silver Wave:	3,0 mm ²

DALI  **WAVE**

DALI - more than meets the eye

Your DALI speakers have been designed on the basis of a long succession of technical solutions based on many years' intensive development work. Most of this is not seen - but it can be heard and experienced, including:

An even frequency response ensures that your DALI speakers reproduce all tones and kinds of music faithfully and without emphasis.

Sound distribution and correct timing are among DALI's specialities, as all DALI speakers are designed for optimum performance in a real home environment and not just in a specially-constructed listening room. The perfect timing in the sound reproduction ensures that a light beat on a snare drum, for example, is reproduced as the light, sharp tap that it really is - without the drums filling and muddying the sound image.

Extremely low loss in movable parts and linear impedance means that the speakers can reproduce very fine details, even at low sound levels, and that DALI speakers will load your amplifier very evenly, and the sound will therefore not be "strained".

Internal cables and crossover networks are an important but frequently-overlooked point. The internal cables in your DALI speakers are our own Cordial cables, and the crossover networks, as with the rest of the speaker, have been assembled by hand using top-quality components.

The loudspeaker units in your DALI speakers have been developed based on our ultimate sound requirements. This ensures that the most delicate details, such as a harp string or a puff of air, will be reproduced just as convincingly as the powerful sound of a car door slamming etc.

At DALI the cabinet is both a piece of furniture and the speaker's sound base, and is therefore constructed from acoustically-correct materials. As with all the other components, the cabinets undergo a rigorous final inspection, guaranteeing that only perfect speakers leave the DALI factory.

Safety



CAUTION:
TO REDUCE THE RISK OF ELRCTRIC SHOCK, DO NOT REMOVE THE BACK PANEL. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.



The lightning flash within an equilateral triangle is intended to alert you to the presence of uninsulated „dangerous voltage“ within the product’s enclosure that may be of sufficient magnitude to constitute an electric shock to persons.



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

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool and the like.
6. Carts and Stands - The appliance should be used only with a cart or stand if recommended by the manufacturer.
7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet, that may impede the flow of air through the ventilation openings.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Power Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed on or against them, paying particular attention to cords at plugs, convenience receptacles and the point where they exit from appliance.
12. Cleaning - Do not use any liquid cleaners. Use only a dry cloth to wipe off dust and grease.
13. Non-use Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
14. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
15. Damage Requiring Service - The appliance should be serviced by qualified personnel when:
 - a. The power-supply cord or the plug has been damaged; or
 - b. Objects have fallen, or liquid has been spilled into the appliance; or
 - c. The appliance has been exposed to rain; or
 - d. The appliance does not appear to operate normally, or exhibits a marked change in performance; or
 - e. The appliance has been dropped, or the enclosure damaged.
16. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Take your time over tuning the subwoofer - it's well worthwhile!

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 AW subwoofers has been designed to reproduce music as honestly as possible - and we know we have succeeded. Enjoy your new speakers!

Model:	DALI AW 8 subwoofer
Design Principle	Active (Built-in amplifier and crossover), Bass reflex
Bass Driver	8" Air dried paper cone
Amplifier	60 Watt RMS
Inputs	Stereo speaker level. Input impedance 47 kohm Stereo line level input RCA phono. Input impedance 47 kohm Mono line level input RCA phono (unfiltered). Input impedance 47 kohm
Outputs	Not available
Controls	Volume level, Low-pass crossover frequency (35-150 Hz), Polarity (0°/180°)
Frequency Range	40 - 150 Hz
Max. SPL	108 dB
Power Consumption	230 VAC 50-60 Hz, max. 100 Watt
Finish/dimensions	Black ash. 36.4 x 26.5 x 41.4 cm.
Weight ex. packing	11.3 kg / 24.0 lbs.

Model:	DALI AW 10 subwoofer
Design Principle	Active (Built-in amplifier and crossover), Bass reflex
Bass Driver	10" Air dried paper cone
Amplifier	60 Watt RMS
Inputs	Stereo speaker level. Input impedance 47 kohm Stereo line level input RCA phono. Input impedance 47 kohm Mono line level input RCA phono (unfiltered). Input impedance 47 kohm
Outputs	Not available
Controls	Volume level, Low-pass crossover frequency (35-150 Hz), Polarity (0°/180°)
Frequency Range	38 - 150 Hz
Max. SPL	109 dB
Power Consumption	230 VAC 50-60 Hz, max. 100 Watt
Finish/dimensions	Black ash. 38.0 x 32.6 x 41.4 cm.
Weight ex. packing	15.8 kg / 33.0 lbs.