



Windsor Earl Windsor Duke

3 YEAR
WARRANTY



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

User Manual

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Important Safety Information

Before installing this product read all these instructions!



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

Read these instructions. Keep these instructions. Heed all warnings. Follow all instructions.

Before making any connections, switch all the units in your system off at the mains.

Set the volume control at a minimum when you switch on your system or change sources and turn the level up gradually.

DO NOT use your amplifier at full volume.

Ensure that all loudspeakers in the system are correctly wired.

DO NOT subject your loudspeakers to excessive cold, heat, humidity or sunlight.

Loudspeakers should not be placed directly facing other hi-fi units, or share the same shelf or cabinet.

DO NOT place heavy objects on top of loudspeakers.

DO NOT connect speaker terminals to the mains supply.

DO NOT dismantle the loudspeaker. There are no user-serviceable parts inside it and you will void the warranty by doing so.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Caution: Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this device.

CONTENTS

- 04 Introduction
- 05 Designer's Notes
- 12 Loudspeaker Installation
- 14 Warranty Coverage
- 18 Technical Data



Introduction

A Fortified Structure that is Beholding to the Eye and Ear

Advanced loudspeaker design has a long tradition, in Great Britain, and **Castle** has always been one of the leading brands when it comes to working in the tradition of classic designs and concepts, while at the same time, using the most advanced technologies to raise the bar of performance excellence.

Castle has been a loudspeaker manufacturer in the truest possible sense, since 1973. Taking its name and logo from the 11th century Skipton Castle; **Castle** was founded in Yorkshire, UK – a rare manufacturer not only making the drive units and electronic components, but also the beautifully hand-crafted cabinets with real wood veneers, that were used to enclose the componentry.

From the beginning, the co-founders of **Castle** Acoustics, John Collinson (formerly at QUAD) and William Escott (ex-Wharfedale), determined to adhere to the traditions of craftsmanship and skilled engineering which they saw as being in decline elsewhere.

A spin-off from Wharfedale, one of the world's most famous audio brands, **Castle** began with a real hi-fi pedigree, which is a tradition that remains to this day.

Castle are proud to announce the **Windsor** series, signalling the return to the UK for the manufacturing of **Castle** loudspeakers. **Castle Windsor** series comes, with craftsmanship and quality that is self-evident and marks the brand's intention to restore and build upon the reputation of the brand for superlative quality loudspeakers.

The epitome of engineering; nothing sits as proud as a Castle.



Designer's Notes

The Road to Excellence

The **Castle Windsor** series was designed by the world-famous Fink Team - headed up by Karl-Heinz Fink, one of the finest loudspeaker engineers on the planet.

FINK AUDIO-CONSULTING

A long-time **Castle** fan, Karl-Heinz Fink and the Fink Team collaborated with the **Castle** engineers to create a loudspeaker series that embodies the philosophes of the **Castle** Acoustics brand pedigree; a magnificent loudspeaker with hallmarks of craftsmanship and quality.

The flagship **Windsor** series comes with craftsmanship and quality that is self-evident, clearly marking the intention to restore and build upon the brand's reputation for a superlative quality loudspeaker.

Three elements need to be optimised in a loudspeaker design to give the highest level of performance. Of course, a good loudspeaker needs good drive units. In the case of the **Windsor Duke** and **Windsor Earl**, an 8" woofer and 6.5" woofer were developed together with a 28mm textile dome tweeter to perform in two classic bookshelf/monitor style cabinets.



KARL-HEINZ FINK

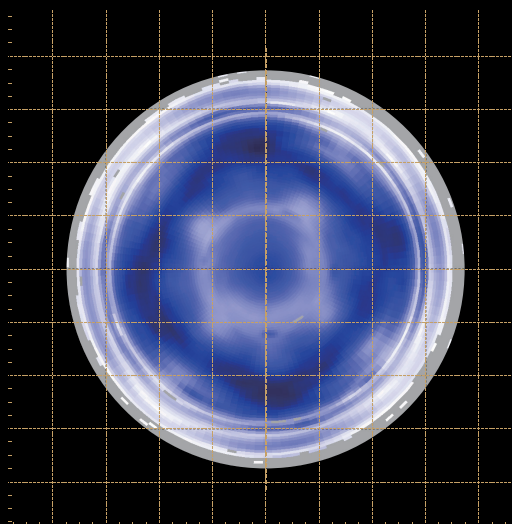
Designer's Notes

Let's get started with the cone: It's the part that defines the sound of the drive unit and gives the overall design a fingerprint; the critical component in the overall sound signature of any loudspeaker.

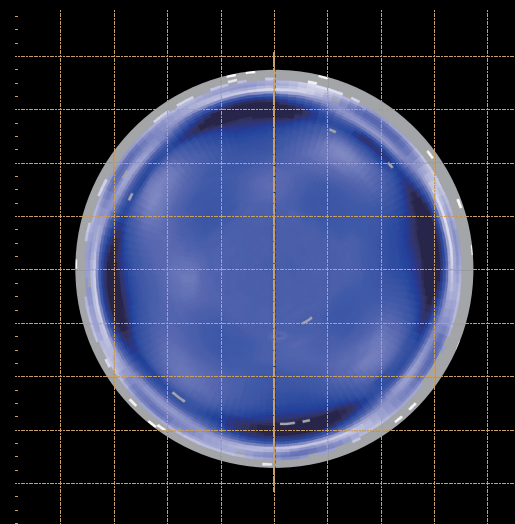
In this case, the woofer is designed around a Polypropylene based material. However, instead of being produced by simply forming a foil under a vacuum, the Polypropylene is precision cut into thin strips, woven back into a sort of fabric and bonded together again to form a solid foil. This foil now gets pressed into the final shape and then cut to size.

So, why this complicated process?

The reason is to create a material with different properties of rigidity, in different directions between the voice coil and the surround. A woven structure will always have a varied stiffness, in the direction of the fibres and a cone. This helps to minimise resonances - the result of which is a much-desired, flatter response curve.



ABOVE: Woofer cone pattern 3000Hz



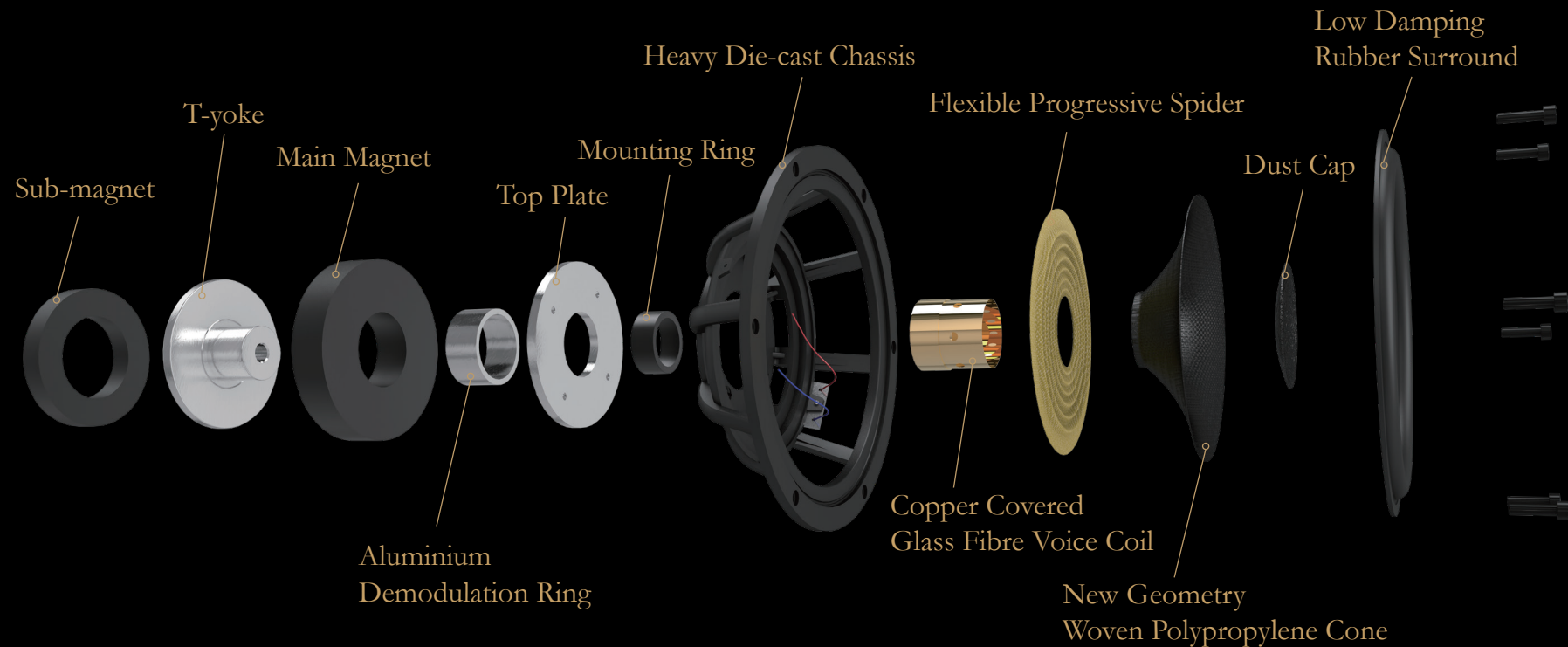
ABOVE: Woofer cone pattern 600Hz

Designer's Notes

A Royal Weave

The surround of the **Windsor** series drivers is made from low hysteresis rubber, for excellent, long-life stability. The voice coils are made out of glass fibre, bonded with high-temperature resin. The stiffness and overall rigidity of this material is very close to that of aluminium. However, this glass fibre material doesn't generate Eddy Current like aluminium will. Thus, it maintains the purity of signal, by its very design.

The magnet system in the **Castle Windsor** series includes an aluminium compensation ring. This ring helps minimise the variation of the impedance during the operation of the drive unit. As a result, the harmonic and intermodulation distortion values are reduced, for improved openness of the midrange performance.



ABOVE: Exploded technical diagram of the **Windsor** series woofer

Designer's Notes

Windsor Highs

The tweeter follows the classical formula of a high-consistency exposed polyester dome, with a pressure equalised Ferrite magnet system and a stable metal front plate. No Ferrofluid is used in the tweeter to guarantee the highest possible dynamic range. This also keeps the resonant frequency below 800Hz, for optimum performance.

The voice coil has a diameter of 28mm and is equipped with a copper cap on the pole piece of the magnet. This reduces distortion, intermodulation and it also lifts the level of very high frequencies for a very tangible increase in the level of detail in the treble performance.



ABOVE: Exploded technical diagram of the **Windsor** series tweeter

Designer's Notes

Built like a Castle

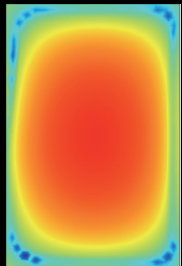
Such is the progress in driver development in recent times, it is relatively easy to design really good drive units with a solid performance. But the process of a matching cabinet design for the said driver is a lot more complicated.

The most important research for low colouration cabinets was made by the BBC, for their classic monitors. Cabinets are still manufactured under these findings, to this very day.

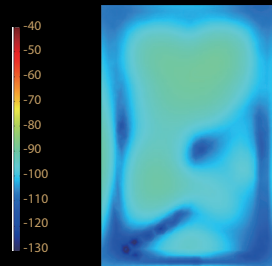
After many hours of analysis, development and consideration of these principles, a new methodology was chosen for the optimisation of the **Castle Windsor** series cabinets.

The main cabinet structure uses dual-layer MDF panels separated by a flexible, but thin layer of a specially engineered, acoustic glue. This glue is purpose developed to dampen resonance in the critical midrange of the dual-layer panels.

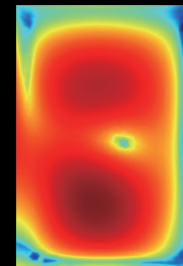
To achieve the optimum rigidity at lower frequencies, point-to-point bracing was used. This joins two opposite panels without feeding the problem of resonance and noise into other parts of the cabinet. The result is a quiet cabinet without prominent peaks and controlled output, simple in theory but intricate in design and engineering. A trait of the **Castle** brand philosophy.



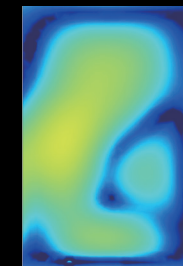
ABOVE: Laser vibrometre measurement of a cabinet at 400Hz before optimisation



ABOVE: Laser vibrometre measurement of a cabinet at 400Hz after optimisation



ABOVE: Laser vibrometre measurement of a cabinet at around 730Hz/630Hz before optimisation



ABOVE: Laser vibrometre measurement of a cabinet at around 730Hz/630Hz after optimisation

Designer's Notes

The Final Crossover

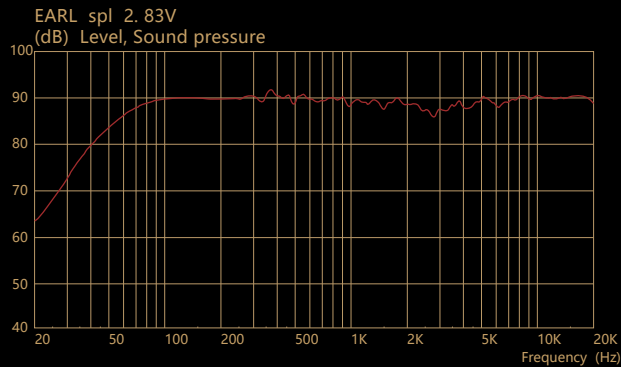
Following driver design and cabinet engineering, the crossover is the third, final, but no lesser stage of speaker design.

The basic topology of both models is a 4th order LKR (Linkwitz-Riley) crossover that allows the best integration of the purpose-designed drive units.

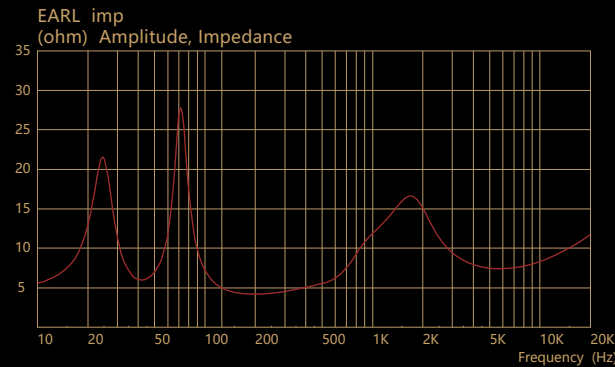
The aim was to get a flat response with an easy load for amplifiers and a low distortion measurement.

Therefore, all critical inductors within the crossover design are 'air core' inductors. This means that there are no metal cores present in the circuit and therefore prevents hysteresis or distortion through the network. The main inductor resistance is compensated in the woofer magnet system, and so, there is no disadvantage from the slightly higher resistance of this air coil.

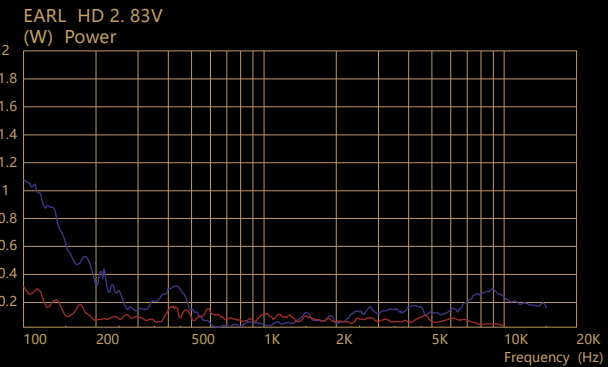
The result is a speaker series that embodies everything that **Castle** stands for – a fortified structure that is beholding to the eye and ear.



ABOVE: Graph indicates the measurement of the Sound Pressure Level (SPL) for **Windsor Earl**



ABOVE: Graph indicates the measurement of the impedance for the **Windsor Earl**



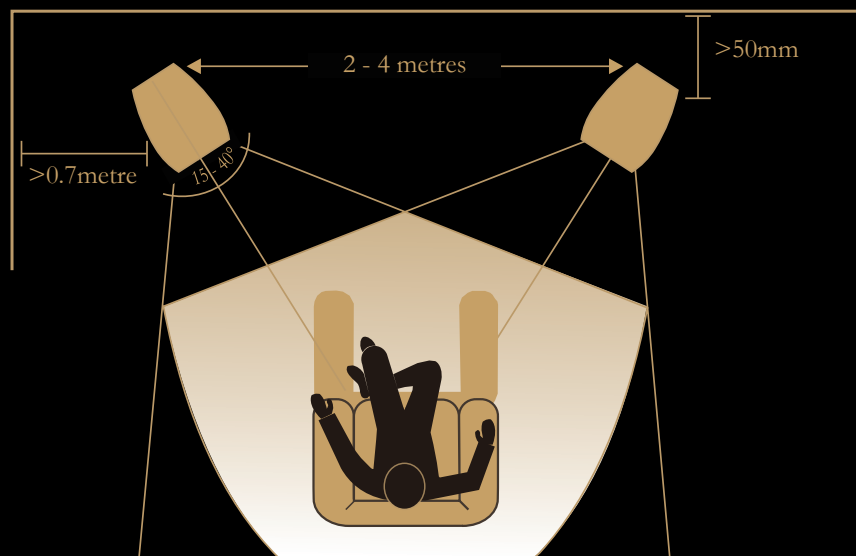
ABOVE: Graph indicates the measurement of the harmonic distortion, before and after optimisation for **Windsor Earl**



Loudspeaker Installation

Unpacking Your Loudspeakers

- Please read this manual as soon as you have opened the carton.
- Lift the loudspeaker carefully out of the packing. 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 for any recycling provisions in your area.



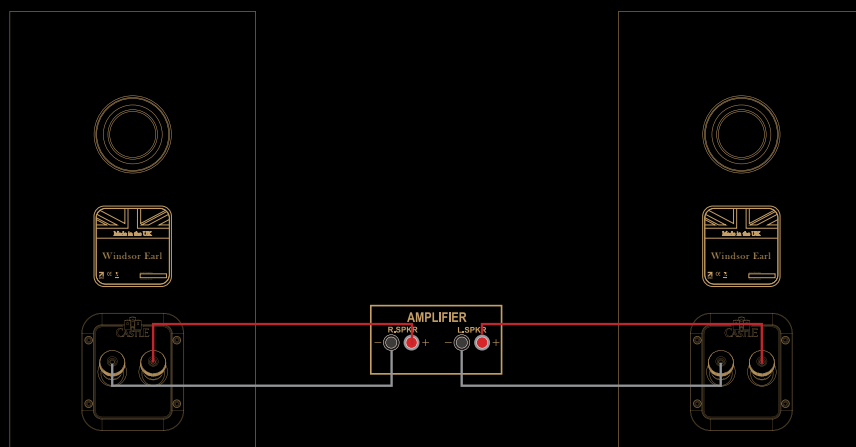
Positioning Stereo Loudspeakers

- If you are sitting within 2 metres of the speakers, the distance between the speakers should be the same as between you and the speakers.
- Otherwise site the speakers between 1.5 to 2 metres apart, clear of rear walls and room corners.
- If the loudspeakers are placed too close to the walls the bass will increase but maybe boomy and indistinct. If the loudspeakers are placed further away from the walls, the inward angle ("toe-in") may be increased by up to 30%. As personal taste and room acoustics play a large role, experiment with different configurations and play a wide range of programme material before finalising the position of your speakers.
- The optimum listening position is in an area between the speakers broadly known as the "sweet spot". The more extreme the angle of toe-in the narrower the sweet spot. **Castle** loudspeakers are designed to cover a wide sonic perspective so there should be no need for extreme settings. A mild angle inwards will cover a wide range of seating positions.
- The grilles are provided to protect the loudspeaker drive units from accidental damage. For critical listening, you may remove the grilles.

Loudspeaker Installation

Standard Connection

- Choose a suitable length of twin core speaker cable for each channel and prepare the ends. Unscrew each terminal a few turns. Connect the red, positive (+) terminal of the left loudspeaker to the corresponding red, positive (+) amplifier terminal.
- Connect the black, negative (-) terminals similarly. Tighten the terminal securely. Repeat this procedure for the right channel. If you are standard wiring make sure the terminal links are securely in place.



Looking After Your Loudspeaker

- This speaker is hand-finished with a varnish coating. As with all real wood furniture finishes; exposure to direct sunlight, heat, cold and varying humidity can affect the natural properties of the speaker cabinet. We advise protecting the speaker from extreme variances in temperature and environmental conditions.
- We advise that you do not place anything on the surface of the cabinets, to protect from damage. Treated with care, the veneer finish will last a lifetime. They will age naturally and subtly, retaining the properties of the beautiful high gloss wood finish.
- Your **Castle** loudspeakers use a especially hardwearing sealed finish. They should not be waxed or treated with spray polishes which will smear and dim their lustrous finish. 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.
- 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.

Warranty Coverage

Your loudspeakers have been constructed to the highest standards. From top grade furniture construction and finish to carefully designed and selected acoustic components, **Castle** speakers are built to provide a lifetime of sonic pleasure. We hope you will derive many years of good service from our products.

Castle 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 castle.uk.com/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. **Castle** 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.*

Warranty Coverage

Exclusions

- The following items are excluded from the **Castle** 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 **Castle** 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 **Castle** or its authorised service partners.
- Damage in transit that cannot be attributable to the fault of **Castle**, 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 **Castle** and its Authorised Distributor.
- Please note items purchased before 1st Jan 2021 are not eligible for the extended warranty claim.

Warranty Coverage

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.
- **Castle** 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 can not be held liable for loss or damage in transit. insurance and freight charges on the return journey will be paid for by **Castle**, 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.

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, **Castle** 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, **Castle** 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.

Warranty Coverage

Service Centre Address

- 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@castle.uk.com

- For information on other authorised service centres worldwide contact **Castle** International, UK.
- A world wide distributors list is available on the **Castle** website: www.castle.uk.com

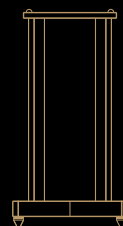


Technical Data

Scan the QR code for latest user manuals and more.



Model	Windsor Duke	Windsor Earl
General Description	2-way Bookshelf Speaker	2-way Bookshelf Speaker
Enclosure Type	Bass Reflex	Bass Reflex
Transducer Complement	2-Way	2-Way
Bass Driver	8" (200mm) Woven Polypropylene	6.5" (165mm) Woven Polypropylene
Treble Driver	1.1" (28mm) Micro-Fibre Dome	1.1" (28mm) Micro-Fibre Dome
Sensitivity (2.83V@1m)	90dB	89dB
Recommended Amplifier Power	30 - 150W	25 - 100W
Peak SPL	95dB	95dB
Nominal Impedance	8Ω Compatible	8Ω Compatible
Minimum Impedance	4.2Ω	4.3Ω
Frequency Response (+/-3dB)	52Hz - 22kHz	58Hz - 22kHz
Bass Extension (-6dB)	39Hz	45Hz
Crossover Frequency	2.1kHz	2.2kHz
Cabinet Volume	26L	15.8L
Dimensions (H x W x D)	470 x 280 x (310+36)mm	430 x 240 x (260+36)mm
Finish	Mahogany Veneer	Mahogany Veneer



Model	Windsor Duke Stand	Windsor Earl Stand
General Description	High-carbon British Steel Construction Specially Weighted Design for Zero-resonance Custom Designed for Optimum Performance Made in UK	High-carbon British Steel Construction Specially Weighted Design for Zero-resonance Custom Designed for Optimum Performance Made in UK






A loudspeaker manufacturer in the truest sense, since 1973.



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www.castle.uk.com  [castle.speakers](#)  [castle.speakers](#)  [Castle Hi-Fi Official](#)

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