



SP[®]4

Product
Specifications



SP[®]4

The SP 4 features the Peavey Quadratic Throat Waveguide with an RX™ 22CT compression driver loaded onto the constant directivity waveguide. The SP 4 is a quasi-three way speaker system comprised of two of the 15" Black Widow® BWX series woofer, now with a long throw voice coil.

The SP 4 has a trapezoidal-shaped enclosure, which reduces the buildup of standing waves inside the enclosure to minimize mid-bass and mid-range coloration. The enclosure is constructed of plywood augmented with internal braces, Coated with a textured black polyurethane finish. A full-length, wrap-around perforated steel grille protects the front of the enclosure. Multiple fly points are provided to allow overhead rigging.

The quasi-three way system consists of the following driver components: two 15" Black Widow® BWX series woofer with a long throw voice coil. The woofers are each capable of over 500 Watts of continuous power handling (AES Std 2-1984). The high frequencies are handled by a 2" RX™22CT titanium diaphragm compression driver. This excellent 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 reaches the audience instead of over their heads. This reduces ceiling reflections and ensures greater clarity and gain before feedback.

Full-range input connection to the system is made via two 1/4" phone jacks and one four-pin twist lock connector in parallel. Bi-amp input is via a swappable plug and headers inside the input cup. The internal passive crossover features the Peavey-exclusive Sound Guard protection circuit for the tweeter and an advanced topology crossover with high-performance components to provide high power handling and reliability. Sound Guard provides long- and medium-term driver overload protection without impairing musical transients or dynamics on either the mid-range or the tweeter when the system is used full range or when it is bi-amped.

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 2000 watts program power, resulting in high articulation and long-term reliability.

FEATURES:

- Quasi-three way, full-range/bi-ampable Sound Reinforcement system
- Two 15" BWX Black Widow® 4" diameter VC woofers
- RX™22CT compression driver
- 2000 watts program, 4000 watts peak
- Patented Quadratic Throat Waveguide™ technology
- Asymmetrical horn aims the sound down 10° (at the audience, not over their heads)
- Sound Guard™ III tweeter protection
- Full-range inputs include one four-pin twist lock connector and two 1/4" phone jacks
- Bi-amp input via swappable headers inside input cup, through four-pin, twist lock connector.
- Trapezoidal plywood enclosure
- Multiple fly points
- Very small profile for a double 15" two-way speaker system

Flying/Rigging Information

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. Do not suspend or mount any other product or device from this enclosure! Maximum enclosure angle 30°. Use only the correct mating hardware. All associated rigging is the responsibility of others.

Hardware for Flying/Rigging the SP®-4

Eyebolts or bracket bolts should be M8 metric thread. Eyebolts and bracket bolts must conform to certain minimum strength criteria for safety reasons. Unspecified eyebolts found at local hardware stores are not strong enough to maintain safety for overhead flying or rigging. Use only forged steel shoulder machinery eyebolts designed for rigging use, which adhere to the stated standards as outlined below.

Hardware Specifications

Forged shoulder machinery eyebolts should be an M8 size, 1.25 mm per thread, and must conform to DIN 580 or ASTM A489, for Germany, BGV-C1 is the relevant standard. Minimum shank length should be 26 mm. The eyebolts should be rated for a minimum of 1,000 lbs straight pull working load.

Bolts used on custom mounting brackets must be certified to be a metric grade 8.8 or better.

If there are any questions regarding the proper hardware or practices for safe flying or rigging of the Peavey SP® 4, contact a certified structural engineer, or consult with those local rigging companies who have trained and certified personnel.

Architectural & Engineering Specifications

The loudspeaker system shall have an operating bandwidth of 69 Hz to 17 kHz. The nominal output level shall be 98.0 dB when measured at a distance of 1 meter with an input of 1 watt. The nominal impedance shall be 4.0 ohms. The maximum continuous power handling shall be 1,000 watts, with maximum program power of 2,000 watts, peak power input of at least 4,000 watts and a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 100 degrees symmetrical about the center axis in the horizontal plane, and +15, -35 degrees about the center axis in the vertical plane.

Fly point inserts shall be provided, 10 per cabinet, at the following locations: 2 top, 2 bottom and 2 each side & 1 each rear top and rear bottom. The outside dimensions shall be 43.5 inches high by 16.75 inches wide by 16.85 inches deep. Width of rear of trapezoidal cabinet is 11.58". The weight shall be 87 lbs. The loudspeaker system shall be a Peavey model SP™4.

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

69 Hz to 17 kHz (± 3 dB)

Usable Low Frequency limit (-10 dB point):

54 Hz

Power Handling:

Full Range: 1000 W continuous, 2000 W program, 4000 W peak

Low Frequency Section: 1000 W continuous, 2000 W program, 4000 W peak

High Frequency Section: 50 W continuous, 100 W program, 200 W peak

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

Full Range: 98 dB SPL, (2.0 V input)

Low Frequency Section: 98 dB SPL, (2.0 V input)

High Frequency Section: 108 dB SPL, (2.0 V input)

Maximum Sound Pressure Level (1 meter):

Full Range: 127 dB SPL continuous, 133 dB SPL peak

Low Frequency Section: 127 dB SPL continuous, 133 dB SPL peak

High Frequency Section: 125 dB SPL continuous, 131 dB SPL peak

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

100 deg. Horizontal by 50 deg. Vertical

The vertical main polar lobe is angled down 10 degrees with respect to straight ahead, the vertical coverage angles being +15. -35 deg.

Transducer Complement:

Low Frequency Section: 2 X 15" woofer, vented; Black Widow® 1508-8 SPS

High Frequency Section: 1 X 1.0" exit, 50 mm voice coil

RX22CT compression driver on asymmetrical Quadratic Throat CD Horn

Box Tuning Frequency:

Low Frequency Section: 64 Hz

Electroacoustic Crossover Frequency (internal passive):

Low Frequency - High Frequency: 1,800 Hz

Recommended Active Crossover Frequency Region and Slope:

Low Frequency - High Frequency: 2.0 kHz at 24 dB/octave LR

Time Offset:

Low Frequency: 0.0 ms

High Frequency: 0.31 ms

Impedance (Z):

Full Range:

Nominal: 4.0 Ω

Minimum: 3.4 Ω

Low Frequency:

Nominal: 4.0 Ω

Minimum: 3.2 Ω

High Frequency:

Nominal: 8.0 Ω

Minimum: 7.9 Ω

Input Connections:

Full range: two 1/4" phone jacks, one four-pin, twist lock connector.

Bi-amp connection via swappable header inside cup through four-pin, twist lock connector.

Enclosure Materials & Finish:

Plywood finished in black textured polyurethane coating. Full length black powder coated metal grille.

Mounting provisions:

10) M8 Threaded Mounting Suspension Points (2 top, 2 bottom and 2 each side & 1 each top rear and bottom rear).

Four large rubber feet on bottom for floor use.

Dimensions (H x W x D):

Front: 43.50 in. x 16.75 in. x 16.85 in.

1105 mm x 426 mm x 428 mm

Rear Width: 11.58" – 294 mm

Net Weight:

87 Lbs. (39.5 kg)

* Specifications subject to change without notice.



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Features and specifications subject to change without notice.

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Logo referenced in Directive 2002/96/EC Annex IV
(OJ(L)37/38, 13.02.03 and defined in EN 50419: 2005
The bar is the symbol for marking of new waste and
is applied only to equipment manufactured after
13 August 2005