



## HDH™ -2T

High Level Two-Way  
Processor Enhanced  
Sound Reinforcement System

### SPECIFICATIONS

**Enclosure:**  
HDH™ 2T

**Frequency Response, 1 Meter on Axis,  
Swept Sine Averaged Across Operating  
Bandwidth in Anechoic Environment:**  
55 Hz - 18 kHz

**Low Frequency Limit (-3 dB Point):**  
55 Hz

**Usable Low Frequency Limit (-10 dB Point):**  
45 Hz

**Power Handling:**

**Lows:**  
250 watts continuous (44.7 volts RMS)  
500 watts program

**Highs:**  
160 watts continuous (35.8 volts RMS)  
320 watts program

**Sound Pressure Level, 1 Watt at 1 Meter,  
Swept Sine Input in Anechoic Environment:**  
106 dB (Processed)  
101 dB (Unprocessed)

**Maximum Sound Pressure Level:**  
128 dB

**Radiation Angle Measured at -6 dB Point of  
Polar Response:**

| Horizontal Plane:                      | Vertical Plane:                       |
|--|---------------------------------------|
| <b>250—500 Hz</b><br>190° +/- 50°      | <b>250—500 Hz</b><br>180° +/- 45°     |
| <b>500—10,000 Hz</b><br>92° +/- 27°    | <b>500—10,000 Hz</b><br>60° +/- 20°   |
| <b>10,000—16,000 Hz</b><br>45° +/- 15° | <b>10,000—16,000 Hz</b><br>40° +/- 5° |

**Directivity Factor Q, 500 Hz—16,000 Hz  
Median:**  
11.2 (+24.3, - 8.0)

**Directivity Index Di, 500-16,000 Hz Median:**  
10.5 dB (+5.0 dB, - 5.1 dB)

**Transducer Complement:**

1 1505-8 BW  
4 22A™ compression drivers coupled to a  
CH™-5 80° H x 40° V horn by a four-driver  
manifold

**Box Tuning Frequency (F box):**  
60 Hz

**Crossover Frequency:**  
1200 Hz

**Crossover Type:**  
Active Dynamic System Controller™  
Series HDH™

**Crossover Slope:**  
18 dB/octave low pass, 18 dB/octave  
high pass

**Impedance (Nominal):**  
8 ohms low, 8 ohms high

**Impedance (Minimal):**  
6.1 ohms low, 5.6 ohms high

**Input Connections:**  
Two Neutrik NL8MPR 8 pin male wall-  
mount receptacles wired in parallel

**Enclosure Materials and Finish:**  
¾", 7 ply, high-density plywood covered  
with wear-resistant carpet with steel  
corners

**Mounting:**  
Provided - 5 fixed flying points  
(ring-in-pan style) 2 top, 2 bottom, 1 back

**Dimensions:**  
22" (55.9 cm) W x 28⅞" (70.8 cm) H x  
18⅞" (46.7 cm) D

**Net Weight:**  
102 lbs. (46.4 kg)

### DESCRIPTION:

The HDH™ 2T is a full-range, 2-way trapezoidal enclosure designed for monitoring, sound reinforcement, and permanent installation. The enclosure is constructed of ¾", 7 ply, high-density plywood, then covered with a rugged wear-resistant carpet. A black perforated metal grille is permanently attached to the baffle to provide component protection and cosmetic appeal. The 2-way system is comprised of one 15 inch 1505-8 Black Widow® low frequency driver and four 22A™ compression drivers loaded onto a CH™-5 constant directivity horn, via a four-driver manifold. The input frequency spectrum is controlled by the Dynamic System Controller™ Series HDH™ which is an active crossover/preamplifier. By sampling each amplifier output, the Dynamic System Controller™ Series HDH™ provides a low frequency excursion control, loudness compensation and three-band thermal protection. The HDH 2T along with the Dynamic System Controller™ Series HDH™ gives the system an ultra-high level in sound reinforcement from 55 Hz to 18,000 Hz.

**FREQUENCY RESPONSE:**

The frequency response of the HDH™ 2T is measured in an anechoic environment at a distance of 1 meter while using a 2.82 volt logarithmically swept sine input. This measurement is useful in determining the accuracy in which the enclosure reproduces the input signal. The combination of the 1505-8 BW and the four 22A™ compression drivers on the CH™-5 horn along with the Dynamic System Controller™ Series HDH™ results in a flat desirable response as shown in figure 1.

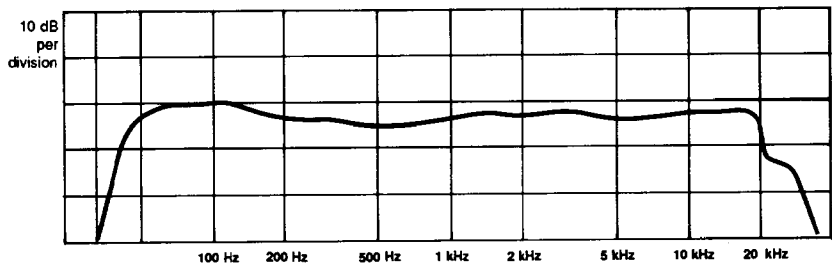


Figure 1. FREQUENCY RESPONSE

**DIRECTIVITY:**

Beamwidth and directivity factors are derived from the -6 dB points from the polar plots (see figures 2 and 3) which are measured in a whole space anechoic environment. These are specifications which provide a reference to the coverage characteristics of the enclosure. These parameters provide insight for proper enclosure placement and installation in the chosen environment. The blending of the components of the HDH exhibits a desirable beamwidth and directivity factor (figures 4 and 5) suitable for all high-level sound reinforcement applications.

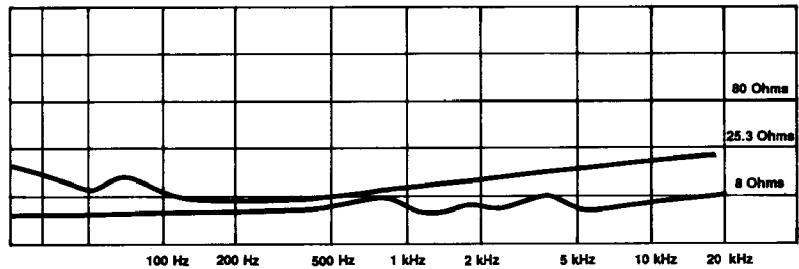


Figure 2. IMPEDANCE

**POWER HANDLING:**

There are many different approaches to power handling ratings, the most common being EIA Standard RS-426A. The derived shape of this test spectrum was an attempt to simulate the spectral content of contemporary music. Although it does resemble contemporary music, EIA-RS-426A does not contain the same levels of very low frequency material found in live music situations. Very high levels of low frequency material produce distortion and, ultimately, device failure. The presence of the low frequency material will therefore yield lower device ratings than produced by EIA Standard RS-426A. Although the device ratings are lower than those produced by the EIA test spectrum, they are far more reliable and will have a direct correlation to real world situations.

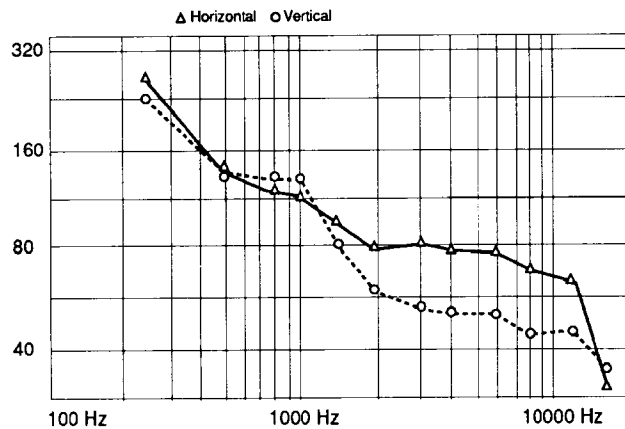


Figure 4. BEAMWIDTH VS. FREQUENCY

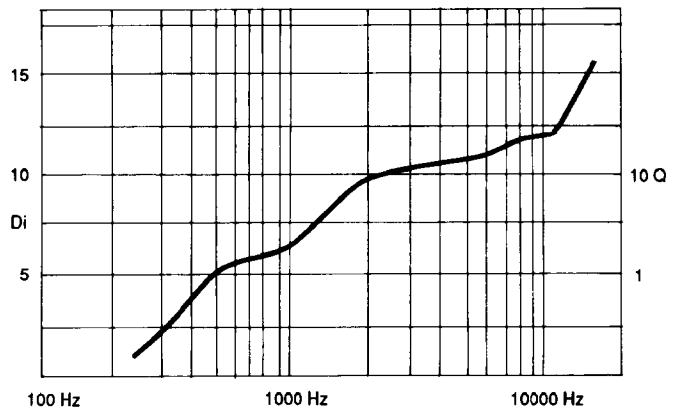
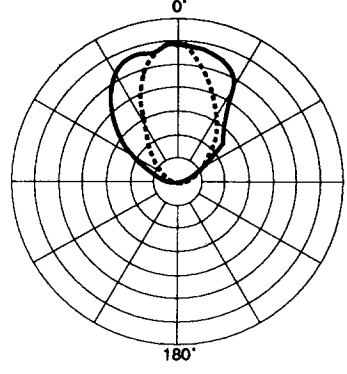
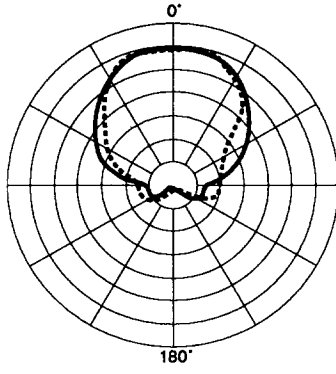
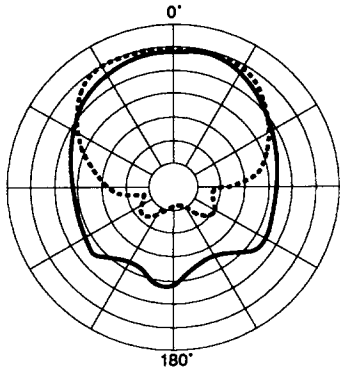


Figure 5. DIRECTIVITY

5 dB per Division

**HORIZONTAL**



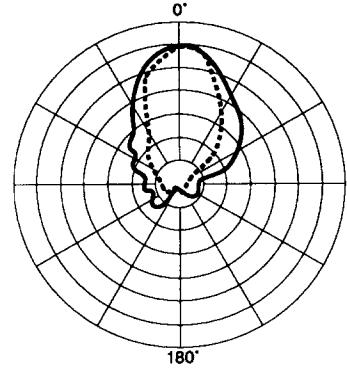
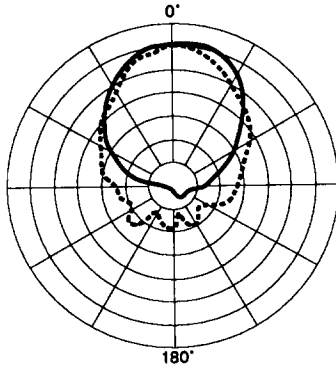
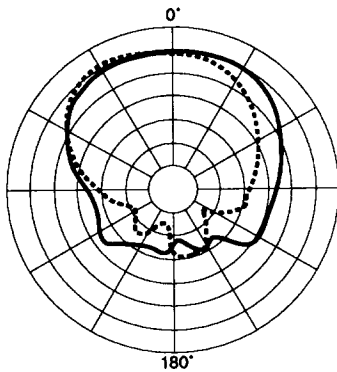
— 500 Hz  
 ..... 1 kHz

— 2 kHz  
 ..... 4 kHz

— 8 kHz  
 ..... 16 kHz

5 dB per Division

**VERTICAL**



**Figure 3. POLAR PATTERNS**

**HDH™ 2T**

**2-Way Sound Reinforcement System**  
A PRODUCT OF PEAVEY ELECTRONICS CORP. MERIDIAN, MS

**MADE IN U.S.A.**

**WEIGHT: 102 POUNDS**

**DANGER:** BEFORE ATTEMPTING TO SUSPEND THIS SPEAKER CONSULT A CERTIFIED STRUCTURAL ENGINEER. SPEAKER CAN FALL FROM IMPROPER SUSPENSION, RESULTING IN SERIOUS INJURY AND PROPERTY DAMAGE. OTHER ENCLOSURES MAY BE SUSPENDED BELOW ONE (1) HDH-2T. HOWEVER, THE COMBINED WEIGHT OF ADDITIONAL ENCLOSURES AND ALL CABLES, CLAMPS AND OTHER HARDWARE MUST NOT EXCEED 146 POUNDS. THE HDH-2T WEIGHS 102 POUNDS AND THE MAXIMUM COMBINED WEIGHT (SUSPENDED) FROM THE UPPER MOST RING AND PAN ASSEMBLY MUST NOT EXCEED 248 POUNDS. MAXIMUM ENCLOSURE ANGLE 45°.

**WARNING:** THIS SPEAKER SYSTEM CAN PERMANENTLY DAMAGE HEARING. USE EXTREME CARE SETTING MAXIMUM LOUDNESS.

**PARALLEL INPUTS**

|                | MAX. POWER | IMPEDANCE |       |       |
|----------------|------------|-----------|-------|-------|
| HIGH CROSSEVER | 160W RMS   | 8Ω-16Ω    | Pin 4 | Pin 3 |
| LOW            | 250W RMS   | 8Ω-16Ω    | Pin 2 | Pin 1 |

PINS 1™ THRU 4 ARE PRIMARY SIGNAL  
 PINS 5 THRU 8 ARE INTERNALLY PARALLELED WITH  
 PINS 1™ THRU 4™ TO 2 TO 6 3 TO 7 4 TO 8  
A PRODUCT OF PEAVEY ELECTRONICS CORP. MERIDIAN, MS



**ARCHITECTURAL & ENGINEERING SPECIFICATIONS:**

The loudspeaker system shall have an operating bandwidth of 55 Hz to 18 kHz. The output level shall be 106 dB (processed - 101 unprocessed) when measured at a distance of one meter with an input of one watt. The nominal impedance shall be 8 ohms. The continuous power handling shall be 250 watts (mids) and 160 watts (highs); maximum program power of 500 watts (mids) and 320 watts (highs), with a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 80 degrees in the horizontal plane and 40 in the vertical plane. The outside dimensions shall be 22 inches wide by 28 $\frac{1}{2}$  inches high by 18 $\frac{1}{2}$  inches deep. The weight shall be 102 lbs. The system shall be capable of suspension and shall be supplied with five (5) "ring-in-pan" style flying points. The loudspeaker system shall be a Peavey model HDH™ 2T.

**DANGER:** Before attempting to suspend this speaker, consult a certified structural engineer. Speaker can fall from improper suspension, resulting in serious injury and property damage. Other enclosures may be suspended below one HDH 2T. However, the combined weight of additional enclosures and all cables, clamps and other hardware must not exceed 146 pounds. The HDH 2T weighs 102 pounds and the maximum combined weight suspended from the uppermost ring and pan assemblies must not exceed 248 pounds. Maximum enclosure angle 45°.

**WARNING:** This speaker system can permanently damage hearing! Use extreme care setting maximum loudness!

**ONE YEAR LIMITED WARRANTY --**

Note: For details, refer to the warranty statement. Copies of this statement may be obtained by contacting Peavey Electronics Corporation, P. O. Box 2898, Meridian, Mississippi 39302-2898.



Features and specifications subject to change without notice.

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