SPECIFICATIONS SP™ 15M

Frequency Response, 1 meter on-axis, swept-sine in anechoic environment:
90 Hz to 14 kHz (±3 dB)

Usable Low Frequency Limit (-10 dB point):
67 Hz

Power Handling:
Full range:
500 Watts continuous
1,000 Watts program
2,000 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:
126 dB SPL continuous
132 dB SPL peak

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

Transducer Complement:
Low frequency section:
One 15" woofer, vented
1508-8 HE SF BWX
High frequency section:
One .875" exit/51 mm voice coil Rx™22 compression driver on a CD horn

Box Tuning Frequency:
Low frequency section: 94 Hz

Crossover Frequency (internal passive):
Low frequency - high frequency:
1,600 Hz

Impedance (Z):
Full range:
Nominal: 8.0 Ω
Minimum: 6.3 Ω

Input Connections:
Full range: Two 1/4" phone jacks and one Neutrik® Speakon® four-pin jack

Enclosure Materials & Finish:
Nine-ply Baltic birch plywood finished in black carpet

Mounting Provisions:
⚠ This unit is not designed for overhead suspension.
SA-1 stand mount adapter incorporated and eight rubber feet on two sides for dual-angle use.

Dimensions (H x W x D):
45° baffle orientation:
15.63" x 24.00" x 17.75"
397 mm x 610 mm x 451 mm

30° baffle orientation:
15.25" x 24.00" x 17.75"
387 mm x 610 mm x 451 mm

Net Weight:
51 lbs. (23.2 kg)

Features
- Two-way, full-range floor monitor
- 1,000 Watts program 2,000 Watts peak
- 15" BWX Black Widow® Woofer, 4" VC, field-replaceable basket
- Rx™22 compression driver with ferrofluid cooling
- Sound Guard™ III tweeter protection
- Baltic birch enclosure
- Dual baffle angles of 45° or 30°
- Two 1/4" full-range phone-jack inputs in parallel with a four-pin Neutrik jack
- Perforated metal grille
- Stand-mount adapter

SPECIFICATIONS SP™ 15M

Description

The new SP™15M is a two-way floor monitor speaker system comprised of a 15" Black Widow® spider-frame BWX woofer with a Kevlar®/carbon fiber-impregnated cone and an enclosure made from nine-ply Baltic birch. The thoroughly braced cabinet is covered with a durable black carpet and provided with a heavy duty perforated steel grille with a dark grey powder coating. An SA-1 stand mount adapter is built in for side-fill or P.A. use.

The low frequencies are provided by the 15" Black Widow BWX woofer with a Kevlar®/carbon fiber-impregnated cone and dust cap. Capable of over 500 Watts of continuous power handling (AES Std 2-1984), the woofer can handle a lot of power, which results in very low power compression. The high frequencies are handled by a 2" Rx™22 titanium diaphragm compression driver utilizing ferrofluid cooling. This superb driver is coupled to a constant directivity horn with smooth, even response and good high frequency dispersion. The Rx 22 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 the 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 when the system is used full range without impairing musical transients or dynamics. The crossover provides driver roll off and protection as well as driver EQ for the woofer and horn for clean, clear, 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 90 Hz to 14 kHz, making it highly appropriate for monitor applications.

Despite its compact dimensions, this system can put out some very high sound levels and handle 1000 Watts of undistorted amplifier power program, resulting in clean monitoring with high articulation and reliability.

Frequency Response

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the SP15M 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 15M combine to give a smooth frequency response from 90 Hz to 14 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 available amplifier headroom.

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. Includes SA-1 stand-mount adapter and eight rubber feet on two sides for dual-angle use.

Architectural & Engineering Specifications

The loudspeaker system shall have an operating bandwidth of 90 Hz to 14 kHz. The nominal output level shall be 99 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 500 Watts with maximum program power of 1000 Watts, a peak power input of at least 2,000 Watts and a minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 40 degrees in the horizontal plane, and 90 degrees in the vertical plane. The outside dimensions shall be 15.63 inches high by 24.00 inches wide by 17.75 inches deep with the unit in the 45 degree baffle orientation. The weight shall be 51 lbs. The loudspeaker system shall be a Peavey model SP 15M.

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.

Amplitude Response (1W 1m On-Axis)

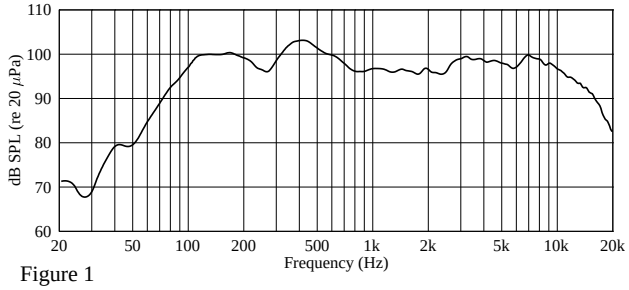


Figure 1

Impedance

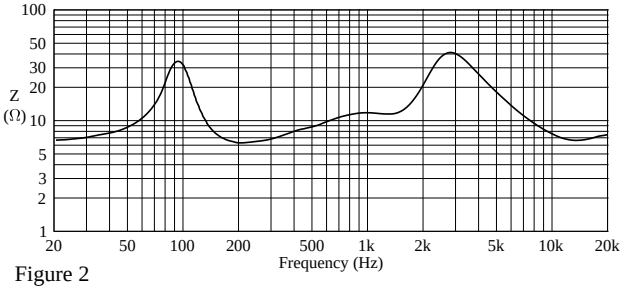


Figure 2

Harmonic Distortion : 1% Rated Power

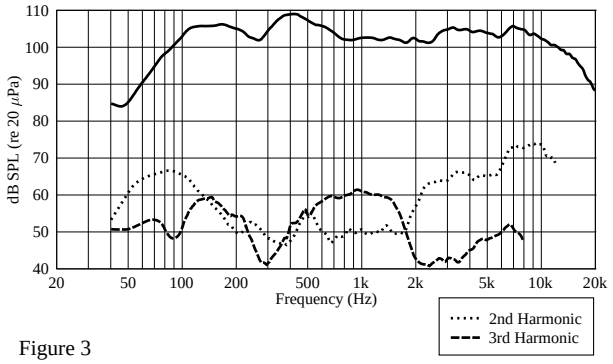


Figure 3

Harmonic Distortion : 10% Rated Power

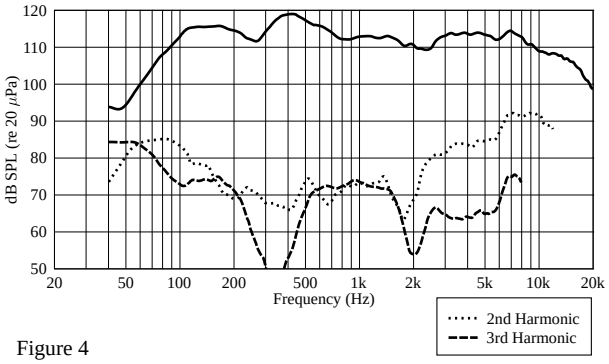
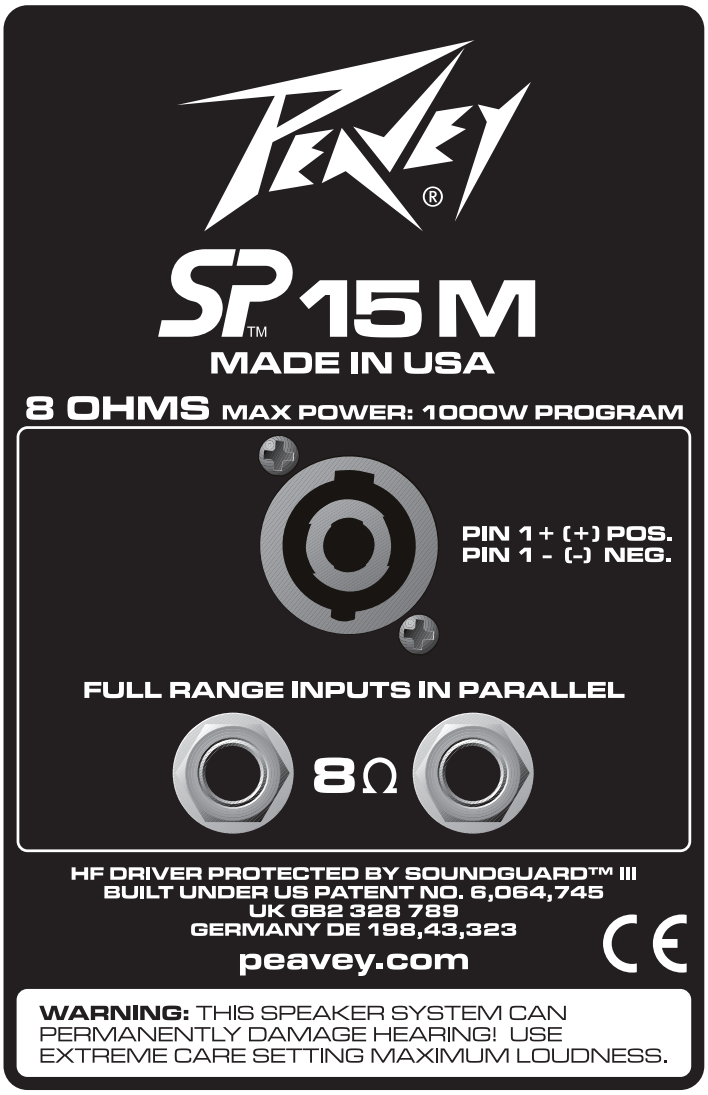


Figure 4

SP 15M Input Plate



Features and specifications subject to change without notice.

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