

SPECIFICATIONS

Impulse® 7



Features:

- Full-range two-way loudspeaker system
- Frequency response 69 Hz to 20 kHz
- SPL 87 dB at 1W/1m
- Weather resistant design
- Hi-Fi sound character
- 6 1/2" high performance woofer
- Planar ribbon tweeter
- Molded polypropylene cabinet
- Slots to allow interlocking of additional units
- Six threaded inserts for mounting
- Mic stand adaptor included on the side
- Drivers protected by an aluminum grille
- Small and lightweight with an unobtrusive appearance

Description

An excellent indoor/outdoor mini 2-way speaker system that is perfect for any application from foreground music to speech reinforcement. The Impulse 7 has a hi-fi sound character with great clarity which is ideal for music systems in bars, taverns, arenas, lounges, arcades or anywhere multi-channel, multi-speaker sound systems are required. This speaker utilizes a specially designed 6 1/2 inch woofer and a 1 1/8 inch square planar dynamic ribbon tweeter, a combination that will provide up to 106 dB SPL and handle up to 320 watts peak when coupled with its sophisticated internal crossover. The surface area of the planar diaphragm is 1.7 times that of a 1" dome tweeter, and the drive coils are affixed directly to the planar diaphragm. This creates a situation where the planar tweeter has a drive factor advantage of approx. 12X over that of a dome tweeter, resulting in faster transients and lower distortion than the typical dome tweeter.

Its trapezoidal high impact polypropylene cabinet is nearly indestructible. A perforated aluminum grille protects the weather-resistant drivers from tampering. With six threaded inserts and optional mounting hardware, this speaker can be wall or ceiling mounted, flown or used in arrays. With a mic stand adaptor on the side, it can also be used on stage just as easily. It is available in black (with a black grille) or white (with a white grille).



SPECIFICATIONS Impulse® 7

Frequency response, 1 meter on-axis, swept-sine in anechoic environment:

98 Hz – 20 kHz (± 3 dB)

Usable low frequency limit (-10 dB point anechoic):

73 Hz

Frequency range, 1 meter on-axis, swept-sine in 1/2 space environment:

69 Hz - 20 kHz

Power handling:

80 W continuous

160 W program

320 W peak

Sound pressure level, 1 watt, 1 meter in anechoic environment:

87 dB SPL, (2.83 V input)

Maximum sound pressure level (1 meter):

106 dB SPL continuous

112 dB SPL peak

Nominal radiation angle:

105 degrees horizontal by

95 degrees vertical

Radiation angle measured at -6 dB point of polar response:

500 Hz – 1.6 kHz:

Horiz. $140^\circ \pm 45^\circ$

Vert. $140^\circ \pm 40^\circ$

1.6 kHz – 5 kHz:

Horiz. $95^\circ \pm 15^\circ$

Vert. $100^\circ \pm 10^\circ$

5 kHz – 16 kHz:

Horiz. $75^\circ \pm 15^\circ$

Vert. $70^\circ \pm 15^\circ$

Directivity factor, Q (Mean):

6.55 ± 3.8 / -4.6

Directivity index, Di (Mean):

7.33 dB ± 4.9 dB

Transducer complement:

Low Frequency Section:

1x 6.5" high performance woofer

High Frequency Section:

1x 28 mm square planar ribbon tweeter mounted on shallow waveguide.

Box frequency (Fbox):

Closed box resonance: 100 Hz

Crossover frequency (internal passive):

3.2 kHz

Impedance (Z):

Nominal: 8 ohms

Minimum: 7.9 ohms

Input connections:

Screw terminals and a 1/4" phone jack (sealed when not in use)

Enclosure materials & finish:

Black molded polypropylene cabinet with textured finish, black perforated aluminum speaker grille

Mounting provisions:

1 set of 4 inserts on the top for a Peavey Versamount™ 35 mounting bracket, one pair of inserts (one top and one bottom) for Peavey SV™-605 speaker bracket

Dimensions (H x W x D):

Front:

11.5 in. x 7.5 in. x 6.88 in.

292 mm x 191 mm x 175 mm

Rear:

10.62 in. x 3.25 in. x 6.88 in.

270 mm x 83 mm x 175 mm

Net weight:

8 lbs. (3.6 kg)

Frequency Response

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the Impulse 7 is measured at a distance of 1-meter using a 1 watt (into the nominal impedance) swept-sine input signal. As shown in figure 1, the selected drivers in the Impulse 7 combine to give a smooth frequency response from 69 Hz to 20 kHz.

Directivity

Beamwidth is derived from the -6 dB points from the polar plots (see figure 3) which are measured in a whole space anechoic environment. Q and Directivity Index are plotted for the on-axis measurement position. These are specifications that provide a reference to the coverage characteristics of the unit. These parameters provide insight for proper placement and installation in the chosen environment. The blending of the components of the Impulse 7 exhibit a desirable beamwidth and directivity (figure 3 & 4) suitable for sound reinforcement applications.

Power Handling

There are many different approaches to power handling ratings. Peavey rates this loudspeaker system's power handling using a full-range form of the AES Standard 2-1984. Using audio band 20 Hz to 20 kHz pink noise with peaks of 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. This rating is contingent upon having a minimum of 3 dB of amplifier headroom available.

Harmonic Distortion

Second and third harmonic distortions vs. frequency are plotted in figures 5 & 6 for two power levels. Ten percent (10%) of rated input power and either one percent (1%) of rated input power or one watt, whichever is greater. 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.

SPECIFICATIONS Impulse® 7

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. The Impulse 7 can be mounted using a Peavey Versamount™ 35 or an SV™ 605 mounting bracket. No more than three interlocked Impulse 7 units should be suspended from a single Versamount 35, and no more than one unit from an SV 605 mounting bracket. Maximum enclosure angle is 45°. Use only the correct mating hardware. All associated rigging is the responsibility of others.

Architectural & Engineering Specifications

The loudspeaker system shall have an operating bandwidth of 69 Hz to 20 kHz. The nominal output level shall be 87 dB when measured at a distance of one meter with an input of one watt. The nominal impedance shall be 8 ohms. The maximum continuous power handling shall be 80 watts, maximum program power of 160 watts and a peak power input of at least 320 watts, with a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 105 degrees in the horizontal plane and 95 degrees in the vertical plane. The tweeter shall be a planar dynamic ribbon type, paired with a high performance 6.5" woofer. The outside dimensions shall be 11.5 inches high by 7.5 inches wide by 6.88 inches deep. The weight shall be 8 pounds. The loudspeaker system shall be a Peavey model Impulse 7.

3 + 2 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 39301-2898.

Amplitude Response (1W 1m On-Axis)

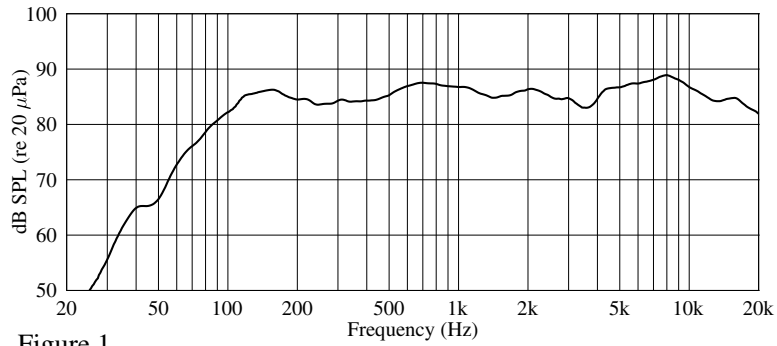


Figure 1

Impedance

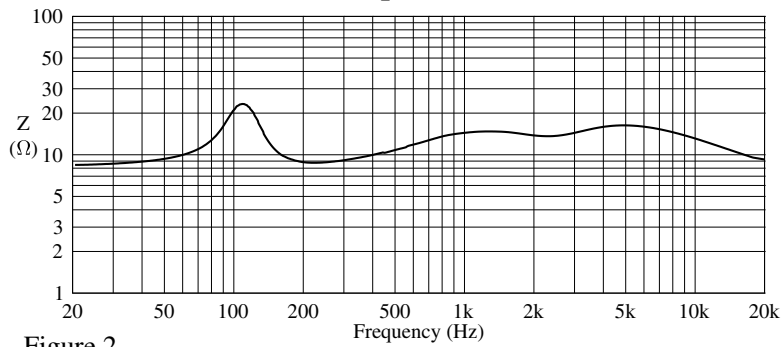


Figure 2

Beamwidth

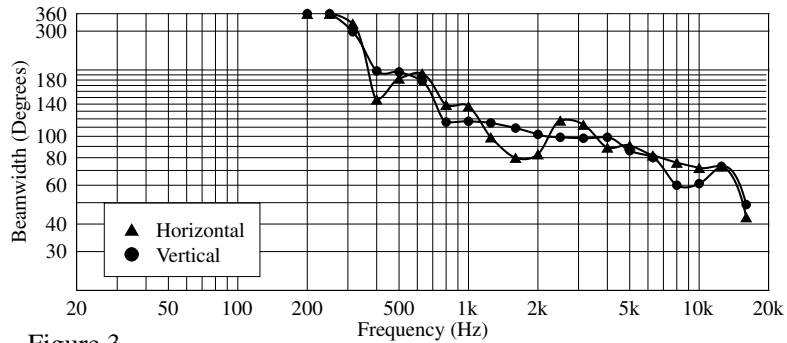


Figure 3

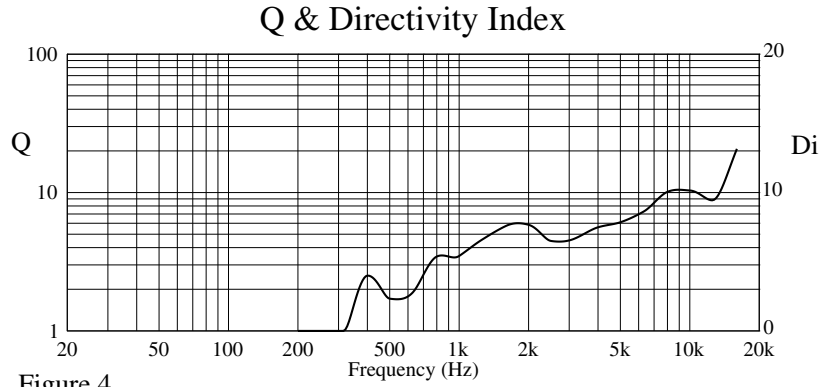


Figure 4

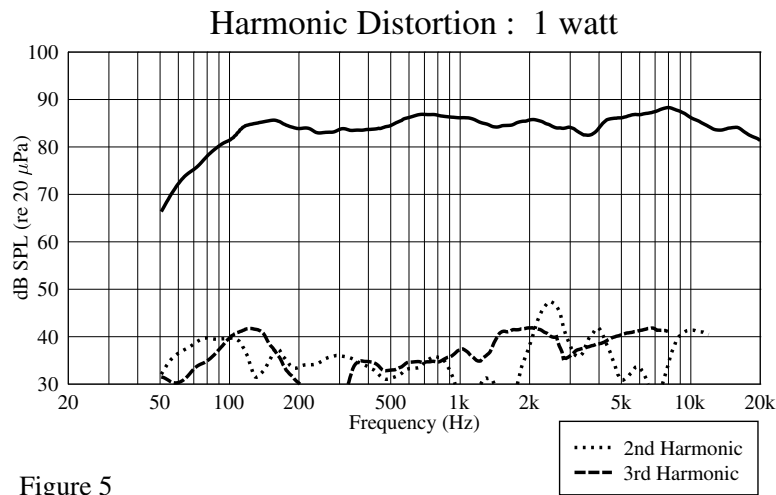


Figure 5

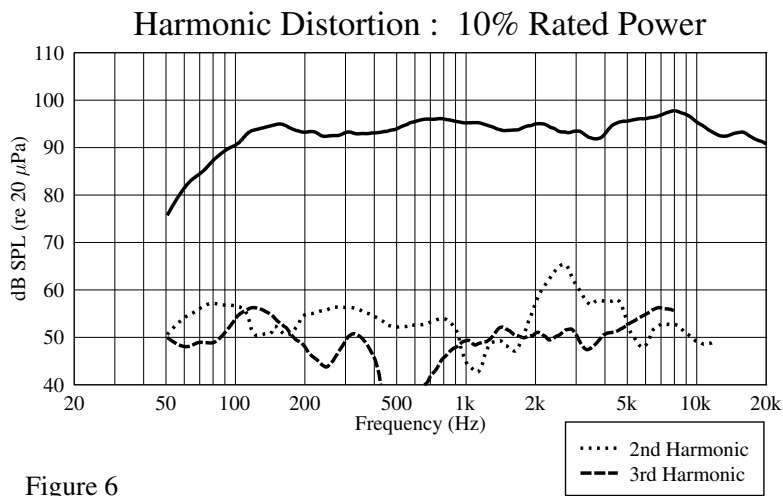


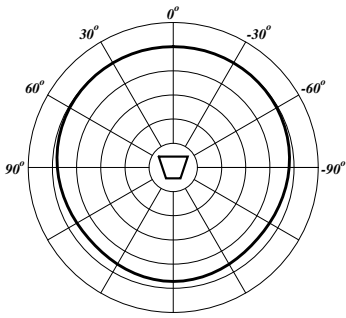
Figure 6

SPECIFICATIONS

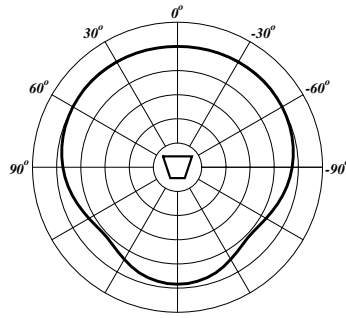
Impulse® 7

Horizontal Polar Plots

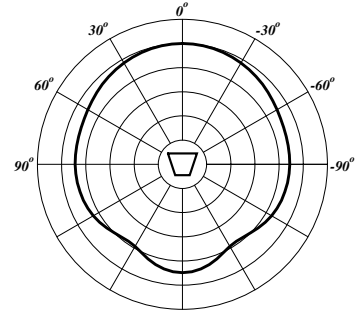
1/3 octave averaged plotted on ISO 1/3 octave centers from 200 Hz - 16 kHz



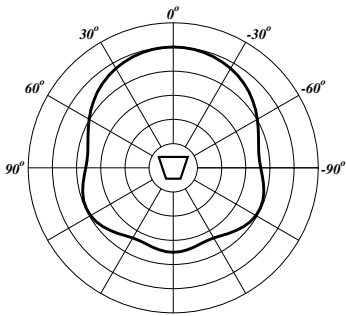
200 Hz



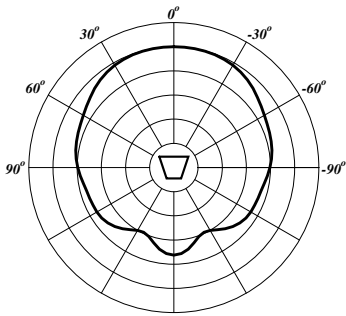
250 Hz



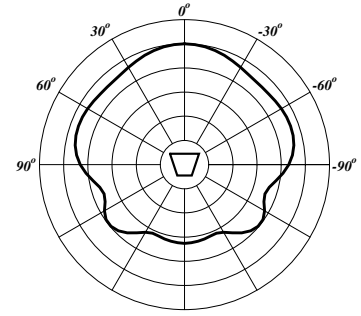
315 Hz



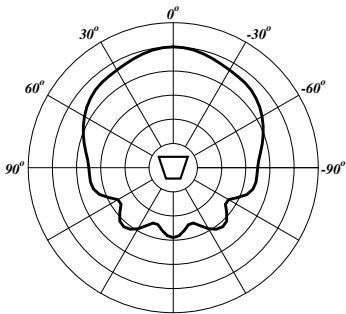
400 Hz



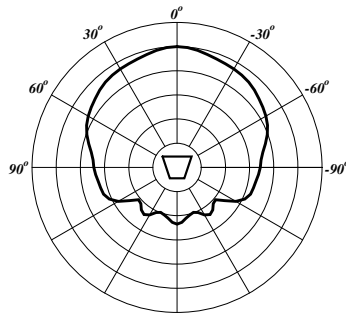
500 Hz



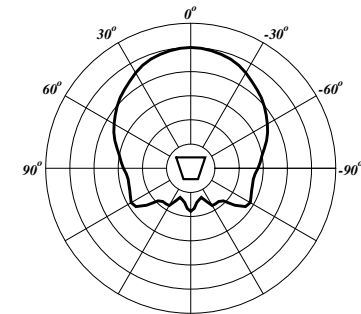
630 Hz



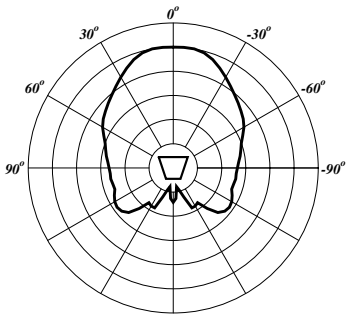
800 Hz



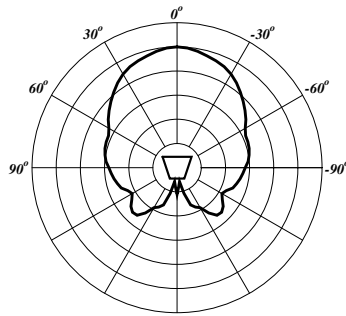
1 kHz



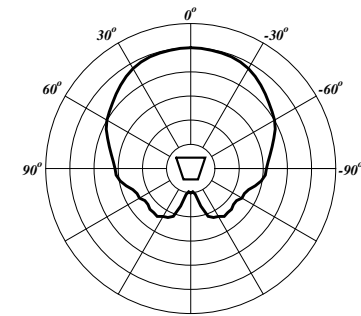
1.25 kHz



1.6 kHz



2 kHz



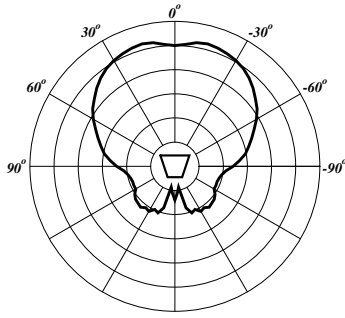
2.5 kHz

SPECIFICATIONS

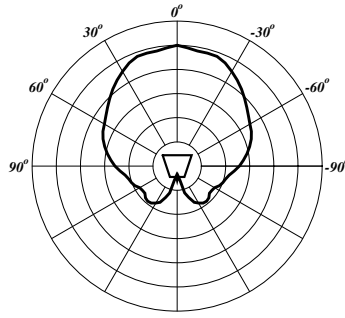
Impulse® 7

Horizontal Polar Plots

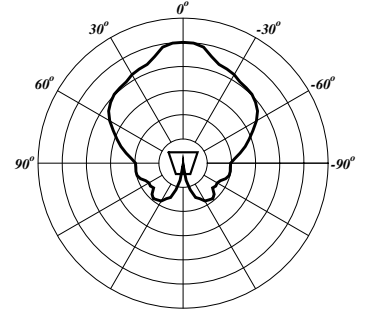
1/3 octave averaged plotted on ISO 1/3 octave centers from 200 Hz - 16 kHz.



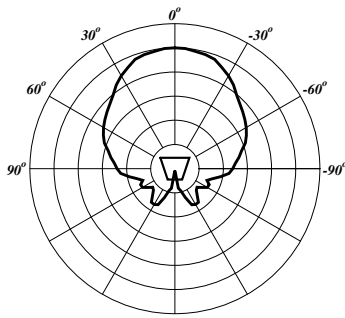
3.15 kHz



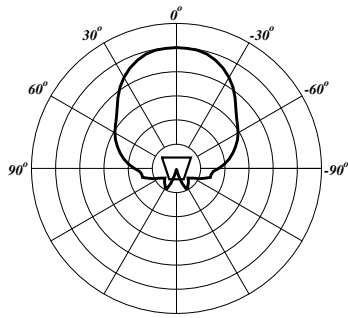
4 kHz



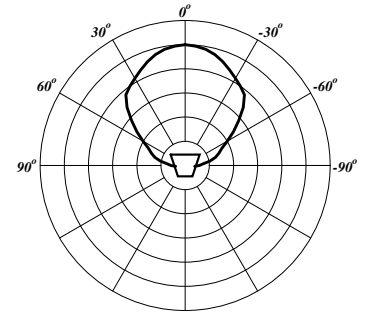
5 kHz



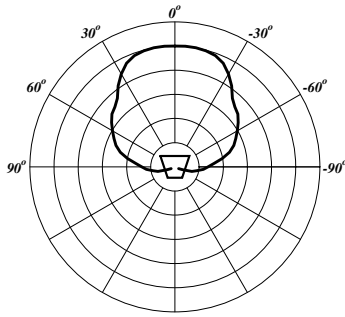
6.3 kHz



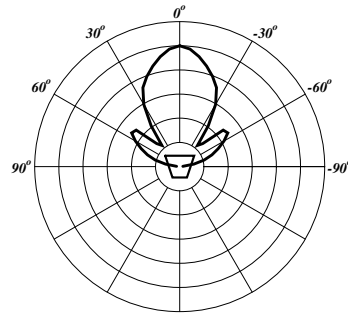
8 kHz



10 kHz



12.5 kHz



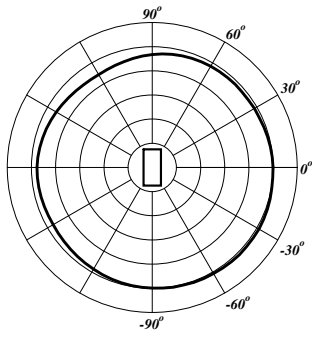
16 kHz

SPECIFICATIONS

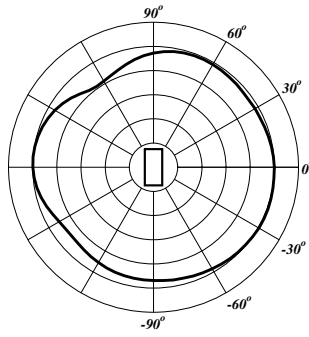
Impulse® 7

Vertical Polar Plots

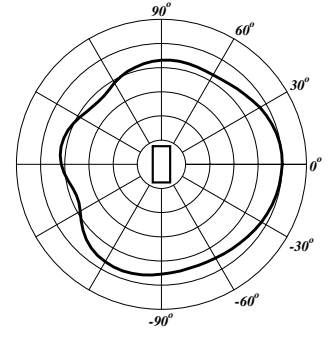
1/3 octave averaged plotted on ISO 1/3 octave centers from 200 Hz - 16 kHz



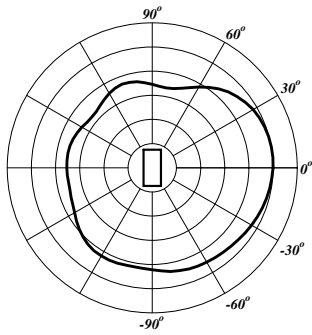
200 Hz



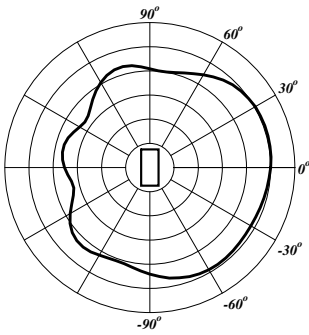
250 Hz



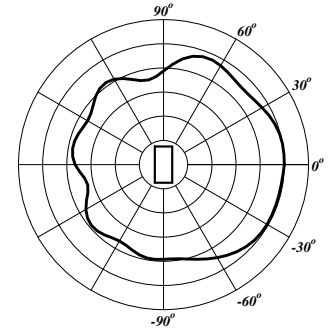
315 Hz



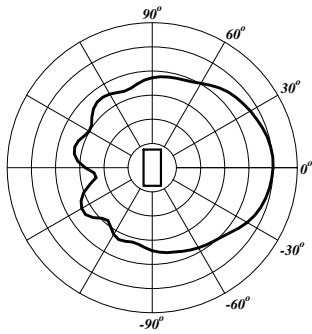
400 Hz



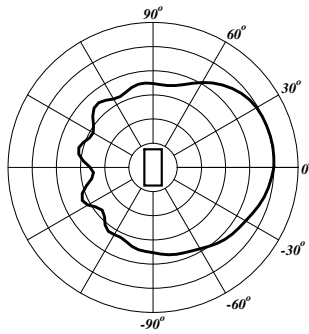
500 Hz



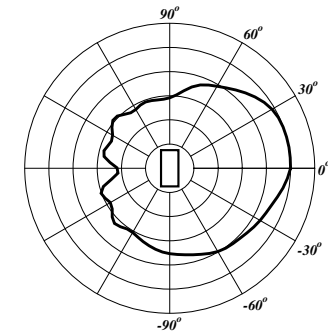
630 Hz



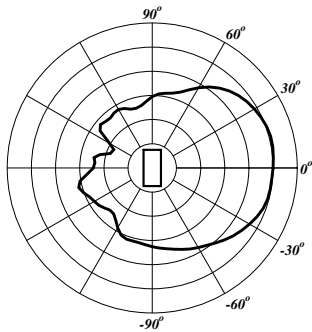
800 Hz



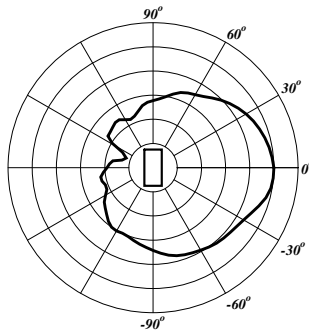
1 kHz



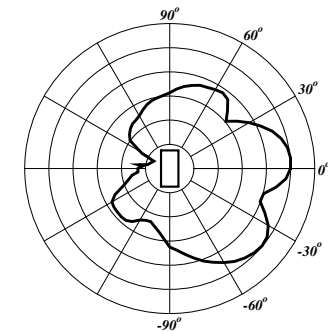
1.25 kHz



1.6 kHz



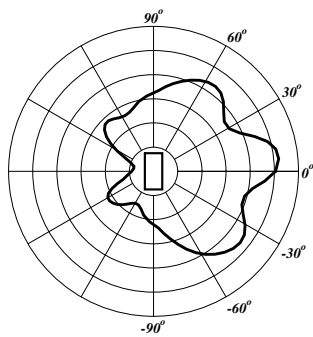
2 kHz



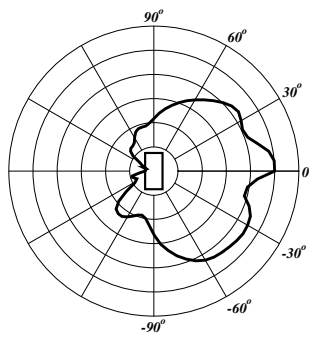
2.5 kHz

Vertical Polar Plots

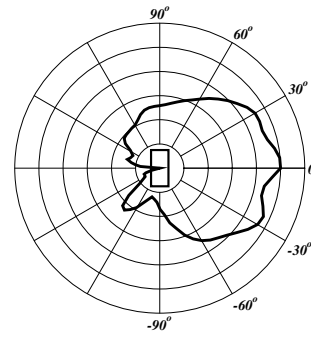
1/3 octave averaged plotted on ISO 1/3 octave centers from 200 Hz - 16 kHz.



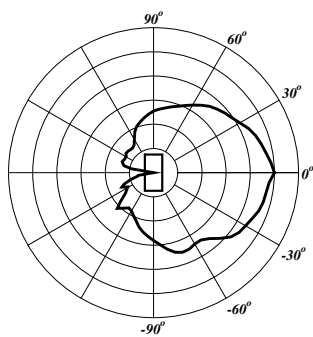
3.15 kHz



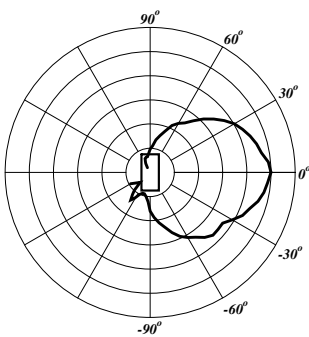
4 kHz



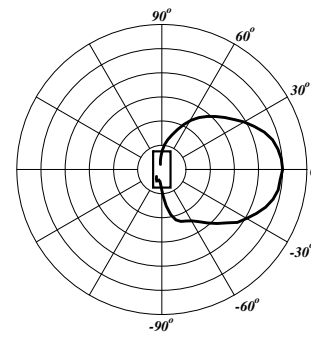
5 kHz



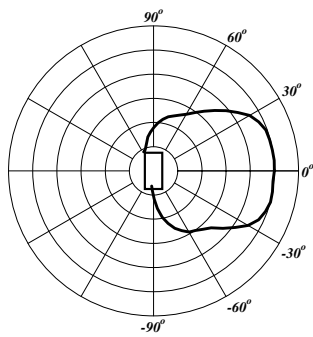
6.3 kHz



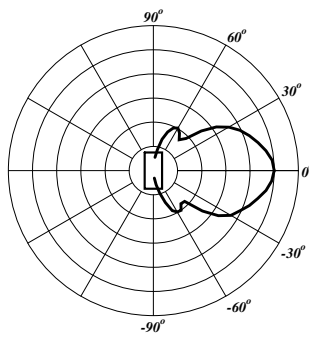
8 kHz



10 kHz

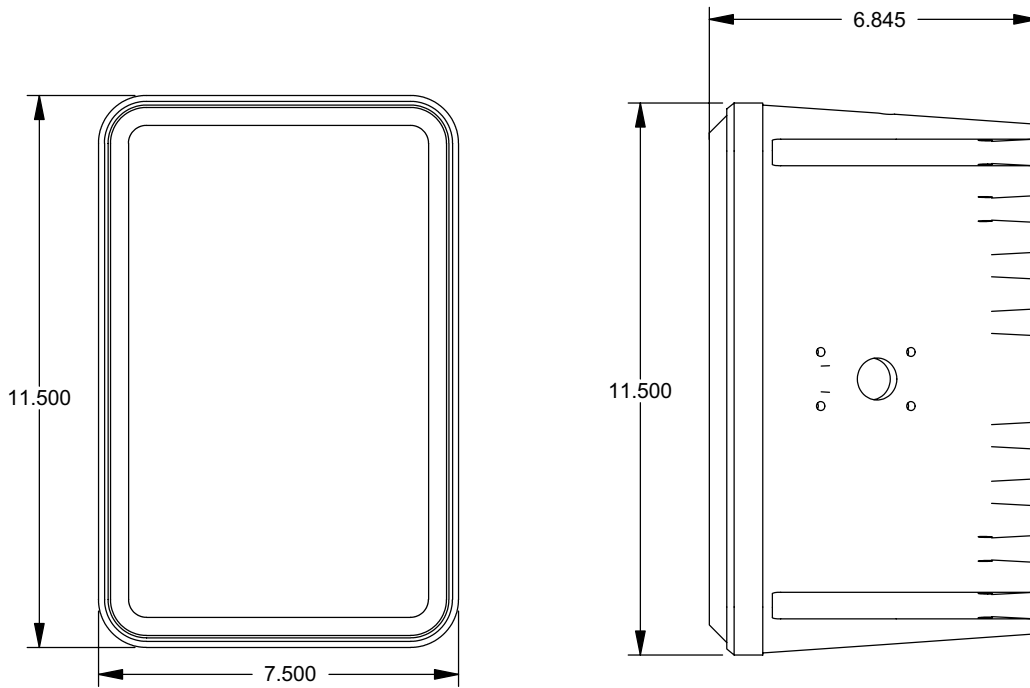
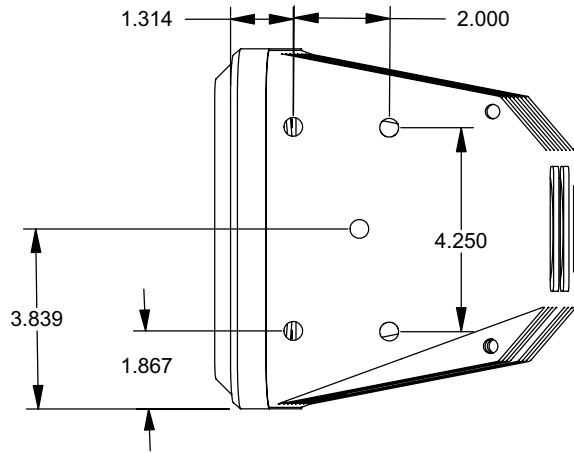


12.5 kHz



16 kHz

Dimensions



SPECIFICATIONS

Impulse® 7

NOTES:



Features and specifications subject to change without notice.

Peavey Electronics Corporation • 5022 Hartley Peavey Drive • Meridian, MS • 39305
(601) 483-5365 • FAX (601) 486-1278 • www.peavey.com

80305469