

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



ILS™ 1294V

**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 peak

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, at
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. $105^\circ \pm 20^\circ$
Vert. $130^\circ \pm 35^\circ$

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):

11.39 ± 5.93

Directivity Index, Di (Mean):

$9.90 \text{ dB} \pm 2.53 \text{ dB}$

Transducer Complement:

Low Frequency Section:

1x 12 in. woofer, vented
1208-8 SPS

High Frequency Section:

1x 1.6 in. exit/100 mm voice coil
compression driver on Quadratic
Throat Waveguide™ 44XT™
(w/o adapter) on CH®-942qt horn

Box Tuning Frequency:

Low Frequency Section: 55 Hz

Harmonic Distortion:

1% rated power

2nd Harmonic:

100 Hz: 2.18%
1 kHz: 0.23%



3rd Harmonic:

100 Hz: 0.62%
1 kHz: 0.25%

10% rated power

2nd Harmonic:

100 Hz: 5.49%
1 kHz: 0.75%

3rd Harmonic:

100 Hz: 2.44%
1 kHz: 0.30%

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 five-position barrier strip

Enclosure Materials and Finish:

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

Mounting Provisions:

(12) 3/8" x 16 threaded mounting
suspension points (three each top
and bottom and two each sides
and back)

Dimensions (H x W x D):

Front:

27.00 in. x 19.38 in. x 17.75 in.
686 mm x 492 mm x 451 mm

Rear:

27.00 in. x 10.75 in. x 17.75 in.
686 mm x 273 mm x 451 mm

Net Weight:

70 lbs. (31.8 kg)

Amplitude Response (1W 1m On-Axis)

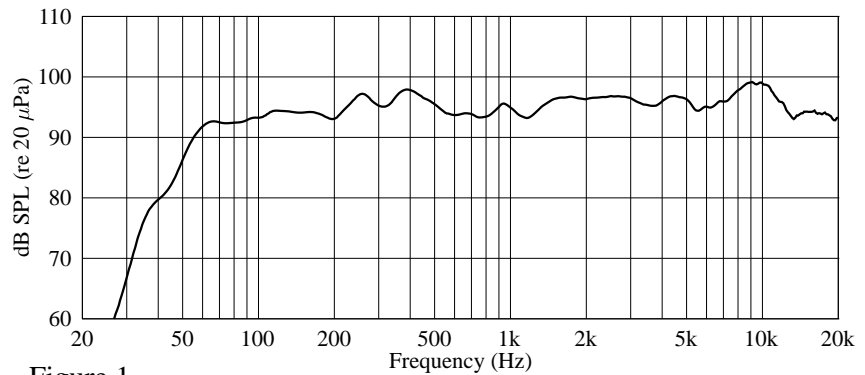


Figure 1

Impedance

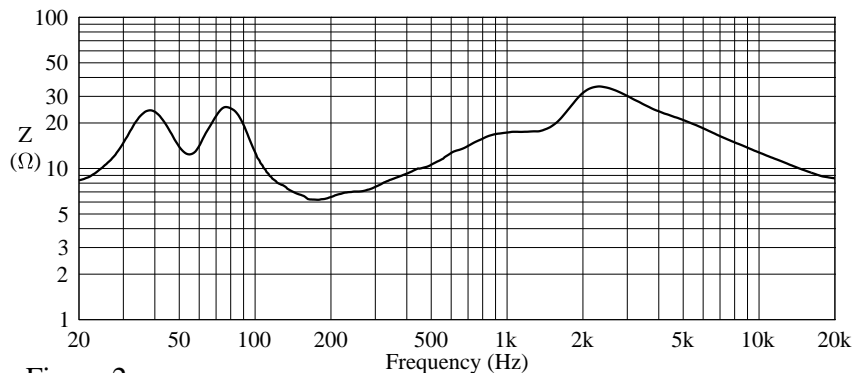


Figure 2

Beamwidth

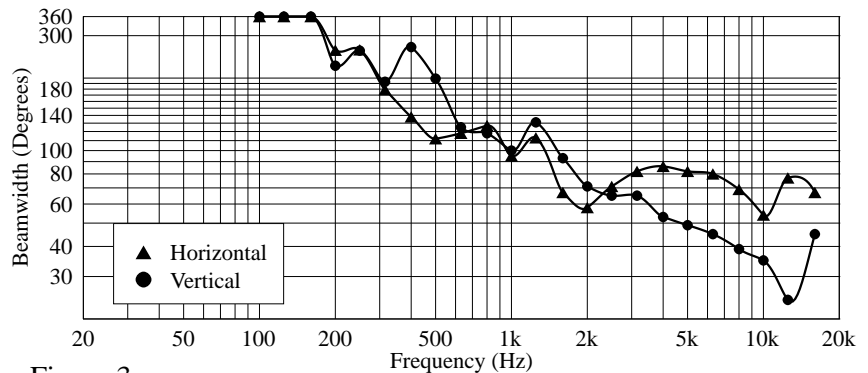


Figure 3

Q & Directivity Index

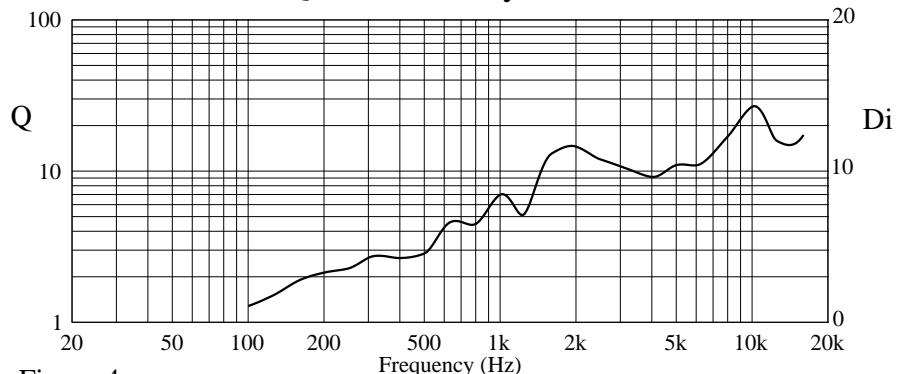


Figure 4

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
- 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 1294V (vertical) 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" x 16 threaded mounting suspension points (3 each top and bottom and 2 each sides and back) allow a variety of suspension configurations. Multiple units may be mounted to form a vertical/horizontal

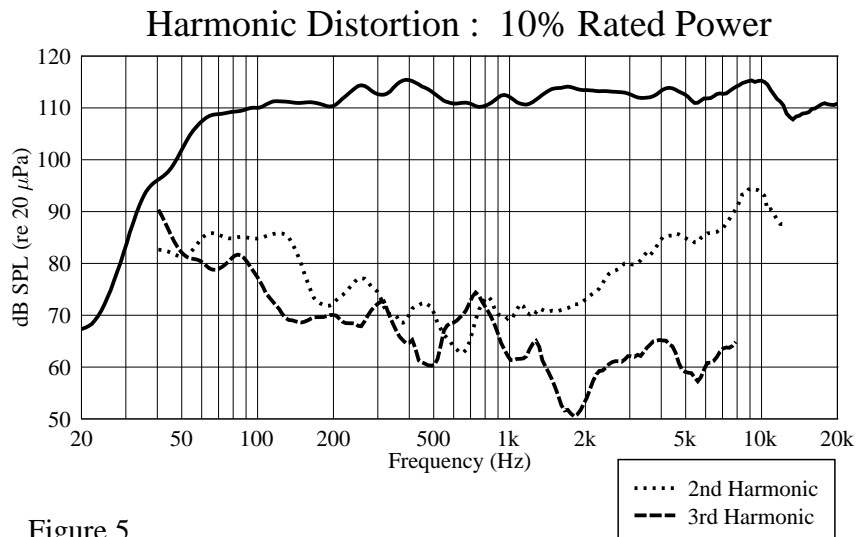


Figure 5

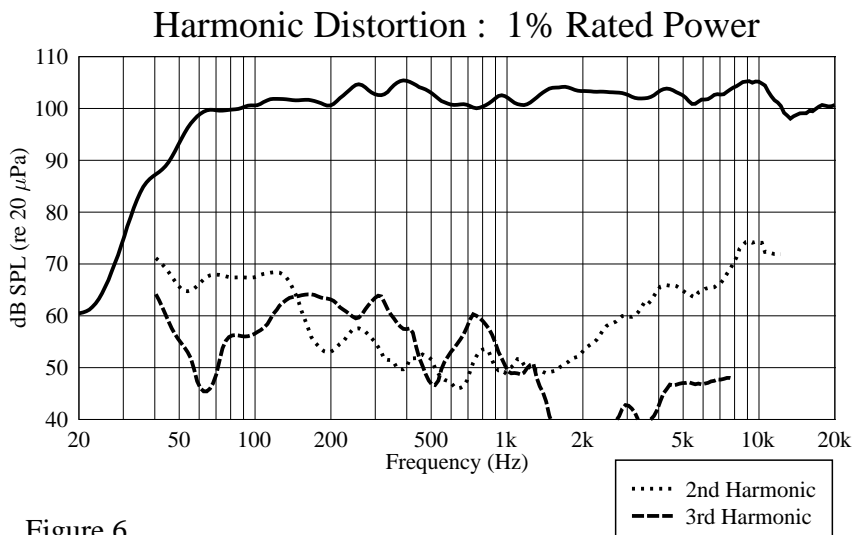


Figure 6

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.

Frequency Response

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the ILS 1294V 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 1294V 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 1294V 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. The speaker can fall from improper suspension, resulting in serious injury and property damage. Other enclosures may be suspended below one ILS 1294V. However, the combined weight of additional enclosures and all cables, clamps and other hardware must not exceed 330 pounds. The ILS 1294V weighs 70 pounds and the maximum combined weight suspended from the uppermost mounting bracket assemblies must not exceed 400 pounds. The maximum enclosure angle is 45°. Use only the correct mating hardware. All associated rigging is the responsibility of others.

Architectural and Engineering Specifications

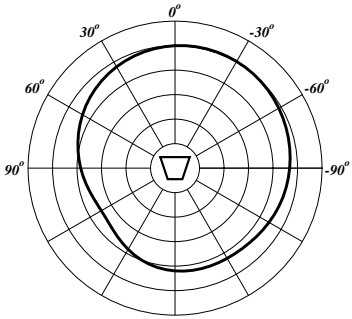
The loudspeaker system shall have an operating bandwidth of 63 Hz — 18.5 kHz. The nominal output level shall be 96.0 dB when measured at a distance of one meter with an input of one Watt. The nominal impedance shall be 8.0 Ohms. The maximum continuous power handling shall be 750 Watts, maximum program 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° in the horizontal plane and 40°

in the vertical plane. The outside dimensions shall be 27.00 inches high by 19.38 inches wide by 17.75 inches deep. The weight shall be 70 pounds. The loudspeaker system shall be an Architectural Acoustics model ILS 1294V.

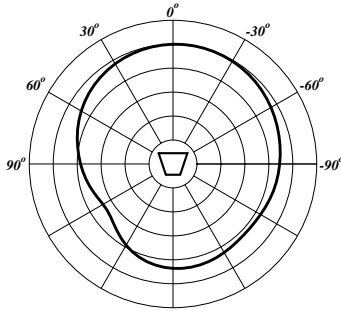
3 + 2 YEAR LIMITED WARRANTY

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.

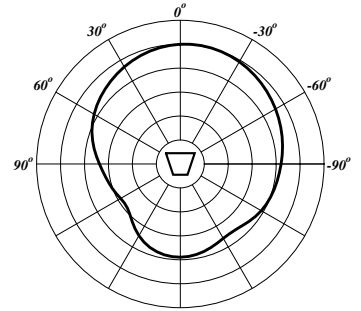
ILS 1294V
Horizontal Polar Patterns 6 dB per Division



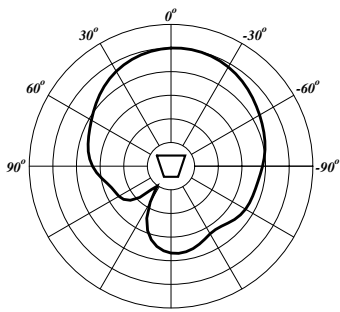
200 Hz



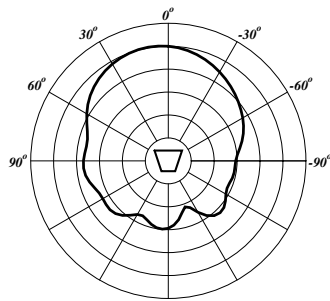
250 Hz



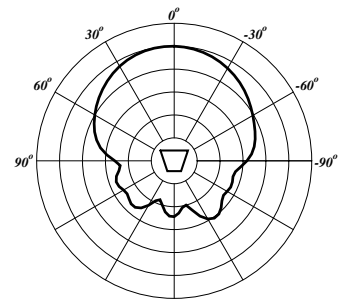
315 Hz



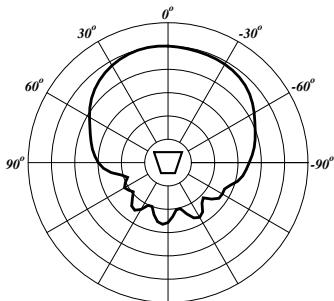
400 Hz



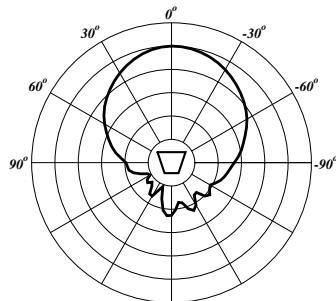
500 Hz



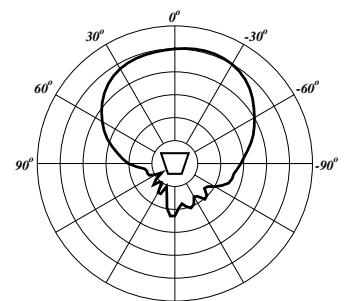
630 Hz



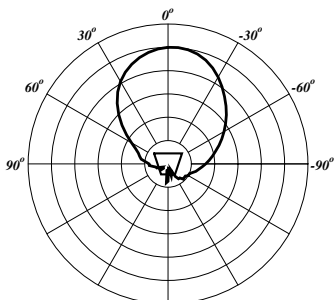
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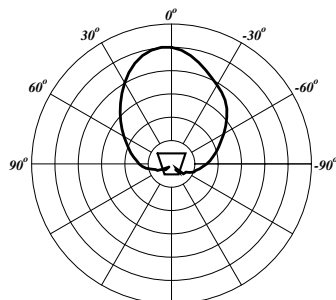
1 kHz



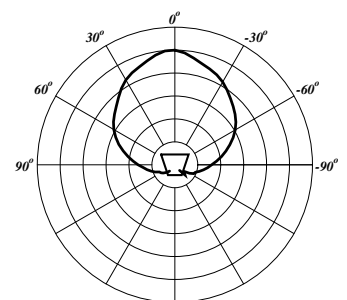
1.25 kHz



1.6 kHz

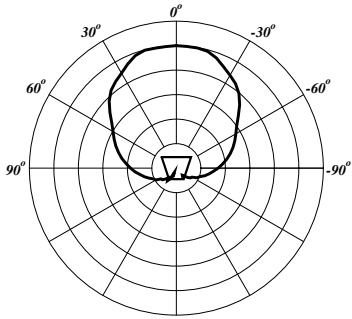


2 kHz

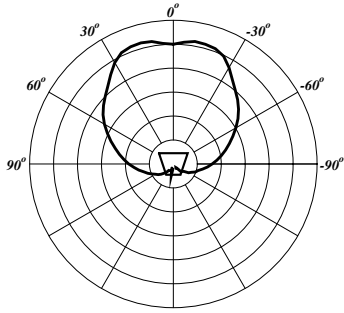


2.5 kHz

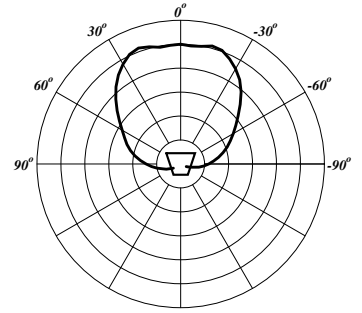
ILS 1294V
Horizontal Polar Patterns 6 dB per Division



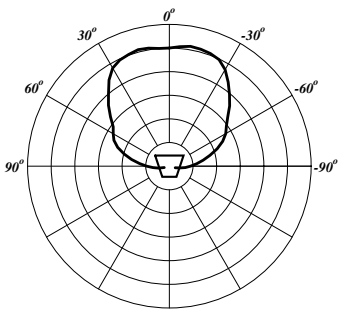
3.15 kHz



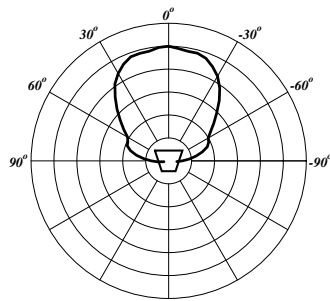
4 kHz



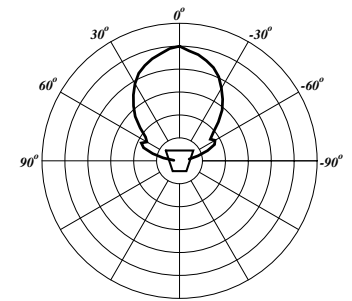
5 kHz



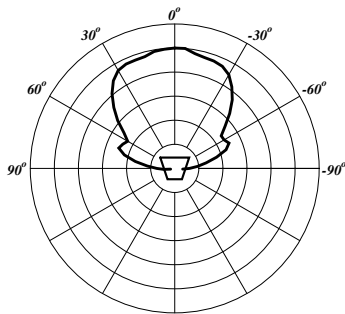
6.3 kHz



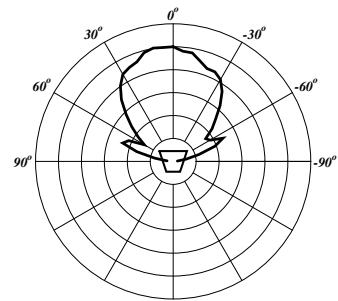
8 kHz



10 kHz

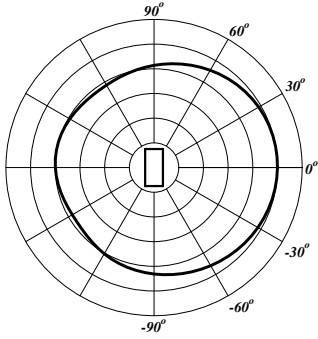


12.5 kHz

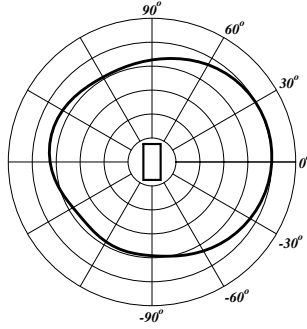


16 kHz

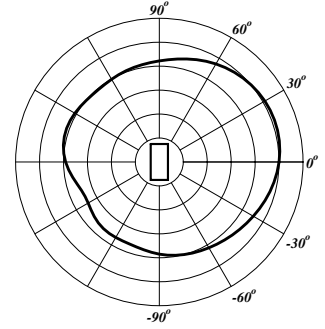
ILS 1294V
Vertical Polar Patterns 6 dB per Division



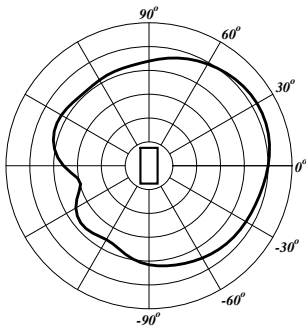
200 Hz



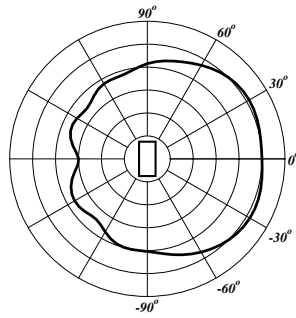
250 Hz



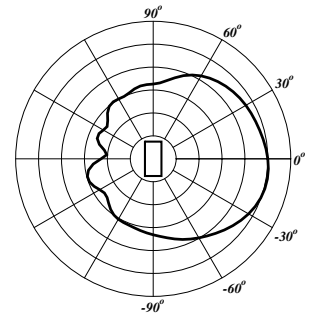
315 Hz



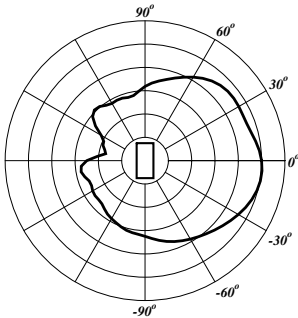
400 Hz



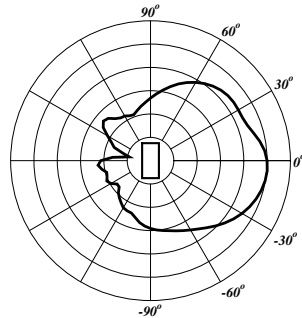
500 Hz



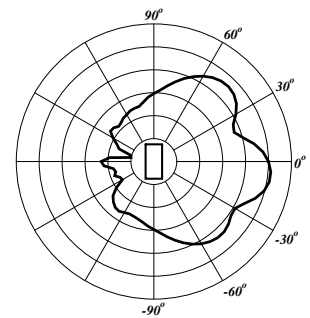
630 Hz



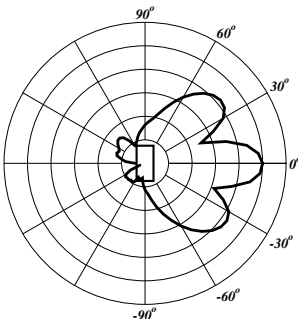
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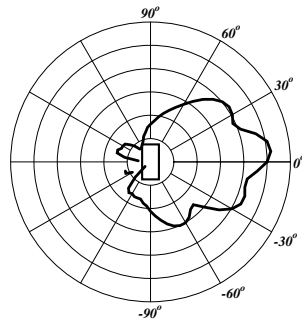
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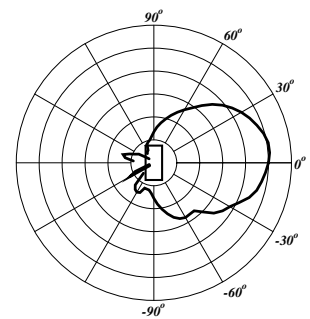
1.25 kHz



1.6 kHz

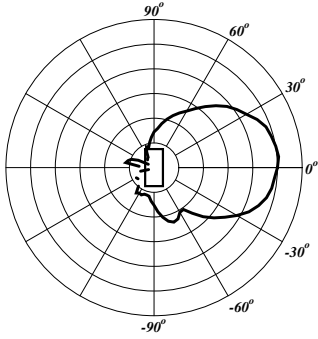


2 kHz

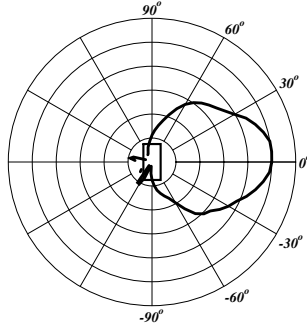


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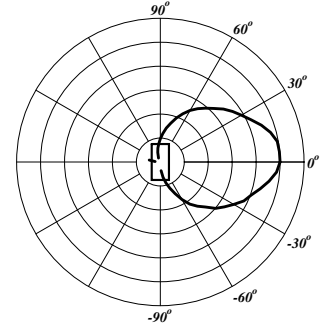
ILS 1294V
Vertical Polar Patterns 6 dB per Division



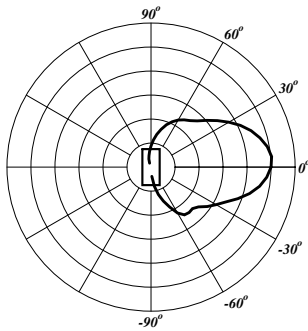
3.15 kHz



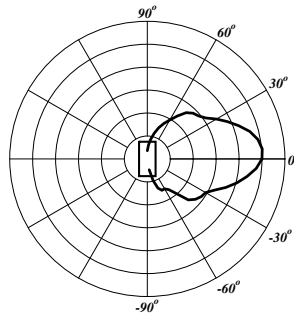
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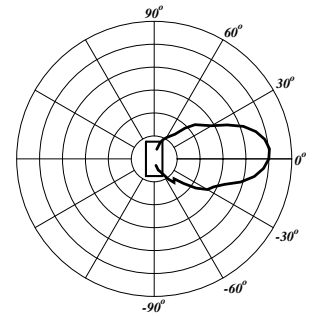
5 kHz



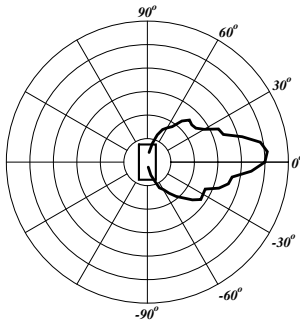
6.3 kHz



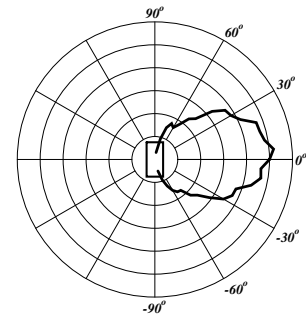
8 kHz



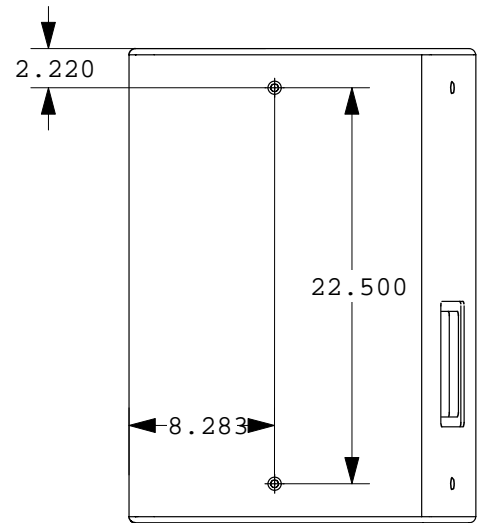
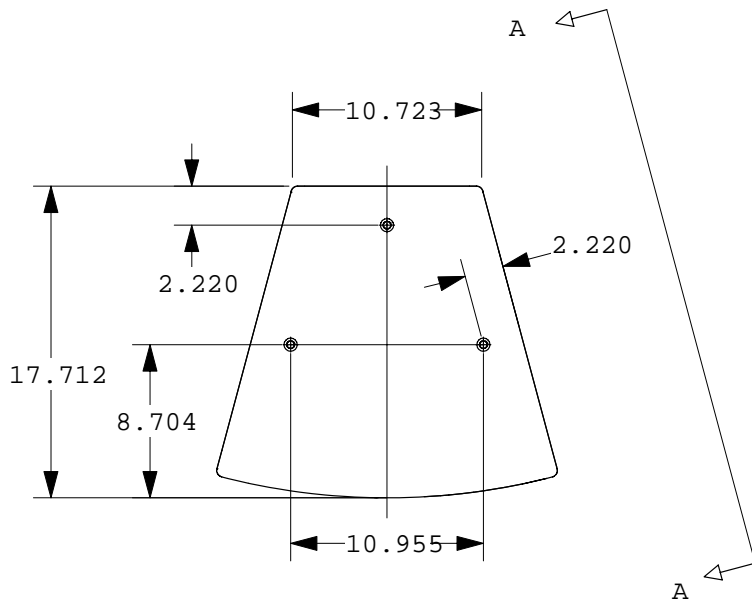
10 kHz



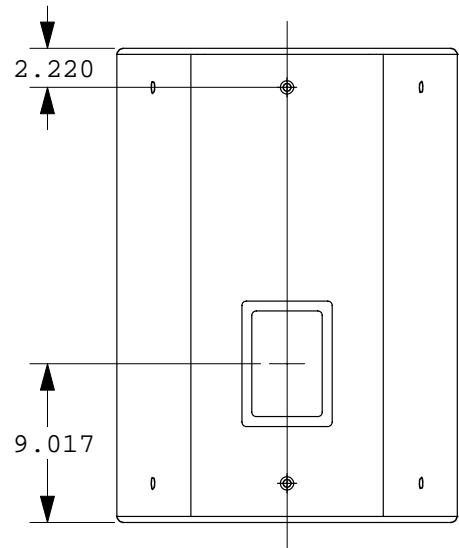
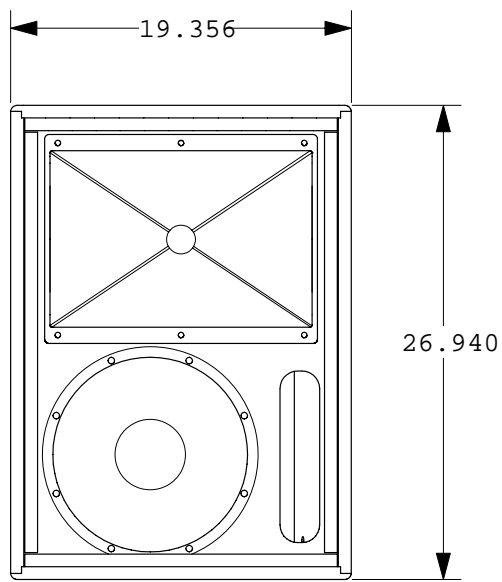
12.5 kHz



16 kHz



View A-A



ILS 1294V

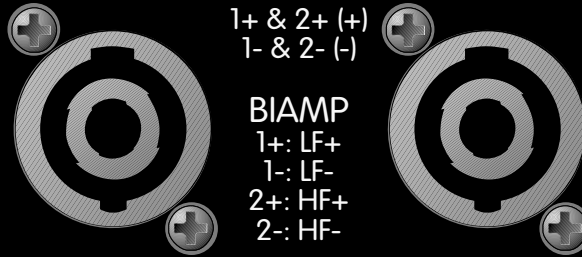
ILS™ 1294V INPUT



A PRODUCT OF PEAVEY ELECTRONICS CORP.

FULL RANGE

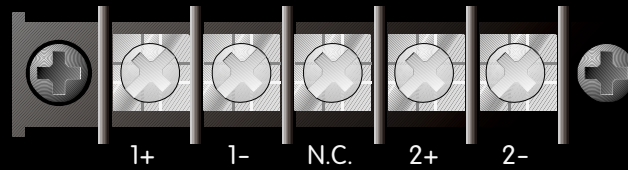
1+ & 2+ (+)
1- & 2- (-)



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 | BIAMP |
|--------------------------|--|
| 750W RMS CONT. 8 OHMS | 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.

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