SPECIFICATIONS SP™ 5



Frequency response, 1 meter on-axis, swept-sine in anechoic environment:
69 Hz to 17 kHz

Usable low frequency limit (-10 dB point):
50 Hz

Power handling:
Full range:
400 watts continuous
800 watts program
1,600 watts peak

Sound pressure level, 1 watt, 1 meter in anechoic environment:
Full range:
99.0 dB SPL (2.83 V input)

Maximum sound pressure level (1 meter):
Full range:
125 dB SPL continuous
131 dB SPL peak

Radiation angle measured at -6 dB point of polar response:
90° horizontal by 40° vertical

The vertical main polar lobe is angled down 10° with respect to straight ahead being +10, -30°

Transducer complement:
Low frequency section:
1 x 15" SP-15825 Scorpion® Plus HO Woofer
High frequency section:
1 x .875" exit /51 mm voice coil RX™ 22 compression driver on an asymmetrical Quadratic Throat CD horn

Box tuning frequency:
Low frequency section: 54 Hz

Crossover frequency (internal passive):
Low frequency – high frequency
1,800 Hz

Impedance (Z):
Full Range:
Nominal: 8.0 Ω
Minimum: 5.9 Ω

Input connections:
Full range: two 1/4" phone jacks and one four-pin twist lock connector

Enclosure materials and finish:
Aspen hardwood plywood finished in Hammertex™ covering

Mounting provisions:
This unit is not designed for overhead suspension

Built-in SA-1 stand-mount adapter incorporated and four large rubber feet on bottom for floor use

Dimensions (H x W x D):
Front:
27.50" x 20.55" x 16.50"
699 mm x 522 mm x 419 mm

Rear:
27.50" x 15.00" x 16.50"
699 mm x 381 mm x 419 mm

Net weight:
71 lbs. (32.2kg)

Features
- Two-way, full-range sound reinforcement system
- 15" Scorpion Plus HO woofer with field-replaceable basket
- RX22 compression driver with ferrofluid cooling
- Patented Quadratic Throat Waveguide™ technology
- Asymmetrical horn aims the sound down 10° (at the audience, not over their heads)
- 800 watts program, 1600 watts peak
- Sound Guard™ III tweeter protection
- Full-range inputs include a four-pin twist lock connector and two 1/4" phone jacks
- Trapezoidal aspen hardwood enclosure
- Stand-mount adapter

SPECIFICATIONS SP™ 5

Description

The SP 5 is a two-way speaker system comprised of a high output 15" Scorpion® Plus HO woofer with a Kevlar®-impregnated cone and an RX™22 compression driver loaded onto a patented Quadratic Throat Waveguide™.

The SP 5 has a trapezoidal-shaped enclosure, which reduces the buildup of standing waves inside the enclosure to minimize mid-bass and midrange coloration. The enclosure is constructed of aspen hardwood plywood augmented with dual-layered top and bottom panels covered with heavy-duty textured black Hammertex™ and reinforced with high impact plastic corners. A full-length, wrap-around perforated steel grille protects the front of the enclosure. A built-in SA-1 stand-mount adapter accommodates speaker stand use.

The low frequencies are supplied by a 15" Scorpion Plus HO woofer with a Kevlar-impregnated cone and a highly linear suspension. The high frequencies are handled by a 2" RX22 titanium diaphragm compression driver utilizing ferrofluid cooling. This superb driver is coupled to a Quadratic Throat Constant Directivity Waveguide (U.S. Patent #6,059,069) to provide smooth, even response, low distortion and good high frequency dispersion. This horn has an asymmetrical vertical polar response, aiming the main energy lobe down 10 degrees so it is aimed at the audience instead of over their heads. This helps reduce ceiling reflections, ensuring greater clarity and gain before feedback. The RX22 driver features the Radialinear Planar Phase Correction System (U.S. Patent #6,064,745), which provides smooth and extended high frequency response.

Input connection to the system is made via two 1/4" phone jacks and one four-pin twist lock connector in parallel. The internal passive crossover features Sound Guard™ III tweeter protection circuit and an advanced topology crossover with high-performance components to provide high power handling and reliability.

Sound Guard, Peavey's proprietary high frequency driver protection circuitry, provides long- and medium-term driver overload protection without impairing musical transients or dynamics when the system is used full range. The crossover provides driver roll-off and protection as well as driver EQ for the woofer and horn for a clean, clear and smooth response. High-quality, reliable crossover components include polypropylene capacitors and high-current inductors. The optimal integration of the crossover with the selected drivers results in a smooth frequency response from 69 Hz to 17 kHz.

Despite its compact dimensions, this system can produce very high sound levels and handle 800 watts program power, resulting in clean coverage with high articulation and long-term reliability.

Frequency response

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the SP 5 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 SP 5 combine to give a smooth frequency response from 69 Hz to 17 kHz.

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 amplifier headroom available.

Harmonic distortion

Second and third harmonic distortions vs. frequency are plotted in figures 3 & 4 for two power levels. Ten percent (10%) of rated input power and either one percent (1%) of rated input power or 1 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

This unit is not designed for overhead suspension. The SA-1 stand-mount adapter may be incorporated, and four large rubber feet are included on the bottom for floor use.

Architectural & Engineering Specifications

The loudspeaker system shall have an operating bandwidth of 69 Hz to 17 kHz. The nominal output level shall be 99.0 dB when measured at a distance of one meter with an input of 1 watt. The nominal impedance shall be 8.0 ohms. The maximum continuous power handling shall be 400 Watts, with maximum program power of 800 watts, peak power input of at least 1,600 watts and a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 90 degrees symmetrical about the center axis in the horizontal plane, and +10, -30 degrees about the center axis in the vertical plane. The outside dimensions shall be 27.5 inches high by 20.55 inches wide by 16.5 inches deep. The weight shall be 71 lbs. The loudspeaker system shall be a Peavey model SP™5.

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.

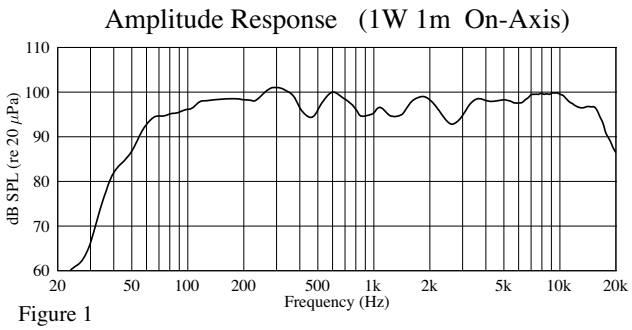


Figure 1

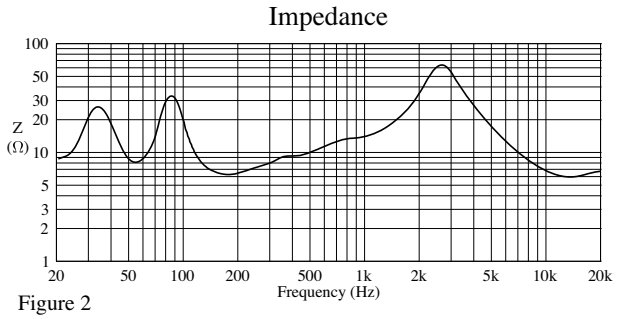


Figure 2

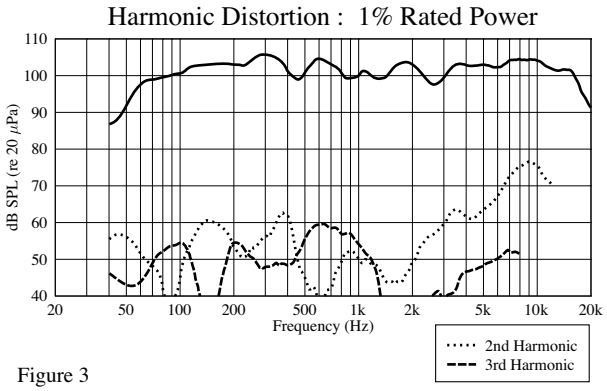


Figure 3

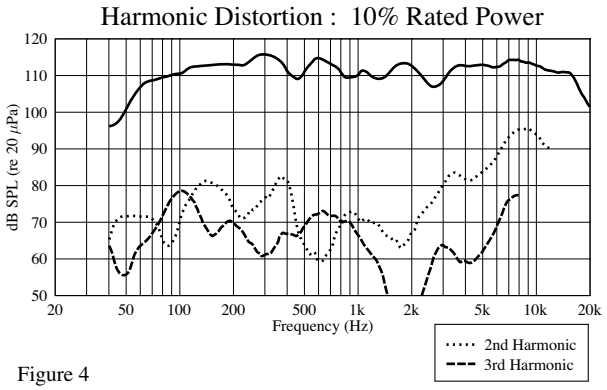


Figure 4

SP 5 Input Plate



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Features and specifications are subject to change without notice.

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