# HEAR THE DIFFERENCE

Where do you find the most carefully considered, technically brilliant, wholly immersive sound?

Probably not in concert halls, or even in recording studios. These days you'll find it in cinemas.

Christie Vive Audio is a complete solution that's been built for one purpose, to bring premium cinema sound to any theatre - and to any seat in any theatre.

It combines the superior performance of planar ribbon drivers with line array loudspeaker design and matches them with powerful Class D amplification to immerse audiences in the latest highly-detailed cinema audio formats.

It's the ultimate cinema sound experience, and it's been designed so that every seat will benefit from pure, directional, sound that makes movies come alive.

Cinema audio is not rock and roll audio and it's not concert hall audio. It has a very different purpose; one that perhaps only a company fully immersed in the business of making and delivering movies fully appreciates.



"Show these gentlemen to the best seat in the house... Un monstre à Paris. Directed by Bibo Bergeron, 2011

# **VIVE AUDIO**

Which is faster? Sound or light? The unexpected answer – in the human brain at least - is sound. Your brain reacts to sound in point-zero-five seconds – It takes it four times that to react to light.



LA4/S215



Even though we think of vision as our primary sense, hearing is equally but subtly just as important. It once kept us safe from tigers in the dark, it's still the sense we rely on first when interpreting the world. Or a movie.

Evolution has seen to that. And that has huge implications for cinema. It means cinema sound isn't just about clear dialogue and subwoofer explosions. It isn't secondary to what's on screen, it's what our brains are hard-wired to process first. Watching films has more to do with listening than anyone ever imagines; in many ways sound extends film beyond the screen, it's the true third dimension. And that's what makes Vive Audio so important. Christie Vive Audio certainly makes dialogue clear and explosions rumble - and does so very well. But its real genius is that it does so for every audience member in every seat, front row to back, side aisle to center. It leaves no blank spots, no missing moments, everyone gets the film they paid for, the full story, fully delivered, just how the director intended.

Achieving this means using some advance audio techniques. We use ribbon driver technology because, unlike compression drivers, their low mass reacts instantly to audio signals. Clarity is enhanced, distortion is much lower, transient responses are ultra fast, and there's no high-frequency breakup. Everything sounds more natural.

It's also why we use Vive Audio cinema amplifiers to complement the high-performance features of those ribbon drivers. High-power output and efficiency for dynamic, detailed sound.

Finally, our line array loudspeakers, known for their coverage and directionality deliver every decibel. To every customer. In every seat.



## LA SERIES

Small- to medium-screen auditoriums | Immersive | Premium large format | Event cinema | Screening rooms



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Advanced loudspeakers that are the ideal platform for today's immersive cinema audio applications. Comprising line array, surround and ceiling surround loudspeakers, the LA Series can be configured to support all DCI-specified distributed and immersive audio formats. And you can combine certain models with our S115 or S215 subwoofers to create full-range screen channel systems or corner surrounds.







LA5

145-122106-01 Fixed arcuate ribbon driver

line array, 2-way,

bi-amplified

#### Key features

#### Line array loudspeakers



Planar ribbon driver technology ensures perfect timbre-matching across the lineup



Dramatically higher RMS to peak max



SPL ratio than compression driver systems

Approximately four times the optimal listening area than typical systems



System type

LA1

145-106108-03

Fixed arcuate ribbon driver line array, 2-way, passive, in a single sealed enclosure

LA3i

145-013105-01

LA4

145-120104-01



Meets a minimum 5:1 safety rating for installation



Versatile installation capabilities with a variety of M8 and M10 fittings

کک) Backed by a limited 5-year warranty

	5			design, in a single sealed enclosure
Driver components	HF: 9 x 3.5" with Kapton® diaphragm and Neodymium magnets MF: 6 x 5.25" paper/ Kevlar composite mid- bass cone drivers	HF: 12 x 3.5" with Kapton diaphragm and Neodymium magnets MF: 8 x 5.25" paper/ Kevlar composite mid- bass cone drivers	HF: 8 x 6.5" with Neodymium magnets MF: 8 x 6.5" paper/ Kevlar composite mid-bass cone drivers	HF: 12 x 6" with Neodymium magnets MF: 12 x 6.5" paper/ Kevlar composite mid- bass cone drivers
Maximum SPL	123dB SPL continuous, 135dB SPL peak	127dB SPL continuous, 128.8dB SPL peak	131dB SPL continuous, 143dB SPL peak	131dB SPL continuous, 143dB SPL peak
System coverage	120° horizontal / 30° vertical dispersion	100° horizontal / 40° vertical dispersion	120° horizontal / 40° vertical dispersion	120° horizontal / 50° vertical dispersion

Performance specifications are typical. Due to constant research, specifications are subject to change without notice.

#### Line array loudspeakers

Make every seat in the house the best seat. Line array loudspeakers are renowned for their ability to produce superior coverage and directionality meaning your customers benefit from impeccably detailed audio no matter where they sit in the auditorium.

#### Typical listening area comparison







System type

Coaxial parabolic ribbon driver line array, 2-way, passive, in a single ported enclosure

Driver components	HF: 6 x 3.5" with Kapton® diaphragm and Neodymium magnets MF: 4 x 5.25" paper/ Kevlar composite mid- bass cone drivers	HF: 4 x 6" with Kapton diaphragm and Neodymium magnets MF: 4 x 6.5" paper/ Kevlar composite mid-bass cone drivers	HF: 12 x 3.5" with Kapton diaphragm and Neodymium magnets MF: 8 x 5.25" paper/ Kevlar composite mid-bass cone drivers	HF: 8 x 6" with Kapton diaphragm and Neodymium magnets MF: 8 x 6.5" paper/ Kevlar composite mid-bass cone drivers	HF: 12 x 6" with Kapton diaphragm and Neodymium magnets MF: 12 x 6.5" paper/ Kevlar composite mid- bass cone drivers
Maximum SPL	119.6dB SPL	119.6dB SPL	124.5dB SPL	130dB SPL	131dB SPL
	continuous,	continuous,	continuous,	continuous,	continuous,
	131dB SPL peak	131dB SPL peak	136.5dB SPL peak	142dB SPL peak	143dB SPL peak
System coverage	120° horizontal /	128.5dB SPL	120° horizontal /	120° horizontal /	120° horizontal /
	120° vertical	continuous,	120° vertical	100° vertical	100° vertical
	dispersion	140.5dB SPL peak	dispersion	dispersion	dispersion

### Ribbon driver technology

Extremely low in mass, ribbon drivers react instantaneously to audio signals providing greatly enhanced clarity, dramatically reduced distortion, and ultra-fast transient response, eliminating the effects of high-frequency breakup and power compression. Speech, effects, music, and alternative content sound more natural and lifelike for an enhanced listening experience that audiences notice.

#### Premium cinema sound

Christie Vive Audio" LA Series loudspeakers feature extremely fast transient response times thanks to low-mass planar ribbon driver technology. This eliminates the effects of high-frequency breakup and power compression while delivering dramatically reduced distortion, enhanced intelligibility, and high dynamic range for the most accurate reproduction of the original source material.





## LS SERIES

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Small- to medium-screen auditoriums | Immersive | Post-production | Boutique cinema | Screening rooms







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Cost-effective cinema line source loudspeakers that provide accurate reproduction of high dynamic range and high resolution DCI-specified audio for small-to-medium sized theatres. With advanced planar ribbon driver technology, the LS Series includes four-way screen channel systems with dual planar ribbon tweeters and two-way surround channel loudspeakers.





Line array technologies for cinema sound whitepaper Find out which technology building blocks form the best foundation for the accurate reproduction of today's leading audio formats



#### Key features



Planar ribbon drivers provide better RMS-topeak max SPL ratio than compression driver systems for enhanced voice intelligibility, superb sonic balance and less distortion



High-efficiency design enables the use of lower power amplilfiers – for overall cost-savings



Acoustically isolated and extensively damped to minimize driver interaction and enhance small-level signal resolution

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Rotatable MF-HF waveguides on screen channel loudspeakers increase installation options

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Higher resolution audio and dynamic range reproduction than standard cinema audio loudspeaker systems



Sophisticated crossover design with frequency shading technology and optimized acoustic integration of transducers provide a wide horizontal dispersion and controlled vertical dispersion pattern

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Backed by a limited 5-year warranty



Screen channels

**LS1** 145-170109-01

System type	Four-way, bi-amp, ported enclosure			
	HF: high output 2 x 3″ planar ribbon with Kapton® diaphragm and Neodymium magnets	HF: high output 6" and 3" planar ribbon with Kapton diaphragm and Neodymium magnets		
Driver components	MF: 6.5″ paper/Kevlar high efficiency midrange with 38mm edgewound voice coil	MF: 6.5″ paper/Kevlar high efficiency midrange with 51mm edge wound voice coil		
	LF: 15" paper composite cone driver with 100mm diameter voice coil	LF: 2 x 15″ paper composite cone driverwith 100mm diametervoice coil		
Maximum SPL	123dB SPL continuous, 126dB SPL peak	126.5dB SPL continuous, 129dB SPL peak		
System coverage	100° horizontal / 40° vertical dispersion			

LS2

145-172101-01

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### Surround loudspeakers





**LS1S** 145-171100-01

System type

Coaxial parabolic ribbon driver line array, 2-way, passive, in a single ported enclosure

Driver components	HF: 3.5" planar ribbon driver with Kapton® diaphragm and Neodymium magnets LF: 8" paper/Kevlar composite cone with 51mm diameter edge wound voice coil	HF: 3" planar ribbon driver with Kapton diaphragm and Neodymium magnets LF: 8" paper/Kevlar composite cone with 51mm diameter edge wound voice coil	HF: 3" planar ribbon driver with Kapton diaphragm and Neodymium magnets LF: 10" paper/Kevlar composite cone with 64mm diameter edge wound voice coil	2" annular ribbon HF driver with Kapton diaphragm, Neodymium magnets and 1.2" exit coaxially mounted within 12" paper Kevlar composite cone driver
Maximum SPL	114dB SPL continuous, 117dB SPL peak	116.5dB SPL continuous, 119dB SPL peak	121dB SPL continuous, 123dB SPL peak	130dB SPL continuous, 142dB SPL peak
System coverage	100° horizontal / 50° vertio	cal dispersion	,	100° spherical cone

### Cost-effective, high-performance cinema audio

Featuring planar ribbon drivers, Vive Audio® LS Series provides dramatically higher RMS-to-peak max SPL ratio than compression drivers, improving performance and intelligibility. Rotatable waveguides, slim enclosures, and multiple mounting options make the LS Series easy to discreetly install into any space-constrained auditorium







## **S SERIES**

Mainstream cinema | Immersive auditoriums | Post-production | Premium large format | Screening rooms



#### ı|**∐lı ı**|∐lı &27Hz &20Hz

Christie Vive Audio® S Series subwoofers offer low distortion, low power compression, and minima turbulence to deliver extended low frequency response at extremely high output levels for powerful and deep bass. S118LP and S218LP models are engineered for the reproduction of Low Frequency Effects (LFE). Combine the S115 and S215 with our LA Series loudspeakers to create full-range audio systems that can be used as screen channels or as corner surrounds for bass management. Integrated fly points offer installation flexibility.









**S115** 145-108100-01



**S215** 145-103105-01



**S118LP** 145-180100-01



**S218LP** 145-181101-01

Application	Bass management	Bass management	Low frequency effects	Low frequency effects		
System type	Subwoofer, ported enclosure, with EBS tuning					
Driver components	1 x 15" low frequency driver with dual 4" voice coils and long linear excursion	2 x 15" low frequency drivers each with dual 4" voice coils and long linear excursion	1 x 18" low frequency driver with dual 4" voice coils and long linear excursion	2 x 18" low frequency drivers each with dual 4" voice coils and long linear excursion		
Frequency response	27-300Hz @ -10dB 30-250Hz @ -6dB	27-300Hz @ -10dB 30-250Hz @ -6dB	20-250Hz @ -10dB 24-200Hz @ -6dB	20-250Hz @ -10dB 24-200Hz @ -6dB		
Maximum SPL	125dB SPL continuous, 137dB SPL peak	131dB SPL continuous, 143dB SPL peak	127.5dB SPL continuous, 139.5dB SPL peak	133.5dB SPL continuous, 145.5dB SPL peak		
Sensitivity	1W/1m: 97dB (40-150Hz)	1W/1m: 100dB (40-150Hz)	1W/1m: 97dB (40-150Hz)	1W/1m: 100dB (40-150Hz)		
Power handling	600W (AES) continuous 1200W (IEC) short term	1200W (AES) continuous 2400W (IEC) short term	1000W (AES) continuous 2000W (IEC) short term	2000W (AES) continuous 4000W (IEC) short term		
Rated impedance	8 ohms	4 ohms	8 ohms	4 ohms		

#### Key features



High cubic displacement cabinet, heavily crossbraced, ported and tuned



Each driver has a discrete, internal ported enclosure for optimal performance



Extra-large port area with rounded edges for minimal air turbulence noise



S115 and S215 models are overhead rated for safe installs and use integrated fly points



Backed by a limited 5-year warranty





## **POWERSOFT AMPLIFIERS**

Mainstream cinema | Immersive auditoriums | Post-production | Premium large format



Drawing from Powersoft's pioneering developments, the Duocanali and Quattrocanali amplifiers offer truly amazing sound quality and pair exceptionally well with our Vive Audio<sup>®</sup> loudspeaker range. Featuring the latest advances in switched-mode technology, Class-D design, and high-power capabilities, these class-leading, energyefficient amplifiers also feature numerous developments including Smart Rail Management technology, which helps lower overall power consumption in a compact 1RU chassis design.

Discover more	F
<u>Quattrocanali Series</u> Key features and specifications of the Quattrocanali Series	ß
Duecanali Series Key features and specifications of the Duecanali Series	Ľ
<u>Cinema audio: How new</u> technologies are helping realize DCI audio	Ľ
specifications whitepaper An integrated systems approach ca enable cinemas to realize the poter of the DCI audio soundtrack	n ntial



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		<b>DUECANALI</b> 4804 145-051118-XX	<b>OUATTROCANALI</b> 1204 145-048114-XX	<b>QUATTROCANALI</b> 2404 145-045111-XX	<b>OUATTROCANALI</b> 4804 145-042118-XX	
Output power channel	per	3000W @ 2 Ω 2400W @ 4 Ω 1250W @ 8 Ω	400W @ 2 Ω 300W @ 4 Ω 300W @ 8 Ω	800W @ 2 Ω 600W @ 4 Ω 600W @ 8 Ω	1500W @ 2 Ω 1200W @ 4 Ω 1200W @ 8 Ω	
Bridge mode		6000W @ 4 Ω 4800W @ 8 Ω	800W @ 4 Ω 600W @ 8 Ω	1600W @ 4 Ω 1200W @ 8 Ω	3000W @ 4 Ω 2400W @ 8 Ω	
Max unclipped voltage @ 8 Ω mode	d output Bridge	142V peak	70V peak	100V peak	139V peak	
Current	Current 80A peak 33A peak 45A peak					
Power supply		Universal, regulated switch mode with Power Factor Correction (PFC)				
Nominal powe requirement	er	100-240V +/- 10%, 50-60H	łz			
Operating vol	tage	60V - 264V	90V -264V	90V -264V		
Power consumption	Idle	1115V: 30.3W - 0.34A 230V: 31.0W - 0.32A	115V: 31.0W - 0.45A 230V: 31.8W - 0.26A	115V: 31.0W - 0.45A 230V: 31.8W - 0.26A	115V: 31.0W - 0.47A 230V: 32.0W - 0.28A	
	1/8 of max power @ 4 Ω	115V: 777W - 7.0A 230V: 753W - 3.9A	115V: 227W - 2.1A 230V: 251W - 1.4A	115V: 406W - 2.1A 230V: 438W - 2.39A	115V: 823W - 7.7A 230V: 840W - 4.3A	
Operating temperature range		32-113 F (0-45 C)				
Thermal dissipation	Idle	115V: 103 BTU/h 230V: 106 BTU/h	115V: 107 BTU/h 230V: 109 BTU/h	115V: 107 BTU/h 230V: 109 BTU/h	115V: 106 BTU/h 230V: 107 BTU/	
	1/8 of max power @ 4 Ω	0115V: 606 BTU/h 230V: 522 BTU/h	115V: 262 BTU/h 230V: 345 BTU/h	115V: 361 BTU/h 230V: 361 BTU/h	115V: 759 BTU/h 230V: 840 BTU/h	

#### Key features

Universal switch-mode power supply up to 4000VAC tolerant with Power Factor Correction

Fixed frequency switchmode output stage for highgrade sound accuracy

Fully protected circuit design with thermal protection

Standard Phoenix® connectors: analog audio outputs, aux supply, alarms, and GPIO

Easy to set up - Userselectable gain/sensitivity with digital gain-attenuator control, built-in defeatable clip limiters and gate selection per channel **Compact 1RU size** for reduced rack cost and space

VHF protection protects loudspeakers against non-audible, strong, non-musical high frequency signals