



## TECHNOLOGY DESCRIPTIONS

### 7.1 High Definition Bass Management™

7.1 Channel High Definition Bass Management™ is built into some models of the subwoofer range. It is compatible with all audio formats from mono through to the latest 7.1 High Definition systems. Eight channels of analog, or an optional 8-channel, 24-bit, 192 kHz digital input card, ensures flexible interconnectivity for modern studios. Four-mode LFE channel processing ensures maximum compatibility across all formats. 4th order crossovers and flexible acoustical controls allow for seamless system integration. Built-in volume control allows for centralized system adjustment independent of the source.

### Accelerated Heat Tunneling™

Accelerated Heat Tunneling™ is a technique designed to ensure equally effective cooling of the amplifiers, whether the cabinet is mounted vertically or horizontally. The “funnel effect” accelerates cool air into the lower heatsink aperture and expels heated air from the upper heatsink aperture. The heatsinks can be cleaned without having to open the electronics panel: simply blow clean compressed air into the vents on the side of the electronics panel.

### Mathematically Modeled Dispersion™

The midrange (if present) and treble driver are mounted into a Mathematically Modeled Dispersion™ waveguide (MMD™). The MMD™ is made from acoustically excellent LRIM™ materials. It has been mathematically modeled and experimentally verified in an anechoic chamber to give optimum control of the directivity of the midrange and treble drivers. The benefits are increased driver loading, reduced edge diffraction and room reflections, a smoother power response, and a wide useable listening area. The result is a reduced audio distortion and a corresponding sound quality improvement. The MMD™ has 80–90° x 60° dispersion and, in the case of large models, can be rotated if the loudspeaker is to be mounted horizontally.

### Plane Wave Bass Array™

A benefit of multiple subwoofer systems is the possibility to reduce the side wall interaction thereby improving consistency in the side-to-side low-frequency reproduction. This is important in studio applications where the sound engineer needs to move left and right along the mixing console, or where there are multiple listening positions along a large format mixing console, for example in the movie industry. The subwoofers should be positioned along the front wall to generate a plane wave down the room. This is called a “Plane Wave Bass Array™” (PWBA™). The required number of subwoofers depends on the width of the room: wider rooms, more subwoofers. Two to four small subwoofers are recommended for small rooms and three to four large subwoofers for larger rooms. The subwoofers should be positioned along the front wall with a spacing of 70 cm (2.5') to generate a plane wave down the room. Refer to the “[Product Selection Guide](#)” for suggest system solutions.