JBL

CINEMA SOUND SYSTEMS

CINEMA

JBL Cinema Sound Systems, A Distinct Advantage.

At JBL, we dedicated ourselves to audio perfection long before digital and space-age sound effects made it essential. So its only natural that this generation of JBL Cinema Sound Systems meets the needs of sound designers and theater owners head-on, delivering the finest sonic reproduction possible. And that's a good thing. Because, at the same time the soundtracks are being created with more complexity and dimension, the theater going public is rapidly becoming more sophisticated in their expectations for a high quality motion picture experience.

Warner West End, London, England. All theaters in London's famed Leicester Square rely on JBL Cinema Systems.

Today, you will find JBL components hard at work throughout the entire motion picture production chain from scoring, editing and screening facilities right into the exhibition environment. Wherever sonic quality is of primary concern, you will find JBL components and systems performing flawlessly to the most stringent requirements imaginable.

Every JBL Cinema Sound Systems component and enclosure has been designed to deliver full frequency sound to every seat in the house. Unlike the tendency of conventional horns to narrow their coverage pattern as frequency rises, our patented Bi-Radial® horns maintain their wide coverage pattern at virtually all frequencies. Further improvements in performance are achieved by our new series of high-frequency compression drivers. Easily distinguishable from more traditional designs, our drivers utilize a pure titanium diaphragm embossed with our patented three-dimensional diamond-pattern surround, which offers greater strength and increased

flexibility. The result is significantly improved high frequency performance, with extended bandwidth and lower distortion.

Low frequencies benefit from the same attention to design and efficiency. Our exclusive Vented Gap Cooling (VGC)™ woofers significantly reduce the operating temperature of the voice coil thereby minimizing the effects of power compression to deliver maximum output. In fact, this technology delivers twice the power handling, reduces transducer weight by nearly 20%, and significantly reduces distortion.

JBL Cinema Sound Loudspeaker Systems, when combined with the new generation of JBL electronics, achieve a level of performance matched to today's rigorous cinema soundtracks. And using JBL systems has never been easier: the popular 4670C and 4675B systems now come partially preassembled in only two cartons, making installation much quicker.

The Academy of Motion Picture Arts and Sciences' Samuel Goldwyn Theater, Beverly Hills, California.

The new JBL Power Amplifiers combine CAD (Computer Aided Design) optimized low-profile reduced weight packages with advanced technology and low distortion electronics to offer both quick installation and accurate audio performance.

Simply stated, there's a JBL Cinema Sound System specifically designed to ensure that the invisible dimension of the motion picture experience, sound, is always the finest possible.

The new 2506B Bracket, for the 4675B, permits rapid horn aiming and setting. Also, new push-in wire terminals facilitate installation.

4671A

Two-Way Direct-Radiator Compact Cinema System

The 4671A is a two-way direct radiator system that is particularly designed for the smaller exhibition environment. The compact enclosure is optimally tuned to reproduce all frequencies smoothly and naturally. System components include the 2226H VGC™ low frequency loudspeaker in a direct radiating tuned bass enclosure, the 2426J high frequency compression driver with titanium diaphragm, the 2370A high frequency Flat-Front Bi-Radial® horn, and the 3110A frequency dividing network.

4673A

Two-Way Direct-Radiator High-Power Compact Cinema System

The 4673A is designed for the medium-sized exhibition environment, and provides deep, rich, seamless sound reproduction across the entire audio range. The 15″ low frequency loudspeaker system is the same as the smaller 4671A. It is matched, however, with a larger, externally mounted 2445J compression driver and 2380A Flat-Front Bi-Radial® horn. High and low frequency sections are smoothly combined into full range response by the 3115A frequency dividing network. The system is ideal for those applications where high acoustic output and moderate size are required.

4670C

Direct-Radiator High-Power
Shallow Profile
Cinema System

For the larger exhibition environment, the 4670C is the foundation of the true big screen sound. Powerful low frequency sound is delivered by two 2226H VGC™ low frequency loudspeakers, housed in an optimally-tuned direct radiator enclosure. The externally mounted 2445H compression driver and 2380A Flat-Front Bi-Radial® horn deliver wide bandwidth with superior horizontal dispersion. The result is a highly efficient system with superb dynamic range. Even installation is made easier, because this system is shipped partially preassembled in just two cartons, cutting installation time to the absolute minimum.

4675B

Direct-Radiator High-Power
Large Cinema Systems

The 4675B is designed for those exhibition environments where nothing but the absolute finest will do. A powerful direct radiator low frequency enclosure with two 2226H VGC™ low frequency loudspeakers is perfectly matched with an externally mounted 2445H compression driver/2360A Constant-Coverage Bi-Radial® horn assembly. The design delivers uniform frequency response and high SPL throughout the entire operating frequency range. And, like the 4670C system, it is shipped partially preassembled in two cartons to reduce installation time.

The 4675B-4LF and 4675B-8LF are designed for bi-amplification applications where an external electronic cross-over such as the JBL 5235 is used in conjunction with separate amplifiers for the high and low frequency sections. The 4675B-8LF is approved by Lucasfilm, Ltd. for THX® system installations.

8330 *Three-Way Direct-Radiator Cinema Surround System*

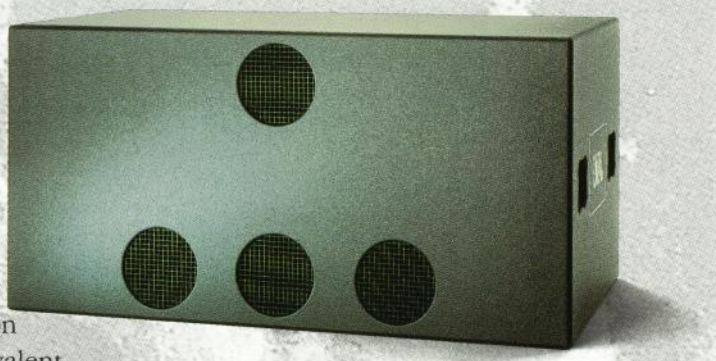
Approved by Lucasfilm, Ltd. for their THX™ sound systems, the 8330 was specifically designed as a cinema surround loudspeaker. A switchable crossover network allows SMPTE/ISO 2969 Curve X high frequency de-emphasis for surround installations, and the special cabinet shape incorporates a −15 degree slant front baffle for the industry-preferred aiming angle when the unit is mounted flush to the wall. The three-way system features a 203mm (8 in) low frequency loudspeaker, a 130mm (5 in) midrange transducer, and a 25mm (1 in) pure titanium dome tweeter. The system enclosure includes six attachment points for rapid installation.

4645 *Direct-Radiator Sub-Bass System*

The JBL 4645 is a high quality subwoofer system which is ideal for low-frequency augmentation in small to medium exhibition environments. The combination of its 2245H low frequency transducer and 4518 direct radiator, bass reflex enclosure provides smooth response to below 30 Hz. The 2445H's 100mm (4 in) diameter voice coil and SFG magnet structure allow for continuous program power capacity of 600 W. The use of multiple modules will both increase efficiency and further extend low frequency response due to mutual coupling effects.

4688

Triple Chamber Bandpass (TCB)™ Sub-Bass Systems



The 4688 and 4688-4 subwoofer loudspeaker systems employ JBL's exclusive Triple Chamber Bandpass™ (TCB) design to satisfy the most rigorous demands for high power, low frequency performance at exceptionally low distortion levels. The TCB enclosure delivers higher output, greater bass response and significantly lower distortion than a standard ported enclosure of equivalent volume. Each woofer in the 4688 and 4688-4 has direct input via dual terminal posts to allow multiple configurations and proper amplifier/load matching. The 4688 inputs can be paralleled for 4Ω system impedance, or run independently at 8Ω per woofer. The 4688-4 utilizes 2240G woofers, allowing 2Ω parallel operation or 4Ω per woofer operation. (Pictured: U.S. model. While minor cosmetic differences exist in international version, all performance characteristics are identical.)

ELECTRONICS

Power Amplification

JBL Power Amplifiers are modular in construction and provide significant reduction in weight for a given power output. Every JBL amplifier offers switchable operation between stereo, bridged mono and dual mono operating modes, as well as variable speed fans that run quietly and efficiently by sensing the temperature of the heat sinks. Some models additionally offer precision calibrated digital input attentuators with a unique "lock-out" function.

Frequency Dividing Network

The 5235 Electronic Frequency Dividing Network is a dual channel electronic crossover designed for use with loudspeaker systems to provide a cleaner signal from the power source directly to the individual loudspeakers of the system. By dividing the audio spectrum before power amplification, treble tones are separated from, and unaffected by, bass frequencies. The result is more efficient utilization of available power and elimination of the signal loss typical of most passive networks.

The 5235, a dual-channel unit, can be used for biamplification of two two-way loudspeaker systems or to control both transition points in a triamplified three-way system. The latter can be accomplished by utilizing one channel for the lower crossover frequency and the other channel for the higher frequency transition. Crossover frequency is selectable via plug-in crossover module which may be ordered with specific crossover characteristics or blank to allow custom circuitry for other crossover frequencies.

The 53-5333 crossover module, developed for cinema applications, allows selection of 24 dB/octave Linkwitz-Riley slope crossover frequencies from 80 Hz to 8 kHz. And, provides 700 μ audio signal delay for time-compensated biamplified loudspeaker systems.

Specifications

Screen Systems

Model	Low Frequency Drivers	High Frequency Drivers	High Frequency Horn	Frequency Dividing Network	Accessories	Enclosure	Assembled Low Frequency System
4671A	(1) 2226H	(1) 2426J	(1) 2370A	3110A	n/a	4507	4647A
4673A	(1) 2226H	(1) 2445J	(1) 2380A	3115A	2508A	4507	4647A
4670C	(2) 2226H	(1) 2445H	(1) 2380A	(See note #1)	2509	4508	4648TH (See note #1)
4675B	(2) 2226H	(1) 2445H	(1) 2360A	(See note #1)	2506B	4508	4648TH (See note #1)

Note #1: Frequency dividing network is incorporated into the low-frequency cabinet.

Surround Systems

Model	Low Frequency Drivers	High Frequency Drivers	High Frequency Horn	Frequency Dividing Network	Accessories	Enclosure	Assembled Low Frequency System
8330	(1) 203mm (8 in)	Mid: (1) 130mm (5 in) High: (1) 25mm (1 in)		(See note #3)	n/a	n/a	n/a

Note #2: Frequency dividing network is incorporated into the system.
Note #3: Special SMPTE/ISO 2969X frequency dividing network is incorporated into the cabinet.

Subwoofer Systems

Model	Low Frequency Drivers	Assembled Low Frequency System	Model	Low Frequency Drivers	Assembled Low Frequency System
4645	(1) 2245H	4645	4688-4	(2) 2240G	4688-4
4688	(2) 2240H	4688			

Screen Systems

Model	Frequency Range (−10 dB)	Power Capacity (Continuous Pink Noise)[1]	Power Capacity (Continuous Program)	Sensitivity 1 W, 1 m (3.3 ft)	Crossover Frequency[2]	Horizontal Beamwidth	Nominal Impedance	Exterior Dimensions (Height x Width x Depth)	Net Weight
4670C	35 Hz - 20 kHz	300 W	600 W	100 dB SPL	500 Hz	90°	4 ohms	1289mm x 673mm x 438mm 50¾'' x 26½'' x 17¼''	92 kg 203 lb
4671A	40 Hz - 20 kHz	150 W	300 W	97 dB SPL	800 Hz	90°	8 ohms	948mm x 546mm x 448mm 37⅝'' x 21½'' x 17⅝''	39 kg 85 lb
4673A	40 Hz - 20 kHz	150 W	300 W	97 dB SPL	500 Hz	90°	8 ohms	948mm x 546mm x 448mm 37⅝'' x 21½'' x 17⅝''	50 kg 110 lb
4675B	35 Hz - 20 kHz	300 W	600 W	100 dB SPL	500 Hz	90°	4 ohms	1797mm x 770mm x 949mm 70¾'' x 30⅝'' x 37⅜''	98 kg 215 lb

Surround Systems

Model	Frequency Range (−10 dB)	Power Capacity (Continuous Pink Noise)[1]	Power Capacity (Continuous Program)	Sensitivity 1 W, 1 m (3.3 ft)	Crossover Frequency[2]	Horizontal Beamwidth	Nominal Impedance	Exterior Dimensions (Height x Width x Depth)	Net Weight
8330	40 Hz - 20 kHz	100 W	200 W	91 dB SPL	650 Hz 3.1 kHz	160° Nominal	8 ohms	494mm x 481mm x 257mm 19⅞'' x 18⁵⁄₁₆'' x 10⅛''	14 kg 31 lb

Subwoofer Systems

Model	Frequency Range (−10 dB)	Power Capacity (Continuous Pink Noise)[1]	Power Capacity (Continuous Program)	Sensitivity 1 W, 1 m (3.3 ft)	Crossover Frequency[2]	Horizontal Beamwidth	Nominal Impedance	Exterior Dimensions (Height x Width x Depth)	Net Weight
4645	Down to 30 Hz	300 W	600 W	95 dB SPL	80Hz-100Hz Recommended	n/a	8 ohms	1060mm x 667mm x 464mm 39¾'' x 26½'' x 17¼''	63 kg 138 lb
4688	23Hz-350kHz	600 W	1200 W	97 dB SPL	80Hz-100Hz Recommended	n/a	(See note #4)	750mm x 1502mm x 750mm 29½'' x 59¼'' x 29½''	122.7kg 270 lb
4688-4	23Hz-350kHz	600 W	1200 W	100 dB SPL	80Hz-100Hz Recommended	n/a	(See note #4)	750mm x 1502mm x 750mm 29½'' x 59¼'' x 29½''	122.7kg 270 lb

1 Rating based on test signal of filtered random noise conforming to international standard IEC 268-5 (pink noise with 12 dB per octave rolloff below 40 Hz and above 5000 Hz with a peak-to-average ratio of 6 dB), for two hours duration.
2 Due to standard motion picture industry recommendations, theater systems with large compression drivers are specified with 500 Hz crossovers. For high-power sound reinforcement
Note #4: 8 ohms, at each woofer 4 ohms, woofers in parallel

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