

KEY FEATURES

- 18 inch high-output sub complements the Eliminator i™ stage system.
- 400 watt continuous
- 18 inch steel pole included

Eliminator i™ Sub



General Product Description

The Electro-Voice Eliminator i™ Sub is a single 18 inch subwoofer system designed to produce very high-peak output musical material. The Eliminator i™ Sub can be used either in conventional biamplified operation or in full-range passive mode with the Eliminator i™ two-way high-peak output stage system in parallel. When used in parallel, the combined impedance is 4 ohms. The internal passive crossover consists of low-pass filter to the 18-in. DL18BFH.

The system is designed for operation up to 100 Hz (in passive mode). The system can also be used in biamp mode by using an active crossover system with slopes of 24 dB per-octave. Recommended crossover point is 80 Hz when used with a loudspeaker processor/crossover capable of low frequency protection; or, as this is a vented system, a 40 Hz low frequency filter of at least 3rd or 4th order is recommended (18 dB/octave to 24 dB/octave) to filter out signals below that frequency.

The Eliminator i™ Sub includes a top-mounted stand adapter and an 18 in. pole mount for use with the Eliminator i™ full-range system. Safety concerns limit the use of a pole greater than 18 inches in length (under no circumstances should a pole of greater than 18 inches be used with the Eliminator i™ Sub). The DL18BFH woofer will provide average power handling ratings of 400 watts EIA and peak power ratings of 800 to 1000 watts. The system input connections are 1/4-in. phone. Vented enclosures offer excellent power handling and low distortion in the lowest octave of rated operation. However, it is always advisable to filter material below enclosure tuning to further improve system output and headroom. The Eliminator i™ should be high-pass filtered to reduce subsonic material below 40 Hz.

Power handling

To our knowledge, Electro-Voice was the first U.S. manufacturer to develop and publish a power test closely related to real-life conditions. First, we use a random-noise input signal because it contains many frequencies simultaneously, just like real voice or instrument program. Second, our signal contains more energy at extremely high and low frequencies than typical actual program, adding an extra measure of reliability. Third, the test signal includes not only the overall "long term average" or "continuous" level—which our ears interpret as loudness—but also short-duration peaks which are many times higher than the average, just like actual program. The long-term average level stresses the speaker thermally (heat). The instantaneous peaks test mechanical reliability (cone and diaphragm excursion). Note that the sine wave test signals sometimes used have a much less demanding peak value relative to their average level. In actual use, long-term average levels exist from several seconds on up, but we apply the long-term average for several hours, adding another extra measure of reliability.

Specifically, the Eliminator i™ Sub is designed to withstand the power test described in the ANSI/EIA RS-426-A 1980. The EIA test spectrum is applied for eight hours. To obtain the spectrum, the

output of a white-noise generator (white noise is a particular type of random noise with equal energy per bandwidth in Hz) is fed to a shaping filter with 6-dB-per-octave slopes below 40 Hz and above 318 Hz.

When measured with the usual constant-percentage bandwidth analyzer (one-third-octave), this shaping filter produces a spectrum whose 3-dB-down points are at 100 Hz and 1,200 Hz with a 3-dB-per-octave slope above 1,200 Hz.

Architects' and Engineers' Specifications

The loudspeaker system shall be a subwoofer system consisting of one 45.7-cm (18-in.) low-frequency transducer in a vented quasi band pass design. The system shall be capable of either biamp operation or full-range passive (when used with the Eliminator i™ stage system or other appropriate full-range system). The passive mode shall provide first order low-pass filtering. The system shall have a rated frequency response of 40 Hz to 100 Hz (passive mode) and is capable of extended high-level operation within that range. Power handling (long-term average) shall be 400 watts when EIA RS-426-A 1980 is employed as a test method or 500 watts when AES 1984 is used at the test method. The system sensitivity shall be 98 dB (101 dB with 1/2 space load-common orientation) with a 1 watt input at a distance of 1 meter. The nominal impedance shall be 8 ohms and shall produce a combined impedance of 4 ohms when used with the Eliminator i™, full-range system. Input connections shall be 1/4-in. phone input and output.

The system dimensions shall be 85.4 cm (33 5/8 in.) high by 42.9 cm wide (16.9 in.) and 60.9 cm (24 in.) deep and have a net weight of 87 lb.

Amplifier Recommendation

The power handling of the Eliminator i™ Sub is 400 watts EIA (500 watts AES). The specific tests used employ a crest factor (ratio of peak energy to continuous energy) of at least 6 dB. During extended testing the loudspeaker in the Eliminator i™ Sub is routinely subjected to peak levels far in excess of the published continuous rating. Many amplifier designs are capable of producing peak power levels in excess of their ratings as well so exact "pairings" of loudspeaker power handling ratings and amplifier ratings are not necessary. Amplifier continuous ratings of 400 watts to 800 watts are recommended for use with the Eliminator i™ Sub. Larger amplifier ratings may be used for maximum dynamic range but it should be remembered that amplifier continuous levels (as opposed to peak levels) be within the range quoted for the Eliminator i™ Sub long-term average power handling.

For technical assistance, contact Technical Support at 866/78AUDIO 8 - 5 p.m. Central Standard time.

Specifications subject to change without notice.

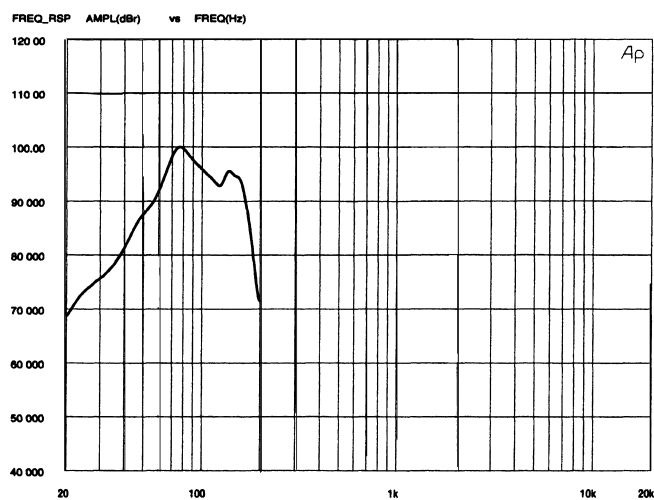


Figure 1. Frequency Response

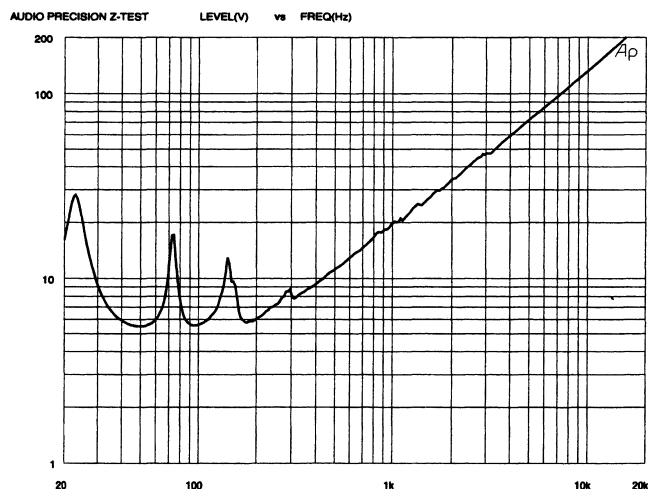


Figure 2. Impedance

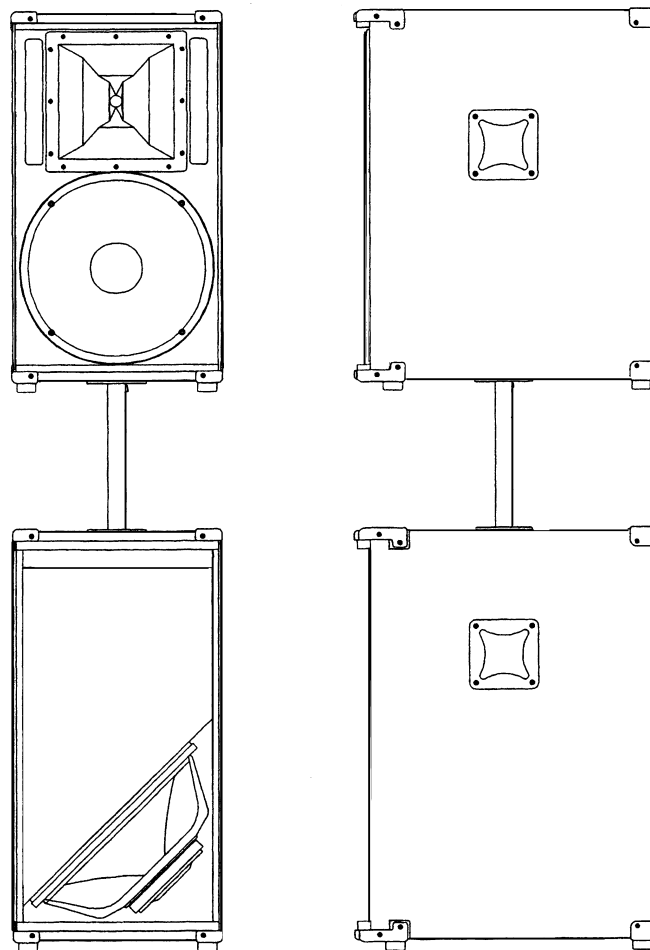


Figure 3. Eliminator i™ with Eliminator i™ Sub

Specifications

Frequency Response: 40-100 Hz, ± 3 dB
Long-Term Average Power Handling,
EIA RS-426A: 400 watts
AES (1984): 500 watts
Sound Pressure Level, 1 W/1 m:
 Full space 98 dB
 Half space 101 dB
Crossover: Acoustic/electronic filter output
Transducer Complement: 1 ea DL18BFH
Impedance,
Nominal: 8 ohms
Minimum: 5.1 ohms
 When used with Eliminator i™ in satellite configuration nominal
 4 ohms, minimum 3.2 ohms.

Enclosure Tuning: 50 Hz
Input connectors:

1/4-in. phone input
 1/4-in. phone output to Eliminator i™

Enclosure material/construction: ... Black carpeted MDF
Dimensions:

Height: 85.9 cm (33.8 in.)
Width: 43.8 cm (17.25 in.)
Depth: 61.0 cm (24.13 in.)
Net Weight: 39.5 kg (87 lb)
Shipping weight: 43.1 kg (95 lb)

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Electro-Voice®

U.S.A. and Canada only.

For customer orders, contact the Customer Service department at
 800/392-3497 Fax: 800/955-6831

For warranty repair or service information, contact the Service
 Repair department at 800/685-2606

For technical assistance, contact Technical Support at 866/78AUDIO

Please refer to the Engineering Data Sheet for warranty information.

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