4641
Single 460 mm (18 in) Subwoofer System

Key Features:

- 600 W (60 V) AES 2-hour power rating
- Usable response to 25 Hz (-10 dB) with no EQ; flat to 25 Hz (-3 dB) with external EQ
- 2241H VGC™ (Vented Gap Cooled) driver provides long peak-to-peak excursion, high sensitivity and high maximum SPL capability
- SFG™ (Symmetrical Field Geometry) magnet structure for low 2nd and 3rd harmonic distortion
- Approved by Lucasfilm, Ltd. for THX® installations

Description:

The JBL 4641 is a high quality subwoofer system, featuring a technologically advanced 460 mm (18 in) low frequency transducer mounted in a direct radiator, bass-reflex enclosure for smooth response to the lowest audible frequencies. The 4641 is ideal for low frequency augmentation of either analog or digital soundtracks in motion picture theaters and for general sound reinforcement applications. The 2241H transducer utilizes the patented Vented Gap Cooling (VGC) process*, which pumps air through the magnetic gap and directly over and around the voice coil, providing immediate heat transfer and a reduction in operating temperature. This increases power handling while reducing power compression. Through the use of computer-aided magnet optimization and analysis techniques, JBL engineers were able to optimize magnet weight, flux density and field saturation, resulting in a 2.6 kg (6.5 lb) reduction in overall driver weight and a significant reduction in harmonic distortion. This magnet structure offers much of the weight advantage of rare earth magnet structures without the prohibitive cost, enabling the system to carry a 600-watt continuous AES pink noise power rating.

Specifications:

<table>
<thead>
<tr>
<th>Component Electronics – Model 2241H</th>
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<tbody>
<tr>
<td>Low Frequency Transducer</td>
<td>1 x 2241H, 460 mm (18 in)</td>
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<tr>
<td>Rated Impedance</td>
<td>8 ohms</td>
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<tr>
<td>Minimum Impedance</td>
<td>6.3 ohms</td>
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Power Handling Capability

- Input Power Handling (AES 100-Hour Rating) 450 W (60 V rms), pink/IEC
- Input Power Handling (AES 2-Hour Rating) 600 W (69 V rms), pink/IEC

Output Capability

- Sensitivity  
  - 40 Hz – 100 Hz: 97 dB, 1 W @ 1 m; reference 2.83 V
- Max Continuous SPL @ 1 meter  
  - Single Module: 125 dB  
  - Two Modules: 131 dB  
  - Four Modules: 136 dB  
  - Eight Modules: 140 dB
- Max Peak SPL @ 1 meter  
  - Single Module: 131 dB  
  - Two Modules: 137 dB  
  - Four Modules: 142 dB  
  - Eight Modules: 146 dB

Frequency Response

- Lower Frequency Limits (no EQ): -10 dB: 25 Hz; -3 dB: 25 Hz
- Lower Frequency Limits (with EQ): -10 dB: 22 Hz; -3 dB: 25 Hz

Other

- Recommended Crossover Frequencies  
  - High-pass: 20 Hz, 24 dB/octave or greater  
  - Low-pass: 80 Hz to 150 Hz, 12 dB/octave or greater
- System Polarity  
  - EIA Standard. Positive voltage to RED terminal produces forward cone motion.
- Input Connectors  
  - Color-coded push terminals
- Net Weight  
  - 60 kg (131 lb)
- Shipping Weight  
  - 66 kg (142 lb)

Enclosure

- Materials and Finish  
  - 19 mm (0.75 in) particle board with 25 mm (1 in) baffle and back panel; extensive bracing on all panels
- Enclosure Tuning Frequency  
  - 25 Hz
- Net Internal Volume  
  - 225 liters (8 cubic ft)
- Dimensions (H x W x D)  
  - 1010 mm x 674 mm x 450 mm (39.75 in x 26.50 in x 17.75 in)

*U.S. Patent #5,042,072. Foreign Patents Pending.

Note: specifications are subject to change without notice.

The 100 mm (4 in) voice coil benefits from a new winding technique which offers greater thermal stability with increased power handling. All elements of the cone, voice coil and suspension system have been carefully optimized and controlled to ensure smooth high frequency response.

The magnet structure and compliance allow for long peak-to-peak excursions without damage to the speaker. Symmetrical Field Geometry (SFG) minimizes second harmonic distortion.

**Enclosure:** The enclosure is constructed of dense stock and is extensively braced on all panels. It has a net internal volume of 225 liters (8 cu. ft.) and is tuned to 25 Hz with a very large port to minimize port compression and to reduce distortion due to turbulent air flow.

**Frequency Response:** The 4641 is intended for use as a subwoofer with a low-pass filter and appropriate high-pass filtering for protection and equalization.