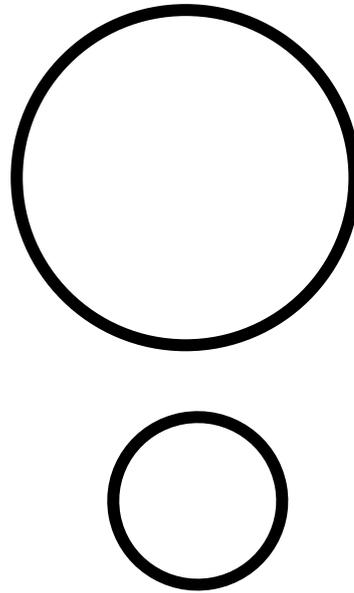


# LS21

LOUDSPEAKER



- OWNERS MANUAL
- INSTRUCTION BOOK

Handcrafted by  
**SUGDEN AUDIO**

## **Introduction**

Thank you for purchasing the LS21 loudspeaker system. We are sure you will be rewarded with many years of listening pleasure.

All Sugden products are manufactured by J E Sugden & Co Ltd, an English company founded over four decades ago in the county of West Yorkshire. Your speakers have been built with the care and enthusiasm only a highly skilled team of enthusiasts can achieve. Each cabinet has been handcrafted in our own workshop using the finest materials available. The veneers are book matched, so each pair of speakers is unique but closely mirrored. Instead of a plain box construction, there are many special design features to enhance the performance. These include mitre locking joints that have been pressed and glued, real hard wood edges and a variety of finishes.

The tapered quarter wave design has been fine tuned with the port at the bottom of the cabinet. The crossover uses high quality audiophile components supplied by Mundorf and is located within the plinth. This keeps the airflow in the cabinet clean. Both drive units have been chosen for their ability to work in a tapered quarter wave design, and have a matched sensitivity of 90dB. The impedance is a friendly nominal 8 Ohms making the LS21 an easy loudspeaker to drive.

## **Caring for you loudspeaker**

As we only use high quality real wood veneers and hard woods (excluding painted options) care should be taken to protect your cabinets. We recommend you treat them like a fine piece of furniture.

Avoid standing next to a heat source such as a fire, direct sunlight may affect the colour over a prolonged period. Keep away from water or any area with a high level of moisture.

Cleaning the cabinets should be carried out with a soft fine duster. The use of any chemicals may spoil the silk lacquer applied to the rear wood surfaces. This lacquer is designed to aid a natural patina over a period of time allowing the real wood to age naturally. The cherry finish has a **clear** silk lacquer and will appear quite light initially. In a few weeks the true colour and beauty of this timber will become visible. The cabinets are waxed prior to despatch.

## **Unpacking**

### **Take care - Heavy item.**

Your loudspeakers should arrive with you well packed and in their original cartons. The packaging has been carefully designed to withstand shipping for export. In the box you should find a guarantee card, eight spikes, eight locking nuts, eight floor protectors and a tommy bar for tightening the spikes and nuts.

### **Installing and adjusting the Spikes**

When the loudspeaker is upside-down you will see four inserts, each with a screw thread. Fasten the locking nut on to the spike thread. Rotate the spikes clockwise until they reach a stop. Place the loudspeaker in its position and check for stability. You can then adjust the spikes to level the loudspeaker by releasing the locking nut. Once the spike is at the correct height and level tighten up the locking nut and spike. Use the tommy bar to tighten up. It is important the loudspeaker is perfectly stable as this will ensure the best performance.

### **Positioning**

Normally a room layout dictates the positioning of a loudspeaker. Most loudspeakers benefit from a certain amount of free space to operate at their best and the LS21 is no exception. We do not recommend putting them against a rear or side wall, as much room as possible should be provided to allow the speaker to breath. The dispersion of the LS21 is good due to the cabinet design and driver arrangement. We do however recommend experimenting with 'toeing in' and raising the front of the speaker as this can improve the sound and create a sweet spot. Moving the loudspeakers even slightly will change the performance so again we recommend spending a little time experimenting. But watch those spikes!

### **Amplifier recommendations**

As the LS21 has a nominal 8 Ohm load with an efficiency of nearly 90dB, amplifier requirement are 10 -100 Watts. The impedance swing is very narrow from low to high making the LS21 easy to drive at all frequencies.

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