

Solace Audio Technology- cinema monitor CM 12/4



Solace Audio's CM 12/4 is a next gen two way active cinema monitor, designed from the ground up to showcase seamless 3D sound with Dolby Atmos panning and mixing.

Features & Benefits

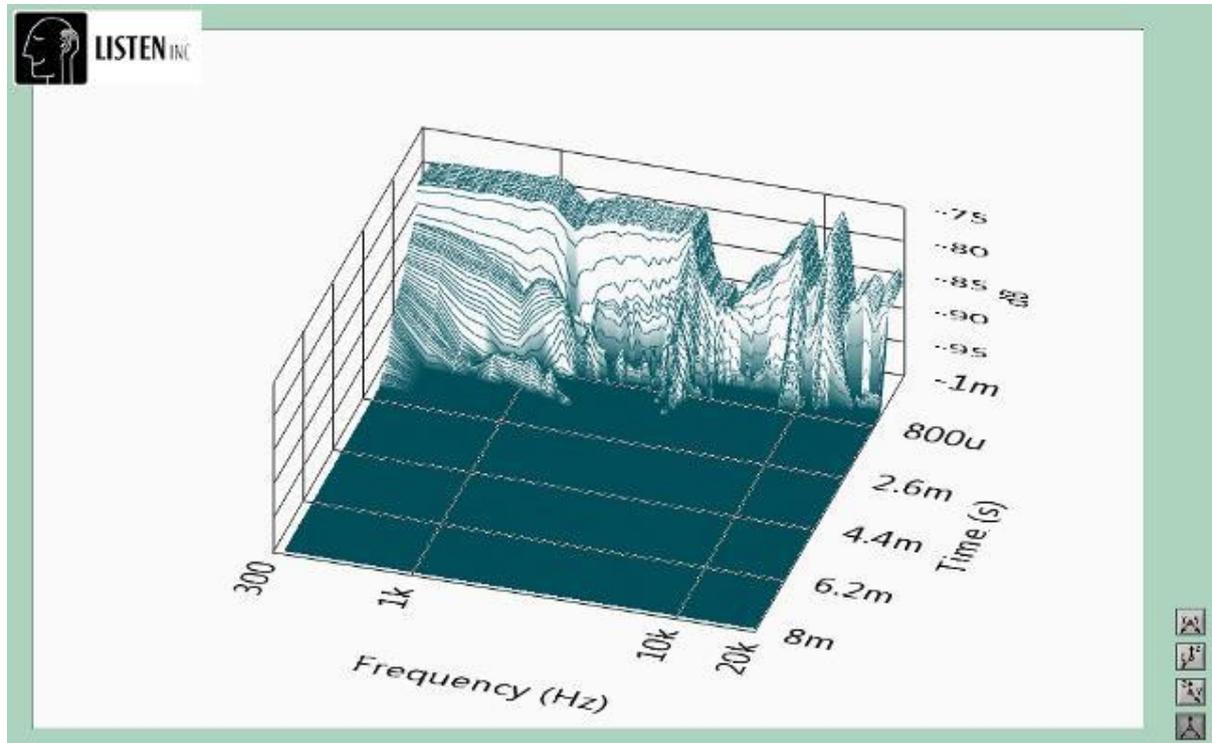
Featuring 4 of our unique silk surround Bending Mode Radiators (BMR) with the fastest energy decay & most accurate time domain performance of any wide bandwidth driver available, they create the most accurate & believable 3D sonic experience to date.

Fig 1 below shows a CSD or energy decay time of less than 1 millisecond. Conventional wide bandwidth drivers lag way behind with 20ms to 50ms energy decay time.

Our drivers incredible speed eliminates the ghost echo or "mass on a spring" oscillation distortion which cause blurred images and smeared transients created by slower conventional drivers. How quickly a driver **stops** is even more important than how fast it starts.

Combined with Dolby Atmos processing the result is truly greater than the sum of its parts....Natural & accurate 3D sound with no time domain distortion or frequency response colourations....Cinema audiences will be astonished & delighted!

Fig 1 – Energy Decay or Cumulative Spectral Decay (CSD) graph



This 3D sonic accuracy also benefits the industry at the mixing / mastering stages when our CIA monitors are used in production of music and movie sound tracks.

To quote Rob Harris <http://www.rob-harris.co.uk/index.html> of **Jamiroquai** :

“Solace Audio’s LA 16’s are really special, they have great tonal accuracy & huge dynamic range that I need for studio mastering plus a unique ability to make the music so believable with rock solid sound staging and natural vocals. Instruments have a beautiful texture & even low level details remain stable and clear regardless of volume, when the vocals kick in it sounds like she has jumped through the glass and is singing to me!”

The Tech

Solace Audio monitors reproduce sounds in the same way our ear/ brain identifies them, using a “bending mode” principal not a “pistonic” motion. The energy decay time of bending modes is an order of magnitude faster than an equivalent pistonic motion driver. This speed is absolutely key to enabling the brain to accurately decode sounds.

In order to hear any sound at all our ear / brain must detect and decode the compression and rarefactions in air pressure. By rapidly comparing the different arrival times at each ear we calculate the location of sounds. After further analysis of the sound the brain then identifies what that sound is. Further information on this key subject is available on request.

For sub bass frequencies our 12 inch bass driver features an advanced Neo motor and 4 inch voice coil, over 9mm Xmax linear travel with 2Kw power handling. The driver parameters have been tuned for a perfect 0.707 Q in a compact sealed enclosure with absolute accuracy down to 28Hz.

Each two channel speaker has over 1,000 watts of power amplification, including our phase linear class A B power amplification with an astonishing power bandwidth of 4Hz to 2.4 **MHz**....*Not* KHz!

The amplifiers spectacular phase linearity is the perfect match for our phase linear BMR drivers....A technically superior combination, the results are sublime.

Options include our cutting edge DAC's, A to D and our bespoke DSP designed by Professor Patrick Gaydecki of Manchester University. This cutting edge DSP includes a suite of digital controls, phase linear mastering grade Eq and comprehensive connectivity.

Intelligent design

We can also offer the option of WiSA wireless connectivity. Full 24 bit 192KHz bandwidth over all channels with less than 5Ms delay. When combined with our DSP & active power amplifiers each loudspeaker becomes an intelligent device able to adapt to its surroundings & optimise its performance in any type of acoustic environment i.e. size, shape, reverb time, construction, furnishings etc.

Our double roll silk surround BMR's are tuned for a 0.707 Q at the precise crossover point to bass driver...Bass only operates below the system resonance....BMR's only operate above the system resonance.

This unique design avoids any driver having to deal with the huge increase in impedance at system resonance. Our “Zero Resonance Loading” (ZRL) ensures a perfectly even impedance loading for all drivers, this is major advantage and simply not possible with conventional drivers and loading techniques.

The numbers

A pair of CM 12/4's will hold 98dB continuous SPL at 1 meter with 104dB peaks.

Stackable / multi cabinet options increase available SPL's to 120dB continuous with 126dB peaks, at 1 meter.

On axis frequency response with inbuilt DSP: 28Hz to 20KHz within +/- 1dB

Off axis frequency response at all angles up to 140 degrees (+/- 70 degrees): 28Hz to 18KHz +/- 3dB.

Dimensions: 486mm 484mm 250mm (WHD).

Weight 18Kg per cabinet including wall mounting bracket.