

# PEAVEY ELECTRONICS

## SP™ 1X

### SPECIFICATIONS

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

56 Hz to 19 kHz ( $\pm 3$  dB)

**Usable low frequency limit (-10 dB point):**

42 Hz

#### Power handling:

##### Full Range:

700 W continuous  
1,400 W program  
2,800 W peak

##### Low Frequency Section:

500 W continuous  
1,000 W program  
2,000 W peak

##### High Frequency Section:

80 W continuous  
160 W program  
320 W peak

**Sound pressure level, 1 Watt, 1-meter in anechoic environment:**

##### Full Range:

99.0 dB SPL, (2.83 V input)

##### Low Frequency Section:

100.0 dB SPL, (2.83 V input)

##### High Frequency Section:

110.0 dB SPL, (2.83 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:

129 dB SPL continuous  
135 dB SPL peak

**Radiation angle measured at -6 dB point of polar response:**

80° horizontal by 40° vertical



#### Transducer complement:

##### Low Frequency Section:

1x 15 in. woofer, vented  
1508-8 HE BWX

##### High Frequency Section:

1x 1.6 in. exit/100 mm voice coil  
compression driver on CD horn  
44XT (w/o adapter) on a CH7 constant  
directivity horn

#### Box tuning frequency:

##### Low Frequency Section:

50 Hz

#### Crossover frequency (internal passive):

##### Low Frequency - High Frequency:

1,400 Hz

#### Recommended active crossover frequency region and slope:

##### Low Frequency - High Frequency:

1600 Hz at 12 dB/octave, plus CD  
horn EQ

#### Time offset:

##### Low Frequency:

Delay 0.67 ms

##### High Frequency:

0.00 ms

#### Impedance (Z):

##### Full Range:

Nominal: 8.0  $\Omega$   
Minimum: 6.4  $\Omega$

##### Low Frequency:

Nominal: 8.0  $\Omega$   
Minimum: 6.9  $\Omega$

##### High Frequency:

Nominal: 8.0  $\Omega$   
Minimum: 7.1  $\Omega$

#### Input connections:

2x 1/4 in. phone jack and 1x Neutrik®  
NL4 Speakon® (bi-amp only)

#### Enclosure materials and finish:

3/4" OSB finished in black carpet



### Mounting provisions:

▲ This unit is not designed for overhead suspension. SA-1 stand mount adaptor built-in, and four large rubber feet on bottom for floor use.

### Dimensions (H x W x D):

#### Front:

33.38 in. x 21.19 in. x 22.75 in.  
848 mm x 538 mm x 578 mm

#### Rear:

33.38 in. x 13.88 in. x 22.75 in.  
848 mm x 352 mm x 578 mm

### Net Weight:

100 lbs. (45.5 kg)

### Features

- 1,400 W program, 2,800 W peak
- Sound Guard™ 44 tweeter protection
- 15" BWX Black Widow® 4" VC woofer
- 44XT™ 4" titanium compression driver
- Trapezoidal enclosure design
- SA-1 stand adaptor

### Description

The latest version of the SP™ 1 has the new BWX high power Black Widow woofer incorporated, as well as a very nice looking cabinet design. The SP 1X is a two-way speaker system comprised of a 15" Black Widow BWX woofer with a Kevlar® impregnated cone, and a 44XT compression driver loaded onto a CH® 7 constant directivity horn.

The SP 1X has a trapezoidal shaped enclosure, which reduces the build-up of standing waves inside the enclosure, which minimizes mid-bass and mid-range colorations due to the cabinet. It is constructed of 3/4" void-free plywood and is covered with a durable black carpet. The enclosure corners are reinforced with polymer caps, and a black powder-coated expanded metal grille covers the lower half of the system to protect the woofer from external damage. An SA-1 stand mount adaptor is built-in for ease of speaker stand use.

The two-way system is comprised of a 15" Black Widow BWX woofer with a Kevlar impregnated cone, and a water-resistant treated cone and dust cap for superior environmental stability. Capable of over 500 W of continuous power handling (AES Std 2-1984), the woofer can handle a lot of sheer power. The high frequencies are handled by a 44XT 4" titanium diaphragm compression driver, utilizing ferrofluid cooling, coupled to a

CH 7 constant directivity horn. This horn has a smooth, even response with good pattern control. The 44XT driver features the Radialinear Planar Phase Correction System, under US 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 in parallel, and a 4-pin Neutrik® switching jack is provided for bi-amping flexibility while maintaining superior signal integrity. The internal passive crossover features Sound Guard 44 tweeter protection circuit, an advanced topology crossover with high performance components, to provide high power handling and reliability. Peavey's proprietary high-frequency driver protection circuitry, Sound Guard, provides long and medium-term driver overload protection when the system is used full-range, or when it is bi-amped, without impairing musical transients or dynamics. The crossover provides driver roll-off and protection, as well as driver EQ for the woofer and horn, the sum total is 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 56 Hz to 19 kHz. A crossover EQ switch is

provided to tailor the response in the mid-range, providing a nominally flat frequency response position, and an EQ'd position that pulls the mids back to help keep bright rooms from overloading, or to help achieve a mellower voicing for those applications that prefer it, such as DJ use.

Despite its compact dimensions for a 15" based enclosure with a 2" throat compression driver, this system can put out some very serious sound levels, and take 1400 Watts program of clean amplifier power, resulting in precise coverage with excellent clarity and high reliability.

### Frequency Response

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the SP 1X 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 1X combine to give a smooth frequency response from 56 Hz to 19 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

### Amplitude Response (1W 1m On-Axis)

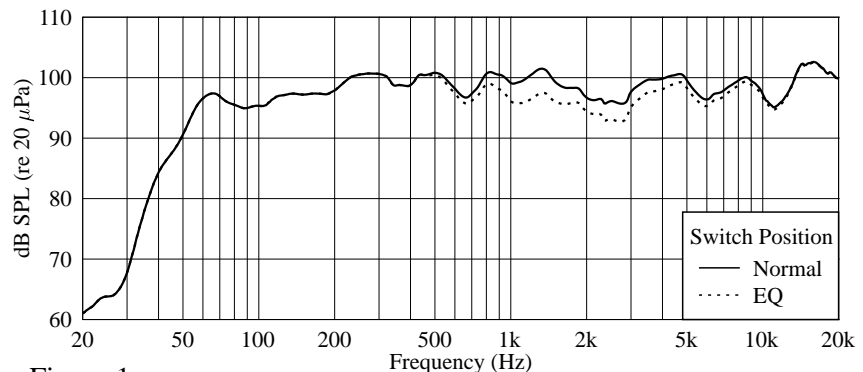


Figure 1

### Impedance

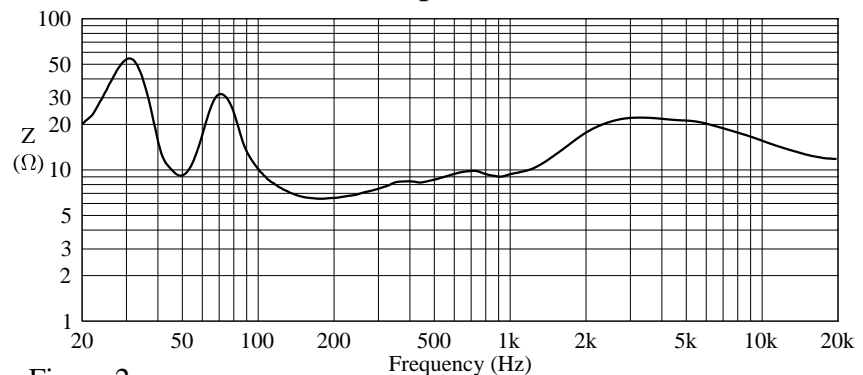



Figure 2

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.

### **Mounting**

 This unit is not designed for overhead suspension.

### **Architectural and Engineering Specifications**

The loudspeaker system shall have an operating bandwidth of 56 Hz to 19 kHz. The nominal output level shall be 99.0 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 700 Watts, maximum program power of 1,400 Watts and a peak power input of at least 2,800 Watts, with a

minimum amplifier headroom of 3 dB. The nominal radiation geometry shall be 80 degrees in the horizontal plane and 40 degrees in the vertical plane. The outside dimensions shall be 33.38 inches high by 21.19 inches wide by 22.75 inches deep. The weight shall be 100 pounds. The loudspeaker system shall be a Peavey model SP™ 1X.

SP™ 1X INPUT

**SP™ 1X**

**PEAVEY®**




BI-AMP INPUT

LOWES — 1+ LF+  
          — 1- LF-



HIGHS — 2+ HF+  
          — 2- HF-

MAX POWER: 1400 W PROGRAM

EQ SWITCH

EQ    NORMAL

**WARNING: THIS SPEAKER SYSTEM CAN PERMANENTLY DAMAGE HEARING! USE EXTREME CARE SETTING MAXIMUM LOUDNESS**

8 OHMS   99 LBS.  
45 kg.

**FULL RANGE INPUTS  
IN PARALLEL**

HF DRIVER PROTECTED BY SOUNDGUARD™ III  
BUILT UNDER U.S. PATENT NO. 6,064,745



Features and specifications subject to change without notice.

Peavey Electronics Corporation • 711 A Street • Meridian • MS • 39301  
(601) 483-5365 • FAX (601) 486-1278 • www.peavey.com



80304849