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User Manual



Sandwich 150 & 250 Loudspeaker



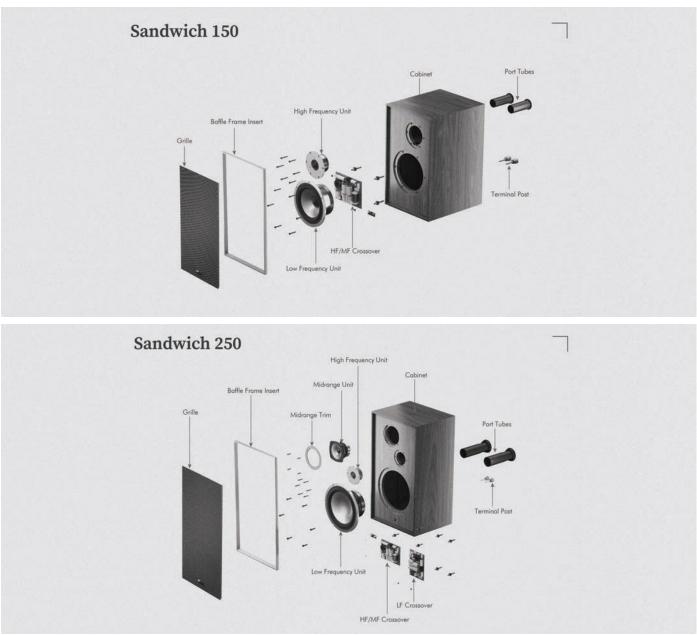
INTRODUCTION

The LEAK Sandwich 150 and 250 are the pinnacle of innovation that commenced in 1961 with the original LEAK Sandwich Loudspeaker. Featuring technological advancements that are implemented with the utmost regard for tradition, the LEAK Sandwich 150 and 250 are groundbreaking loudspeakers that retain the continual aspiration to forge sound reproduction equipment of the highest quality, accessible to every discerning audiophile.



The LEAK Sandwich 150 comes in the format of a 2-way standmount loudspeaker with a combination of 6.5" (170mm) low-frequency 'Sandwich' driver and a 1.2" (30mm) coated textile dome high-frequency driver.

The LEAK Sandwich 250 is a larger format, 3-way standmount loudspeaker with a 11" (280mm) low frequency 'Sandwich' driver, a 4.25" (108mm) 'Sandwich' mid-range driver and 1.2" (30mm) coated textile dome high-frequency driver. The Sandwich 250 is available with, or without, a matching custom-specified stand, finished in a matching real-wood veneer.





Please read this owner's manual carefully before using the product to ensure proper operation. After reading this manual, be sure to keep it for future reference.

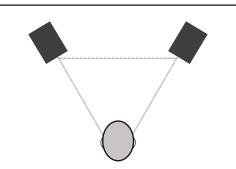
UNPACKING YOUR LOUDSPEAKERS

- Please read this manual as soon as you have opened the carton.
- Carefullly lift the loudspeaker out of the carton box. Please do not try to lift the loudspeaker using the cloth bag.
- Unpack any accessories carefully.
- If there is any sign of damage or if the contents are incomplete, report this to your dealer as soon as possible.
- Retain the packing for future safe transport of the product. Dispose of the packing with respect to any recycling provisions in your area.

POSITIONING THE LEAK SANDWICH LOUDSPEAKERS

The LEAK Sandwich 150/250 speakers feature offset treble units to smooth the high frequency dispersion. The speakers should be positioned with treble units inwards, that is with the HF unit (the smallest driver) on the inside.

Additionally the drive unit dispersion is aided by the front grilles which should be left on for optimum listening performance. Removing the grilles will produce a brighter but less smooth sound.



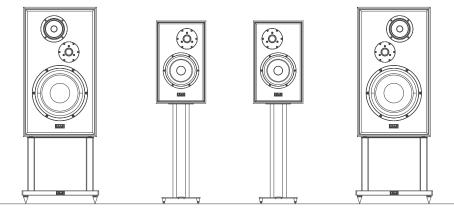
When positioning loudspeakers, it's important to avoid placing them too close to the walls as this can lead to an increase in bass that may sound boomy and indistinct. Instead, try placing the loudspeakers further away from the walls and increasing the inward angle ("toe in") by up to 30%. Remember that personal preference plays a big role. For the best listening experience, it is recommended to sit in the "sweet spot" area. The wider the angle, the larger the sweet spot.

The LEAK Sandwich 150/250 speakers are designed to provide a broad soundstage, so it should not be necessary to adjust them to extreme settings. However, it's a good idea to experiment with different configurations and listen to a variety of program materials before settling on the best position for your speakers.

The LEAK Sandwich 150 is a stand mount / bookshelf format loudspeaker. It can be utilised on stable flat surfaces, such as sidetables, desks or even adequately supportive shelves. However, for optimum performance, placing the Sandwich 150 loudspeakers on suitable loudspeaker stands is recommended. Speak to your dealer for advice on suitable stands for your listening environment.

The LEAK Sandwich 250 is a larger stand mount loudspeaker which requires placement on a suitable loudspeaker stand. The custom and specifically designed LEAK Sandwich 250 stand (sold separately) is recommended for optimum performance and positioning.

It is not recommended to place the loudspeaker on the floor or use without stands.

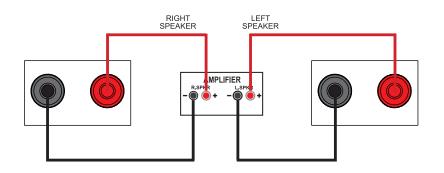




STANDARD LOUDSPEAKER WIRING

To set up your audio system select the appropriate length of twin-core speaker cable to connect each speaker to a channel of your amplifier unit.

Prepare the ends of the cable by carefully exposing bare-wire from the insulation of the cable. Loosen the terminal screws of the speaker and attach the red, positive (+) terminal of the left speaker to the corresponding red, positive (+) amplifier terminal. Repeat this process for the black, negative (-) terminals, and tighten the terminals to secure the connection. Repeat the same procedure for the right channel. Ensure that the terminal links are firmly in place and secure.







LOOKING AFTER YOUR LOUDSPEAKERS

- Your LEAK Sandwich 150/250 loudspeakers use a specially hardwearing sealed finish. They should not be waxed or treated with spray polishes which will smear and dim their lustrous finish. Occasionally polish them with a dry or barely moist cloth to remove dust and finger marks, etc.
- Occasionally, remove the loudspeaker grilles and brush them gently with a soft brush before replacing them carefully.
- Never stand objects on your loudspeakers. In particular do not stand flowers, etc. on them they are not jardinieres!
- Avoid getting any liquid behind the grille. If you accidentally spill liquid on your loudspeakers, take them to your dealer for attention before using them again.
- Do not open the speakers; there are no user serviceable parts inside. Never touch the drive units either with an object or your hands.

WARRANTY COVERAGE

LEAK warrants its products, subject to the following terms and conditions below, to be free from defects in materials and workmanship.

ONLINE REGISTRATION



Scan the QR code using a smart-phone device, for product warranty registration online.

The three (3) year extended warranty is applicable to items purchased from Jan 1st 2021, onwards. Items purchased prior to this date are not eligible for this extended warranty service but are subject to statutory warranty claims and all applicable consumer rights.

To qualify for the extended 3 year warranty, you must register your product within ninety (90) calendar days from the date of purchase. Visit leak-hifi.co.uk/warranty-registration to complete your online registration. Items not registered online will have a Limited Warranty for one (1) year, or for the period of your country's statutory warranty, whichever is longer.

Warranty can only be offered to products registered with proof of purchase with date, model and details of the authorised dealer clearly stated on the receipt/invoice. Please keep the original receipt/invoice in case it is required for a warranty claim.

This Limited Warranty is non-transferable and is offered exclusively to the original owner.

This Limited Warranty is valid only in the original country of purchase.

Repairs or replacements are provided under this warranty are the exclusive remedy of the consumer. LEAK shall not be liable for any incidental or consequential damages for breach of any expenses or implied warranty with any product. Except to the extent prohibited by law, this warranty is exclusive and in lieu of all other warranties whatsoever, both expressed and implied, including but not limited to the warrant of merchantability and fitness for practical purpose.

This warranty provides benefits that are additional to and do not affect your statutory consumer rights.

This Limited Warranty offer is subject to correct information being submitted in your application. Incorrect dates or mismatched purchase receipt dates that are outside of the warranty terms will immediately invalidate any warranty claim.

*Please check with your dealer local distributor for further information.



EXCLUSIONS

The following items are excluded from the LEAK warranty:

Normal wear and tear and cosmetic damage (including but not limited to any wear from reasonable use, environmental deterioration or neglect)

Products on which the serial number has been removed, altered or otherwise made illegible.

Products not purchased from an authorised LEAK dealer.

Products that were not new at the time of original purchase.

Products sold 'as is', 'as seen' or 'with faults'

Product not purchased from an Authorised Dealer/Distributor within the region of the claim (ie parallel imports or grey market products)

Accidental damage or faults caused by commercial use, acts of God, incorrect installation, incorrect connection, incorrect packaging, misuse or careless operation or handling which is not in accordance with the user instructions.

Equipment that has been operated in conjunction with unsuitable, inappropriate or faulty apparatus.

Repairs, alterations or modifications carried out by parties other than LEAK or its authorised service partners.

Damage in transit that cannot be attributable to the fault of LEAK, the authorised distributor or dealer (ie. claims otherwise covered by transit insurance.)

Faults relating to abnormal or inappropriate power supply voltage or power surges.

Faults relating to extremities in temperature, exposure to heat, water or other liquids, insects, excessive moisture, sand, chemicals, battery leakage or any other contaminants.

Any force majeure events, including but not limited to any acts of God, fire, lightning, typhoon, storm, earthquake, hurricane, natural disaster, tsunami, flood, war, riot, public disturbance.

Any other causes beyond the reasonable control of either LEAK and its Authorised Distributor.

Please note items purchased before 1st Jan 2021 are not eligible for the extended warranty claim.

HOW TO CLAIM

To obtain warranty service please contact the authorised dealer from which you purchased this product and present the limited warranty certificate offered upon registration of your product's extended warranty offer.

Do not dispatch goods without the prior agreement of the dealer distributor or authorised service centre.

If asked to return products for inspection and or repair, please pack carefully preferably in the original carton or packaging affording an equal degree of protection and returned via insured, trackable courier service.

The authorised dealer or distributor will offer full return details and instructions. However, please note if unsuitable packaging is used the warranty may be deemed void due to improper action in return.

LEAK or the authorised distributor, dealer or service centre may make a charge for the supply of new packaging for the return of the repaired item. Please note, insurance is recommended as goods are returned at the owner's risk. Authorised distributors or service centres cannot be held liable for loss or damage in transit, insurance and freight charges on the return journey will be paid for by LEAK, authorised dealer, distributor or service centre if corrective work proves to be necessary.

In the event of 'no-fault found' or 'no repair necessary', the return shipping charge will be the responsibility of the owner.

LEAK

REPAIRS

All repairs will be carried out by the appointed distributor (or locally appointed service centre). Repairs handled or processed without authorisation or approval of the appointed representative will be excluded from this limited warranty. Please note, LEAK is not able to supply parts or replacement items to any other entity than the official distributor or authorised service centre.

Other than the warranty and services set out in this warranty, to the fullest extent permitted by law, LEAK shall not be liable to you and/or any third party or entity whatsoever for:

- Any loss, damages and/or malfunction caused to any product(s) which is/are connected to any of the products covered by this warranty.
- Any damages, loss and liability, whether direct, indirect, incidental, consequential special, punitive or otherwise, howsoever caused by, arising out of or otherwise, in relation to the installation, delivery, use, service, repair, replacement and/or maintenance of the product;
- Any damages, loss and liability under this warranty in respect of any act, omission, or negligence of any of their technicians, employees, agents, representatives or independent contractors relating to the actual or purported performance of any of the obligations under this warranty

SERVICE CENTRE ADDRESS

Should a fault occur with your product, please pack it correctly using the original packing, so you can ship it safely. For technical support, servicing or product queries and information, please contact either your local retailer or the office below:

IAG Service Dept.

13/14 Glebe Road

Huntingdon

Cambridgeshire

PE29 7DL

UK

Tel: +44(0) 1480 452561

Email: service@leak-hifi.co.uk

For information on other authorised service centres worldwide contact LEAK International, UK.

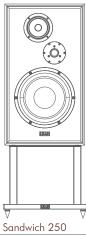
A world wide distributors list is available on the LEAK website: www.leak-hifi.co.uk

SPECIFICATIONS

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Model	Sandwich 150
General description	2 - way vented-box / standmount
Design philosophy and core technology	
Enclosure type	Bass reflex
Transducer complement	2 - way
ABR	
Bass driver	6.5" (170mm) Aluminium-Foamcore Sandwich cone
Midrange driver	
Treble driver	1.2" (30mm) Coated Textile Dome
Full-range driver	
AV shield	No
Sensitivity (2.83V @ 1m)	86.5dB
Recommended amplifier power	25 - 150W
Peak power handling	
Peak SPL	106dB
Nominal impedance	6Ω (8Ω Compatible)
Minimum impedance	4 Ω
Frequency response(+/-3dB)	44Hz - 26kHz
Bass extension(-6dB)	38Hz
Crossover frequency	2.4kHz
Cabinet Volume (in litres)	19.6L
Dimensions (mm)	
Height (on plinth)	415mm
Width	250mm
Depth (with terminals)	(290+25)mm
Carton size	650*400*530mm
Net weight	12.3kg / pcs
Gross weight	27kg / ctn
Finish	Real Wood Veneer - Walnut
Standard accessories	Rubber feet

SPECIFICATIONS



Model	Sandwich 250
General description	3 - way vented-box / standmount
Design philosophy and core technology	
Enclosure type	Bass reflex
Transducer complement	3 - way
ABR	
Bass driver	11" (280mm) Aluminium-Foamcore Sandwich cone
Midrange driver	4.25" (108mm) Aluminium-Foamcore Sandwich cone
Treble driver	1.2" (30mm) Coated Textile Dome
Full-range driver	
AV shield	No
Sensitivity (2.83V @ 1m)	88.5dB
Recommended amplifier power	25 - 250W
Peak power handling	
Peak SPL	112dB
Nominal impedance	6Ω (8Ω Compatible)
Minimum impedance	4Ω
Frequency response(+/-3dB)	42Hz - 26kHz
Bass extension(-6dB)	32Hz
Crossover frequency	470Hz & 3.1kHz
Cabinet Volume (in litres)	2.7L, 45.5L
Dimensions (mm)	
Height (on plinth)	655mm
Width	370mm
Depth (with terminals)	(300+30)mm
Carton size	500*430*790mm
Net weight	27.3kg / pcs
Gross weight	30.2kg / ctn
Finish	Real Wood Veneer - Walnut
Standard accessories	Rubber feet
Optional accessories	LEAK Sandwich 250 stand













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