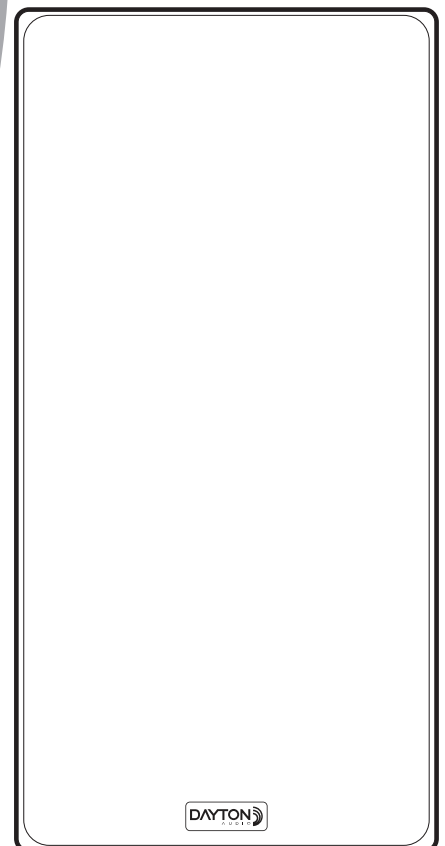
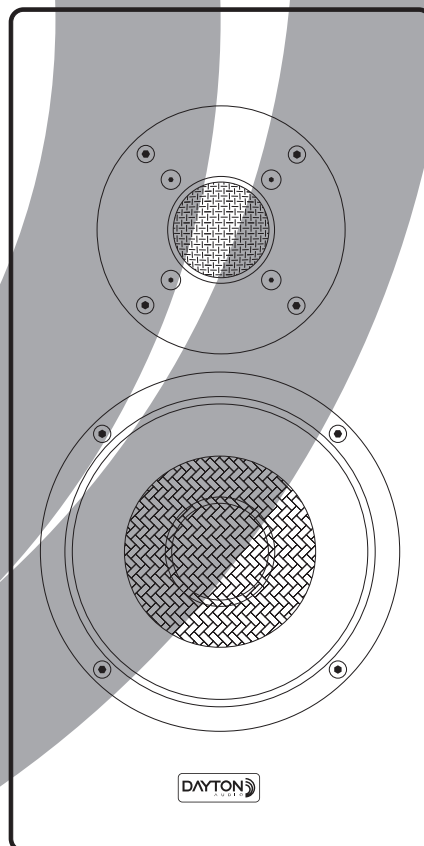




OPAL1

Product Manual



Welcome

Thank you for purchasing the OPAL1 from Dayton Audio. The compact design of the OPAL1 comes from close collaboration between our team of engineers, creative designers, and loudspeaker enthusiasts to showcase the true power and extreme versatility of our unique extended range subwoofers with patented MMAG™ motors.

OPAL1 stands as a proclamation of our passion for engineering and design in loudspeakers; It's design is unlike anything previously conceived at Dayton Audio.

This user manual is intended to provide all the essential information to maximize the enjoyment of your new speakers. Inside, you will find clear instructions on setup, operation, and tips for optimizing your listening experience. Please don't hesitate to reach out if you have any questions or need further assistance.

Thank you for choosing Dayton Audio – Your path to great sound!

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About Your Speakers

Since its establishment, Dayton Audio has been synonymous with premier loudspeaker components, and ready-to-build designs. During our research and development process to create new and interesting loudspeaker concepts one design reigned supreme – OPAL1. This compact loudspeaker embodies our commitment to innovation, exclusively incorporating Dayton Audio's in-house components for an audio experience that is both authentic and groundbreaking.

At the heart of the OPAL1 lies the revolutionary 5.5" Dayton Audio EPIQUE woofers, featuring a patented MMAG motor with an expansive ring of radial bucking magnets to extend the magnetic gap; enabling a more uniform BI force throughout the woofer's immense excursion. This along with the unique carbon fiber diaphragm results in an enhanced bass response that seamlessly integrates with the smooth upper midrange of the EPIQUE woofers.

The rear of the OPAL1 is just as impressive, housing dual 5.5" passive radiators from the EPIQUE series. These not only augment the low-end response but also maintain a cohesive visual design. With the assistance of these passive radiators, the OPAL1 achieves a remarkable low frequency response, approaching the limits of human hearing.

The transition from low to high is effortless, thanks to the popular Dayton Audio Reference Fabric Dome Tweeter. A favorite among DIY loudspeaker enthusiasts, this tweeter is celebrated for its expansive dispersion and meticulous detail, engaging listeners in a tapestry of sound.

The Dayton Audio designed crossover is fine-tuned to harmonize the robust low-end with a midrange that is both smooth and dynamic. While the sensitivity is moderated to facilitate the extended bass, the system requires a substantial amplifier with a recommendation of 200W or more to achieve its full potential. The use of high-quality components in the crossover ensures that the OPAL1 not only lasts but performs with unerring precision.

What's In The Box

- Left Speaker
- Right Speaker
- Rubber Feet
- Grills (2x)
- This Manual

Unpacking

Please unpack the speakers and carefully examine them for any potential damage that may have occurred during shipping. If damage is discovered, it is important to promptly inform the shipping company.

While Dayton Audio is available and willing to assist as necessary, only the recipient can initiate a claim for any shipping-related damage. If the product shows visible signs of damage upon arrival, be sure to retain the shipping carton for the shipper's inspection.

It is strongly advised to keep all packing materials, as they may be useful in the future event the speakers need to be transported or stored. Never attempt to ship the speakers without the original factory carton and the accompanying packing materials.

Placement

Proper placement of your stereo speakers is crucial to achieving optimal audio performance. Follow the guidelines below to ensure the best sound experience.

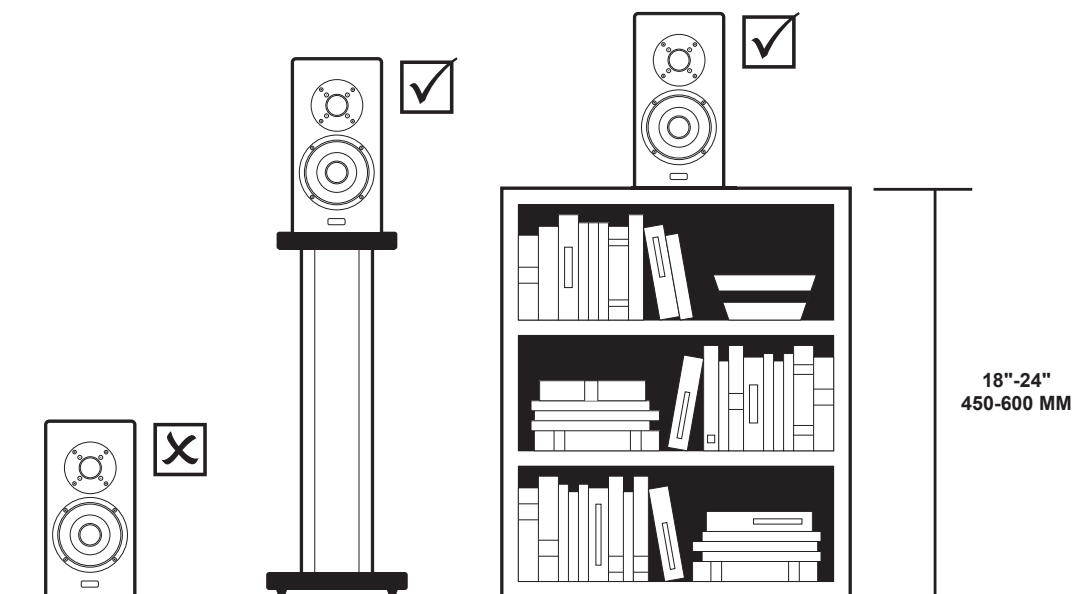
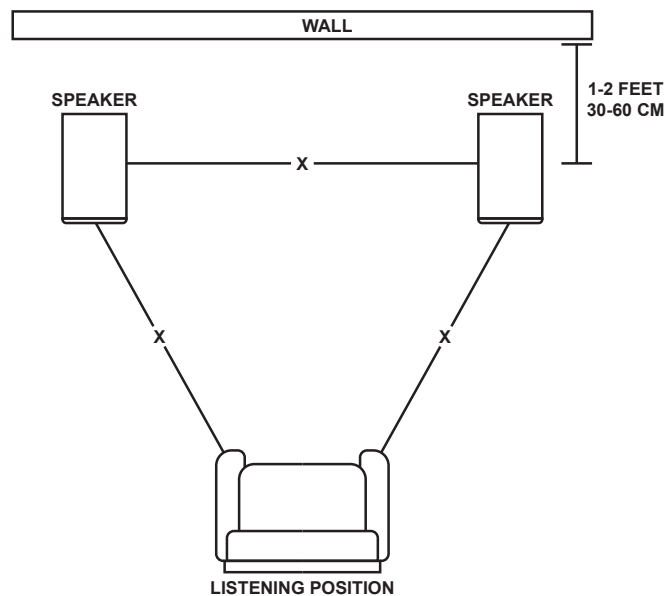
Place the speakers at an equal distance from the back wall and 6-8 feet apart with the front directly facing the listening area. To create an even soundstage, aim for an equidistant placement of both speakers from the primary listening position to maintain balanced audio dispersion.

To minimize unwanted boundary reflections, maintain a distance of at least 1-2 feet (30-60 cm) between the back of the speaker and the back wall, as well as a minimum of 3 feet from the side walls, if possible. Adjustments may be needed based on room acoustics.

Ideally, the tweeters (high-frequency drivers) should be positioned at ear level when seated. Use speaker stands or adjustable mounts if necessary.

Slight angling of the speakers towards the listening area (toeing in) can enhance stereo imaging. Experiment with angles between 5-30 degrees to find the best sound.

Note: Keep in mind that every room has its own acoustic properties, and small adjustments can make a significant difference in sound quality. Some experimentation may be necessary to find the optimal placement for your specific environment.

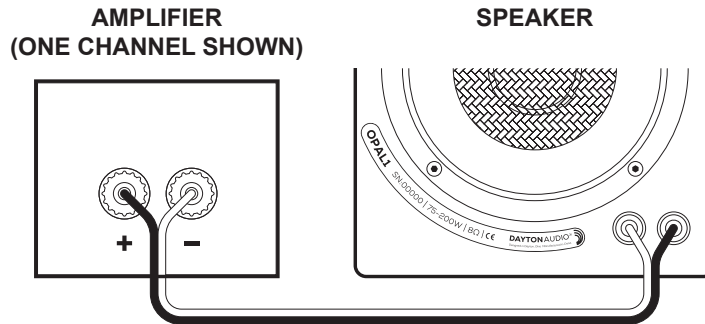


Hooking Up

Using high-quality two conductor speaker wire connect the OPAL1 speakers to the speaker output. Connect the red “positive” (+) and black “negative” (-) terminals on the rear of the left speaker to the positive (+) and negative (-) output terminals on an amplifier’s left channel. Repeat for the right channel.

The binding posts on the OPAL1 are capable of accepting banana plugs, spade connectors, and bare wire up to 8 AWG.

Ensure that there is no direct contact between exposed wires from any of the connections and other terminals. Such contact could lead to a short circuit and potential damage to your equipment.



Note: OPAL1 is a low sensitivity speaker and can handle up to 200 watts of power per speaker. In many cases, the extra power can improve the sound quality when compared to lower power amplifiers. Keep this in mind when selecting an amplifier to pair with the OPAL1.

Using Your Speakers

Speakers often exhibit a noticeable improvement after a break-in period of around 30 to 40 hours of playtime. During this initial phase, the soft parts of the drivers (surround and spider) will relax and become more compliant, resulting in enhanced detail for improved audio quality.

To break-in the OPAL1 effectively, play a diverse selection of music at moderate volume levels. This allows the speaker’s transducers to settle and relax, optimizing their performance. It is worth noting that even after this initial break-in period, further improvements in sound quality can continue to develop over time, ensuring an even more satisfying listening experience.

Using Grills

The included magnetic speaker grills are an optional accessory for the OPAL1. The cloth material is acoustically transparent, allowing sound waves through unimpeded, providing an uninterrupted listening experience. When installed the grills can provide an added layer of protection from dust and foreign particles.

To install the magnetic grills, align the magnetic posts with the front baffle of the speaker. The magnets will attract to matching magnets inside the baffle and securely hold the grill in place. To remove, gently pull the grill away from the speaker.

Installing Rubber Feet (optional)

To ensure the OPAL speakers stay securely in position and to safeguard furniture from potential damage, adhesive-backed rubber feet are included and can be applied to the underside of each loudspeaker. The use of these rubber feet is optional and will not be required in all installations. If placing on a hard, unprotected surface, the use of rubber feet is recommended.

Care and Maintenance

The finish on the cabinets can be maintained with regular dusting. For extreme buildup of dust or debris a slightly dampened microfiber cloth can be used. Exercise caution to not get moisture on the driver components.

If you wish to use a cleaning solution, please do so by applying a small amount to an inconspicuous part of the cabinet such as the bottom before applying to the entire cabinet. Do this to ensure that the solution will not cause harm to the finish of the OPAL1.

Specifications

Model	OPAL1
Frequency Response	32-20,000 Hz, -3db, half space
Sensitivity	78.5 dB, 2.83 V/1M
Potential Output	102 dB @ rated power
Recommended Amplifier Power	75-200 Watts / Channel
Nominal Impedance	8Ω
Minimum Impedance	4.3Ω @ 4,400 Hz
Transducers	
Low Frequency	1 x 5-1/4" DVC MMAG Extended Range Bass Driver
High Frequency	1-1/8" Reference™ Fabric* Dome Tweeter
System Format	2-Way
Bass Alignment	Bass Reflex via dual passive radiators
Crossover Frequency	2,200 Hz
External Dimensions (W x D x H)	177 x 241 x 355 mm (7 x 9-1/2 x 14 in.)
Depth Including Grill	261 mm (10-1/3 in.)
Weight (each)	9.434 kg (20.8 lbs.)
Finishes Available	Gloss Black and Gloss White

5-Year Limited Warranty
See daytonaudio.com for details



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