

## DTS-215

### Duplex® Loudspeaker System

- New design dual 15-inch high power woofers
- Compact arrayable enclosure, identical size to DTS-640
- Very-high output capability at 4,000 watts peak, low distortion
- 1,000-watt short-term, 800-watt long-term power capacity
- Subwoofer and high-power woofer capability
- Paralleled or biamp configuration
- Enclosure allows refinishing
- Full four-point hanging system

#### Description

The Altec Lansing **DTS-215** low-frequency loudspeaker is a factory-assembled system featuring dual 15-inch direct radiators in a vented enclosure. The **DTS-215** is intended to be used as a subwoofer or high-power woofer system to complement the performance of the **DTS-640**, but may also be used as the low-frequency component in most multi-way loudspeaker systems.

The **DTS-215** consists of two **ALX15-LF** 381-mm (15-inch) very-high-power, very-long excursion, low-frequency drivers, each mounted within its own vented chamber of 2.4 cubic feet, optimally tuned to provide unequalized low frequency response to below 60 Hz. When used with the Altec Lansing **2400A** controller, the low-frequency performance will be extended to below 42 Hz. The new **ALX15-LF** drivers have an extremely stiff cone and newly designed magnet system, providing more than 11-mm (0.433-inch) of linear peak-peak excursion and over 30.5-mm (1.2-inch) of maximum peak-peak excursion.

Two configurations are recommended for use with the **DTS-640**. When used as a subwoofer with the **DTS-640**, a crossover point of 80 Hz is recommended. When used

as a high-power woofer array, the **DTS-215** may be operated in parallel with the **DTS-640**'s woofer, providing an extremely high-power array with significant directionality at a crossover point of 220 Hz. When used with other full-range speaker systems, higher crossover frequencies may be used depending on the desired polar pattern. Each driver in the **DTS-215** may be independently connected by large screw terminals able to accept up to 10-gauge wire or by two paralleled 4-pin female Neutrik Speakon® connectors located on the back of the enclosure. With this configuration, the **DTS-215** is a biampable system utilizing two channels to drive each 8 ohm load separately, with the option of wiring the drivers in parallel outside the enclosure for a single amplifier channel into a 4 ohm load. The system is supplied with external jumpers paralleling the two woofers as the standard configuration. The system should be used with the Altec Lansing **2400A** electronic controller. The recommended crossover frequency is 80 Hz in subwoofer mode, 220 Hz as a high-power woofer system arrayed with the **DTS-640**, or up to 500 Hz as a woofer system in most multi-way loudspeaker systems.

The trapezoidal shaped enclosure is constructed from 19-mm (0.75-inch) thick,

thoroughly braced 14-ply birch plywood lined with sound-absorbent glass wool. A complete four-point hanging system is provided for safe suspension of the **DTS-215**. The system may then be hung as a single unit or as part of a cluster. The finish of the enclosure is textured black paint which can be painted to complement any interior. The grille is constructed from black 16-gauge powder-coated steel and is backed with a weather-resistant foam.

The **DTS-215** low-frequency loudspeaker is the ideal companion system to the **DTS-640** whenever high-output, full-frequency-range material must be reproduced in churches, auditoriums, hotels and civic centers.

#### Architects' and Engineers' Specifications

The loudspeaker system shall be of the dual subwoofer type consisting of two 381-mm (15-inch) high-power woofers in a vented enclosure. The system shall be capable of being biamped using the connectors located on the rear of the enclosure. The loudspeaker system shall meet the following performance criteria. Power handling shall be 1,000 watts of pink noise with a 6-dB crest factor for two hours and 800 watts for eight hours,

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band-limited from 35 Hz to 500 Hz with the Altec Lansing 2400A controller.<sup>3</sup> Frequency response shall be smooth and uniformly usable from 42 Hz to 500 Hz (60 Hz to 500 Hz without 2400A controller). Pressure sensitivity shall be 98 dB SPL when measured at one meter on axis with one watt of band-limited pink noise from 42 Hz to 500 Hz. The enclosure shall be constructed of 19-mm (0.75-inch) 14-ply birch plywood and shall be heavily braced and lined with sound-absorbent glass wool. The finish of the enclosure shall be textured black and a removable black metal grille shall be provided. The dimensions of the enclosure shall be 833 mm (32.8 inches) high by 498 mm (19.6 inches) wide by 498 mm (19.6 inches) deep. The system shall be trapezoidal with a 10 degree angle and a rear width of 330 mm (13.0 inches). The loudspeaker system shall weigh 38.6 kg (85 lb).

The loudspeaker system shall be the Altec Lansing DTS-215.

## Uniform Limited Warranty Statement

Altec Lansing products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning

with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid. **Exclusions and Limitations:** The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Mark IV Audio Service or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to Mark IV Audio Service or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of sale or receipted invoice. A list of authorized service representatives is available from Mark IV Audio Service at 10500 W. Reno Avenue, Oklahoma, OK 73127 (800/845-8727 or FAX 405/577-3274). **Incidental and Consequential Damages Excluded:** Product repair or replacement and

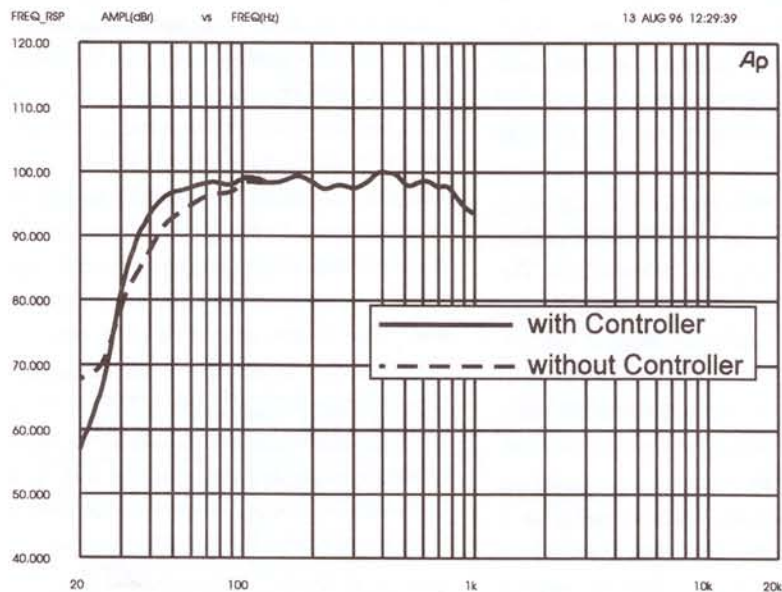
return to the customer are the only remedies provided to the customer. Altec Lansing shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

**Altec Lansing Speakers and Speaker Systems** are guaranteed against malfunction due to defects in materials or workmanship for a period of five (5) years from the date of original purchase. The Limited Warranty does not apply to burned voice coils or malfunctions such as cone and/or coil damage resulting from improperly designed enclosures. Altec Lansing active electronics associated with the speaker systems are guaranteed for three (3) years from the date of original purchase. Additional details are included in the Uniform Limited Warranty statement.

**For technical assistance,** contact Technical Support at 800/234-6831 or 616/695-6831, M-F, 8:00 a.m. to 5:00 p.m. Eastern Standard time.

Specifications subject to change without notice.

Figure 1—Frequency Response



# Altec Lansing DTS-215 Duplex<sup>®</sup> Loudspeaker System

Figure 2—Impedance (paralleled)

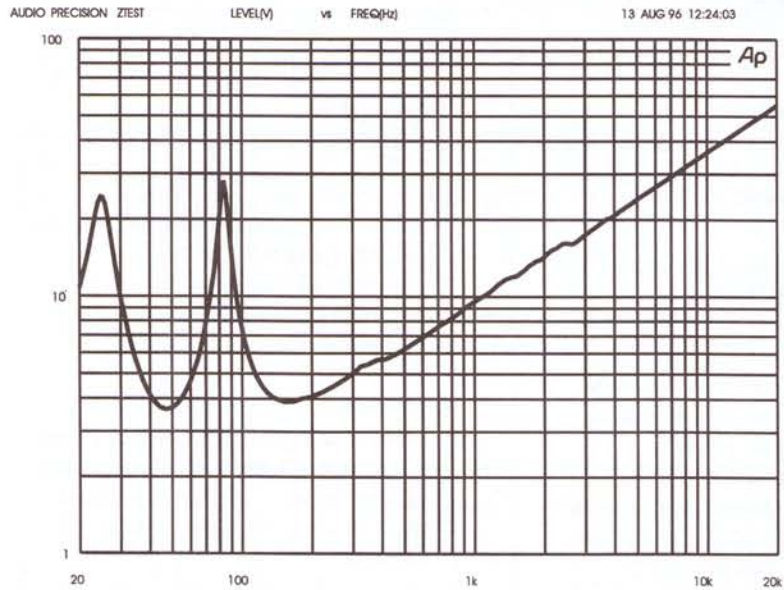


Figure 3—Distortion 1% power (no controller)

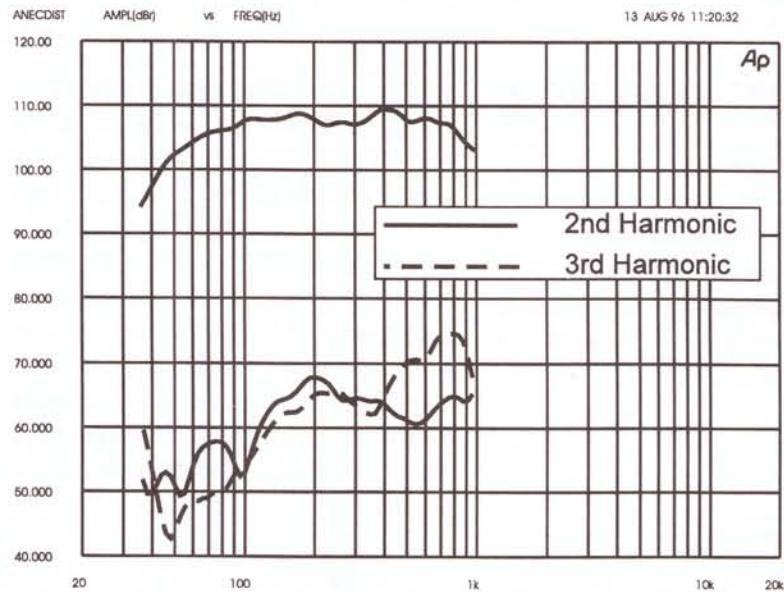
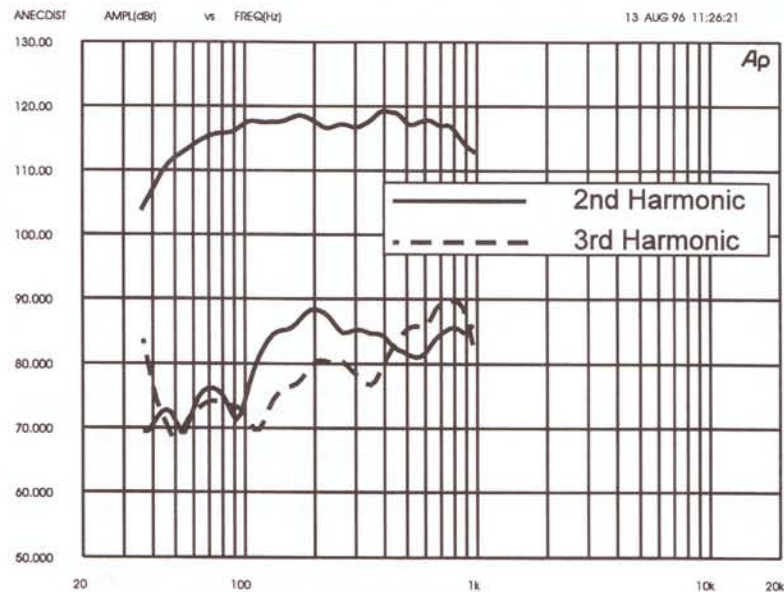


Figure 4—Distortion 10% power (no controller)

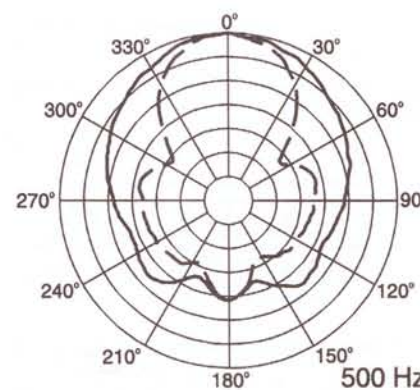
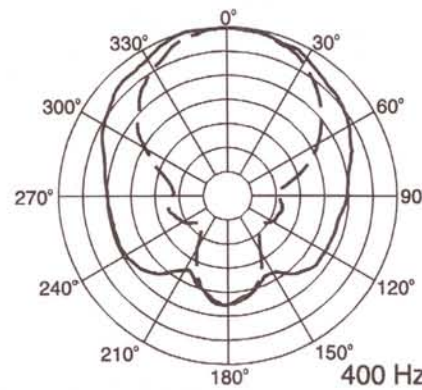
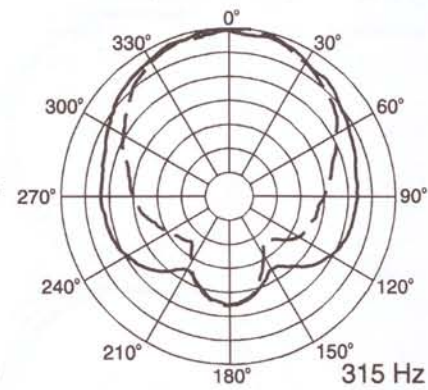
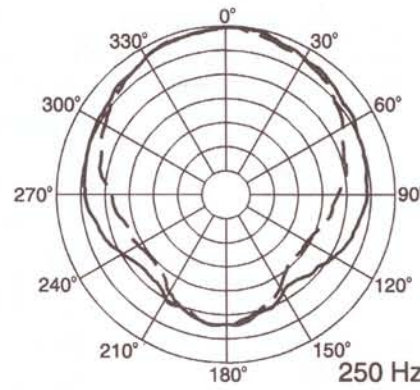
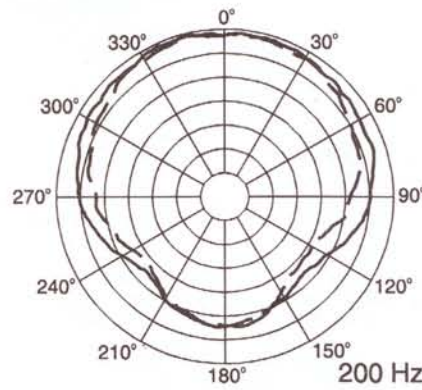
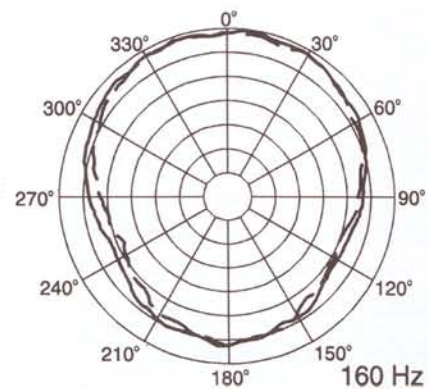
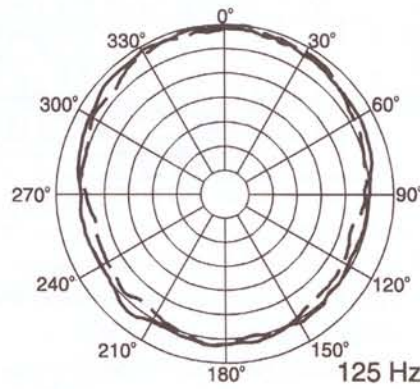
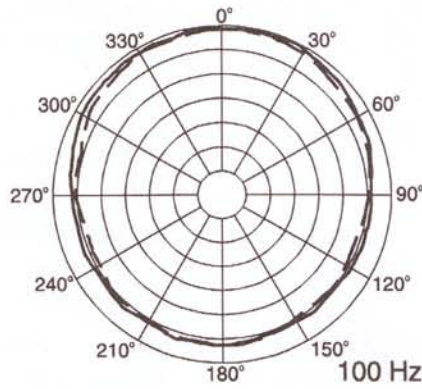
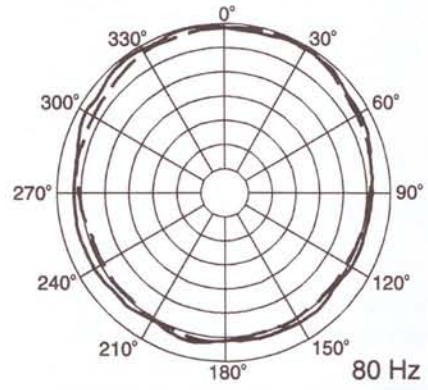
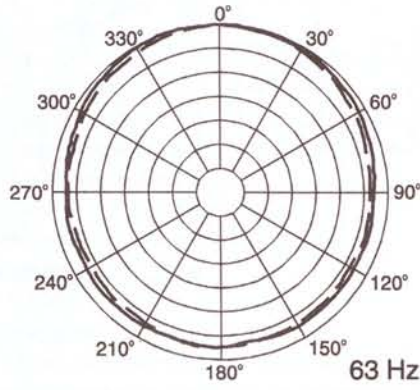
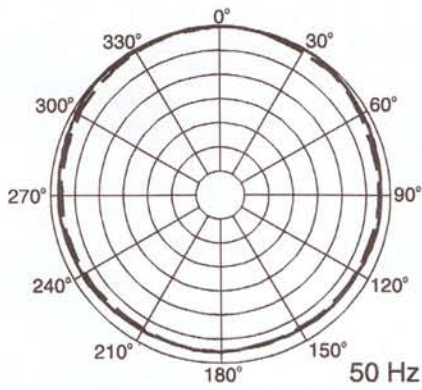


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Figure 5—Polar Response

— Horizontal  
 - - Vertical

Scale: 5 dB/division



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Figure 6—Beamwidth

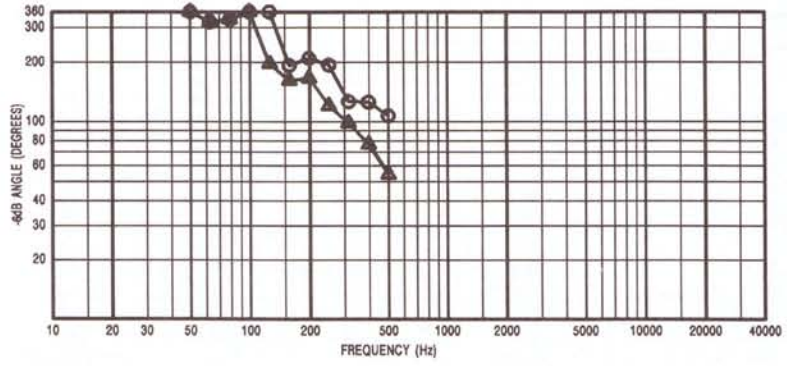


Figure 7—Directivity

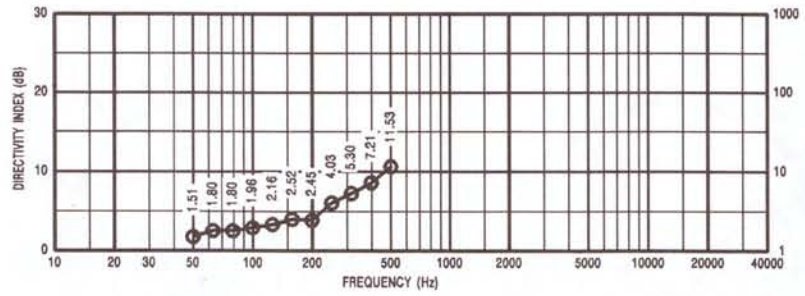
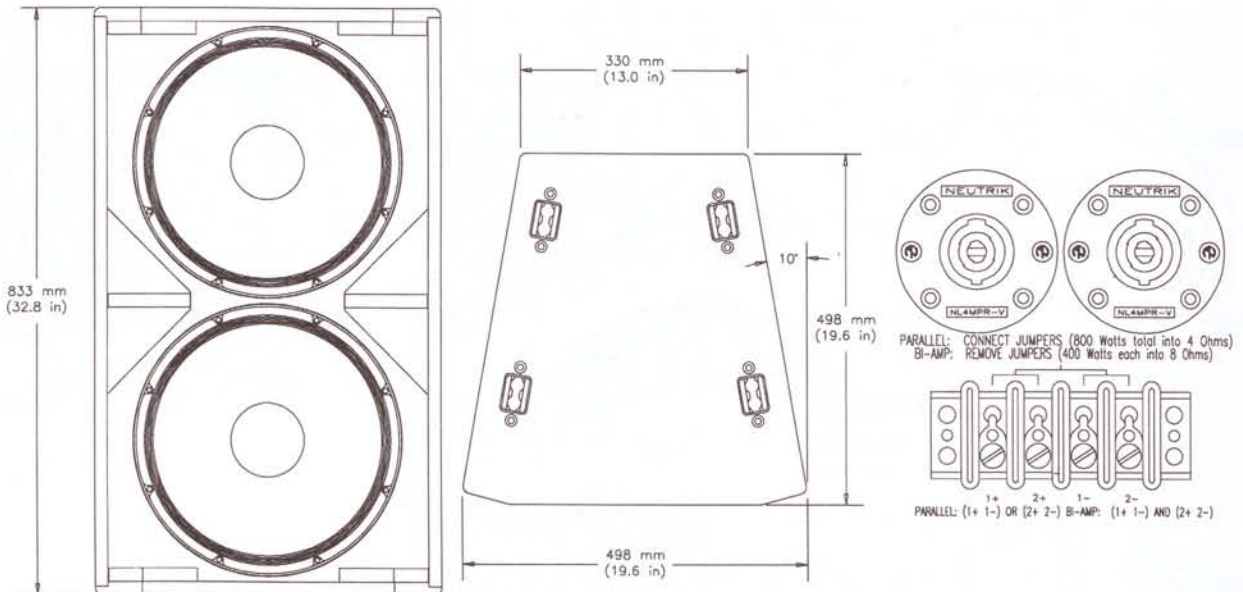


Figure 8—Dimensions



# Altec Lansing DTS-215 Duplex® Loudspeaker System

## Specifications:

### System Type:

Dual direct-radiating vented subwoofer/woofer loudspeaker system; biamp or paralleled operation

### Pressure Sensitivity:<sup>1</sup>

98 dB SPL

### Frequency Response (see Figure 1):<sup>2</sup>

42 (60\*) - 500 Hz (\* without 2400A controller)

### Power Handling:<sup>3</sup>

1,000 watts, short-term continuous

800 watts, long-term continuous

4,000 watts, peak power

### Maximum Output:<sup>4</sup>

128 dB SPL, short-term continuous

127 dB SPL, long-term continuous

133 dB SPL, peak power

### Impedance:

4.0 ohms nominal

3.7 ohms minimum

### Components:

Dual high-efficiency 381-mm (15-inch) woofers

### Input Terminals:

Large screw terminals with parallel 4-pin

Neutrik Speakon® connectors

### Replacement Drivers:

815-2825

### Replacement Grille:

83965

### Enclosure:

Direct-radiating vented LF, built of 19 mm (0.75-inch), 14-ply birch plywood with appropriate bracing, lined with glass wool; four-point hanging system included

### Dimensions:

833 mm (32.8 inch) high

498 mm (19.6 inch) wide

498 mm (19.6 inch) deep

### Net Weight:

38.6 kg (85 lb)

### Shipping Weight:

44.0 kg (97 lb)

### Finish:

Black textured paint with black 16-gauge powder-coated grille

### Accessories:

Four Ancra 42546-10 single-stud tie-down cargo suspension fittings provided with system

## NOTES ON MEASUREMENT CONDITIONS

1. Band-limited pink noise signal, one watt calculated using  $E^2/Z_{min}$ , 3.16-meter measurement distance referred to one meter.

2. On-axis, one watt calculated using  $E^2/Z_{min}$ , 3.16-meter measurement distance referred to one meter, low frequencies corrected for anechoic chamber error.

3. This system rating is patterned after the ANSI/EIA RS-426-A method where the test signal is pink noise with a 6-dB crest factor over the bandwidth of the system, with power calculated using  $E^2/R_e \times 1.15$ , for two or eight hours. To ensure long-term real-world system reliability, the test signal is processed with the 2400A controller using a high-pass filter of 12 dB/octave at 35 Hz with a filter Q of 2 (providing 6 dB of boost centered at 35 Hz), and a low-pass filter at 500 Hz of 24 dB/octave Linkwitz-Riley profile.

4. This measurement made under the same conditions as pressure sensitivity, and takes into account any power-compression effects due to nonlinearities in the system.

5. The distortion at any given frequency may be found by graphically taking the difference between the fundamental and harmonic, and adding the number of decibels which the harmonic has been raised on the graph and apply the formula: percent distortion =  $100 \times 10^{-(\text{difference in dB}/20)}$ .



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Low-Frequency Speaker Systems

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