

JORDAN SYSTEMS

JXR6 HD SYSTEMS:

For traditional applications, a single JORDAN JXR6 HD is an exceptional drive unit, covering the entire audible range from 80Hz upwards.

The low frequency response of the JXR6 HD has been extended to a remarkably low limit to enable its in-box performance to be directly matched to appropriate high quality sub-woofers. To achieve this, the conventional rear suspension has been omitted and the system resonant frequency and 'Q' values are set primarily by the 'acoustic suspension' provided by the volume of air enclosed within a small box. This technique also provides a significant reduction in low frequency distortion.

This table gives the values of F_b , Q_b and F_{-3dB} , plotted against box volume in liters:

V_b	F_b	Q_b	F_{-3}
4	106	0.66	115
3	113	0.7	114
2	126	0.78	115
1.5	139	0.86	119
1	160	1.0	127

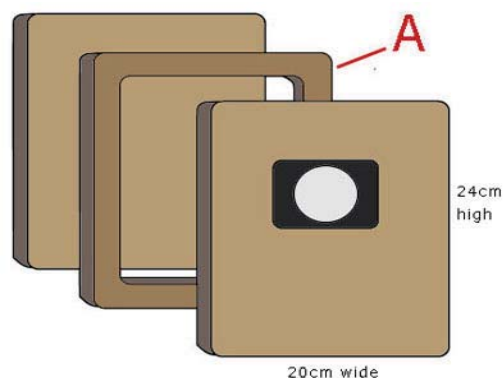
These values are computer modeled, based on unfilled boxes and will be modified by the inclusion of damping materials.

The best compromise is a 3 liter closed box, giving an F_{-3dB} of 114Hz. These sizes are for a single drive unit. The enclosure could be sized to accept a further three units and enable you to upgrade to a Linear Array at a later date.

Alternatively, the JXR6 HD and it's enclosure can be integrated into a bass system, either by incorporating into the bass enclosure (with allowance for the JXR6 HD's enclosure volume) or mounted on the top of the bass enclosure (this is more versatile and decouples the JXR6 HD from the bass).

One suggested design for a stand-alone system is shown below, made from 12mm ply or MDF. Two panels are cut for front and back - the sizes shown below are external. Then a matching frame (A) is cut to the same external dimensions. The hole inside the frame should be 15cm (h) x 19cm (w). Five frames, clamped between the front and back panels, will give approximately 2 liters. The number of frames can be altered to match the volume required. The hole inside the frames could be cut in an irregular shape, to help break up internal reflections.

The JXR6 HD should be inset to be flush with the front panel and the outer edges of the cabinet rounded. Place four small pieces of dowel at irregular points between the front and back panels to brace the enclosure and the



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JORDAN Linear Array

This definitive statement of JORDAN technology is, as would be expected, deceptively simple in concept.

The system is based upon a vertical linear array of four JORDAN JXR6 HD drive units for each channel. Their rectangular chassis format permits close stacking. The units are driven with equal power and full bandwidth. Bass 'roll-off' components are unnecessary and, indeed, detrimental to the performance of the system.

For optimum performance, the arrays should be wall mounted in front of the listening area. They may be up to 15 feet apart and the wall space between them should be unobstructed and preferably lined with a soft covering.

The linear array generates near-cylindrical wave formations which project along the wall and develop a continuous full width soundstage between the arrays with remarkable image stability regardless of listening position within the room.

Together with the intrinsic ability of the system to preserve low level detail this image stability will, program permitting, sonically 'open up the wall' to reveal an unprecedented spatiality and depth of live stage realism.

The JORDAN Arrays should be used in conjunction with a suitable bass system, such as our powered sub-woofer. If using a passive bass system, low pass roll-off should be achieved with a series 9mH inductor. System power rating is determined by the bass system.

Technical background to the Linear Array

Conventional loudspeakers radiate sound randomly in all directions where the perceived loudness is proportional to the inverse square of the distance between the loudspeaker and the listener. This means that if the listener moves a little to the left or right from a central 'hot seat' position, images cluster toward the nearest loudspeaker. A cylindrical wave front has an inverse linear loudness/distance relationship which maintains far greater image stability.

The spatiality and 'depth' of the soundstage is a result of the low level detail intrinsic to JORDAN foil cone technology, and the absence of the masking influences of wall reflections and crossover circuitry.