

# 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:

1x 15" SP-15825 Scorpion® Plus HO Woofer

High frequency section:

1x .875" exit /51mm 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 Neutrik® four-pin Speakon® jack

**Enclosure materials and finish:**

Nine-ply Baltic birch plywood finished in black carpet

**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:

27.63" x 20.56" x 16.5"  
702 mm x 522 mm x 419 mm

REAR:

27.63" x 14.8" x 16.5"  
702 mm x 378 mm x 419 mm

**Net Weight:**

56 lbs. (25.5kg)

**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 Neutrik Speakon four-pin jack and two 1/4" phone jacks
- Trapezoidal Baltic birch enclosure, 25% lighter than SP 5X
- Stand-mount adapter



# SPECIFICATIONS SP™ 5

## Description

The new SP 5 features the Peavey Quadratic Throat Waveguide™ and an enclosure made from Baltic birch plywood. 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 the patented constant directivity waveguide.

The SP 5 has a trapezoidal-shaped enclosure, which reduces the buildup of standing waves inside the enclosure to minimize mid-bass and mid-range coloration. It is constructed of nine-ply Baltic birch plywood and covered with a durable black carpet. Use of the Baltic birch plywood provides an enclosure that is 25% lighter than the previous SP 5XL. The enclosure corners are reinforced with metal corners, and a powder-coated, perforated metal grille covers the lower half of the system to protect the woofer from external damage. 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 smoother and extended high frequency response.

Input connection to the system is made via two 1/4" phone jacks and a four-pin Neutrik 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 of 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 27.63 inches high by 20.56 inches wide by 16.5 inches deep. The weight shall be 56 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.

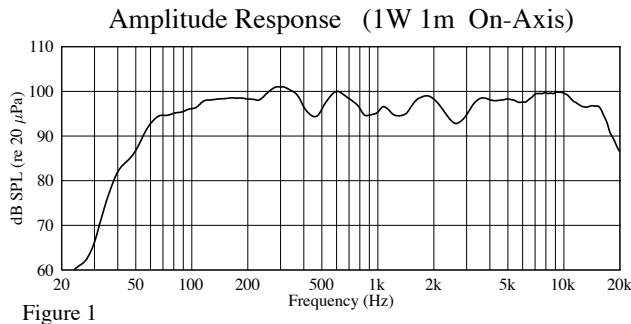


Figure 1

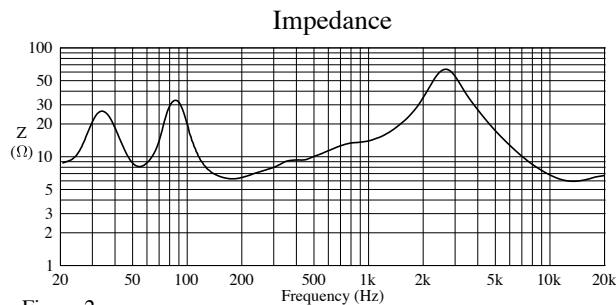


Figure 2

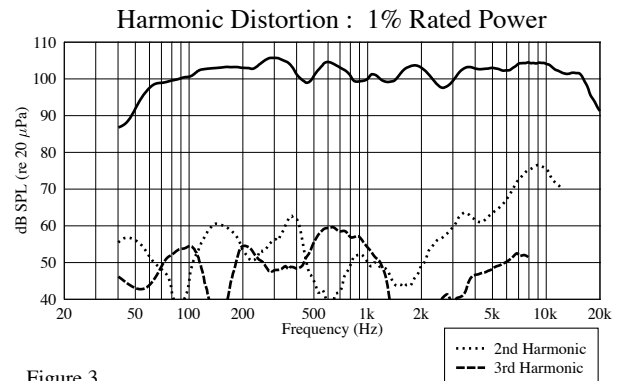


Figure 3

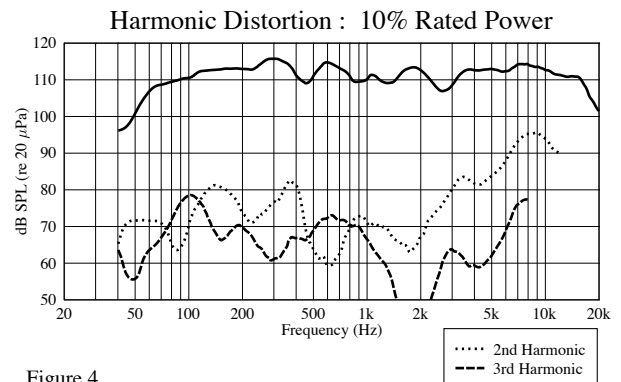
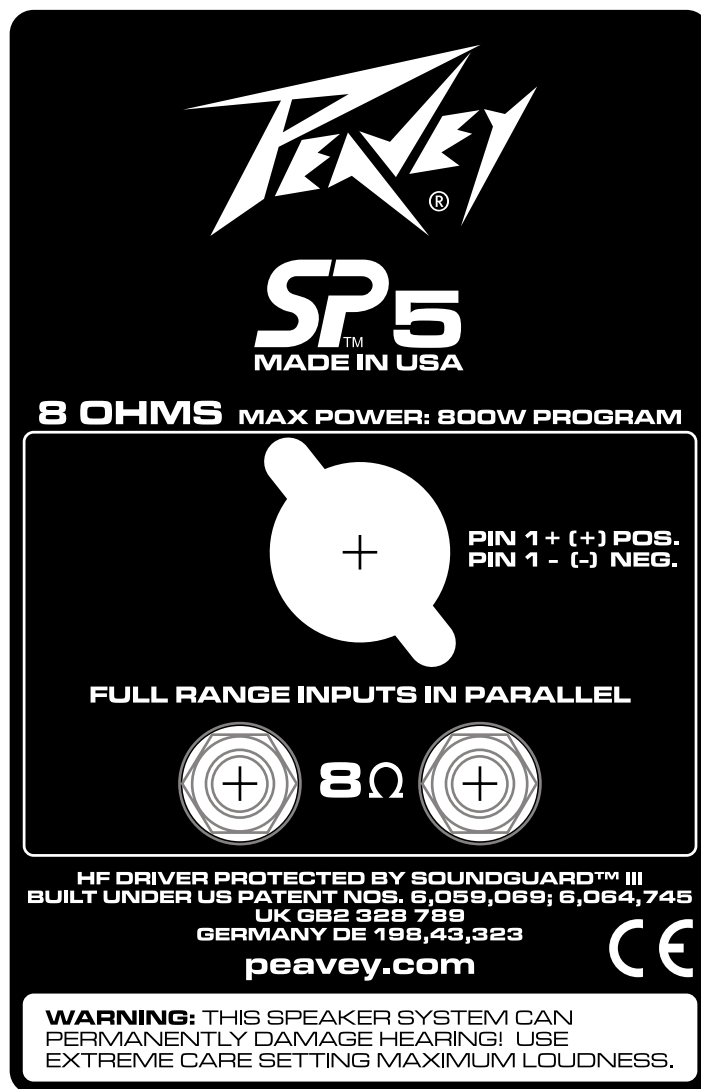


Figure 4



The image shows a black rectangular label for a Peavey SP5 speaker. At the top is the Peavey logo in a stylized, jagged font. Below it is 'SP5' in large, bold letters, with 'MADE IN USA' underneath. The text '8 OHMS MAX POWER: 800W PROGRAM' is printed in a smaller font. A central diagram shows a circular speaker with a '+' sign in the center, and to its right, the text 'PIN 1 + (+) POS.' and 'PIN 1 - (-) NEG.'. Below this is the text 'FULL RANGE INPUTS IN PARALLEL' and two circular icons representing terminals, each with a '+' sign and the text '8Ω' between them. At the bottom, it says 'HF DRIVER PROTECTED BY SOUNDGUARD™ III BUILT UNDER US PATENT NOS. 6,059,069; 6,064,745 UK GB2 328 789 GERMANY DE 198,43,323 peavey.com' followed by a CE mark. A white box at the very bottom contains a warning: 'WARNING: THIS SPEAKER SYSTEM CAN PERMANENTLY DAMAGE HEARING! USE EXTREME CARE SETTING MAXIMUM LOUDNESS.'

**PEAVEY**  
**SP5**  
MADE IN USA

**8 OHMS** MAX POWER: 800W PROGRAM

PIN 1 + (+) POS.  
PIN 1 - (-) NEG.

FULL RANGE INPUTS IN PARALLEL

8Ω

HF DRIVER PROTECTED BY SOUNDGUARD™ III  
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UK GB2 328 789  
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Features and specifications subject to change without notice.

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