

SPECIFICATIONS

Versarray™ 118 Sub



Features:

- Peavey Exclusive Lo Max® 18" Subwoofer
- Extended frequency response down to 33 Hz (half-space)
- 2400 watts of program power rating
- Full power low frequency response down to 38 Hz!
- Neutrik® Speakon® professional input connectors
- Compact design
- Speaker pole mount tunnel built-in
- Heavy-duty steel handles inset on both sides
- Acrylic polyurethane painted finish, black or white
- Steel grille for speaker protection
- Made in the U.S.A.

Description

The Versarray 118 Sub incorporates the the ultra-high power Lo Max 18" woofer into a new compact cabinet design. The Versarray 118 Sub is a direct radiator vented subwoofer designed specifically for the most demanding Pro-Audio applications.

The Versarray 118 is compact for its power handling, sound pressure level (SPL) output, distortion performance and bass extension. This is made possible by special characteristics designed into the Lo Max woofer.

The Lo Max 18" driver in the Versarray 118 cabinet is Peavey's pinnacle of high-power subwoofer design. An incredible 2,400 watt program rating and extra-long cone excursion add up to amazing levels of clean, deep bass from a single 18" woofer. Incorporating all of the features that Peavey has engineered into their woofers over the years, including the field-replaceable basket, Kevlar®-impregnated cone for increased strength and lower distortion due to greater dampening of excess cone vibrations, polyimide-impregnated fiberglass former for higher sensitivity and frequency response, die-cast aluminum frame, and a 4" diameter edge-wound voice coil with solderless diffusion welded OFHC copper leads.

This makes the Versarray 118 Sub a superior choice for the bass end of any high performance sound system, primarily designed for professional touring and high performance permanent install.

Extreme Bracing Cabinet Design

The Versarray 118 Sub cabinet is well braced and very stiff, as internal pressures produced by the Lo Max woofer can be very high. The vent design integrated into the enclosure includes a middle brace to further increase enclosure stiffness. The Versarray 118 Sub's large vent area and long path length allow for a large volume of air to move with very low resistance. This is important due to the huge airflow volumes that the Lo Max woofer can produce. Each cabinet side wall and vent wall are tied together at multiple points using multiple interlocking girdle braces, making this one of the sturdiest subwoofer enclosures on the market. A knuckle-rap test will prove this immediately. The Versarray 118 Sub is constructed of premium 13-ply Baltic birch plywood and is finished with a tough acrylic polyurethane paint, for good looks and durability. The finish is available in black or white. A 16-gauge powder-coated perforated metal grille covers the front of the system to protect the speakers from external damage.

Input connection to the system is made via two 4-pin Neutrik jacks in parallel, or an 8-pin Neutrik jack. A 4-pin Neutrik thru jack is provided for bi-amping flexibility while maintaining superior signal integrity. The inclusion of a standard 4-pin Neutrik jack in parallel for the main inputs allows for daisy chaining to another cabinet. A pole tunnel is built-in so that a Versarray specific pole can be used to pole mount up to two Versarray 112 modules above the Versarray 118 Sub.

Despite its compact dimensions for a single 18" bass enclosure, this system generates extremely high sound pressure levels (SPLs) and accepts up to 2,400 watts program of clean amplifier power, resulting in large area coverage with excellent punch and high reliability.



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Frequency response, 1 meter on-axis, swept-sine:

Anechoic environment:
47 Hz – 1.5 kHz (±3 dB)
Half-space environment:
43 Hz

Usable low frequency limit (-10 dB point):

Anechoic environment: 37 Hz
Half-space environment: 33 Hz

Power handling:

1,200 W continuous
2,400 W program
4,800 W Peak

Sound pressure level, 1 watt, 1 meter:

Anechoic environment:
97 dB SPL, (2.83 V input)
Half-space environment:
103 dB SPL

Maximum sound pressure level (1 meter):

Anechoic environment:
127 dB SPL continuous
133 dB SPL peak
Half-space environment:
133 dB SPL continuous
139 dB SPL peak

Transducer complement:

1 x 18 in. vented
Lo Max® 18 woofer

Box tuning frequency:

35 Hz

Harmonic distortion:

1% rated power

Second Harmonic:
100 Hz: 0.61%
500 Hz: 0.44%
Third Harmonic:
100 Hz: 0.73%
500 Hz: 0.47%

10% rated power

Second Harmonic:
100 Hz: 3.94%
500 Hz: 1.62%
Third Harmonic:
100 Hz: 0.74%
500 Hz: 1.41%

Recommended Active Crossover Frequency Region and Slope:

120 Hz at 18 dB/octave minimum

Impedance (Z):

Low Frequency:
Nominal: 8.0 Ω
Minimum: 6.6 Ω

Input connections:

2 x 4-pin Neutrik® Speakon® inputs in Parallel
1 x 8-pin Neutrik Speakon input
1 x 4-pin Neutrik Speakon thru (for use with 8-pin Input)

Enclosure materials & finish:

18 mm 13-ply Baltic birch plywood finished in acrylic polyurethane paint, black or white

Mounting provisions:

This unit is not designed for over head suspension. Satellite stand mounting provided for via built-in pole mount tunnel. Four rubber feet for floor use.

Dimensions (H x W x D):

22.88 in. x 25.06 in. x 26.30 in.
581 mm x 636 mm x 668 mm

Net Weight:

109 lbs. (49.5 kg)

Companion Loudspeakers (sold separately):

Versarray 112 line array module speaker system

Optional Accessories:

Versarray subwoofer stand mount pole (Peavey part number 00584860)

Frequency Response

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the Versarray 118 Sub 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 driver in the Versarray 118 Sub combine to give a smooth frequency response from 47 Hz to 1.5 kHz.

Power Handling

There are many different approaches to power handling ratings. Peavey rates this loudspeaker system's power handling using the AES Standard 2-1984. Using audio band 40 Hz to 400 Hz 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 and 4 for two power levels. Ten percent (10%) of rated input power and either one percent (1%) of rated input power or one 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



Caution: This unit is not designed for overhead suspension!

Architectural and Engineering Specifications

The loudspeaker system shall have an operating bandwidth of 47 Hz to 1.5 kHz, measured on axis at 1m in an anechoic environment, with +/- 3 dB tolerance. The nominal output level shall be 97 dB when measured at a distance of one meter with an input of one watt. The nominal impedance shall be 8 ohms. The maximum continuous power handling shall be 1,200 watts, maximum program power of 2,400 watts and a peak power input of at least 4,800 watts, with a minimum amplifier headroom of 3 dB. The outside dimensions shall be 22.88 inches high by 25.06 inches wide by 26.30 inches deep. The weight shall be 109 pounds. The loudspeaker system shall be a Peavey model Versarray 118.



WARNING! The Versarray 118 Sub is extremely efficient and handles a lot of power! This sound system can permanently damage hearing! Use extreme care setting the overall maximum loudness! Due to the clear, clean sound output of the Versarray 118 Sub and the lack of distortion or obvious distress, the sound level seems much lower than it actually is. This system is capable of SPLs in excess of 133 dB at 1 meter from the speaker!

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 Anechoic vs 1/2 Space

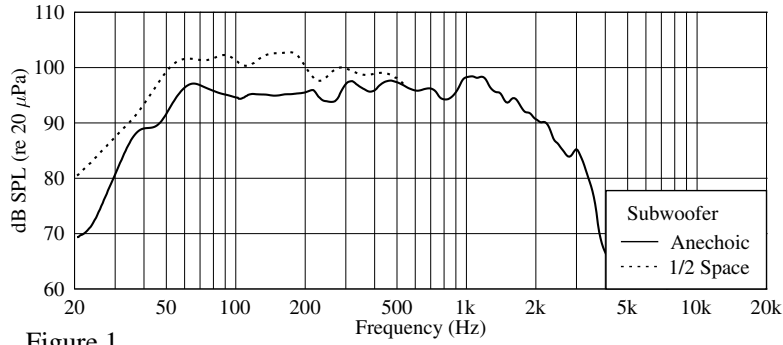


Figure 1

Impedance

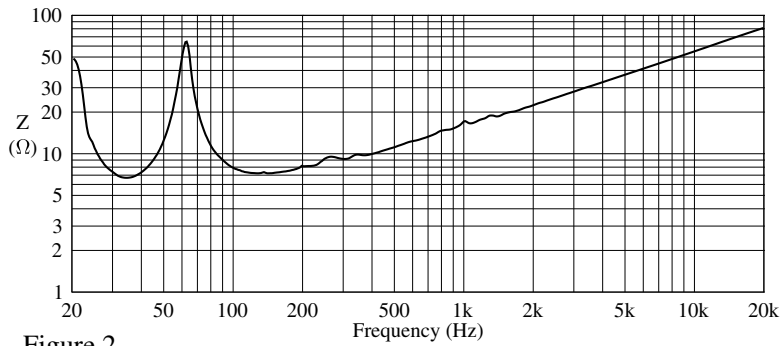


Figure 2

Harmonic Distortion : 1% Rated Power

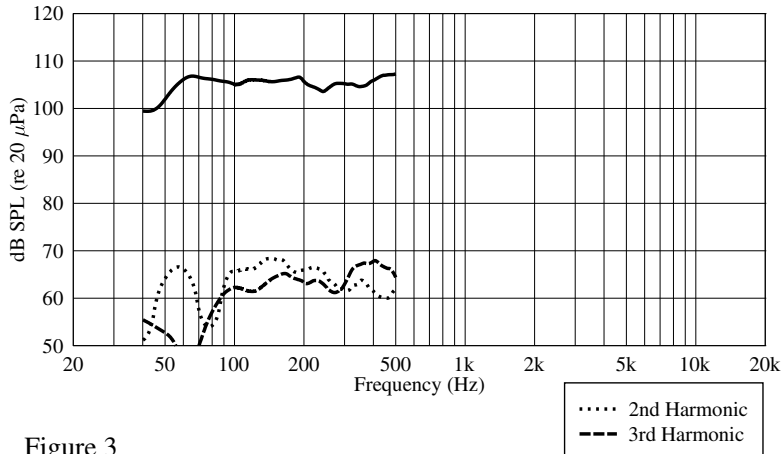


Figure 3

Harmonic Distortion : 10% Rated Power

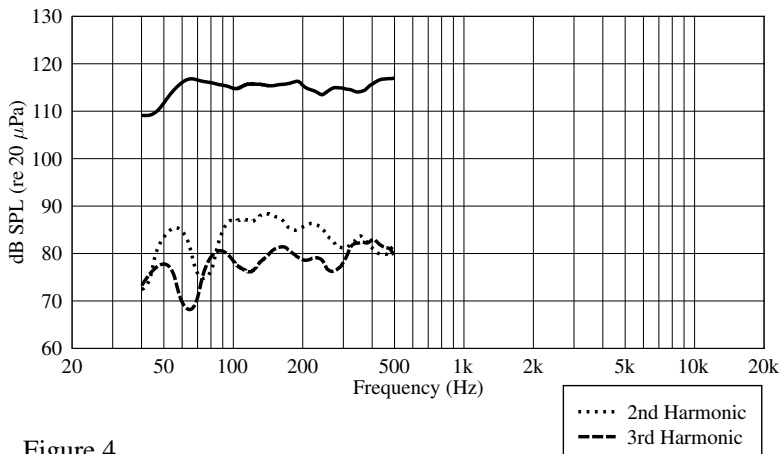
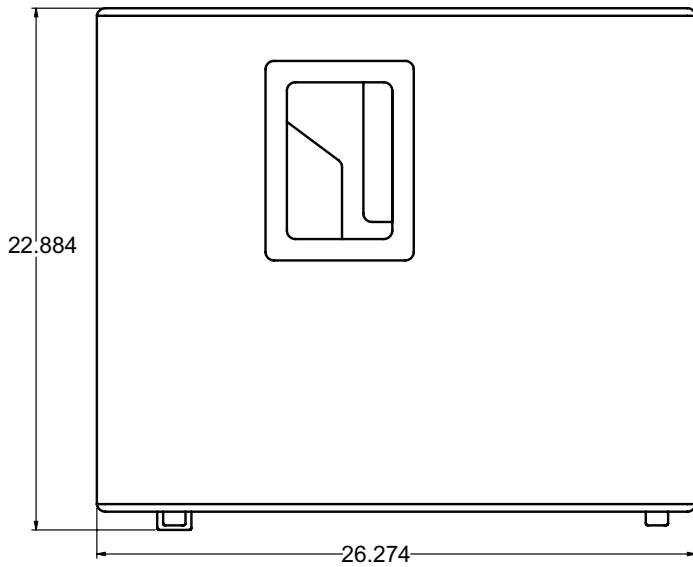
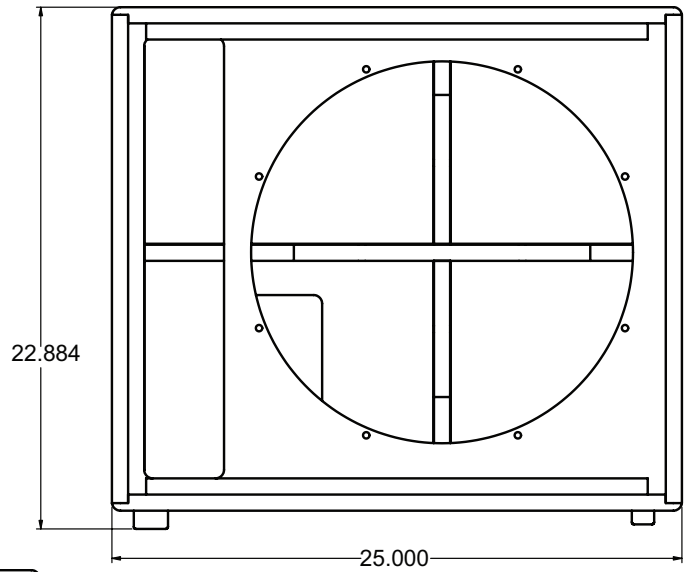
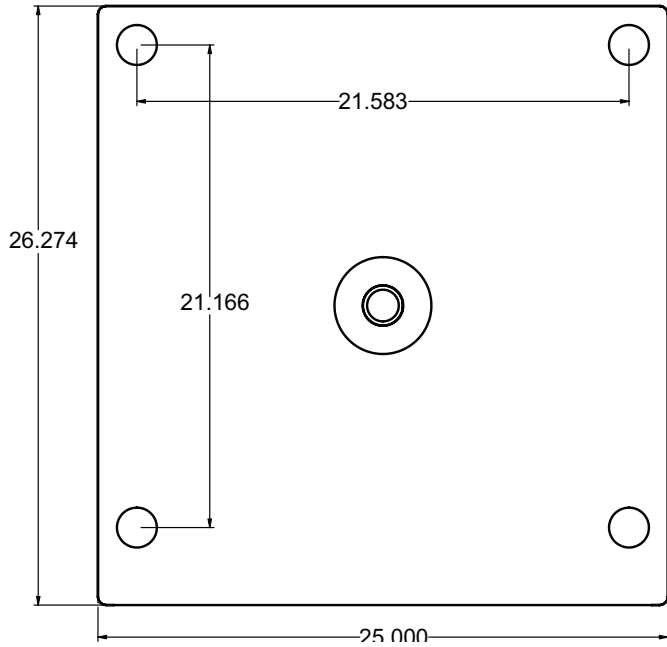


Figure 4

SPECIFICATIONS

Versarray™ 118 Sub

Dimensions



Using the Versarray 118 Sub

Caution! The Versarray 118 Sub can have up to two coupled Versarray 112 line array modules stacked above it on a stand pole, using the built-in pole tunnel. When placing any cabinets above a Versarray 118 Sub, be sure that the unit is on flat or level ground, and is not tilted by more than 10 degrees. If the ground or stage surface creates more than a 10 degree tilt, then do not stack any cabinets above the Versarray 118 Sub. Use only the pole designed for use with the Versarray 118 Sub and the Versarray 112, Peavey part number 00584860, which is 1 3/8 inches in diameter, and 59 inches long.



Speaker Cables

For best results, do not daisy-chain the speaker cable runs, or use small speaker cables to power the Versarray 118 Sub, run a single dedicated speaker cable to each Versarray 118 Sub.

A minimum of 12-gauge speaker cable is recommended, to help maintain damping factor, and due to the high amount of power that will be sent to the Versarray 118 Sub. If the speaker cable run is longer than 50 feet, we recommend locating the power amp nearer the Versarray 118 Sub, and running a line level signal further out to the power amp.

Using Multiple Versarray 112's mounted over a Versarray 118/218 Sub

The rigging plate hardware allows up to 2 coupled cabinets to be arrayed over a Versarray 118 on a pole, and up to 3 coupled Versarray 112's mounted over a Versarray 218 with the use of an optional subwoofer mounting bracket set. With the angle between cabinets adjustable in 2.5 degree increments, the second (or third) cabinet can be aimed as needed at the coverage area.

We do not recommend more than 2 Versarray 112 cabinets be pole mounted over a Versarray 118 Sub, or more than 3 cabinets above a Versarray 218 Sub.

Crossover Settings

A number of suitable crossover options are available from Peavey: the Peavey VSX™ 26 Loudspeaker Controller, the VSX™ 48 Loudspeaker Controller, and the Peavey Digitool™MX. These have available pre-configured set-up files that provide an optimized crossover, and EQ for a flat response and level set as a starting place for any permanent installation.

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Features and specifications subject to change without notice.

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