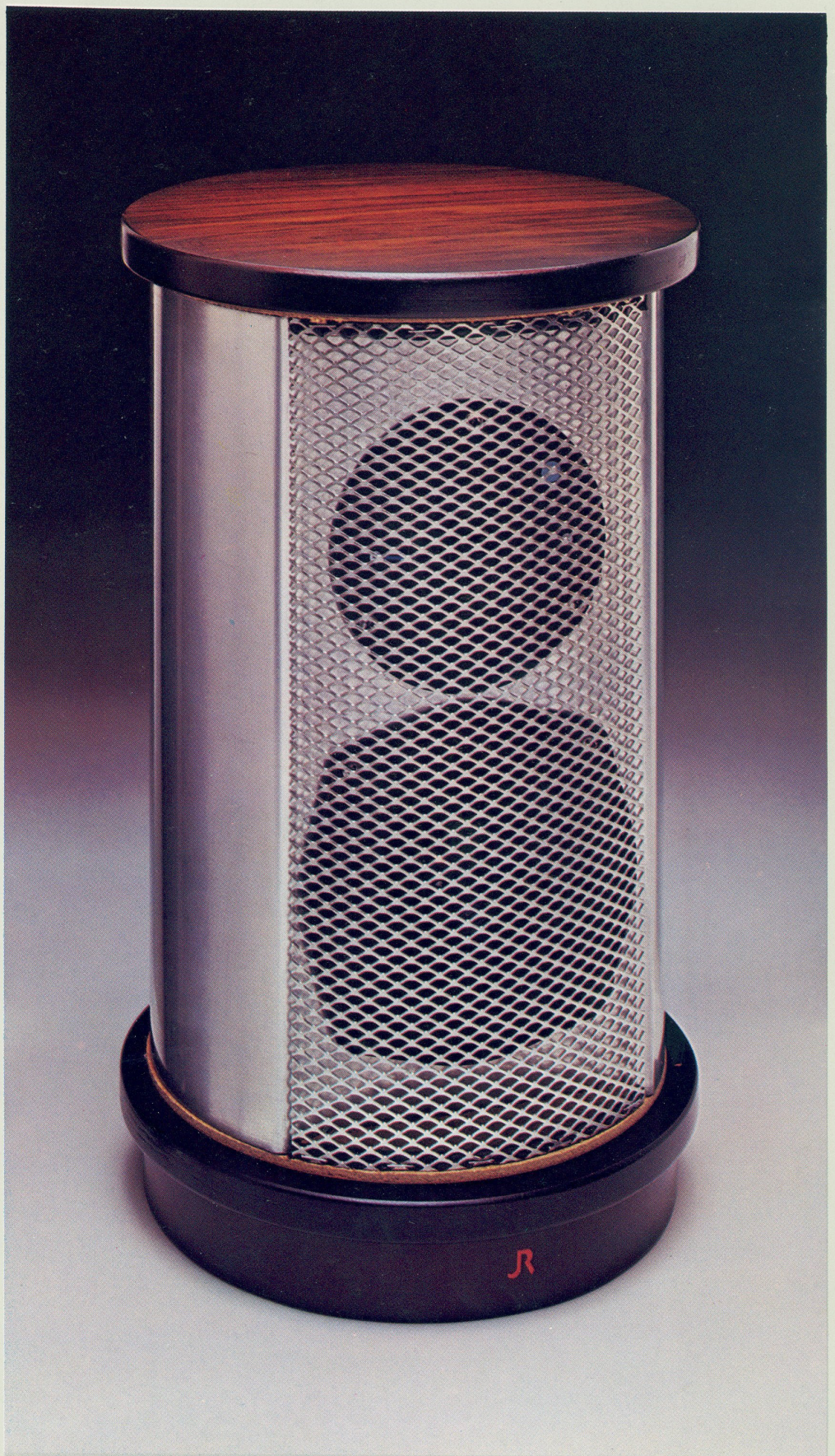




JR
Loudspeakers



JR149 with Declon foam removed.

The Inside Story

A small bass drive unit with a long-throw voice coil gives an improved response by reducing cone breakup in the critical 300Hz to 3kHz range. Good bass response is enhanced by a low system resonance of 64Hz.

A sophisticated 15-element crossover filter network gives the best balance between efficiency, power handling capability and low frequency range. This is mounted externally in a sub-housing to avoid buzzes and rattles from any of the components.

A pre-set control adjusts the high quality tweeter for the flattest response. Very large ferrite inductors and precision-made low loss capacitors of close tolerance virtually eliminate any crossover distortion and provide long-life performance.

Tweeter and bass unit are mounted in the side of the cylinder and protected with an expanded aluminium grille.

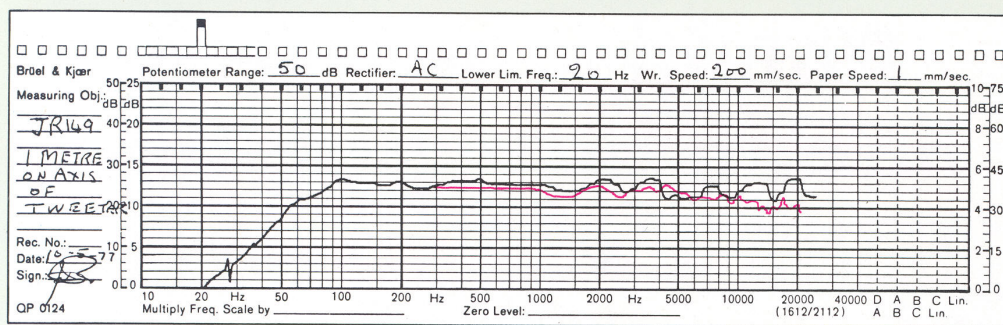
A tensioned steel rod runs through

the enclosure fixing the cap and base which are both covered by decorative wood. The enclosure sits on a spun aluminium base which also contains the crossover network.

Acoustic foam lines the interior with in a layer of anti-resonant bitumen impregnated sheeting. Further resonance suppression is effected by the stiffening bar between the two drive units.

Jim Rogers' extensive experience in audio research and development has embraced high fidelity equipment in its various forms. Product of this expertise, the JR149 is manufactured under scientifically controlled conditions backed by test and measuring facilities of the most modern type. Under the supervision of Jim Rogers at every stage, the JR149 is subject to all the care in manufacture and assembly, technical checking and quality control warranted by a speaker of top hi-fi calibre.





JR149 Response Curves. Black Curve on axis of tweeter at one metre. Red Curve 30° off axis of tweeter at one metre. Measured using gating technique.

The B&K frequency response trace of the JR149, showing on-axis and off-axis response at high frequencies, demonstrates the smooth performance of this novel high-grade design.

The curves shown were taken by the generally accepted standard of the microphone placed at 1 metre from the axis of the tweeter. However, it will be realised that this is far from the normal position for domestic listening. In fact it is very rare that one ever listens to the loudspeaker on the exact axis of the tweeter.

To establish the performance of the JR149 under average home conditions, measurements were made using $\frac{1}{3}$ octave pink noise. The loudspeakers were placed 2'6" high towards the corners of the rooms (the best position determined experimentally on various programme material). The microphone was placed centrally about 10-12ft from the loudspeakers at a height of 3'4" and an angle of 20° (ear level sitting down). In three rooms of different sizes the measurements showed the response to be within the ± 3 dB limits down to a frequency where the room resonances affected the results, usually about 300Hz. The room will lift the lower bass response by some 6-8dB average over the response taken under anechoic conditions, which should be taken into account when interpreting the graph.

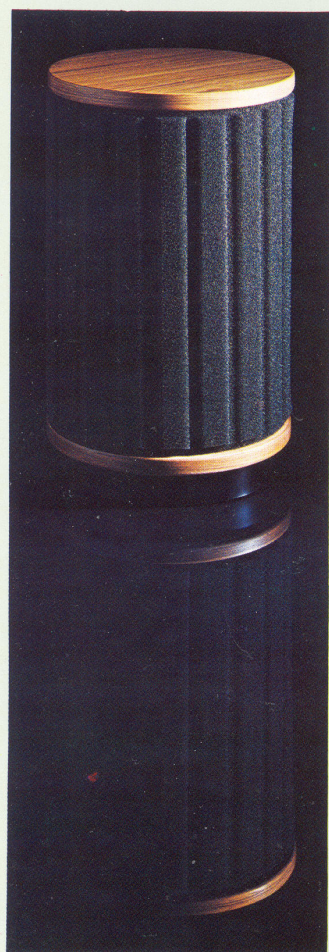
The JR149 therefore performs correctly under domestic conditions as well as in the laboratory.

Important though technical measurements prove to be, however, only careful listening can reveal the merits of a good loudspeaker. Audition of the JR149 provides a fresh and exhilarating experience—a view of musical values and stereo quality which reflects the flair and technical resource underlying the speaker's design.

Top and base finishes are available in teak, walnut, rosewood, yew and aluminium, as well as red, green or brown leather inlaid into rosewood. Black acrylic or white acrylic are optional extras. The cylinder is covered in black Declon foam.

A wall bracket system is available as an accessory for those who do not wish to place their speakers on a supporting surface.





Round Sound Sets New Standards

Designed by hi-fi pioneer Jim Rogers, the JR149 offers exceptional reproduction without the slightest hint of the speaker's small size. Versatility is the keynote. Capable of room-filling sound of the highest quality when used in the most advanced installations, it is the ideal solution for more compact systems where space is at a premium. Although barely 15in high the JR149 produces a big sound source. Furthermore, the strength and quality that is immediately apparent visually is not just skin deep. By using newly developed materials this loudspeaker makes the musical performance more apparent and lifelike, whilst itself becoming less obtrusive in any room surroundings.

Why Round?

Quite simply—it not only looks good but actively aids sound quality. Rectangular speaker enclosures with their flat panels pose many problems to the designer and listener. The resonances of box cabinets make themselves heard in colouration of the sound despite the introduction of various damping methods and the use of internal partitions. The externally smooth contour of the JR149 avoids the defraction effects of the rectangular box which produces an uneven polar response. The JR approach departs radically from conventional cabinet design to provide a combination of small size and high performance.

A Scientific Solution

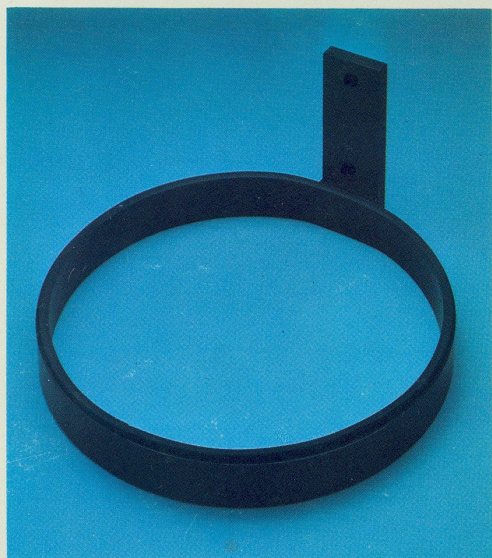
The JR149 has an enclosure of heavy-gauge aluminium in a near-cylindrical shape, which confers on it enormous advantages over the conventional rectangular box. The shape is extremely resistant to vibrations. Standing waves from varying lengths of reflection are of low amplitude and these are damped by a thick layer of acoustic absorbing foam which lines the whole of the inside. The lining also reduces radiation from the cylinder's walls. Each end is fitted with a low resonance fibre disc made slightly concave by the tension of an internal steel rod which further inhibits panel resonance. The bass loud-speaker frame and central steel rod are damped to reduce resonance and therefore colouration.

The smooth external contour of the cylinder allows high frequency response to be unaffected by edge reflections. Polar response also is improved: wide dispersion of output gives a more consistent and realistic stereo image, and for the user this brings an important advantage—more freedom of choice of listening positions in which good stereo can be enjoyed.

Music and speech reproduction of all kinds, including organ music, are of a quality to belie this speaker's small size. In fact with the JR149 the listener is less conscious of the source, much more aware of the realism with which musical sounds are projected in the room.

Due to the accurate matching of all parameters, no undesirable phase effects are exhibited and pink noise tests have revealed a truly remarkable lack of colouration. For sheer fidelity and performance these new speakers attain new standards. Engineering accuracy and carefully controlled production methods ensure that the JR149 is consistently reliable and the specifications quoted are attained. Impeccable design and specification have achieved a breakthrough in audio technology.

Optional Accessory: Wall Bracket



Comprising a black satin aluminium hoop, of 9ins diameter (23cm), designed to fit the base of the loudspeaker so that it can be suspended on the wall. The hoop which is attached to a rigid die-cast wall plate, is lined with soft plastic to cushion the loudspeaker and to avoid undue transmission of vibrations to the wall. Supplied complete with wall plugs and screws for easy fixing.

JR149 Facts and Figures

Frequency range: overall 40Hz-40kHz.

Frequency response: on-axis and up to 30° off-axis ± 3 dB 70Hz-20kHz. ± 4 dB 55Hz-20kHz.

Power handling capacity: 60 watts programme. Suitable for 20-100 watt amplifiers.

Sensitivity: 11V at 500Hz for 90dB SPL at 1 metre.

Impedance: Suitable for outputs of 4 to 16 ohms.

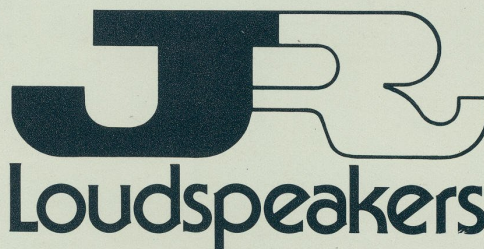
Crossover frequency: 3kHz.

Overall dimensions: 9in diameter (23cm) \times 14 $\frac{5}{8}$ in high (37cm).

Weight: 12lb (5.5kg).

Bass unit: 5 $\frac{1}{8}$ in (13cm).

Treble unit: $\frac{3}{4}$ in (2cm) dome.



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NOTE: Whilst the information given in this leaflet is accurate at the time of printing, production changes are subject to alteration without notice in the course of J.R. Loudspeakers policy of continued research and development which may not necessarily be indicated in the specifications. We point this out to avoid any misunderstanding and would ask you to check with your J.R. Loudspeaker dealer if clarification on any point is required.