



**EMERALD  
PHYSICS**

## CS2 Controlled Directivity Dipole Loudspeaker

*"We must leave behind the old ways and discover the way forward"*

This principle has been our guiding philosophy since we first started our investigation into open baffle technology in 1988. Almost 20 years later, Emerald Physics has released its first serial production design: The CS2 Controlled Directivity Loudspeaker.

Along the way, many other important technologies have been integrated into the original platform and as DSP technology has evolved, we now have a complete, optimized loudspeaker solution that at once generates a breathtakingly realistic sonic picture, while operating mostly independent of the room's acoustic signature.

The intersection of 4 technology elements combine to transcend conventional loudspeaker designs:

- 1. Open-Baffle Dipole** - Difficult to design, but no other low frequency propagation technique sounds so natural and eliminates speaker placement problems so effectively.
- 2. Studio Waveguide System** - Precision directivity control and acoustic impedance matching provide outstanding imaging and sound quality. The room becomes largely non-relevant. The compression driver / 300mm (12") waveguide generates a very wide dynamic range.
- 3. DSP** - The included digital signal processing computer controls many aspects of the loudspeaker's behavior such as amplitude response, active crossover, and time alignment.
- 4. Professional Components** - Ultra-dynamic, low mass professional transducers effortlessly reproduce the full dynamic envelope of the music. The enormous radiating area of the twin 380mm (15") low-mid frequency drivers, operating below 1kHz, replicates the fullness and authority of vocals and large instruments.



**CS2**

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### CS2 Loudspeaker Specification

System Type: 2-Way, Active, Dynamic Loudspeaker  
Dipole below 1kHz, Monopole above 1kHz  
Controlled directivity design, DSP controlled

Impedance:  
Minimum: 4 Ohms  
Maximum: 9 Ohms  
Woofer drivers: 4 Ohms composite nominal value  
Treble driver: 8 Ohms nominal value

Mid • Treble Driver: (1) 1 inch (25mm) exit compression driver  
(1) 12 inch (300mm) diameter acoustic waveguide

Mid • Woofer Driver: (2) 15 inch (380mm) diameter pulp fiber cone

Sensitivity: 100dB 2.83V @ 1M @ 1kHz

Design Axis: Waveguide Axis - 1 Meter

Crossover: DSP based, active network at 1kHz  
Linkwitz-Riley 48dB/octave - symmetrical

Amp configuration: Bi-amp (amplifiers not included)

Signal Processing: outboard 4 channel DSP controller - factory settings installed

Frequency Response: 20Hz-22kHz -3dB down points (with DSP correction)

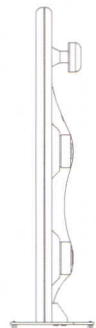
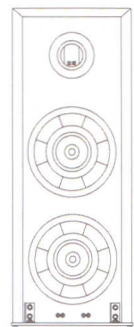
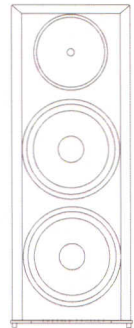
Finish:  
Body: Black cloth  
Base: Silver painted aluminum billet

Dimensions:  
Height: 48 inches (1220mm)  
Width: 18.5 inches (470mm)  
Depth: 2.5 inches (64mm) - baffle  
6 inches (152mm) - total

Net Weight: 62 lbs. (28kg) each

Shipping weight: 80 lbs. (38.5kg) each - shipping carton contains one loudspeaker

Shipping carton: Double-walled, corrugated - 54 x 25 x 13 inches



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