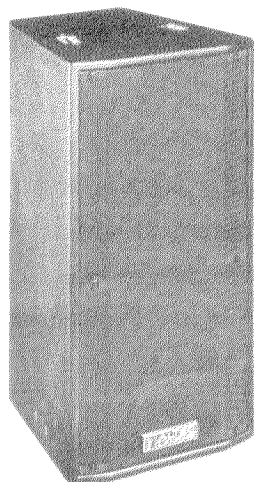




a Mark IV company



DTS-941

Duplex® Loudspeaker System

- High output capability
- Excellent directivity control
- Enclosure allows refinishing
- Three-way horn-loaded system
- Biamp with internal passive crossover

Description

The Altec Lansing DTS-941 is a three-way loudspeaker system with a vented low-frequency woofer and horn-loaded mid- and high-frequency components. The system is configured as a biamp system using the internal mid/high passive crossover. This compact system features high sensitivity and high output down to 80 Hz. The coverage at 800 Hz is 90° horizontal by 120° vertical and the system's nominal coverage is 90° horizontal by 40° vertical. The vented bass section extends the low-frequency response to below 75 Hz, or lower if multiple units are used. The DTS-941 consists of a 305-mm (12-in.) high-power, low-frequency driver with a horn-loaded 165-mm (6.5-in.) mid-frequency driver and a 25.4-mm (1-in.) high-frequency compression driver. Both drivers utilize 90° x 40° constant-directivity horns. Electrical connection to each driver is made by large screw terminals, able to accept up to 10-gauge wire, or by two parallel 4-pin Neutrik Speakon® connectors. The system should be used with the Altec Lansing DTS 2400A electronic controller. The recommended crossover frequency is 350 Hz. The enclosure is constructed from 19-mm (0.75-in.) thick, thoroughly braced, 14-ply birch plywood lined with sound-absorbent glass wool. A complete three-point hang-

ing system is provided for safe suspension of the DTS-941. 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 16-gauge black, powder-coated steel and is backed with a weather-resistant foam.

The DTS-941 can be used individually or in arrays to create compact, high output and directivity-controlled systems for use in churches, auditoriums, hotels and civic centers.

Architects' And Engineers' Specifications

The loudspeaker system shall be of the three-way type consisting of a 305-mm (12-in.) high-power woofer in a vented enclosure together with a horn-loaded 165-mm (6.5-in.) high-efficiency, mid-frequency driver and a 25.4-mm (1-in.) compression driver loaded with a 90° x 40° constant-directivity horn. The system shall be capable of being biamped using the internal passive crossover. The loudspeaker system shall meet the following performance criteria. Power handling shall be 300 watts of pink noise with 6-dB crest factor, band-limited from 75 Hz to 350 Hz, and 100 watts band-limited from 350 Hz to 20 kHz. Frequency response shall be smooth

and uniformly usable from 75 Hz to 20 kHz. Pressure sensitivity shall be 100.5 dB (LF) and 104 dB (MF/HF) SPL when measured at one meter on axis with one watt of band-limited pink noise from 75 Hz to 20 kHz. The enclosure shall be constructed of 19-mm (0.75-in.) 14-ply birch plywood and shall be heavily braced and lined with sound-absorbent glass wool. The finish of the enclosure shall be a textured black and a removable black metal grille shall be provided. The dimensions of the enclosure shall be 699 mm (27.5 in.) high by 368 mm (14.5 in.) wide by 368 mm (14.5 in.) deep. The loudspeaker system shall weigh 34.0 kg (75 lb).

The loudspeaker system shall be the Altec Lansing DTS-941.

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

Altec Lansing DTS-941 Duplex Loudspeaker System

Altec Lansing DTS-941 Duplex Loudspeaker System

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 origi-

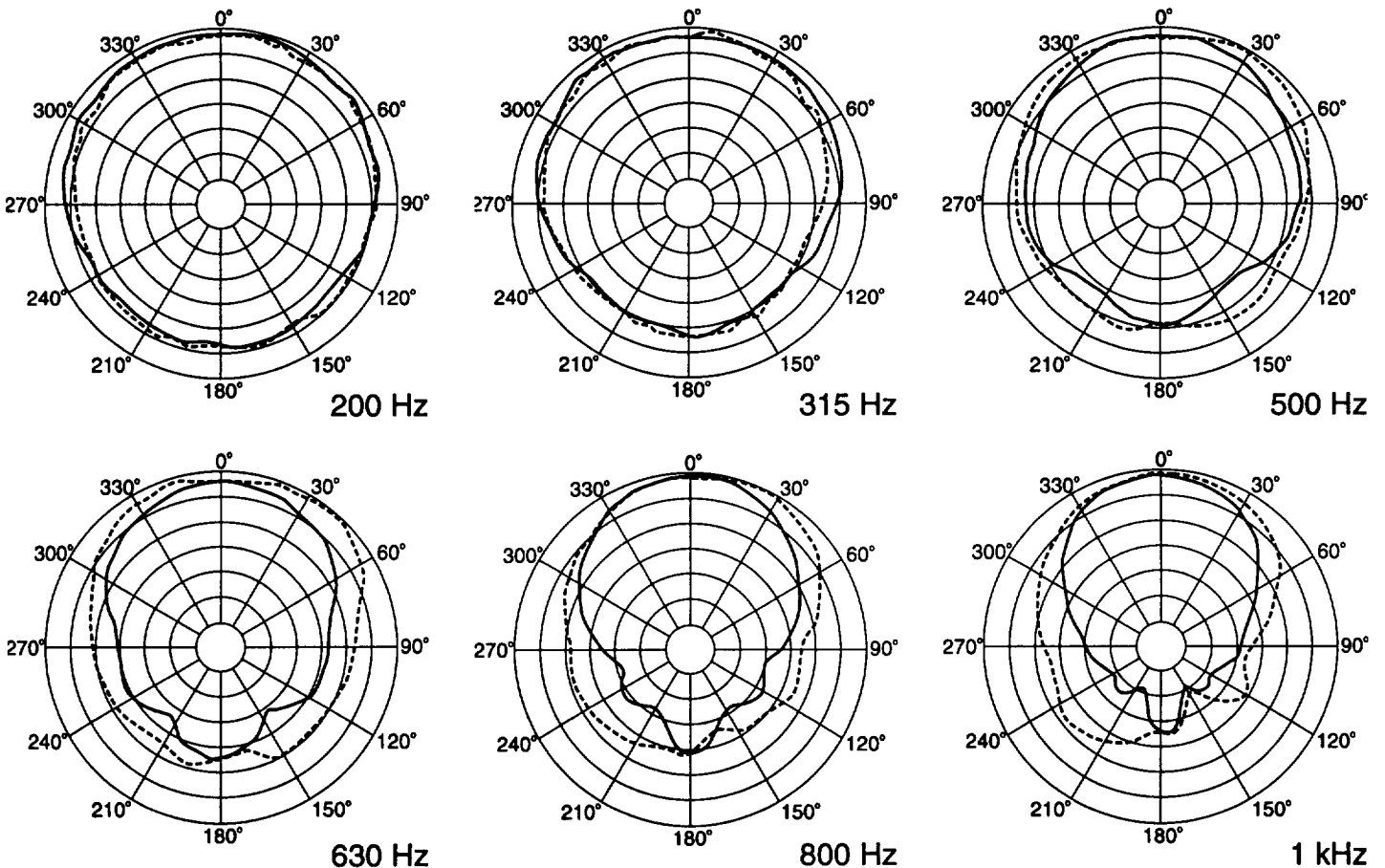
nal purchase. The Limited Warranty does not apply to burned voice coils or malfunctions such as cone and/or coil damage resulting from improperly designed enclosures. Altec Lansing active electronics associated with the speaker systems are guaranteed for three (3) years from the date of original purchase. Additional details are included in the Uniform Limited Warranty statement.

Altec Lansing Accessories are guaranteed against malfunction due to defects in materials or workmanship for a period of one (1) year 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.

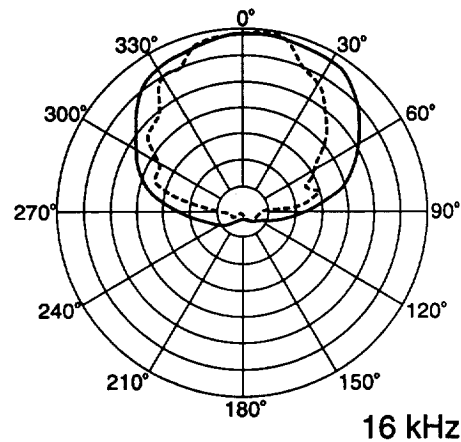
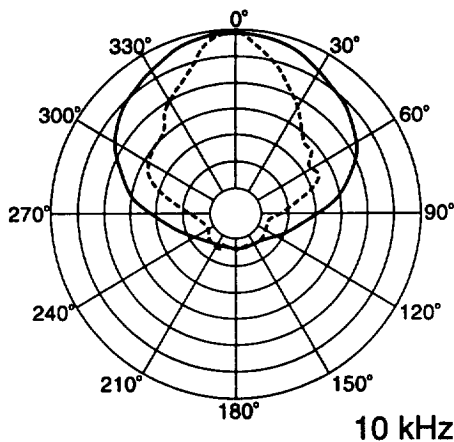
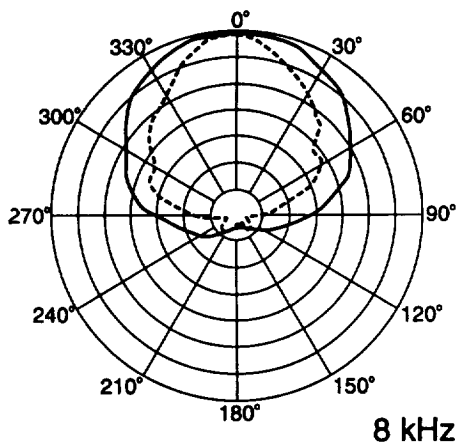
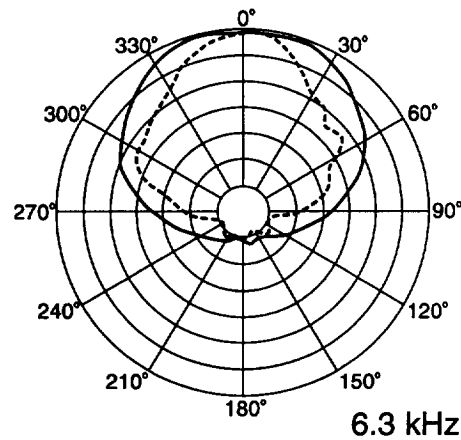
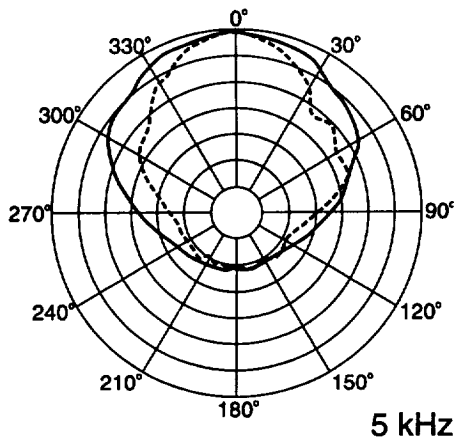
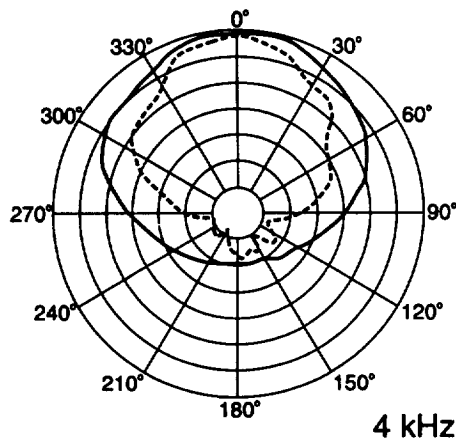
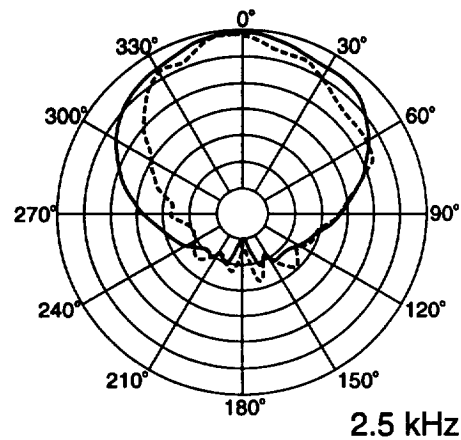
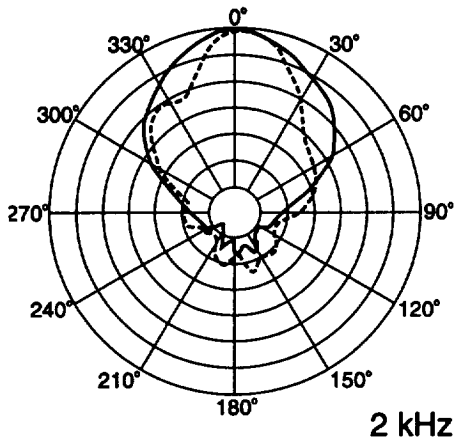
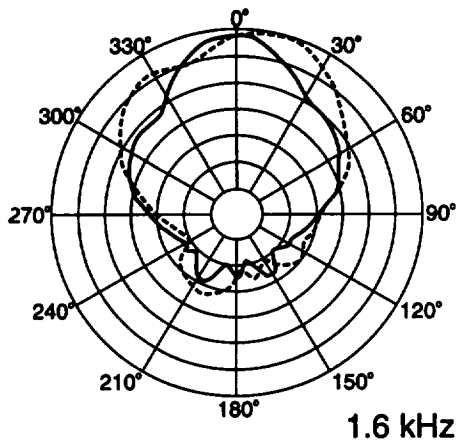
Figure 1—DTS-941 Polar Response
(one-third-octave bands of pink noise)



* Long enclosure axis vertical.

Altec Lansing DTS-941 Duplex™ Loudspeaker System

Figure 1—DTS-941 Polar Response
(one-third-octave bands of pink noise)



— Horizontal*
- - - Vertical*

* Long enclosure axis vertical.

Altec Lansing DTS-941 Duplex Loudspeaker System

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Figure 2—DTS-941 Frequency Response
(on axis, 1 watt/1 meter, anechoic environment)

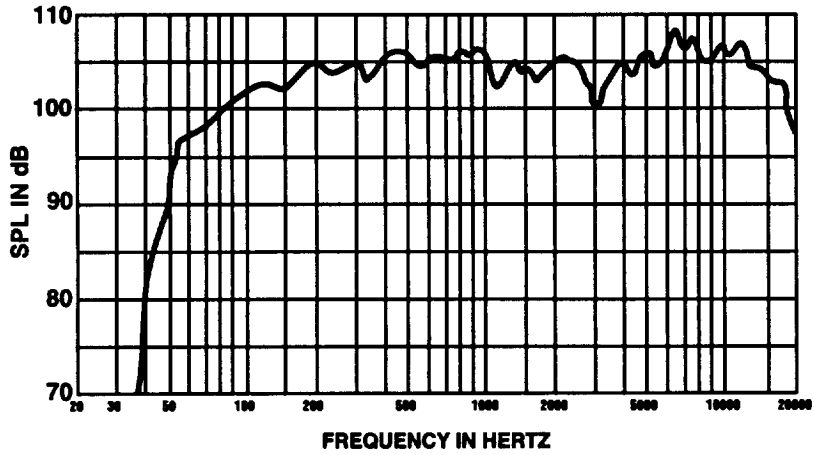


Figure 3—DTS-941 Impedance, High Frequency

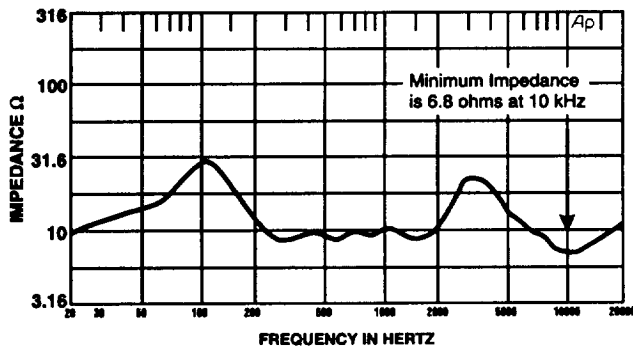


Figure 4—DTS-941 Impedance, Low Frequency

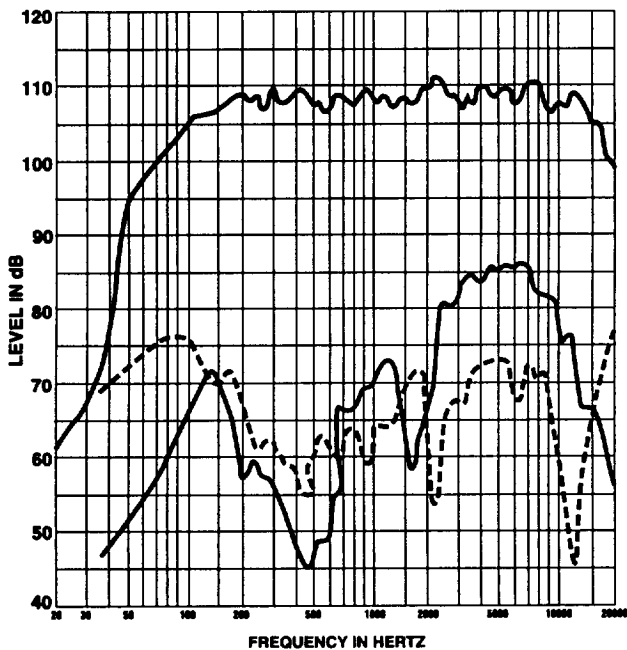
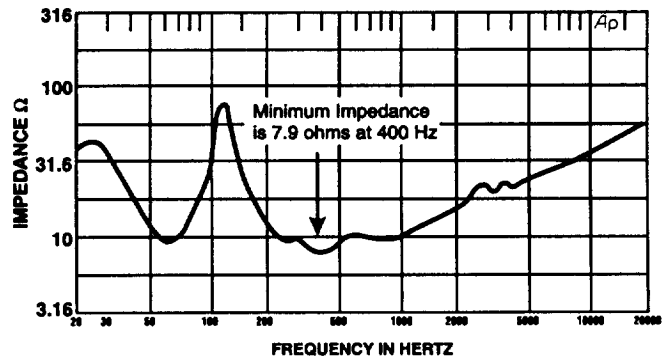


Figure 5—DTS-941 Harmonic Distortion at 0.01 Rated Power (3W)¹

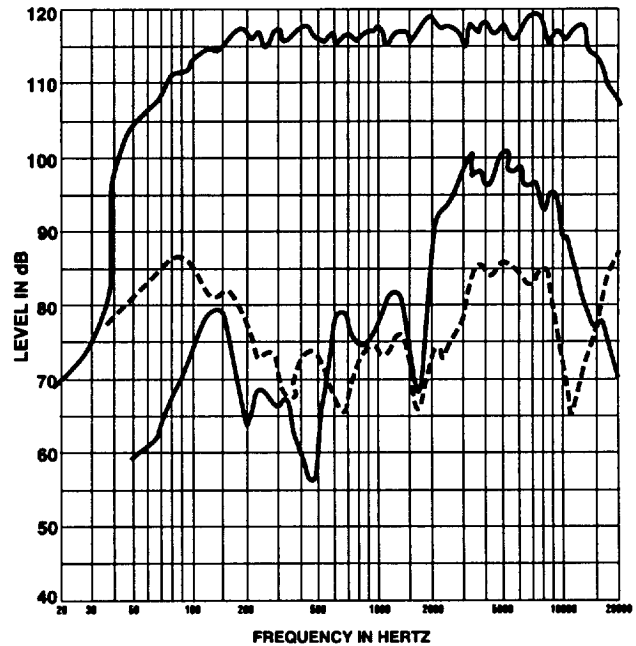
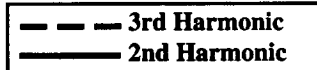
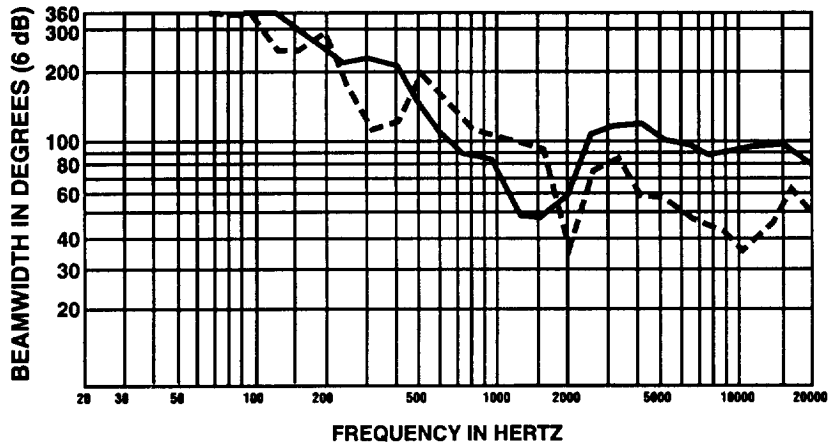


Figure 6—DTS-941 Harmonic Distortion at 0.1 Rated Power (30 W)¹

Altec Lansing DTS-941 Duplex⁽¹⁾ Loudspeaker System

Figure 7—DTS-941 Beamwidth



— Horizontal*
 - - - Vertical*

* Long enclosure axis vertical.

Altec Lansing DTS-941 Duplex[®] Loudspeaker System

Figure 8—DTS-941 R_{θ} (Q) and Directivity Index, D_i

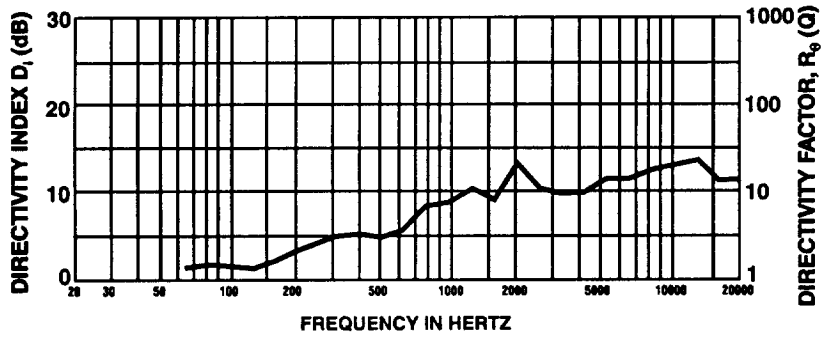
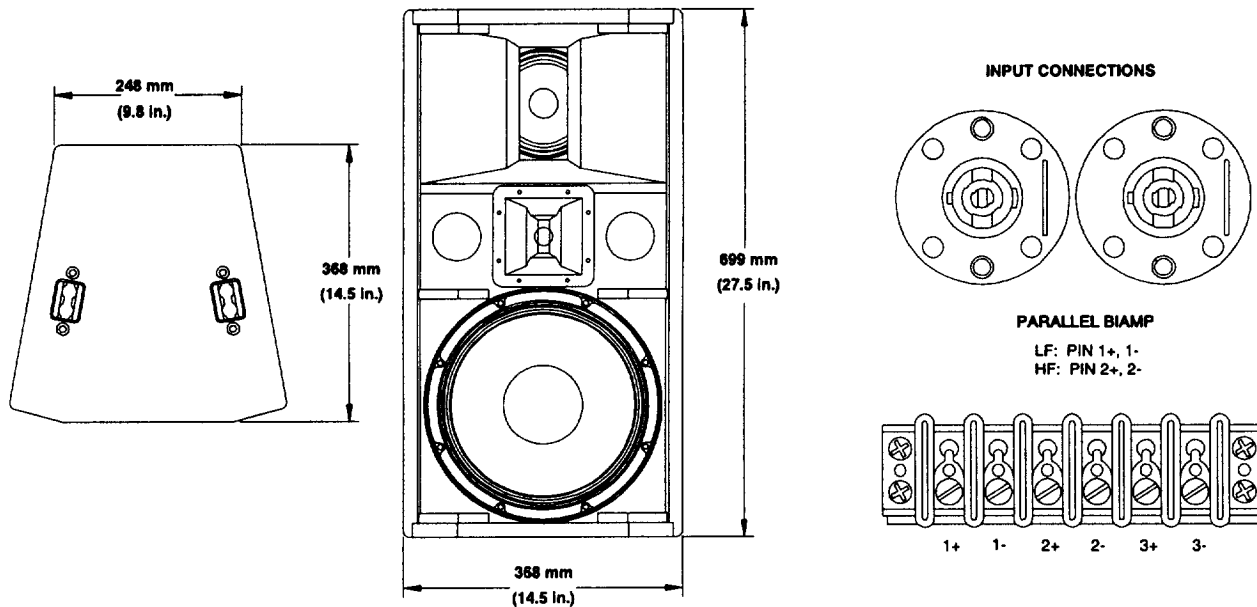


Figure 9—DTS-941 Dimensions



Altec Lansing DTS-941 Duplex[®] Loudspeaker System

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Altec Lansing DTS-941 Duplex™ Loudspeaker System

Specifications

System Type:

Three-way, horn-loaded, full-range loudspeaker system; biamp using internal passive crossover

Pressure Sensitivity,

HF (350-20,000 Hz):

104 dB SPL²

LF (75-350 Hz):

300 watts²

Frequency Response (see Figure 2):

75-20,000 Hz³

Beamwidth,

Horizontal, 800-16,000 Hz:

90° (+20°, -40°)

Vertical, 4,000-16,000 Hz:

40° (+20°, -5°)

Directivity Factor, R_v (Q), 800-16,000 Hz:

10.6 (+11.5, -3.5)

Directivity Index, D_v, 800-16,000 Hz:

10.2 dB (+3.1, -2.1 dB)

Power Handling,

HF (350-20,000 Hz):

100 watts⁴

LF (75-350 Hz):

300 watts⁴

Maximum Long-Term Output,

HF (350-20,000 Hz, 100 watt input):

124 dB SPL⁵

LF (75-350 Hz, 300 watts input):

125 dB SPL⁵

Impedance,

HF:

6.8 ohms minimum

8.0 ohms nominal

LF:

7.9 ohms minimum

8.0 ohms nominal

Components:

LF:

305-mm (12-in.), high efficiency

woofer

MF:

165-mm (6.5-in.), high-efficiency

midrange

HF:

25.4-mm (1-in.) exit high-frequency

driver

Input Terminals:

Large screw terminals with paralleled

4-pin Neutrik Speakon® connectors

Replacement LF:

812-2364

Replacement MF:

84051

Replacement HF:

833-2442

Replacement Grille:

84054

Enclosure:

Vented LF and horn-loaded MF, built of 19-mm (0.75-in.), 14-ply birch plywood with appropriate bracing, lined with glass wool; three point hanging system included

Dimensions:

699 mm (27.5 in.) high

368 mm (14.5 in.) wide

368 mm (14.5 in.) deep

Net Weight:

34.0 kg (75.0 lb)

Shipping Weight:

36.8 kg (81.0 lb)

Finish:

Black textured primer finish, black 16-gauge powder-coated grille

Accessories:

Two Ancra 42546-10 single-stud tie-down cargo suspension hardware provided with system

NOTES ON MEASUREMENT CONDITIONS

1. Distortion components invalid above 10 kHz. 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 applying the formula:

$$\text{percent distortion} = 100 \times 10^{(\text{difference in dB}/20)}$$

2. Pink-noise signal, one watt calculated using E^2/Z_{\min} , 3.16-meter measurement distance referred to one meter.

3. 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.

4. This system rating patterned after the ANSI/EIA RS-426-A 1980 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 8 hours (where E is the RMS test voltage and R_E is the dc resistance of the woofer voice coil).

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



a Mark IV company

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