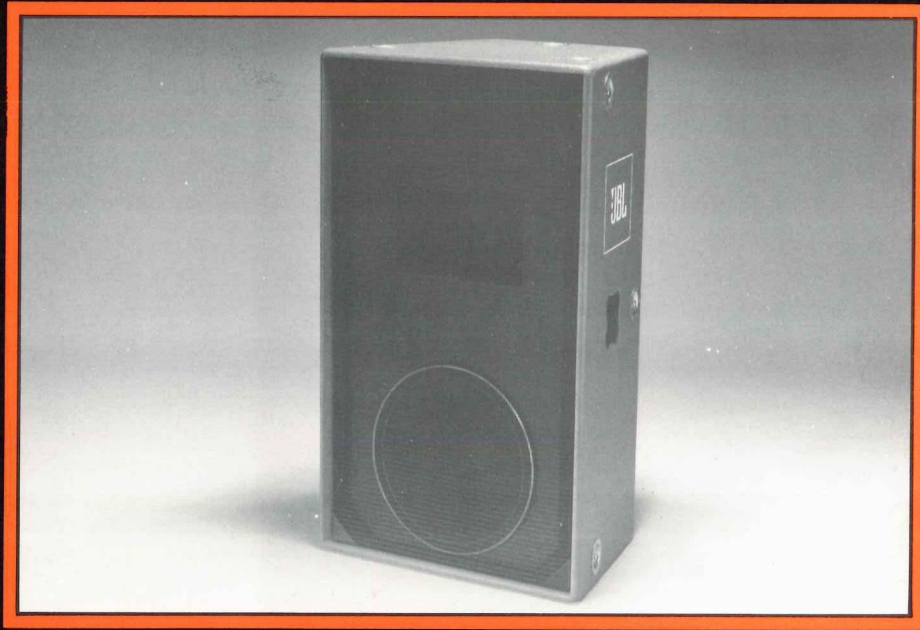


# 4845

## VERY LOW FREQUENCY SYSTEM



### FEATURES:

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Concert-proven componentry and design configuration

Rugged fiberglass-reinforced construction for touring sound reinforcement applications

30 degree wedge frustum shape decreases driver-to-driver distances, resulting in improved coupling at upper frequencies. Matches JBL 4870 family

14 certified aircraft-type hanging points

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The JBL 4845 is a vented direct-radiator very-low-frequency (VLF) loudspeaker system suitable for a wide variety of sound reinforcement and playback system applications.

Unlike many products intended for VLF service, the 4845 provides uniform power response to 30 Hz. Cabinets are identical in size, shape and hanging points to the JBL 4870 family. Cabinetry is void-free birch plywood, coated with virtually indestructible fiberglass reinforced plastic, and fitted with three four-way handles and steel-reinforced aircraft style pan fitting hanging hardware.

The enclosure is tapered from front to back forming a 30 degree wedge frustum, enabling several

4845s to be grouped in a tight cluster to take full advantage of mutual coupling effects. A ported enclosure, tuned to 27 Hz, mounts a JBL 2245H loudspeaker. The alignment has been carefully executed to assure that the driver operates within its displacement limit for the entire bandpass. Large ducting assures freedom from vent compression and turbulence at all operating power levels.

The 2245H loudspeaker features unusually large linear displacement capability, exceptional power handling, a rigid cone assembly of great strength and JBL's unique Symmetrical Field Geometry (SFG) magnetic structure. The result is an extension of low-frequency power response and very low distortion.

The 4845 is energized through one EP-8 input connector. Two connectors are installed (one male, one female) to enable loop-through wiring for connecting additional 4845s or 4870s. An accessory dolly, model 4870DL, is available to facilitate handling and cartage. The 4870DL also fits 4870 systems.

### SPECIFICATIONS:

Components: 1-JBL 2245H low frequency transducer			
SYSTEM SPECIFICATIONS:			
System Type: Modular direct radiating low frequency loudspeaker system			
Frequency Range (-10 dB): 20 Hz to 800 Hz			
Frequency Response ( $\pm 3$ dB): 25 Hz to 250 Hz			
Nominal Impedance: 8 ohms			
Connectors: ITT Cannon EP-8 type, one each male and female			
Dimensions: 126 cm (49½ in) H 75 cm (29½ in) W 50 cm (19¾ in) D			
Weight: 80 kg (176 lbs)			
Finish: Dark gray impregnated fiberglass-reinforced plastic, black nylon protective grill			
Quantity of Units:	One	Two	Four
Pressure Sensitivity (1 w, 1 m, half-space):	95 dB	98 dB	101 dB
Nominal Efficiency (half-space reference):	2.1%	4.2%	8.4%
Power Capacity (continuous pgm.) <sup>1</sup> :	600 w	1200 w	2400 w
Power Output <sup>2</sup> :	6 w	25 w	100 w
Power Response ( $\pm 3$ dB):	30-250 Hz	28-125 Hz	25-80 Hz
Maximum SPL at 1 m (half-space ref.) <sup>2</sup> :	120 dB	126 dB	132 dB

<sup>1</sup> Continuous program power is defined as 3 dB greater than continuous sine wave power and is a conservative expression of the transducer's ability to handle typical speech and music program material.

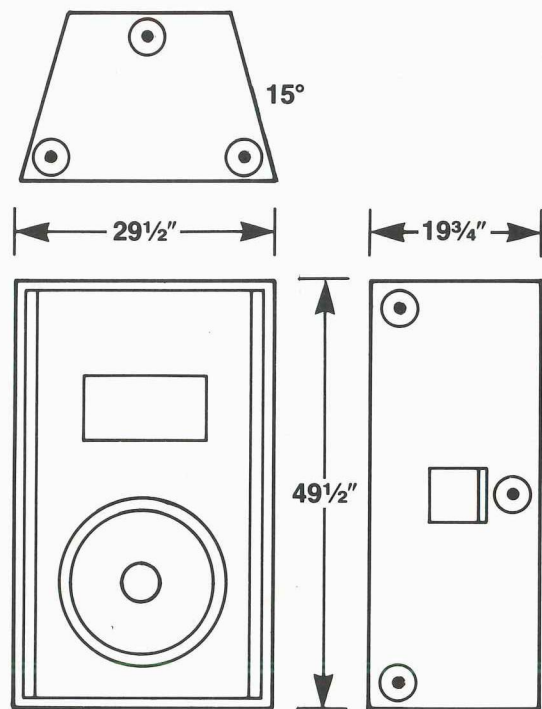
<sup>2</sup> Usable acoustic power output at a given frequency in direct radiating systems is a function of piston surface area and linear axial displacement. Because music is periodic, acoustic power output is conservatively calculated as the product of reference efficiency and sine wave maximum input power. Peak values will be considerably higher, but subject to driver mechanical displacement limits at the lowest frequencies. Unlike products of manufacturers that rate maximum SPL on the basis of noise signals that result in ambiguous or dimensionless specifications, full acoustic power and maximum SPL are available at all frequencies within the stated power response envelope.

### ARCHITECTURAL SPECIFICATIONS:

The low frequency loudspeaker system shall be of the vented direct-radiator type, and shall meet the following unit performance criteria: Acoustic power output: 6.3 watts above 30 Hz; Power response: (plus/minus 3 dB) 30 Hz to 250 Hz; Power Capacity: 300 watts sine wave above 30 Hz. The loudspeaker system shall incorporate a driver with a peak linear displacement of 9.5mm, and a cabinet tuning frequency of 27 Hz with a total duct surface area of not less than 110 square inches.

The cabinet shall be constructed of void-free birch plywood, stiffened internally and coated with fiberglass reinforced plastic. All exposed corners shall be rounded for damage resistance. Aircraft-type hanging fixture attachment points shall be installed through the cabinet to internal steel reinforcement plates. Fourteen hanging points shall be provided. Each hanging point shall have a load rating of 2000 lbs. at 90 degrees to the fitting. Cabinet width shall taper front-to-back, forming a 30 degree wedge frustum.

The modular VLF loudspeaker system shall be the JBL Concert Series model 4845.



JBL continually engages in research related to product improvement. New materials, production methods, and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description but will always equal or exceed the original design specifications unless otherwise stated.





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ELECTRONIC  
PRODUCTS

## Features

Concert-proven componentry and design configuration.

20 Hz to 800 Hz usable frequency range.

Ruggedized construction for touring sound reinforcement applications.

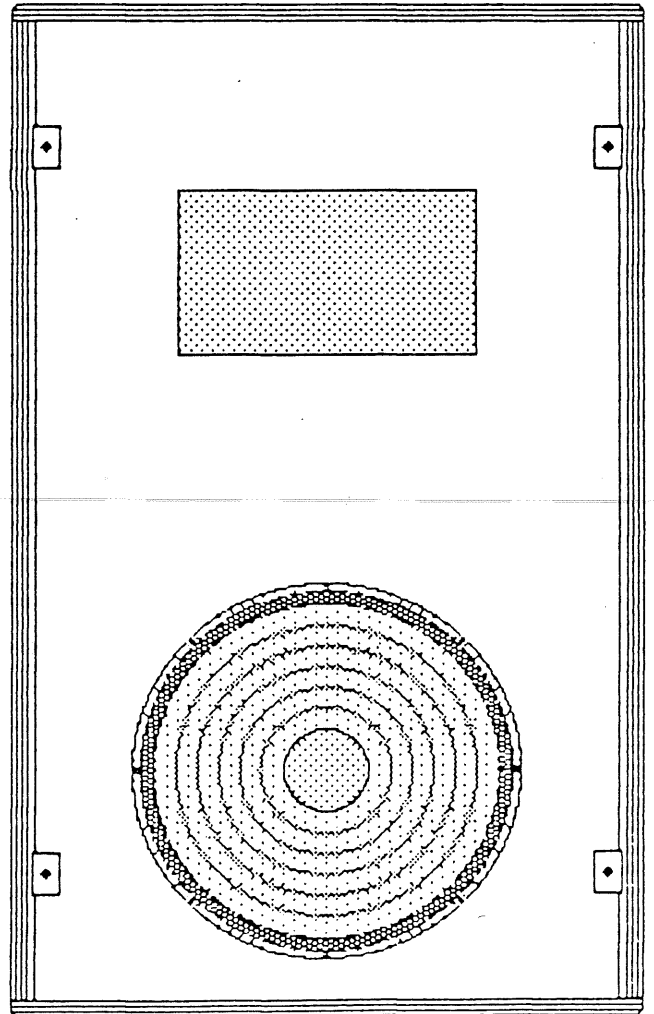
30 degree wedge frustum shape for mutual coupling. Matches JBL 4870.

Fiberglass-reinforced finish for durability.

## Description

The JBL Concert Series 4845 is a vented direct radiator very low frequency (VLF) loudspeaker system suitable for a wide variety of sound reinforcement and playback system applications. Unlike many products intended for VLF service, the 4845 provides uniform power response to 30 Hz. Cabinets are identical in size and shape to JBL 4870 systems for stacking. Cabinetry is of void-free birch plywood, coated with virtually indestructible fiberglass reinforced plastic, and fitted with handles and reinforced aircraft style pan fitting hanging hardware. The enclosure is tapered from front to back, forming a 30 degree wedge frustum. This enables several 4845s to be grouped in a tight cluster to take full advantage of mutual coupling effects.

JBL Concert Series  
4845



## Performance

A ported enclosure, tuned to 27 Hz mounts a JBL 2245H loudspeaker. The alignment has been carefully executed to assure that the driver operate within its displacement limit for the entire power bandpass. Large ducting assures freedom from vent compression and turbulence at all operating power levels. Unlike many so-called subwoofers, the 4845 delivers its full rated acoustic power output and maximum SPL to 30 Hz.

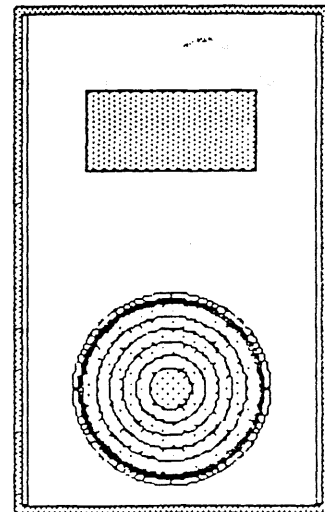
The 2245H loudspeaker features unusually large linear displacement capability, exceptional power handling, a rigid cone assembly of great strength and JBL's unique Symmetrical Field Geometry (SFG) magnetic structure. The result is an extension of low frequency power response and extremely low distortion.

## Physical

The 4845 sides taper from front to back at an angle of fifteen degrees from rectangular convention, forming a 30 degree wedge frustum shape. This allows grouping of 4845s in tight clusters for improved coupling at low frequencies. Fourteen system hanging points are included to facilitate cluster rigging and flying. The 4845 is identical in shape, size and rigging points to the JBL 4870 two-way Concert Series loudspeaker system.

The 4845 is energized through one EP-8 input connector. Two connectors are installed on each cabinet to enable loop-thru wiring for connecting additional 4845s or 4870s.

An accessory dolly, model 4870DL, is available to facilitate handling and cartage. The 4870DL also fits the 4870 system.



Model 4845

System Type	Modular direct radiating low frequency loudspeaker system
Frequency Range (-10dB)	20Hz to 800Hz
Frequency Response ( $\pm 3$ dB)	25 Hz to 250 Hz
Nominal Impedance	8 ohms
Connectors	ITT Cannon EP-8 type, one each male and female
Dimensions	49-1/2" (126 cm) H 29-1/2" (75 cm.) W 19-3/4" (50 cm.) D
Weight	176 lbs. (80 kg.)
Finish	Dark gray impregnated fiberglass-reinforced plastic, black nylon protective grill

<u>Quantity of Units</u>	<u>One</u>	<u>Two</u>	<u>Four</u>
Pressure Sensitivity [1w/1m half-space]	95dB	98dB	101dB
Nominal Efficiency [half-space reference]	2.1%	4.2%	8.4%
Power Capacity (continuous pgm)[1]	600w	1200w	2400w
Acoustic Power Output [2]	6 watts	25 watts	101 watts
Power Response [+/- 3 dB]	30Hz-250Hz	28Hz-125Hz	25Hz-80Hz
Maximum SPL at 1m (half-space ref.)[2]	120 dB	126 dB	132 dB

[1] Continuous program power is defined as 3 dB greater than continuous sine wave power and is a conservative expression of the transducer's ability to handle typical speech and music program material.

[2] Usable acoustic power output at a given frequency in direct radiating systems is a function of piston surface area and linear axial displacement. Because music is periodic, acoustic power output is conservatively calculated as the product of reference efficiency and sine wave maximum input power. Peak values will be considerably higher, but subject to driver mechanical displacement limits at the lowest frequencies. Unlike products of manufacturers that rate maximum SPL on the basis of noise signals that result in ambiguous or dimensionless specifications, full acoustic power and maximum SPL are available at all frequencies within the stated power response envelope.

## Architect's and Engineer's Specifications

### Model 4845

The low frequency loudspeaker system shall be of the vented direct radiator type, and shall meet the following unit performance criteria: Acoustic power output: 6.3 watts above 30 Hz. Power response; plus/minus 3 dB, 30 Hz to 250 Hz. Power Capacity: 300 watts sine wave above 30 Hz. The loudspeaker system shall incorporate a driver with a peak linear displacement of 9.5mm, and a cabinet tuning frequency of 27 Hz with a total duct surface area of not less than 110 square inches.

The cabinet shall be constructed of void-free birch plywood, stiffened internally and coated with fiberglass reinforced plastic. All exposed corners shall be rounded for damage resistance. Aircraft-type hanging fixture attachment points shall be installed through the cabinet to internal steel reinforcement plates. Fourteen hanging points shall be provided. Each hanging point shall have a load rating of 2000 lbs. at 90 degrees to the fitting. Cabinet width shall taper front-to-back, forming a 30 degree wedge frustum.

The modular YLF loudspeaker system shall be the JBL Concert Series model 4845.

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