

# S P E C I F I C A T I O N S



part number 00332250 eyebolts optional

## IMPULSE™ 1582 Full Range, Two-Way Enclosure

### SPECIFICATIONS

#### Frequency Response, 1 Meter, On-Axis, Swept Sine in Anechoic Environment:

55 Hz to 19 kHz

#### Low-Frequency Cut-Off (-3 dB point):

55 Hz

#### Usable Low-Frequency Limit (-10 dB point):

47 Hz

#### Power Handling:

Full Range:

300 W continuous (48.9 V RMS)

600 W program

1,200 W peak

Bi-amp Low:

350 W continuous (34.6 V RMS)

700 W program

1,400 W peak

Bi-amp High:

80 W continuous (17.9 V RMS)

160 W program

320 W peak

#### Sensitivity, 1 Watt 1 Meter in Anechoic Environment:

Full Range:

99 dB SPL

Bi-amp Low:

99 dB SPL

Bi-amp High:

111 dB SPL

#### Maximum Sound Pressure Level (1 meter):

Full Range:

122 dB SPL (continuous)

128 dB SPL (peak)

Bi-amp Low:

122 dB SPL (continuous)

128 dB SPL (peak)

Bi-amp High:

134 dB SPL (continuous)

140 dB SPL (peak)

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

500 Hz to 1.6 kHz:

Horizontal: 98° ±18°

Vertical: 90° ±10°

1.6 kHz to 5 kHz:

Horizontal: 76° ±9°

Vertical: 62° ±16°

5 kHz to 16 kHz:

Horizontal: 63° ±17°

Vertical: 39° ±5°

#### Directivity Factor, Q (Mean):

8.5 dB

#### Directivity Index, D<sub>i</sub> (Mean):

9.3 dB

#### Transducer Complement:

One 1505-8DT Black Widow® 15" inch woofer

One 44T™ compression driver coupled with a CH®-7 constant-directivity horn

#### Box Tuning Frequency:

54 Hz

#### Harmonic Distortion:

1/100 rated power

2nd harmonic:

100 Hz: 0.80%

1 kHz: 0.16%

3rd harmonic:

100 Hz: 0.28%

1 kHz: 0.19%

1/10 rated power

2nd harmonic:

100 Hz: 2.50%

1 kHz: 0.35%

3rd harmonic:

100 Hz: 3.10%

1 kHz: 0.40%

#### Recommended Active Crossover Frequency and Slope:

800 Hz minimum at 12 dB/octave

#### Time Offset:

0.41 ms (delay Lows)

#### Impedance (Z):

Full Range Nominal: 8Ω

Full Range Minimum: 5.9Ω

Lows Nominal: 8Ω

Highs Minimum: 8Ω

#### Input Connections:

Full Range: 2-position terminal barrier strip

Bi-amp: 4-position terminal barrier strip (barrier strips accept up to 10 ga. wire)

#### Enclosure Materials & Finish:

Painted finish (illustrated):

3/4", 7-ply Poplar faced, high-density plywood with grey polyurethane finish

Natural finish:

18 mm, 13-ply Baltic Birch, void-free plywood (ready for finish of user's choice)



**Dimensions (H x W x D):**  
 29.50" H x 21.50" W x 17.50" D  
 (rear width 21.50")  
 74.9 cm x 54.6 cm x 44.5 cm  
 (rear width 54.6 cm)

**Net Weight:**  
 108 lbs. (49.1 kg)

**FEATURES**

- Bi-amp capability
- High power handling
- Metal guard grille
- 10 gauge steel internal flying points
- 44T™ titanium dome compression driver
- Grille color options
- 800 Hz crossover

**DESCRIPTION**

The new Impulse™ 1582 is a full range or bi-ampable two-way enclosure designed specifically for permanent installation. The cabinet is constructed of 3/4" Poplar-faced, high-density plywood, or 18 mm, 13-ply all Birch void-free plywood. The internal flying points are reinforced with 10 gauge steel bracing. The decorative and internal protective grilles are permanently attached to the enclosure.

The two-way system is comprised of a Black Widow 15" woofer, and a 44T compression driver loaded into a CH-7 constant-directivity horn. The frequency spectrum can either be divided internally through the enclosure's passive crossover operating at about 800 Hertz, or through an external active or passive crossover. In either case, the input lead connection is made secure through the use of screw terminal barrier strips for bi-amp operation.

**FREQUENCY RESPONSE**

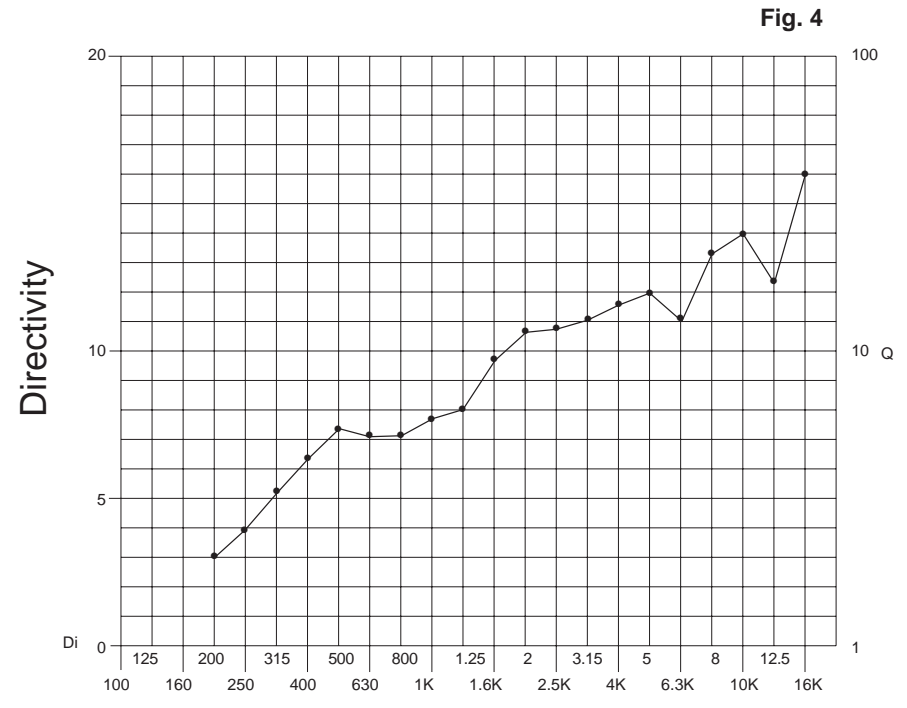
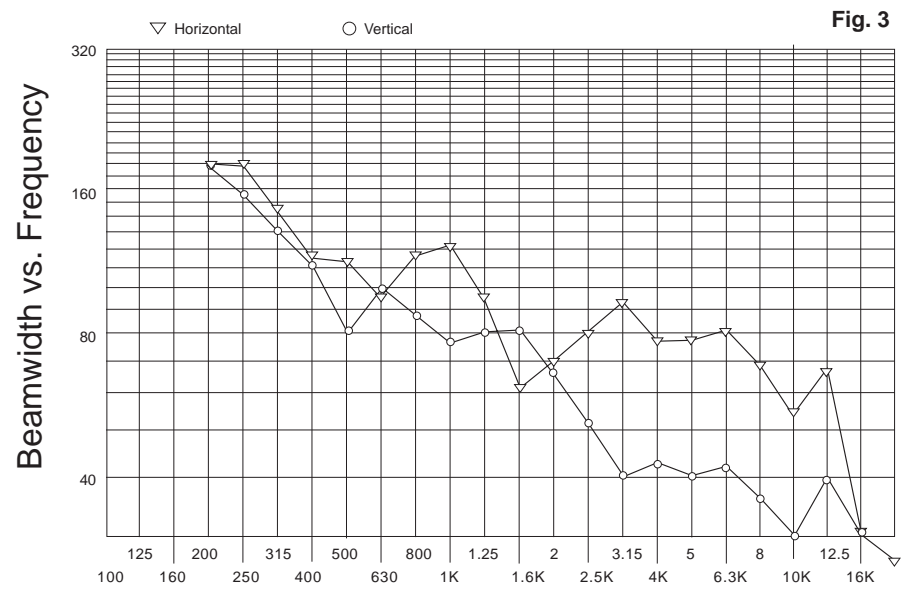
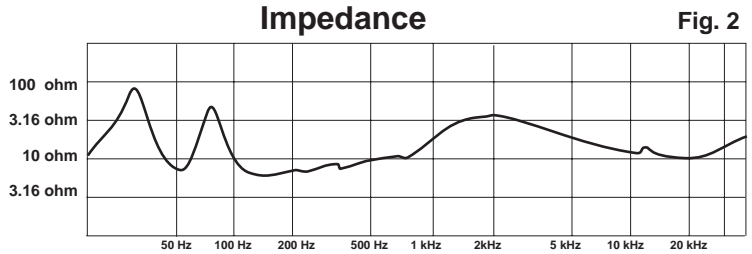
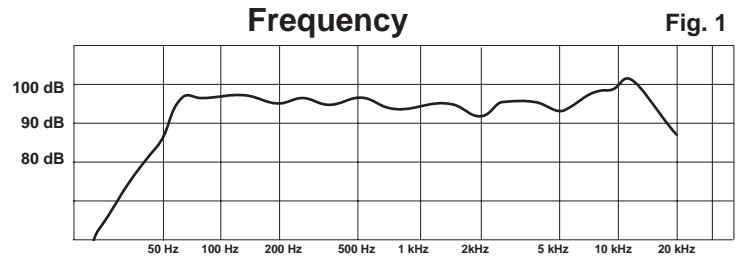
This measurement is useful in determining how accurately a given enclosure reproduces an input signal. The frequency response of the Impulse 1582 is measured at 1 meter using a 2.83 volt swept sine input. As shown in Figure 1, the selected drivers in the Impulse 1582 combine to give a smooth frequency response from 55 Hz to 19 kHz.

**DIRECTIVITY**

Beamwidth and directivity factors are derived from the -6 dB points from the polar plots, which are measured in a whole-space anechoic environment. These are specifications that 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 Impulse 1582 exhibits a desirable beamwidth and directivity factor suitable for all high-level sound reinforcement applications.

**POWER HANDLING**

There are many different approaches to power handling ratings. Peavey rates this speaker system's power handling using a modified form of the AES Standard 2-1984. Utilizing audio band (20 Hz to 20 kHz) pink noise with peaks over four times the RMS level, this strenuous test signal assures the



user that every portion of this system can withstand today's high-technology music. The test signal contains large amounts of very low-frequency energy, effectively simulating the frequency content of live music situations. The full measure of high frequencies in the test signal allow for exposure of the speaker system to synthesize tones that may extend beyond audibility. This rating is contingent on having a minimum 3 dB of amplifier headroom available.

## HARMONIC DISTORTION

Second and third harmonic distortion vs. frequency are plotted in Figures 5 and 6 for two power levels, one-tenth rated input power and one-hundredth rated input power. Distortion is read from the graph as the difference between the fundamental signal (frequency response) and the desired harmonic. As an example, a distortion curve that is down 40 dB from the fundamental is equivalent to 1% distortion.

### MOUNTING:

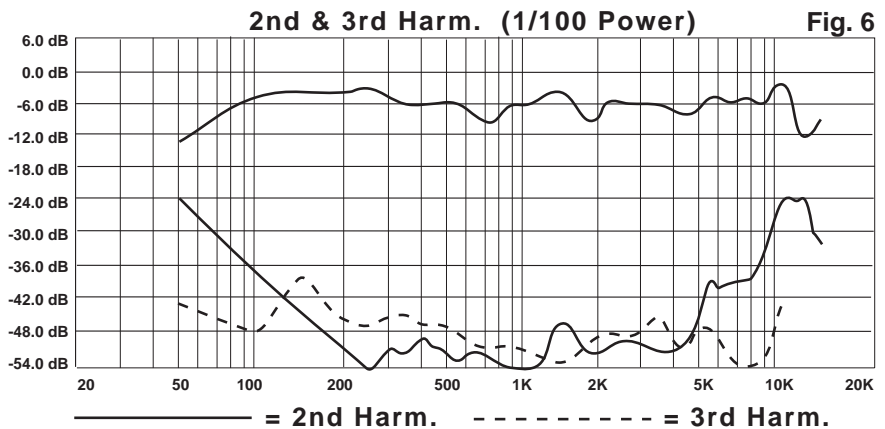
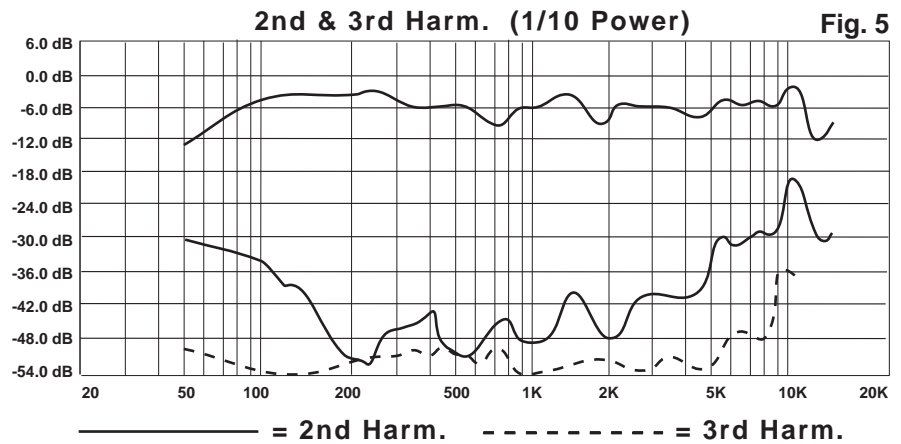
**CAUTION:** Before attempting to suspend this speaker, consult a certified structural engineer. Speaker can fall from improper suspension, resulting in serious injury and property damage. Other enclosures may be suspended below one Impulse 1582. However, the combined weight of additional enclosures and all cables, clamps, and other hardware must not exceed 117 lbs. The Impulse 1582 weighs 108 pounds and the maximum combined weight suspended from the uppermost mounting bracket assemblies must not exceed 225 pounds. Maximum enclosure angle is 45°. Use only 1/2" forged shoulder machinery eyebolt, mil spec. MS51937-5, Peavey part number 00332250. All associated rigging is the responsibility of others.

## ARCHITECTURAL & ENGINEERING SPECIFICATIONS

The loudspeaker system shall have an operating bandwidth of 55 Hz to 19 kHz. The nominal output level shall be 99 dB (full range), 99 dB (bi-amp) when measured at a distance of one meter with an input of one watt. The nominal impedance shall be 8 ohms (full range), 8 ohms (bi-amp). The maximum continuous power handling shall be 300 watts (full range), 300 watts (bi-amp), and maximum program power of 600 watts (full range), 700 watts (bi-amp), with a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 80° in the horizontal plane and 40° in the vertical plane. The outside dimensions shall be 29.50 inches wide by 21.50 inches high by 17.50 inches deep, with a rear width of 21.50 inches. The weight shall be 108 lbs. The loudspeaker system shall be a Peavey model Impulse™ 1582.

### 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 30302-2898.



## LIMITED WARRANTY

Peavey Electronics Corporation warrants to the original purchaser of this new Architectural Acoustics product that it is free from defects in material and workmanship. If within one (1) year from date of purchase a properly installed product proves to be defective and Peavey is notified, Peavey will repair or replace it at no charge. (Note: Batteries and patch cords not covered.) "Original purchaser" means the customer for whom the product is originally installed.

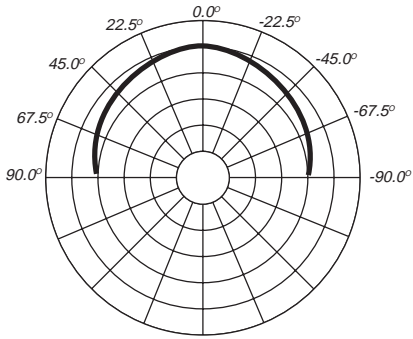
Damage resulting from improper installation, interconnection of a unit or system of another manufacturer, accident or unreasonable use, neglect or any other cause not arising from defects in material and workmanship is not covered by this warranty. The warranty is valid only as to products purchased and installed in the United States.

**THIS LIMITED WARRANTY IS IN LIEU OF ANY AND ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. UNDER NO CIRCUMSTANCES WILL PEAVEY BE LIABLE FOR ANY LOST PROFITS, LOST SAVINGS, INCIDENTAL DAMAGES OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT, EVEN IF PEAVEY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. THIS LIMITED WARRANTY IS THE ONLY EXPRESSED WARRANTY ON THIS PRODUCT, AND NO OTHER STATEMENT, REPRESENTATION, WARRANTY, OR AGREEMENT BY ANY PERSON SHALL BE VALID OR BINDING UPON PEAVEY.**

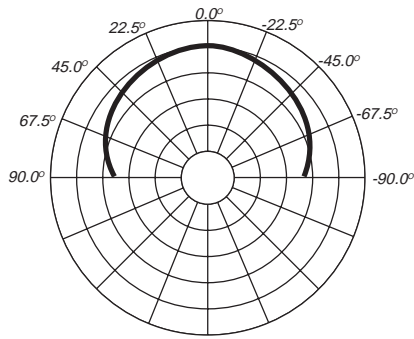
Peavey's liability to the original purchaser for damages for any cause whatsoever and regardless of the form of action is limited to the actual damages up to the greater of Five Hundred Dollars (\$500) or an amount equal to the purchase price of the product that caused the damage or that is the subject of or is directly related to the cause of action. This limitation of liability will not apply to claims for personal injury or damage to real property or tangible personal property allegedly caused by Peavey's negligence. For information on service under this warranty, call a Peavey customer service representative at (601) 483-5376.

# HORIZONTAL POLAR PATTERNS

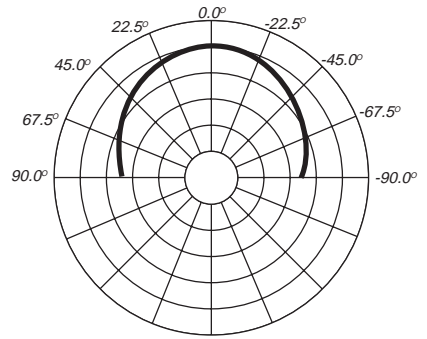
6 dB per division



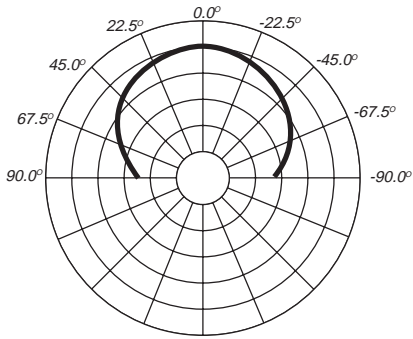
250 Hz \_\_\_\_\_



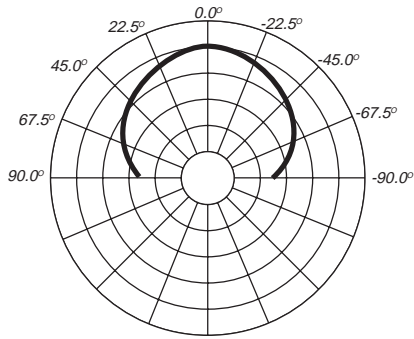
300 Hz \_\_\_\_\_



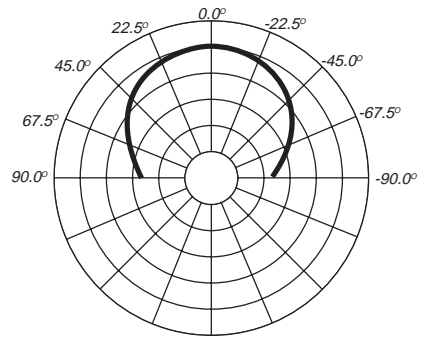
400 Hz \_\_\_\_\_



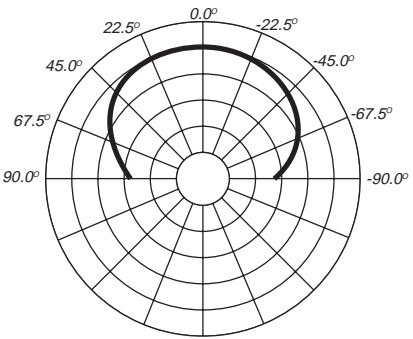
500 Hz \_\_\_\_\_



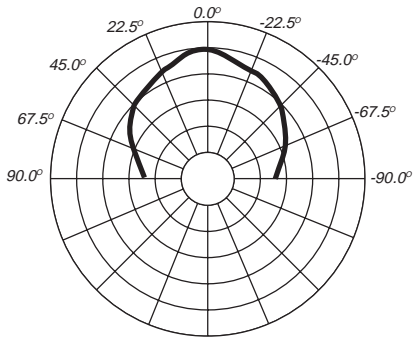
630 Hz \_\_\_\_\_



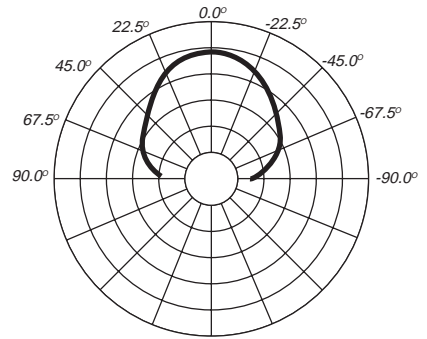
800 Hz \_\_\_\_\_



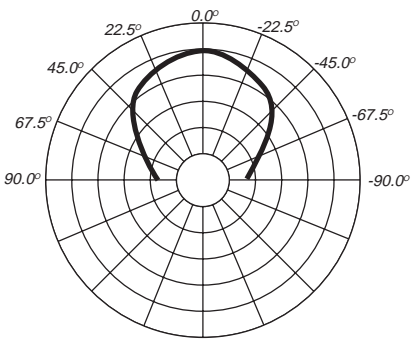
1 kHz \_\_\_\_\_



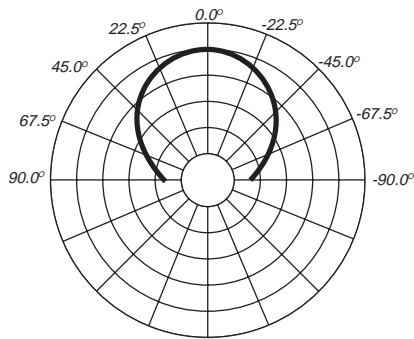
1.25 kHz \_\_\_\_\_



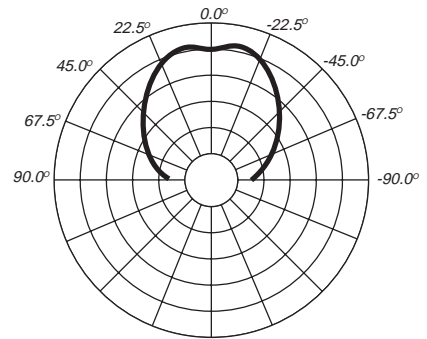
1.6 kHz \_\_\_\_\_



2 kHz \_\_\_\_\_



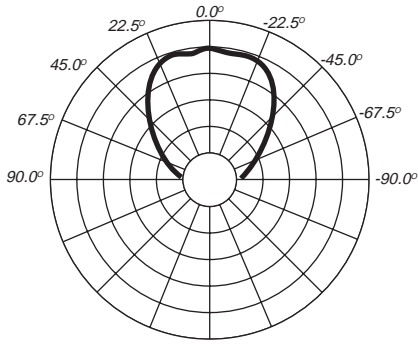
2.5 kHz \_\_\_\_\_



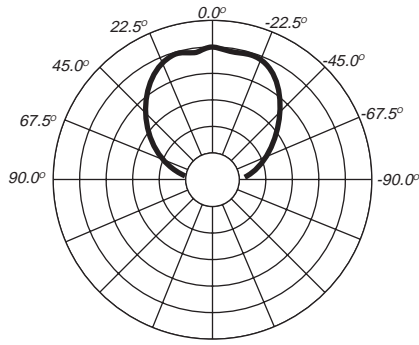
3.15 kHz \_\_\_\_\_

# HORIZONTAL POLAR PATTERNS

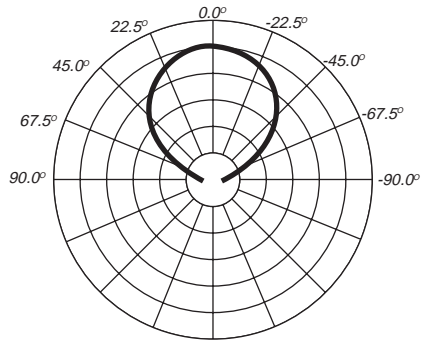
6 dB per division



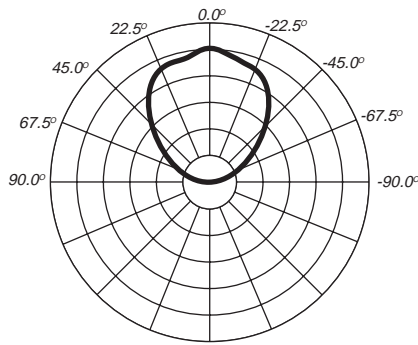
4 kHz \_\_\_\_\_



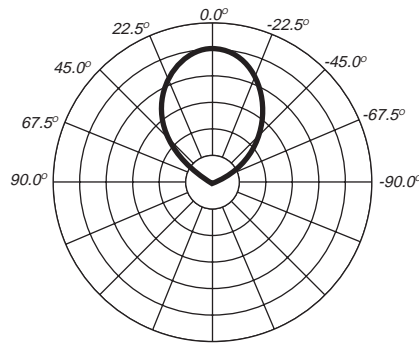
5 kHz \_\_\_\_\_



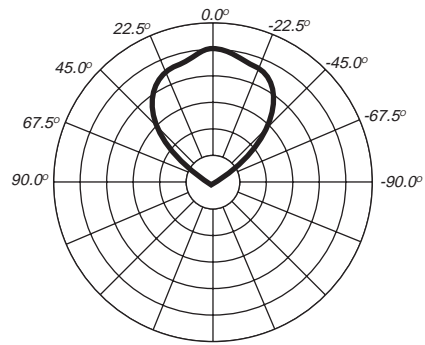
6.3 kHz \_\_\_\_\_



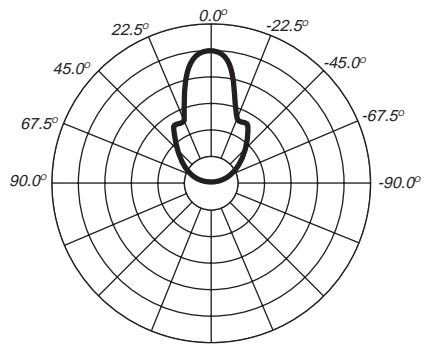
8 kHz \_\_\_\_\_



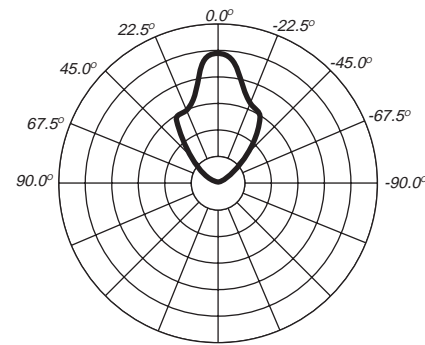
10 kHz \_\_\_\_\_



12.5 kHz \_\_\_\_\_



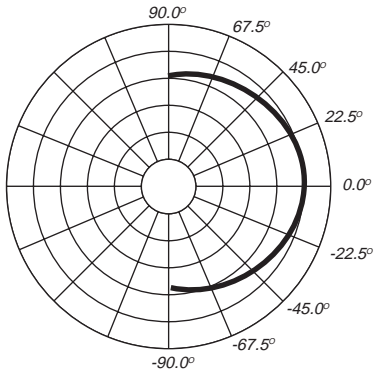
16 kHz \_\_\_\_\_



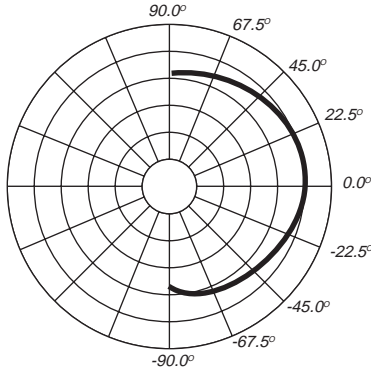
20 kHz \_\_\_\_\_

# VERTICAL POLAR PATTERNS

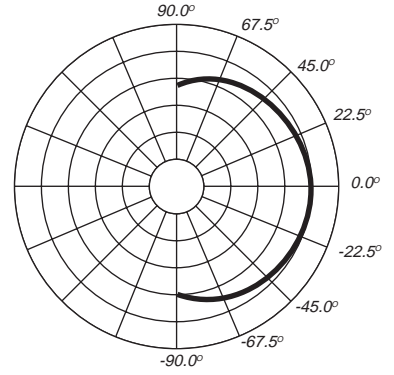
6 dB per division



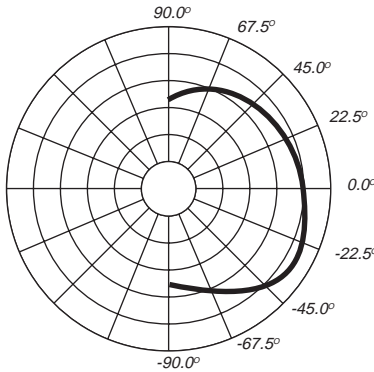
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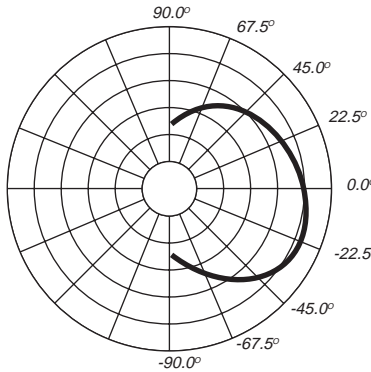
315 Hz



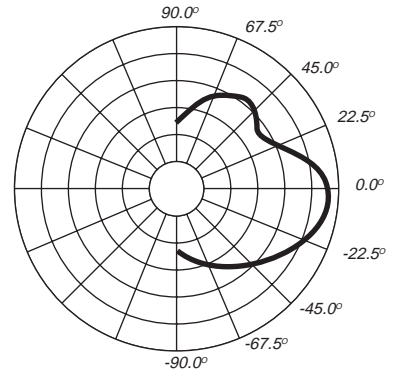
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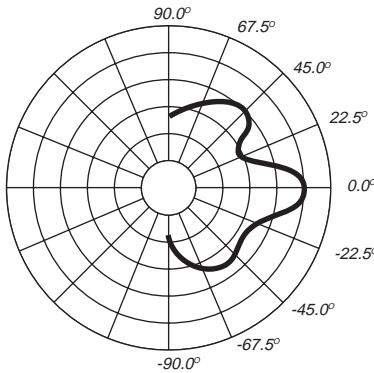
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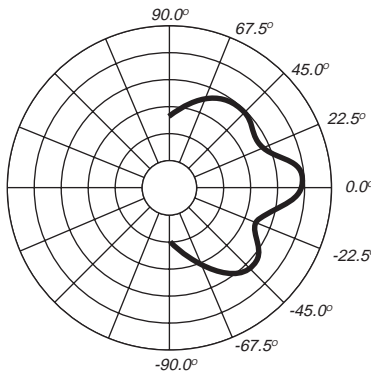
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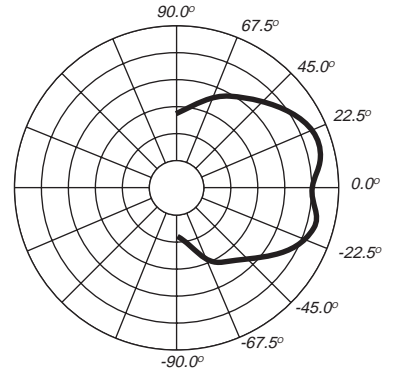
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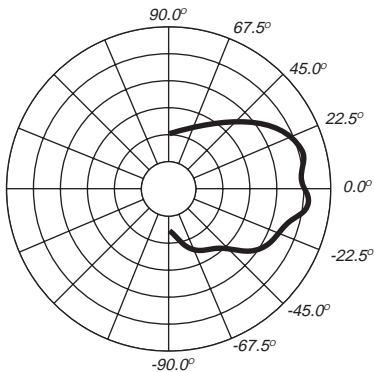
1 kHz



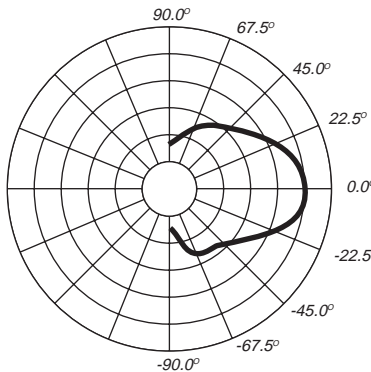
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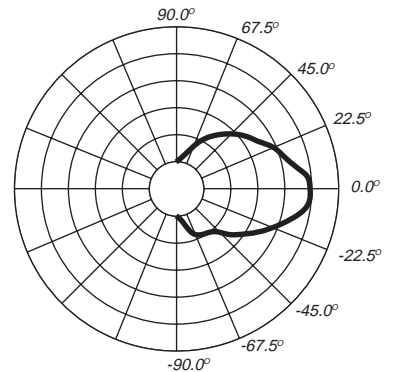
1.6 kHz



2 kHz



2.5 kHz

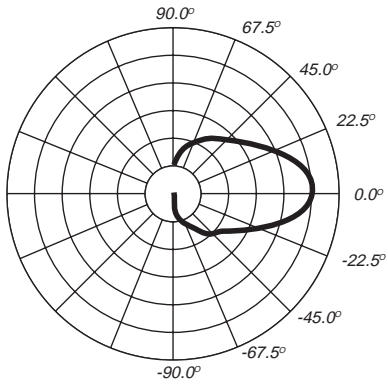


3.15 kHz

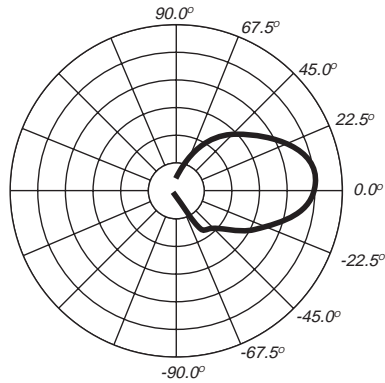


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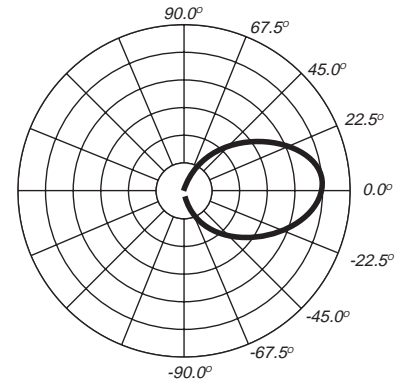
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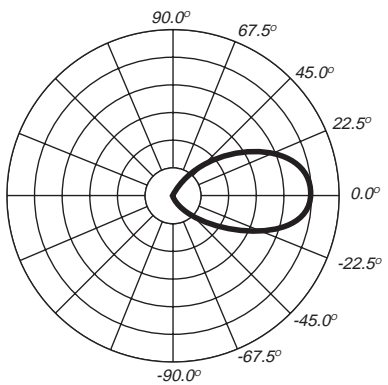
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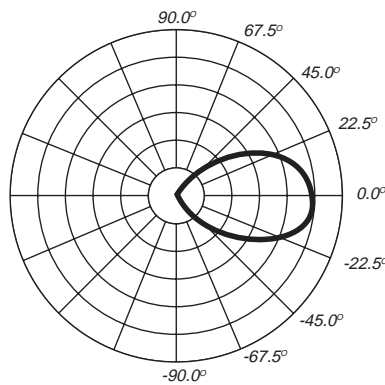
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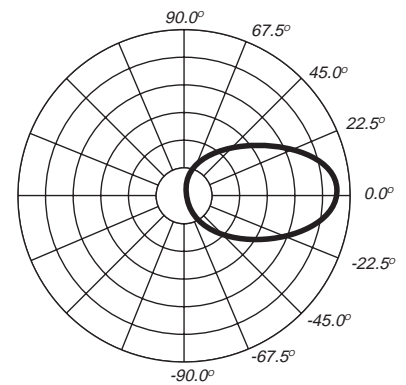
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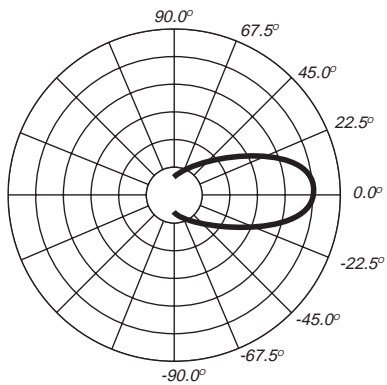
8 kHz



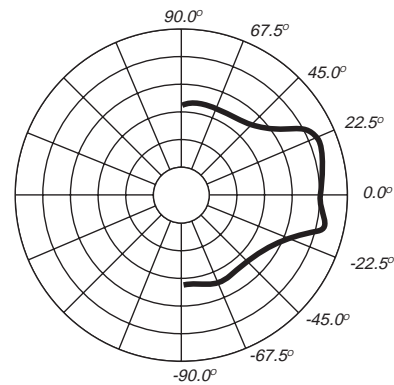
10 kHz



12.5 kHz

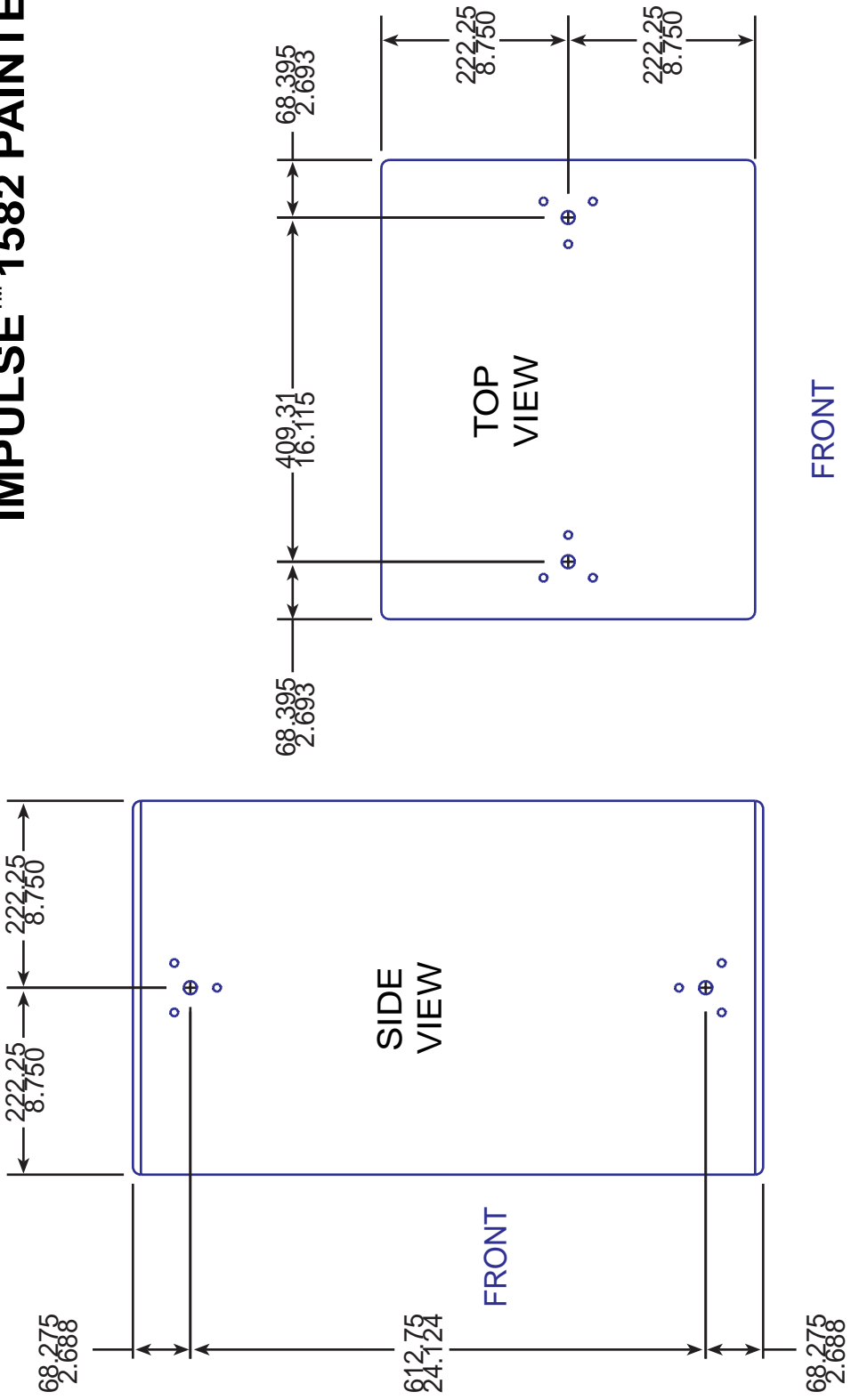


16 kHz



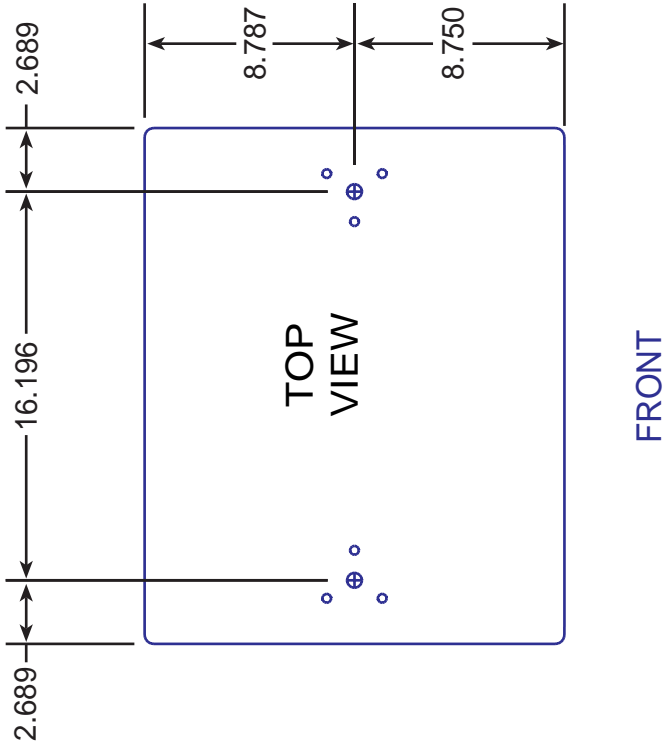
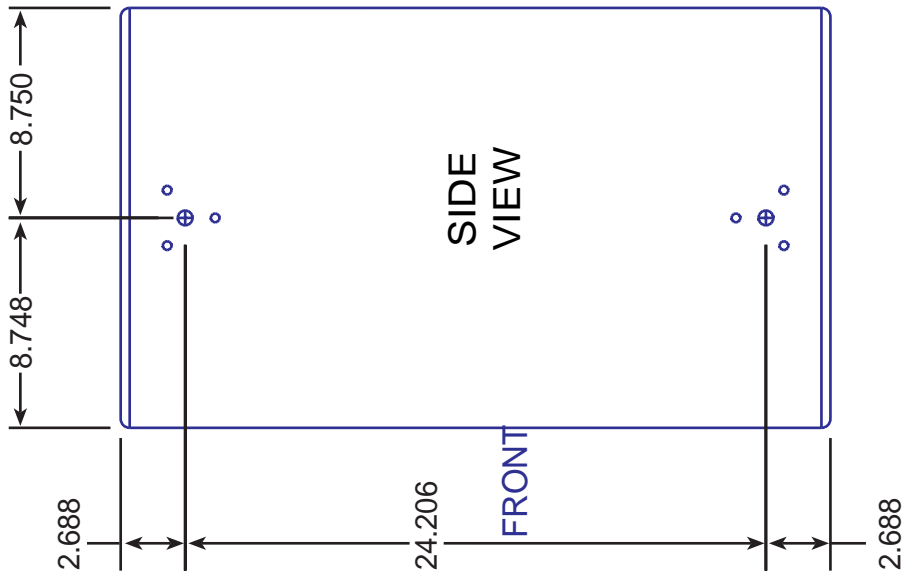
20 kHz

# IMPULSE™ 1582 PAINTED





# IMPULSE™ 1582 NATURAL



# Impulse™ 1582

MADE IN U.S.A.

# PEAVEY®

A PRODUCT OF PEAVEY ELECTRONICS CORP.

MERIDIAN, MS

MAX POWER: 150W CONT. (34.7V RMS)

300W PROGRAM

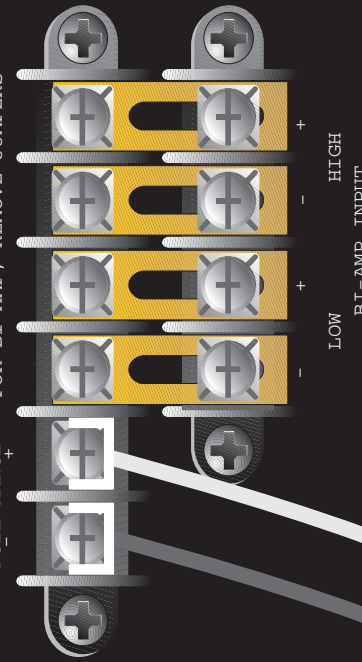
IMPEDANCE: 8 OHMS

WEIGHT: 52 LBS.

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 IMPULSE™ 1582. HOWEVER, THE COMBINED WEIGHT OF ADDITIONAL ENCLOSURES AND ALL CABLE, CLAMPS AND OTHER HARDWARE MUST NOT EXCEED 146 POUNDS. THE IMPULSE™ 1582 WEIGHS 52 POUNDS. AND THE MAXIMUM COMBINED WEIGHT SUSPENDED FROM THE UPPERMOST MOUNTING BRACKET ASSEMBLIES MUST NOT EXCEED 200 POUNDS. MAXIMUM ENCLOSURE ANGLE 45°. USE ONLY 1/2" FORGED SHOULDER MACHINERY EYE BOLT MIL SPEC MS 51937-5 ALL ASSOCIATED RIGGING IS THE RESPONSIBILITY OF OTHERS

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

FULL RANGE FOR BI-AMP, REMOVE JUMPERS



— + Full Range

Jumpers must be closed across terminal strips.

# Impulse™ 1582

MADE IN U.S.A.

# PEAVEY®

A PRODUCT OF PEAVEY ELECTRONICS CORP.

MERIDIAN, MS

MAX POWER: 150W CONT. (34.7V RMS)

300W PROGRAM

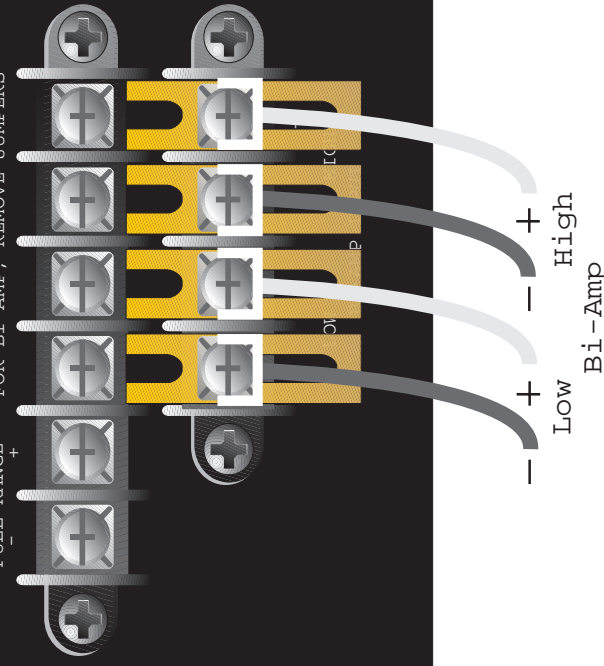
IMPEDANCE: 8 OHMS

WEIGHT: 52 LBS.

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 IMPULSE™ 1582. HOWEVER, THE COMBINED WEIGHT OF ADDITIONAL ENCLOSURES AND ALL CABLE, CLAMPS AND OTHER HARDWARE MUST NOT EXCEED 146 POUNDS. THE IMPULSE™ 1582 WEIGHS 52 POUNDS. AND THE MAXIMUM COMBINED WEIGHT SUSPENDED FROM THE UPPERMOST MOUNTING BRACKET ASSEMBLIES MUST NOT EXCEED 200 POUNDS. MAXIMUM ENCLOSURE ANGLE 45°. USE ONLY 1/2" FORGED SHOULDER MACHINERY EYE BOLT MIL SPEC MS 51937-5 ALL ASSOCIATED RIGGING IS THE RESPONSIBILITY OF OTHERS

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

FULL RANGE FOR BI-AMP, REMOVE JUMPERS



— + Low High  
Bi-Amp

Jumpers must be open across terminal strips.

# **NOTES**

**PEAVEY®**



Features and specifications subject to change without notice.

**Peavey Electronics Corporation / 711 A Street / Meridian, MS 39301 / U.S.A. / (601) 483-5376 / Fax 486-1154**



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