

# LS3/5a

## Owners Manual

Manufactured under Licence from the British Broadcasting Corporation

**Falcon  
Acoustics**

## **Thank you for your purchase of Falcon Acoustics LS3/5a Loudspeakers**

These loudspeakers are a superb example of traditional British HiFi, a historic tradition of innovation and quality which goes back many decades, which we hope will give much enjoyment.

Please read through this manual. It contains much useful information to enable you to get your speakers installed correctly.

You will also find helpful advice on connecting-up, matching equipment, room placement, service and maintenance.

Provided the recommendations are followed your LS3/5a's will give you many years of pleasure.

If advice or service is required please contact the dealer from whom you purchased the product, quoting the serial number and date of purchase.

### **FALCON ACOUSTICS and the LS3/5a**

Falcon Acoustics was founded in 1972 as Falcon Electronics by Malcolm Jones.

As Senior Development Engineer at KEF Electronics Ltd. until 1974, Malcolm undertook most of the design and development of the classic B139, B200, B110, T15 and T27, including the systems in which they were used.

They are amongst the most successful drive units ranges ever produced, finally ceasing production in the late 1990's.

The original classic 15ohm LS3/5a system used the KEF B110 and KEF T27. and was designed by the BBC for use as a small Studio/Outside Broadcast monitor for quality control purposes.

Falcon Acoustics applied in January 1982 for a licence to manufacture the LS3/5A, but the licence was given to Goodmans. The disappointment this caused was considerable, but Falcon carried on its association with the LS3/5a, supplying components and crossovers to both Goodmans and RAM for their LS3/5a versions.

Following the success of the Falcon Acoustics F B110 and F T27 drive units, again both designed by Malcolm Jones, Falcon Acoustics was granted a BBC Licence to recommence manufacture of the original "classic" 15 ohm LS3/5a.

## UNPACKING

Unpack your speakers with care so as not to damage the natural wood finish. Keep all the packaging materials, in case you ever need to ship them again.

## AMPLIFIER REQUIREMENTS

It's a well known fact in HiFi that more damage is caused to loudspeakers by using under-powered amplifiers "clipping" at high output levels, than almost any other cause. Compared to a normal audio signal which has smooth sine-curve waveforms, clipping creates a "sharp" or "cut-off" shaped waveform which may cause heat build-up in the loudspeaker's coil assembly, leading to damaged and burnt out drive units.

It really is preferable to carefully use an amplifier of 100 watts rated output to drive a 75-80 watt rated loudspeaker, than to use a 50 watts rated amplifier at maximum volume.

The output of most recent amplifiers is quoted into a nominal 8 ohm loudspeaker load. A few (e.g. older Valve [Tube] Amplifiers) may have selectable output positions for use with either 4, 8 or 16 ohms loudspeakers. In this case select the 16ohms output.

Because the "Classic" LS3/5a has low sensitivity and a nominal 15 ohms impedance, if not using a Valve [Tube] based amplifier rated at 25 watts or more into 16 ohms, we recommend using an amplifier with at least 60 watts output into 8 ohms. This way it is unlikely that the full power setting will be required and this should therefore avoid such clipping damage.

## POSITIONING

Correctly setting up and positioning your Falcon Acoustics LS3/5a's is important.

They should be placed on stands and "toed-in" towards the listening position slightly.

Most users find 600mm (24") stands to be the optimum stand height.

Please note that placing them into a corner will generally make bass output more "boomy". However, positioning them away from walls will give the best results. Furniture and wall coverings also make a considerable difference. We recommend you experiment until the best results in your room are obtained.

## GRILLES

The LS3/5a is different from many loudspeakers as it is designed to give its specified performance with the grille in place. Using the LS3/5a with the grille removed will therefore adversely affect the specified performance.

The front grille Tygan cloth is hand-woven on specialist equipment in England. If the Tygan cloth appears loose over time, it can be re-tensioned - after removing it from the loudspeaker - by gently heating it with a hair-dryer and then allowing it to cool. Take care in doing this, and do not hold the hair dryer against the material - rather gently "wave" the heated air stream from about 200mm - 300mm away depending on the heating power of your appliance, until the desired result is achieved. Never apply too much heat (or use a DIY heat gun) as this could damage or melt the Tygan.

If, for any reason damage is apparent to the front grilles, spares are available from your dealer or direct from Falcon Acoustics.

## CONNECTIONS

Please ensure that you observe left/right integrity and correct polarity with all connections. On each loudspeaker the red coloured terminal is positive and the black coloured terminal is negative, so connect the positive terminals on the amplifier to the positive terminals on the loudspeaker. The gold-plated terminals on the Falcon LS3/5a will accept 4mm banana plugs. We recommend that you use good quality banana plugs and loudspeaker cables.

## LOOKING AFTER YOUR FALCON ACOUSTICS LS3/5a

Your LS3/5a's are veneered using real wood veneers and then lacquered for protection.

They will darken a little and gain depth of colour over time. They should not be left in direct sunlight as this will fade the wood.

Occasional gentle cleaning with a good furniture polish and a soft cloth is all they will need. The front grille's Tygan cloth can be cleaned by removing it from the loudspeaker and either gently using a vacuum cleaner or a clean, soft paint brush, or by dabbing gently with the sticky side of clear tape.

## **FALCON T27 OUTPUT ADJUSTMENT**

The output from the Falcon T27 can be adjusted if required to suit differing room/location conditions. This must be undertaken by your dealer to avoid any warranty problems and to ensure correct performance.

We recommend you discuss your requirements carefully with your dealer or Falcon Acoustics so the correct adjustments can be made. Please note your dealer or Falcon Acoustics keep the correct graded components for this work.

## **SERVICE AND REPAIRS**

Should for any reason your LS3/5a's require service or replacement parts, please contact your dealer or Falcon Acoustics if bought directly from Falcon, who will be happy to help you.

## **SPECIFICATION**

### **System type**

Two-way infinite baffle (sealed box)

### **Frequency response**

70Hz – 20kHz ± 3dB

### **Sensitivity**

83dB for 2.83V @ 1m

### **Nominal impedance**

15 ohm

### **Bass/Midrange driver**

138mm Falcon Acoustics F B110 - graded & matched by computer.

### **Tweeter**

19mm Falcon Acoustics F T27 - graded & matched by computer.

### **Crossover**

Falcon Acoustics FL6/23, graded/precision measured and matched components throughout. Crossover frequency 3Khz.

### **Cabinet**

Selected grade Baltic Birch Ply, Beech battens, internally damped

### **Finishes—all natural wood veneers**

Cherry, Walnut, Rosewood. Special Editions

### **Dimensions**

304mm H x 190mm W x 165mm D. Weight 5.35 kgs each  
11.96" H x 7.48" W x 6.6" D. Weight: 11.8 lbs. each

## **CERTIFICATE OF OWNERSHIP**

This Certificate of Ownership confirms that

---

Is the Registered Owner of  
**Falcon Acoustics**  
**BBC LS3/5a Loudspeakers**  
serial numbers:

---

*which were built in accordance with the Specification of the  
British Broadcasting Corporation  
and tested in accordance with our strict quality control standards.*

**Manufactured under license from the  
British Broadcasting Corporation**

© Falcon Acoustics Ltd 2014

Falcon Acoustics Ltd, Mallories, Pound Lane  
Stanton St. John, Oxford, Oxfordshire  
UK, OX33 1HF  
+44 (0)1865 358001