

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



ILS™ 1294H

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

63 Hz - 18.5 kHz (± 3 dB)

Usable Low Frequency Limit (-10 dB point):

48 Hz

Power Handling:

Full Range:

750 W continuous

1,500 W program

3,000 W program

Low Frequency Section:

500 W continuous

1,000 W program

2,000 W peak

High Frequency Section:

100 W continuous

200 W program

400 W peak

Sound Pressure Level, 1 Watt, 1 meter in anechoic environment:

Full Range:

96.0 dB SPL, (2.83 V input)

Low Frequency Section:

97.0 dB SPL, (2.83 V input)

High Frequency Section:

107.0 dB SPL, (2.83 V input)

Maximum Sound Pressure Level (1 meter):

Full Range:

124.8 dB SPL continuous

130.8 dB SPL peak

Low Frequency Section:

124.0 dB SPL continuous

130.0 dB SPL peak

High Frequency Section:

127.0 dB SPL continuous

133.0 dB SPL peak

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

500 Hz - 1.6 kHz:

Horiz. $110^\circ \pm 30^\circ$

Vert. $120^\circ \pm 15^\circ$

1.6 kHz - 5 kHz:

Horiz. $75^\circ \pm 10^\circ$

Vert. $65^\circ \pm 15^\circ$

5 kHz - 16 kHz:

Horiz. $70^\circ \pm 10^\circ$

Vert. $40^\circ \pm 10^\circ$

Directivity Factor, Q (Mean):

12.02 ± 7.00

Directivity Index, Di (Mean):

$10.02 \text{ dB} \pm 2.69 \text{ dB}$

Transducer Complement:

Low Frequency Section:

1x 12in. woofer, vented

1208-8 SPS

High Frequency Section:

1x 1.6 in. exit/100 mm voice coil compression driver on Quadratic Throat Waveguide

44 XT (w/o adapter) on a CH®-642qt

Box Tuning Frequency:

Low Frequency Section:

55 Hz

Harmonic Distortion:

1% rated power

2nd Harmonic:

100 Hz: 3.79%

1 kHz: 0.42%



3rd Harmonic:

100 Hz: 0.25%

1 kHz: 0.29%

10% rated power

2nd Harmonic:

100 Hz: 8.62%

1 kHz: 1.75%

3rd Harmonic:

100 Hz: 2.62%

1 kHz: 0.24%

Crossover Frequency (internal passive):

Low Frequency - High Frequency:

1,600 Hz

Time Offset:

Low Frequency: 0.00 ms

High Frequency: 0.38 ms

Impedance (Z):

Full Range:

Nominal: 8.0 Ω

Minimum: 7.1 Ω

Low Frequency:

Nominal: 8.0 Ω

Minimum: 7.4 Ω

High Frequency:

Nominal: 8.0 Ω

Minimum: 8.3 Ω

Input Connections:

2x Neutrik® Speakon® NL4MD and
1x 5-position barrier strip

Enclosure Materials and Finish:

3/4 in. poplar plywood finished in
exterior grade hardened black paint

Mounting Provisions:

(12) 3/8"-16 threaded mounting
suspension points (2 each top,
bottom and back and 3 each sides)

Dimensions (H x W x D):

Front:

17.50 in. x 30.75 in. x 17.50 in.

445 mm x 781 mm x 445 mm

Rear:

11.88 in. x 30.75 in. x 17.50 in.

302 mm x 781 mm x 445 mm

Net Weight:

80 lbs. (36.4 kg)

Features

- 63 Hz to 18.5 kHz bandpass
- 4" diaphragm, 1.6" exit, ferrofluid equipped high frequency compression driver
- Patented Quadratic Throat Waveguide™
- Carefully tailored directivity patterns

Amplitude Response (1W 1m On-Axis)

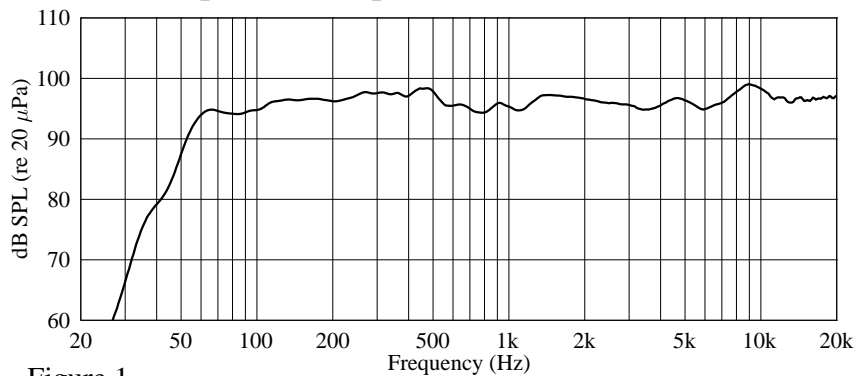


Figure 1

Impedance

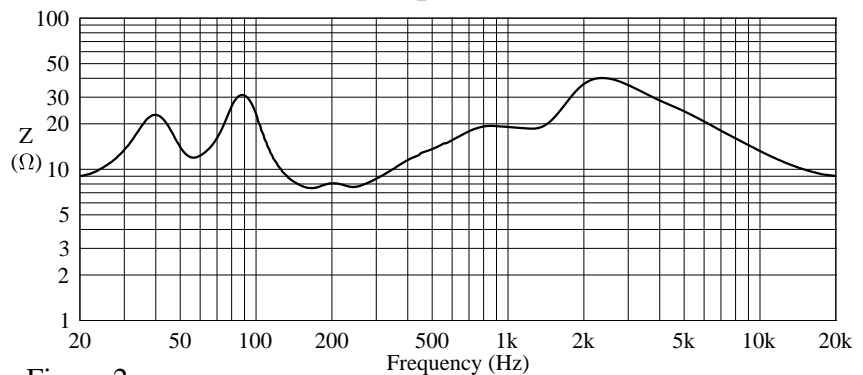


Figure 2

Beamwidth

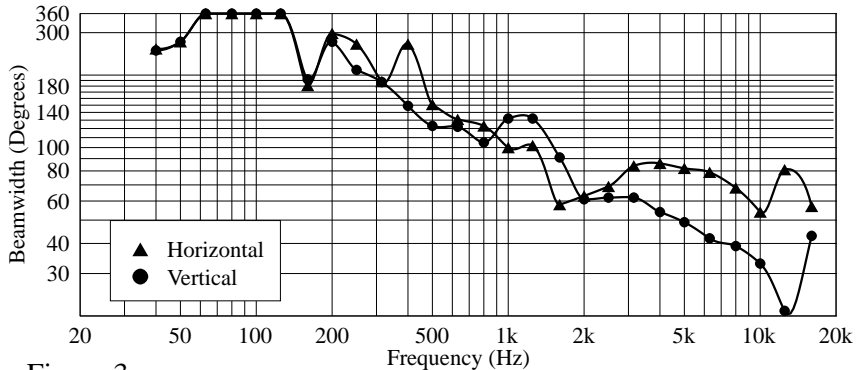


Figure 3

Q & Directivity Index

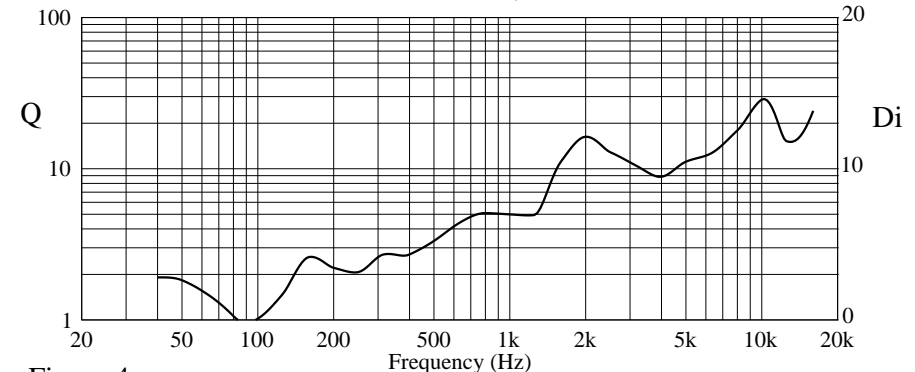


Figure 4

- Flexible suspension provisions
- Robust power handling capabilities
- Passive crossover included
- Bi-amplified crossover provisions

Applications

- Stadiums
- Arenas
- Multi-purpose facilities
- Cruise ships
- Theme parks
- Houses of worship
- Live music venues
- Hotel meeting rooms
- Conference facilities
- Theaters
- Auditoriums
- Civic centers
- Judicial facilities
- Gymnasiums
- Performing arts centers

Description

The new Peavey ILS™ 1294H (horizontal) loudspeaker system is a two-way, vented low frequency enclosure using a 12" low frequency driver paired with a 90° (horizontal) by 40° (vertical) high frequency waveguide. The HF section employs a 1.6 exit/100 mm voice coil compression driver mounted on one of Peavey's revolutionary new Quadratic Throat waveguides. The ILS 1294 has a full range sensitivity of 96 dB SPL – (1 Watt/1 meter) and a maximum output of 130 dB at 1 meter (full range).

The Peavey ILS 1294 is a high performance loudspeaker system for use in demanding sound reinforcement applications. The robust construction of the ILS 1294 provides power handling capacities of 750 W continuous, 1.5 kW program and 3.0 kW peak (full range). The unit may be operated using the internal passive crossover or may be bi-amplified. Twelve 3/8"x16 threaded mounting suspension points (2 each top, bottom and back and 3 each sides) allow a variety of suspension configurations. Multiple units may be mounted to form a vertical/horizontal array [see limitations under mounting instructions]. Both versions of the ILS 1294 are solidly constructed of 3/4" void-free poplar plywood and finished with an exterior grade hardened black paint.

Harmonic Distortion : 10% Rated Power

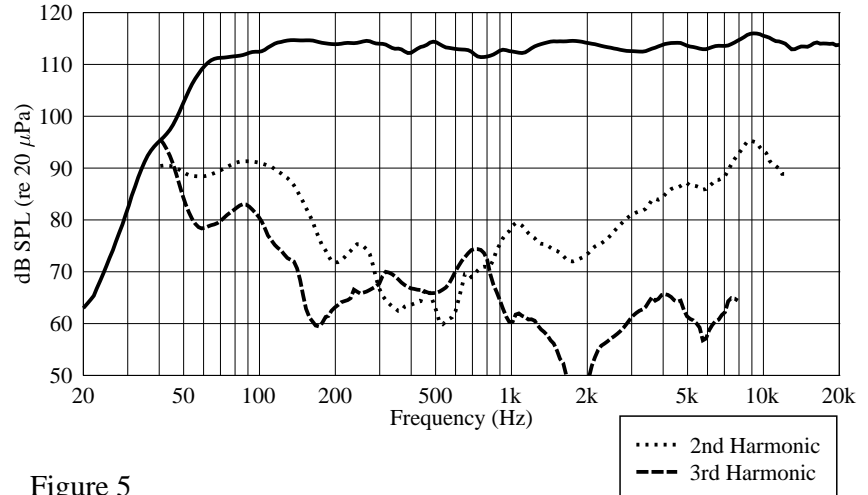


Figure 5

Harmonic Distortion : 1% Rated Power

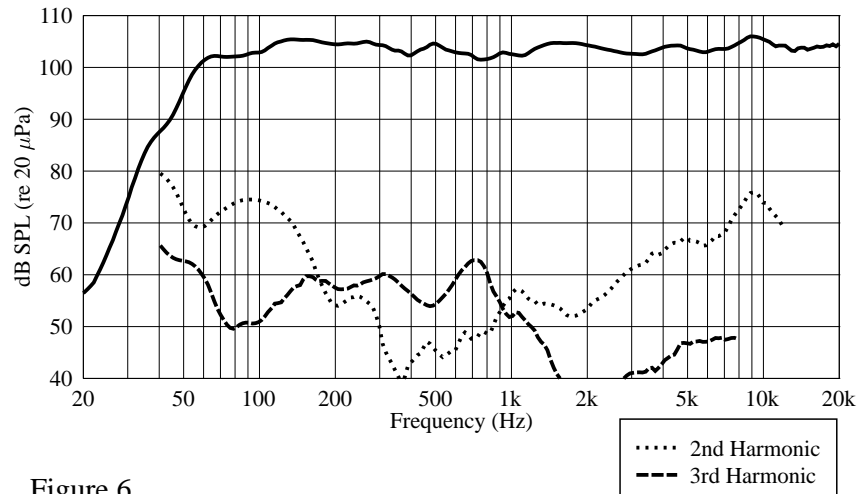


Figure 6

Frequency Response

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the ILS 1294H 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 ILS™ 1294H combine to give a smooth frequency response from 63 Hz - 18.5 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 ILS 1294H exhibit a desirable beamwidth and directivity (figure 3 and 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 and 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.

▲ 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 ILS 1294H. However, the combined weight of additional enclosures and all cables, clamps and other hardware must not exceed 320 pounds. The ILS 1294H weighs 80 pounds and the maximum combined weight suspended from the uppermost mounting bracket assemblies must not exceed 400

pounds. Maximum enclosure angle is 45°. Use only the correct mating hardware. All associated rigging is the responsibility of others.

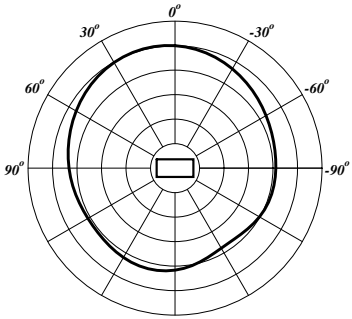
Architectural and Engineering Specifications

The loudspeaker system shall have an operating bandwidth of 63 Hz - 18.5 kHz. The nominal output level shall be 96.0 dB when measured at a distance of one meter with an input of one Watt. The nominal impedance shall be 8.0 Ohms. The maximum continuous power handling shall be 750 Watts, maximum program power of 1,500 Watts and a peak power input of at least 3,000 Watts, with a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 90 degrees in the horizontal plane and 40 degrees in the vertical plane. The outside dimensions shall be 17.50 inches high by 30.75 inches wide by 17.50 inches deep. The weight shall be 80 pounds. The loudspeaker system shall be an Architectural Acoustics model ILS 1294H.

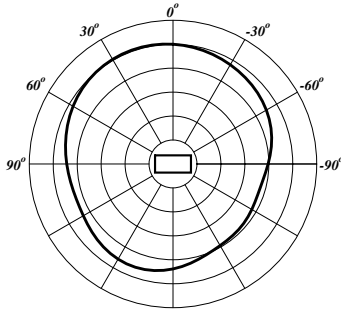
3 + 2 YEAR LIMITED WARRANTY

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.

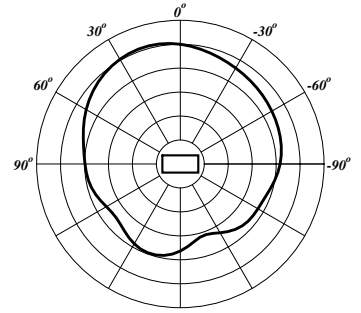
ILS 1294H
Horizontal Polar Patterns 6 dB per Division



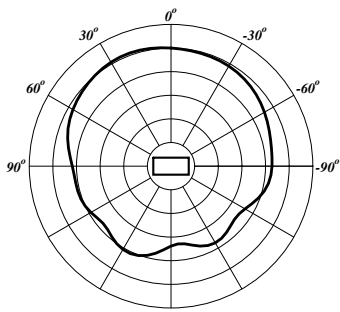
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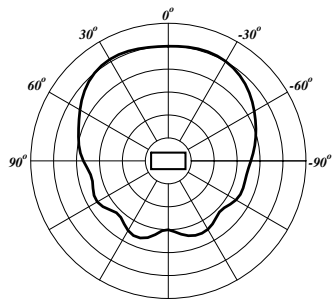
250 Hz



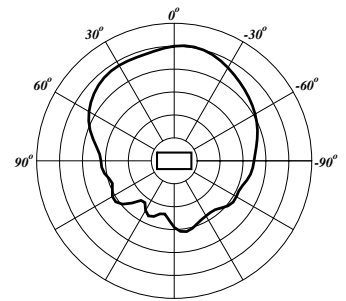
315 Hz



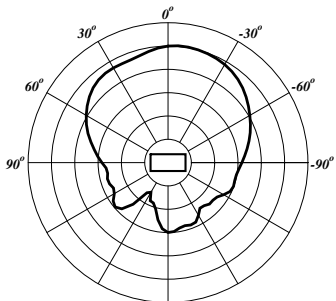
400 Hz



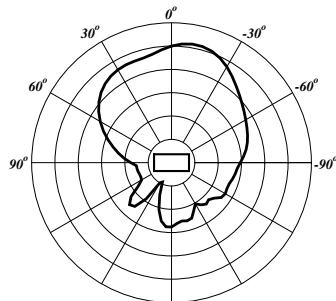
500 Hz



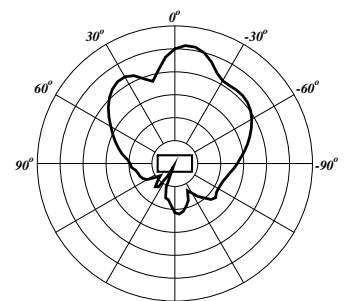
630 Hz



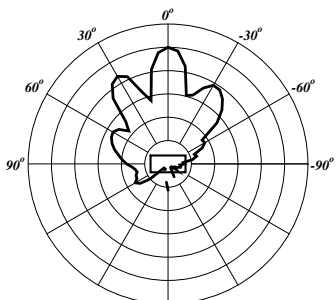
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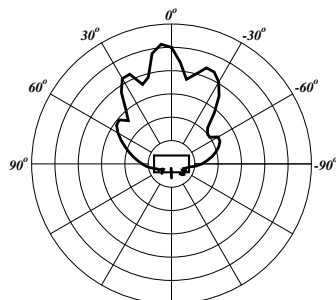
1 kHz



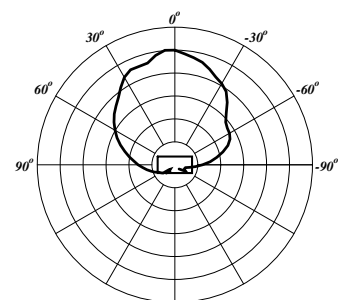
1.25 kHz



1.6 kHz

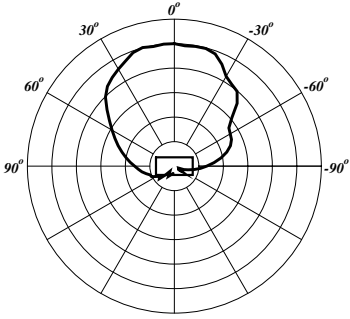


2 kHz

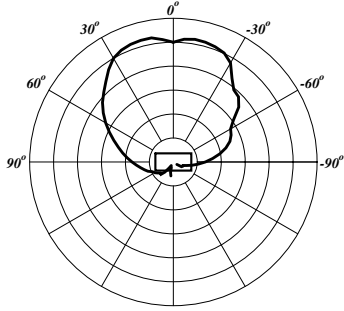


2.5 kHz

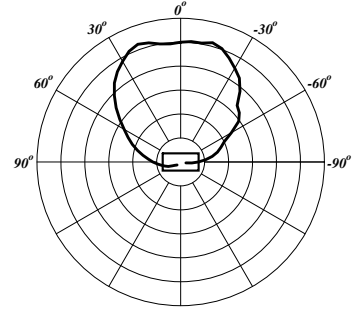
ILS 1294H
Horizontal Polar Patterns 6 dB per Division



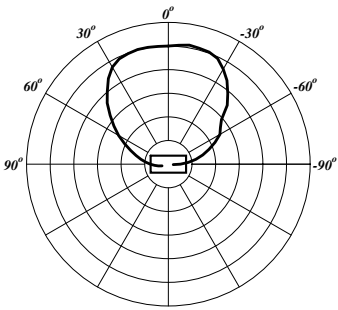
3.15 kHz



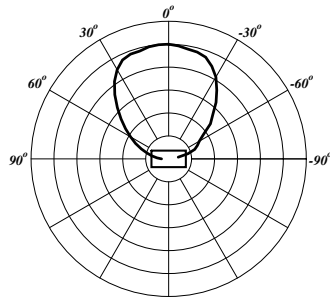
4 kHz



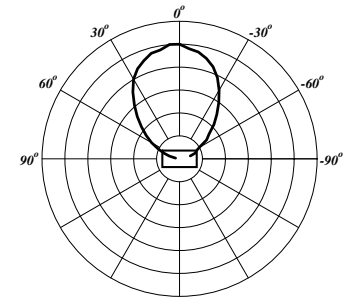
5 kHz



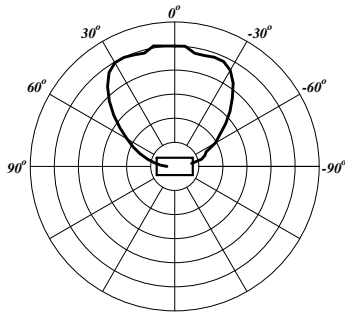
6.3 kHz



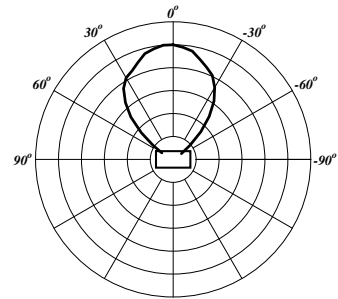
8 kHz



10 kHz

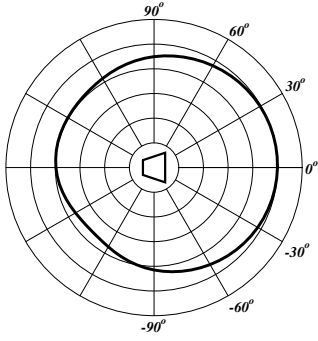


12.5 kHz

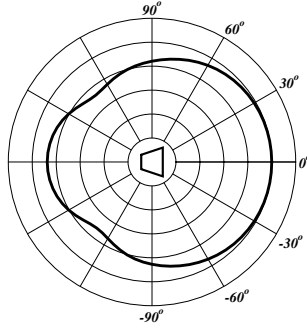


16 kHz

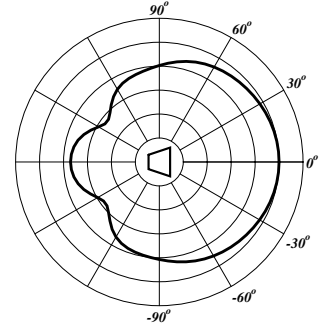
ILS 1294H
Vertical Polar Patterns 6 dB per Division



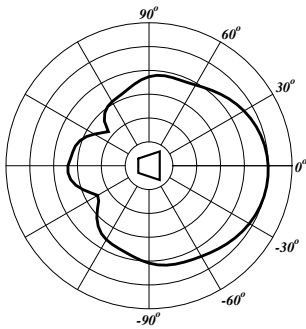
200 Hz



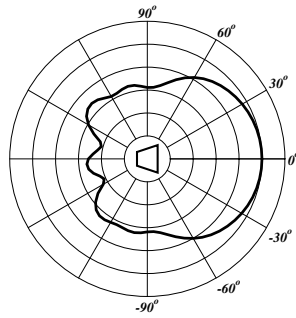
250 Hz



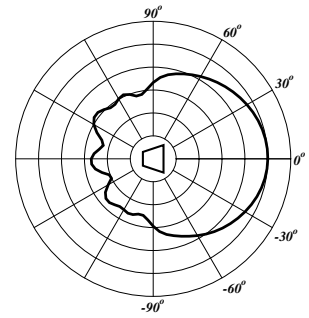
315 Hz



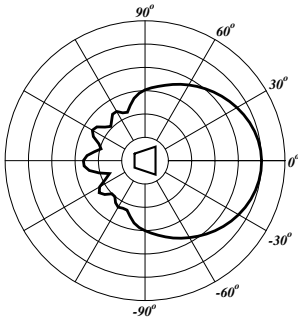
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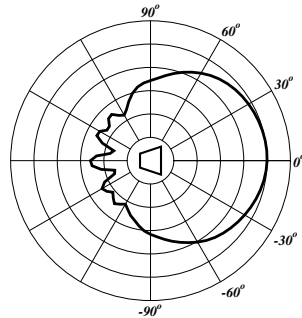
500 Hz



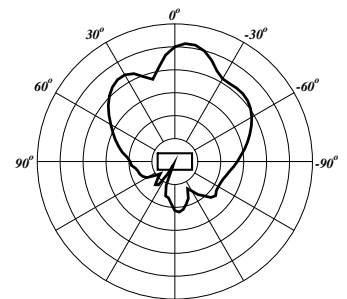
630 Hz



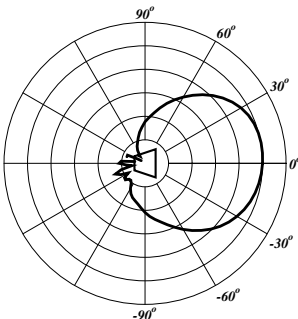
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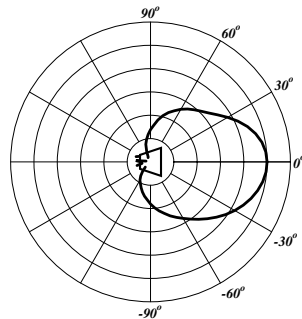
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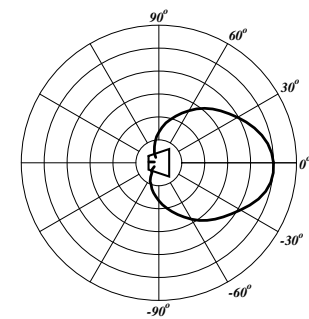
1.25 kHz



1.6 kHz

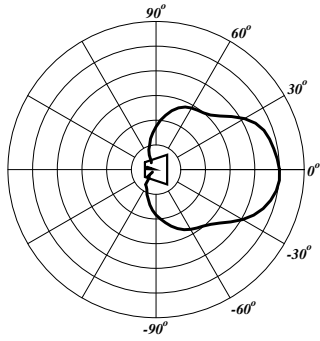


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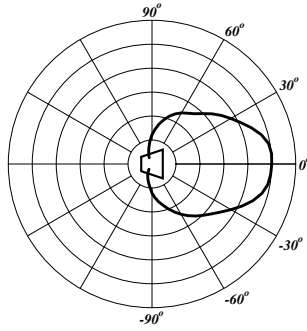


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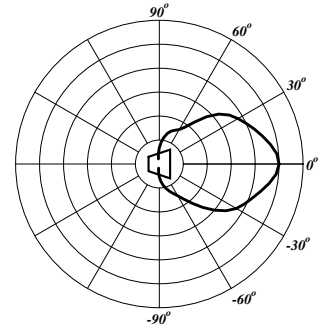
ILS 1294H
Vertical Polar Patterns 6 dB per Division



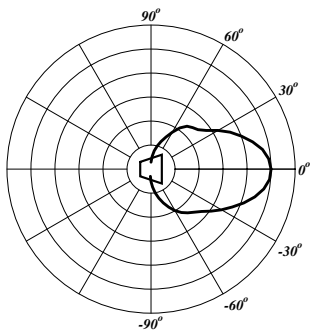
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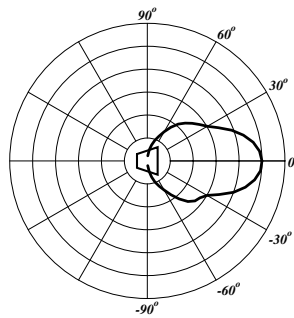
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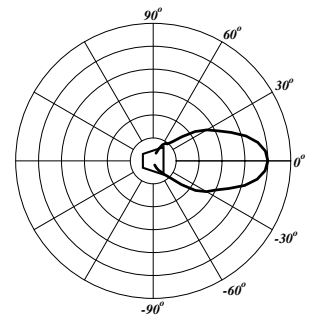
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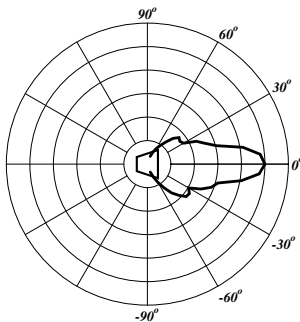
6.3 kHz



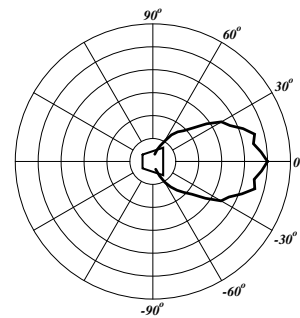
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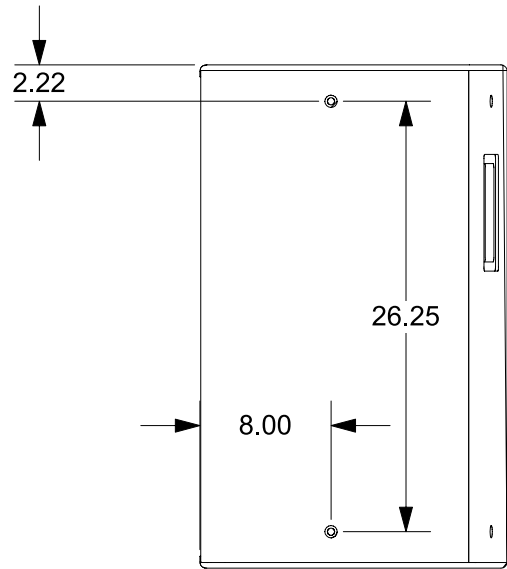
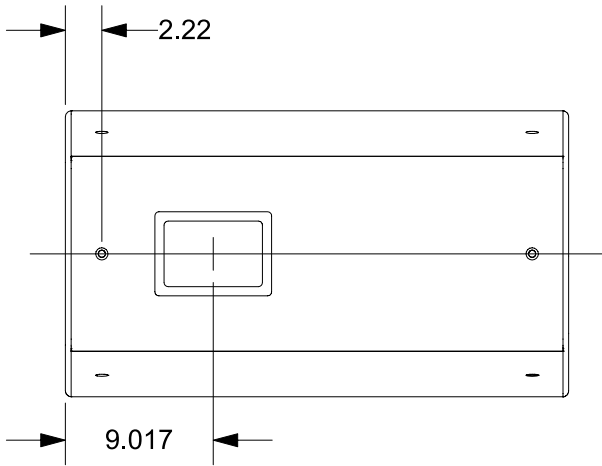
10 kHz



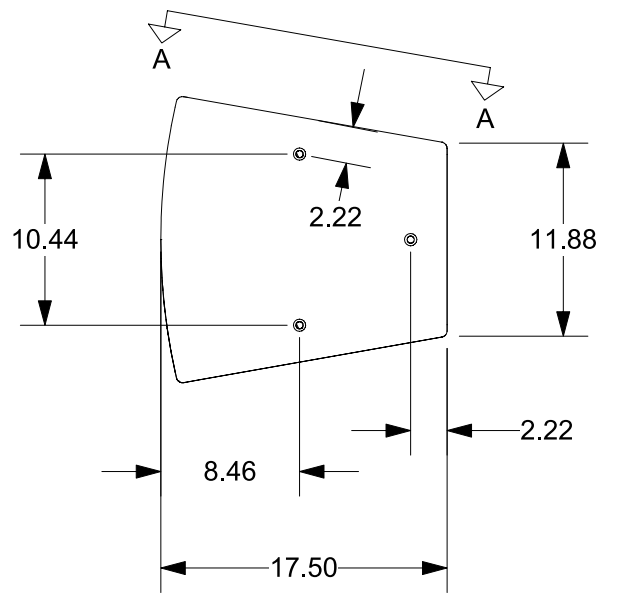
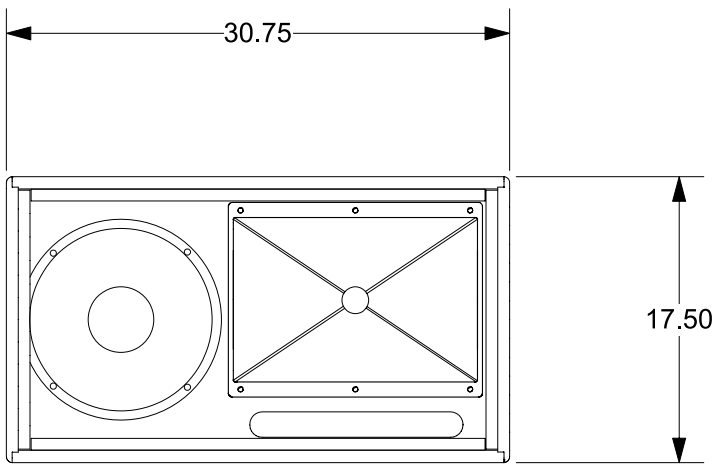
12.5 kHz



16 kHz



View A-A



ILS 1294H

ILS™ 1294H INPUT

PEAVEY **ILS™ 1294H**

A PRODUCT OF PEAVEY ELECTRONICS CORP.

FULL RANGE

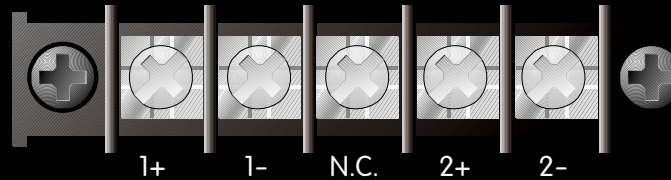
1+(+), 1-(-)
2+(NC), 2-(NC)



BIAMP

1+: LF+
1-: LF-
2+: HF+
2-: HF-

ALL CONNECTORS ARE WIRED IN PARALLEL INTERNALLY.
CHANGE INTERNAL JUMPER FOR BIAMP OR FULL RANGE
OPERATION.



FULL RANGE

750W RMS CONT.
8 OHMS

BIAMP

LF: 500W RMS CONT.
8 OHMS
HF: 100W RMS CONT.
>1.0 kHz
8 OHMS

WARNING: CONSULT SPEC SHEET FOR FULL SUSPENSION
RATINGS. DO NOT EXCEED 400 lbs. OR 45 DEGREE ANGLE

BUILT UNDER U.S. PATENT NOS.
6,059,069 AND 6,064,745



Features and specifications subject to change without notice.

Peavey Electronics Corporation • 711 A Street • Meridian • MS • 39301
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