



Bass-Focus Technology

Bass-Focus technology is based on the acoustical principle that the natural dispersion angle of a radiator is proportional to the ratio of the wavelength of the wave being radiated to the physical dimensions of the radiator. This relationship shows that in order to reduce the dispersion angle of low-frequency energy the dimensions of the radiator need to be increased.

With this principle in mind, consider that the radiating membrane of our panels is a single film that has been divided into a series of independent smaller radiating sectors. The area of each of these sectors follows a formulation that equalizes the low-frequency response of the panel, which we refer to as distributed-resonance. The arrangement of the radiating sectors in our panels before Bass-Focus had the lowest-frequency sector at the bottom of the panel and the sectors became smaller (less radiating area) in a graded fashion toward the top of the panel. The Bass-Focus principle places identical lowest-frequency sectors at both the bottom and the top of the panel. Then, the radiating area of the subsequent sectors become smaller, from both directions, toward the middle of the panel. Thus, the smallest radiating sector is at the middle of the panel whereas formerly it was at the top of the panel.

The new Bass-Focus arrangement, having the lowest frequency sectors at both the top and bottom, simulates a low-frequency source having a dimension the size of the height of the panel rather than just a single sector at the bottom of the panel as was the case previously. This makes the panel more directional at lower frequencies in the vertical plane, which increases low-frequency energy density at the listener's location. In addition to this another benefit is realized since the amount of radiating area at lower frequencies is doubled compared to the previous panels, which in turn doubles the radiated energy.

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