



Versarray™ 218 MkIII Sub  
Passive Subwoofer  
Product Specifications



The Crest Audio® Versarray™ 218 Mk III Sub incorporates the ultra-high power Peavey® Lo Max® 18” woofer and a unique cabinet design. The Versarray™ 218 Mk III is a direct radiator vented subwoofer designed specifically for the most demanding Pro-Audio applications.

The Versarray™ 218 Mk III Sub is compact for its power handling, 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 is Peavey’s pinnacle of high-power subwoofer design. An incredible 4,800 watt program rating and extra-long cone excursion add up to amazing levels of clean, deep bass from a pair of 18” woofers. Incorporating all of the features that Peavey® has engineered into their woofers over the years, including the field-replaceable basket, high-strength cone for increased rigidity and lower distortion due to greater dampening of excess cone vibrations, polyimide-impregnated fiberglass former for higher sensitivity and extended frequency response, die-cast aluminum frame, and a 4-inch diameter edge-wound voice coil.

This makes the Versarray™ 218 Mk III Sub a superior choice for the bass end of any high performance sound system, and it is primarily designed for large professional touring and high performance permanent installs.

#### Extreme Bracing Cabinet Design

The Versarray™ 218 Mk III Sub cabinet is well braced and very stiff, as internal pressures produced by the Lo Max® woofer can be very high.

Each cabinet side wall and vent wall are tied together at multiple points using multiple interlocking girdle braces, making these some of the sturdiest subwoofer enclosures on the market. A knuckle-rap test will prove this immediately. The Versarray™ 218 Mk III Sub is constructed of premium 13-ply Baltic birch plywood and is finished with a durable acrylic polyurethane textured coating, for a good cosmetic presentation. A 16-gauge powder-coated perforated metal grille covers the front of the system to protect the speakers from external damage. Tilt back 4” wheel casters provide for ease of transport and set-up.

The Versarray™ 218 Mk III Sub incorporates Peavey’s UniVent™ venting system that literally pumps air through the enclosure, exchanging the stale hot air inside the cabinet for the cooler outside air. This helps keep the woofer operating temperatures from getting so high, and increases reliability and reduces power compression under heavy continuous drive conditions. The air pumping action is achieved without excessive turbulence or any significant net asymmetry of total vent air flow. The 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 air flow volumes that the Lo Max® woofer can produce.

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 satellite/top-box bi-amping flexibility while maintaining superior signal integrity. The inclusion of a standard 4-pin Neutrik® jack in parallel allows for daisy chaining to another cabinet. The system comes wired with both woofers in parallel, but they can be accessed separately by removing the input cup and moving a jumper plug. The two woofers can be driven by separate power amp channels through the Neutrik® input jacks.

Despite its compact dimensions for a double 18" bass enclosure, this system generates extremely high sound pressure levels (SPLs) and accepts up to 4,800 watts program of clean amplifier power, resulting in large area coverage with excellent punch and high reliability.

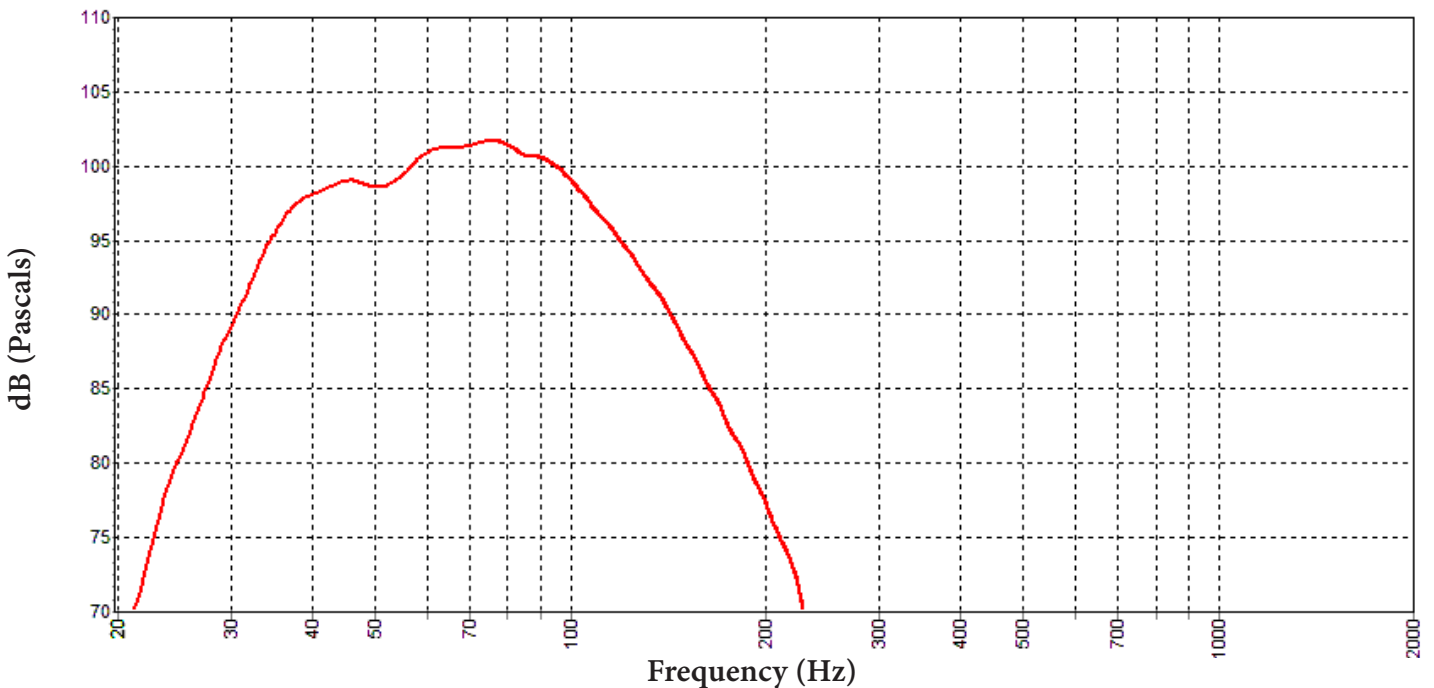
Designed to be used in conjunction with a compatible DSP based loudspeaker signal processor, such as a Peavey® Digitool™, or a NION® series processor, with the Crest Audio® factory settings in use, the Versarray™ 218 Mk III can perform to modern standards of excellence, and handily exceed the competitions audible performance.

An optional special groundstack bracket set mounts to the Versarray™ 218 Mk III Sub, and allows up to three of the Crest Audio® Versarray™ 112 Mk III 's to be mounted on top of the Versarray™ 218 Mk III Sub, and angled upward, for use on stage in a stadium seating situation.

### Features

- Dual Peavey® Lo Max® 18" subwoofers
- 4800 watts of Program Power Rating
- Full power low frequency response down to 34 Hz!
- UniVent™ vented cooling system
- Neutrik® Speakon® professional input connectors, 4- and 8-pin
- Built-In tilt back casters with 4" wheels
- Pairs of heavy-duty steel handles inset on both sides
- 18 mm 13 ply Baltic Birch enclosure with steel inner brackets
- Hammerhead™ polyurea black finish and black powder-coated cloth lined grilles
- Perforated Steel grille for speaker protection

Figure 1 - Frequency Response



## SPECIFICATIONS

## Versarray™ 218 Mk III

Frequency Response, 1 meter  
on-axis, swept-sine (-6 dB):

In anechoic environment: 35 Hz  
– 125 Hz

Half-space environment: 33 Hz  
(When processed according to  
recommended Factory Settings)

Useable Low Frequency Limit, -10  
dB:

In anechoic environment: 33 Hz  
Half-space environment: 30 Hz  
(When processed according to  
recommended Factory Settings)

Power handling:

Woofers paralleled

2,400 W continuous  
4,800 W program  
9,600 W Peak

Woofers driven separately, each

1,200 W continuous (X2)  
2,400 W program (X2)  
4,800 W Peak (X2)

Sound pressure level, 1 watt, 1  
meter:

Woofers paralleled, 2.00 V input  
Anechoic environment: 98  
dB SPL,  
Half-space environment: 104  
dB SPL

Woofers driven separately, 2.83V  
input to each  
Anechoic environment: 101  
dB SPL,  
Half-space environment: 107  
dB SPL

Maximum sound pressure level (1  
meter):

Anechoic environment:  
132 dB SPL continuous  
138 dB SPL peak  
Half-space environment:  
138 dB SPL continuous  
144 dB SPL peak

Transducer complement:

2 x 18 in. vented Peavey® Lo  
Max® 18 woofers

Box tuning frequency:  
36 Hz

Impedance (Z):

Woofers parallel:

Nominal: 4 Ω  
Minimum: 3.3 Ω

Woofers separate access:

Nominal: 8 Ω x 2  
Minimum: 6.6 Ω x 2

Electroacoustic Crossover Point,  
Active Digital Crossover:  
(Applies to Digitool® and NION®/  
MediaMatrix® settings provided by  
Crest Audio®)

Sub – Low Frequency: 125 Hz at  
24dB/octave

Recommended Active Crossover  
Frequency Region and Slope: Sub –  
VR112 Mk: 120 Hz at 24dB/octave LR

Input Connections: 2 x 4-pin  
Neutrik® Speakon® Subwoofer  
inputs in Parallel (default  
connection) or separate feed to  
each woofer via internal header  
repositioning, 1 x 8-pin Neutrik  
Speakon multi-band input, 1 x  
4-pin Neutrik Speakon thru for use  
with the 8-pin connector when  
it is carrying the mids or high  
frequencies into the Sub.

Enclosure Materials & Finish: 18 mm  
13 ply Baltic Birch plywood finished  
in a tough Hammerhead™ polyurea  
black finish, with a perforated steel  
grille finished in black powder coat  
paint and a cloth liner inside.

Mounting provisions: Ground  
Stack kit for attaching up to three  
Versarray™ 112 Mk III cabinets.

Dimensions (H x W x D):  
42.88 in. x 25.56 in. x 26.18 in.  
1089 mm x 649 mm x 665 mm

Net Weight: 183 Lbs. (83.2 kg)  
Packed Weight: 206 Lbs. (93.6 kg)

Companion Speaker Systems (sold  
separately): Crest Audio® Versarray™  
112 Mk III Passive Ribbon Line  
Source Array

Companion Speaker Systems (sold separately): Crest Audio® Versarray™ 112 Mk III Passive Ribbon Line Source Array

### **Optional Accessories:**

Crest Audio® Versarray™ Mk III Ground Stack Kit.

Stacks up to three Audio® Versarray™ 112 Mk III cabinets above a Sub, allowing stage use for stadium seating and arena's.

### **Frequency Response**

This measurement is useful in determining how accurately a given unit reproduces an input signal. The frequency response of the Versarray™ 218 Mk3 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 drivers in the Versarray™ 218 Mk3 Sub combine to give a smooth frequency response on the central axis from 33 Hz to 125 Hz (with processing).

### **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.

### **Mounting**



Caution: This unit is not designed for overhead suspension!

### **Using the Versarray™ 218 Mk3 Sub**

Caution! The Versarray™ 218 Mk3 Sub can have up to three coupled Versarray™ 112 Mk3 line array modules stacked above it, using an optional Ground Stack Kit mounting bracket. When mounting any cabinets above a Versarray™ 218 Mk3 Sub, be sure that the unit is on flat or level ground, and is not tilted by more than 5 degrees. If the ground or stage surface creates more than a 5 degree tilt, then do not mount any cabinets above the Versarray™ 218 Mk3 Sub. The optional Ground Stack Kit mounting bracket is intended to be used with tie-down straps for stability and safety. Further details are provided in the Ground Stack Kit Owner's Manual.

### **Wiring the Versarray 218 Sub**

The system comes wired with both woofers in parallel and accessible through the Neutrik® pins 1+ and 1-, but they can be accessed separately by removing the input cup and moving a jumper plug, then the two woofers can be driven by separate power amp channels through the Neutrik input jacks, with the top woofer accessible through Neutrik pins 1+ and 1-, and the bottom woofer through pins 2+ and 2-.



**Caution!** Never drive only one woofer in a Versarray 218 Sub, this will severely compromise power handling and performance, resulting in boomy and ill-defined bass!

### **Speaker Cables**

For best results, do not daisy-chain the speaker cable runs, or use small speaker cables to power the Versarray™ 218 Mk3 Sub, run a single dedicated speaker cable to each Versarray™ 218 Mk3 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™ 218 Mk3 Sub. If the speaker cable run is longer than 50 feet, we recommend locating the power amp nearer the Versarray 218 Sub, and running a line level signal out to the power amp.

## Using Multiple Versarray™ 112 Mk3's mounted over a Versarray™ 218 Mk3 Sub

The rigging hardware on the Versarray™ 218 Mk3 Sub allows up to 3 coupled Versarray™ 112 Mk3 units mounted over the top of a Versarray™ 218 Mk3 Sub with the use of an optional Ground Stack Kit mounting bracket set. Do not mount more than 3 cabinets above a Versarray™ 218 Mk3 Sub using the Ground Stack Kit mounting bracket set. Full instructions for connecting and adjusting the Versarray™ 112 Mk3 cabinets that mount above the Versarray™ 218 Mk3 Sub will be provided in the Ground Stack Kit Owner's Manual.

### Crossover Settings

A number of suitable crossover options are available from Crest Audio®, the Digitool™ Live, MX16 or MX32, as well as the NION® series. 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.

### Processor Settings

Versarray™ 218 Mk 3 Sub Processor Settings

### Specific Settings for a Digitool® Live (or MX16 or MX32)

#### Infrasonic Filtering:

Input Channel = HP12, 29 Hz, BW= 1.9

Output Channel = VR 218 Mk 3 High Pass crossover, Linkwitz-Riley 24 dB/oct. @ 23 Hz

#### Crossover settings:

#### VR218 Mk3 Subwoofer Crossover (to VR112 Mk3):

Sub= 24 dB/oct. Low Pass Linkwitz-Riley 24 dB/oct. @ 120 Hz, Sub Polarity Normal

Sub EQ (in output channel):

PEQ +4.5 dB @ 38 Hz, BW= 0.70

PEQ -3.0 dB @ 55 Hz, BW= 0.50

PEQ -2.5 dB @ 66 Hz, BW= 0.50

PEQ -8.5 dB @ 260 Hz, BW= 0.70

#### Use of Speaker Processors Other than the Digitool®, NION®, or MediaMatrix®

If using other brands of speaker processors, it is up to the user to verify that the settings used match the settings of the provided parameters as manifest in the recommended models of Processors.

For the Infra-sonic input filtering, instead of a Butterworth 12 dB/octave high pass filter set to 29 Hz and a Linkwitz-Riley 24 dB/octave high pass filter set to 23 Hz, a single Linkwitz-Riley 36 dB/octave high pass filter set to 33 Hz can be used instead.

The other crossover and EQ settings should cross to most other speaker processors without any trouble, and we provide a BW to Q chart for your convenience.

### Processor Setting Parameters

For processor's that use the parameter "Q" in octaves instead of bandwidth, here is a chart to convert from BW to Q. NOTE: Q is not as well defined as bandwidth, so some processors may have Q settings that do not exactly correspond to the chart conversions, they may need to be set to one click higher or lower on the device provided Q range than the chart indicates.

## Bandwidth (BW) to Q Chart

BW	Q .
0.30	4.80
0.36	4.00
0.40	3.60
0.46	3.20
0.50	2.87
0.60	2.39
0.70	2.04
0.85	1.67
1.10	1.28

### **Versarray™ 218 Mk3 Sub is factory default set to 4 ohm mode (woofers paralleled).**

The Versarray™ 218 Mk3 Sub woofers can be driven separately, one channel each to a separate woofer. Due to the very high back EMF of the Lo Max® woofer, driving each woofer independently can often provide more punch and slam than driving the woofers in parallel from one channel, and avoids the halving of the damping factor when a power amp is bridged. Separate cables to each woofer must be run for this technique to be effective.

### **Limiters**

(DO NOT DEPEND ON THE LIMITER ALONE to prevent damage!)

Sensible output levels and amounts of boost should be kept in mind.

### **DIGITOOL® Series Limiter Settings**

Input Gain Block= 18 dBu

Output Gain Block= 24 dBu

Power Amp Gain set to 40X (32 dB)

Versarray™ 218: Threshold: - 17.0 dB

Ratio: 20:1

Attack: 100 mS

Release: 500 mS

Input Limiter: Threshold: - 2 dB

Ratio: 20:1

Attack: 50 mS

Release: 500 mS

**Note:** The Digitool® Live references the limiter settings to 0 dBFS, or the maximum digital output levels of the system.

The settings above provided for the Digitool® Live will also work for the Digitool® MX16 and MX32. Settings for the NION® series can be found at the Crest web site.

### **AUX fed Subs**

When using AUX fed Subs, or boosting the level of the normally crossed over Subs more than 4-6 dB above a truly flat level, the low pass crossover point needs to be adjusted down. For the Regular Processor Settings, this would mean crossing the Subs over at 100 Hz instead of 120 Hz, using a 24 dB/oct. LR crossover. If running the Subs at 10 dB or more above a truly flat level (not uncommon for concert or DJ venues), the low pass crossover point of the Subs needs to be adjusted down to 90 Hz, and some EQ pull-back may be required around 200 –250 Hz.



### **Versarray™ Driver Components Maximum Input Voltages**

Versarray™ 218 Mk3 Subwoofer: 89 VRMS continuous, 178 VRMS peak or momentary (with proper infrasonic and low pass filters engaged)

We strongly recommend that a power amp be used with a peak voltage rating that is not substantially higher than the peak voltage rating of the driver it is connected to. There will be no further significant increase in SPL, and a much higher chance that an accident or mistake will damage the speaker system.

### **CREST Power Amp Peak Output Voltages**

Pro-LITE® 7.5 Maximum RMS Voltage Output – 124 volts

Pro-LITE® 5.0 Maximum RMS Voltage Output – 105 volts

### **Older models**

### **CREST Power Amp Peak Output Voltages**

Pro 9200 Maximum RMS Voltage Output – 113 volts

Pro 8200 Maximum RMS Voltage Output – 90 volts

### **Recommended Crest Audio® Power Amps for Use with the Versarray™ 218 Mk3 Subwoofer:**

Pro-LITE® 7.5 (One channel driving each woofer in the enclosure separately.)


Pro 9200 (One channel driving each woofer in the enclosure separately.)

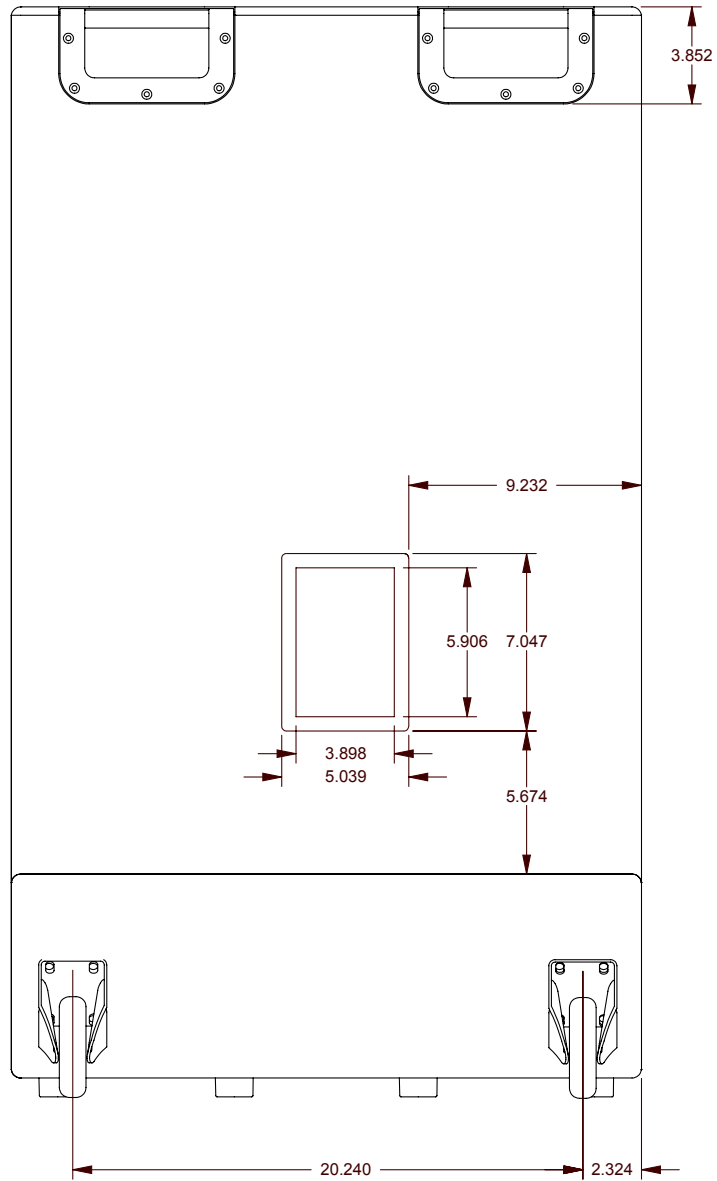
### **Architectural and Engineering Specifications**

The loudspeaker system shall have an unprocessed operating bandwidth of 41 Hz to 750 Hz, measured on axis at 1 meter in a half-space environment, with +/- 3 dB tolerance. The nominal output level shall be 98 dB when measured at a distance of one meter with an input of one watt. The nominal impedance shall be 4 ohms when both woofers are wired in parallel, and two times 8 ohms when wired for separate powering.

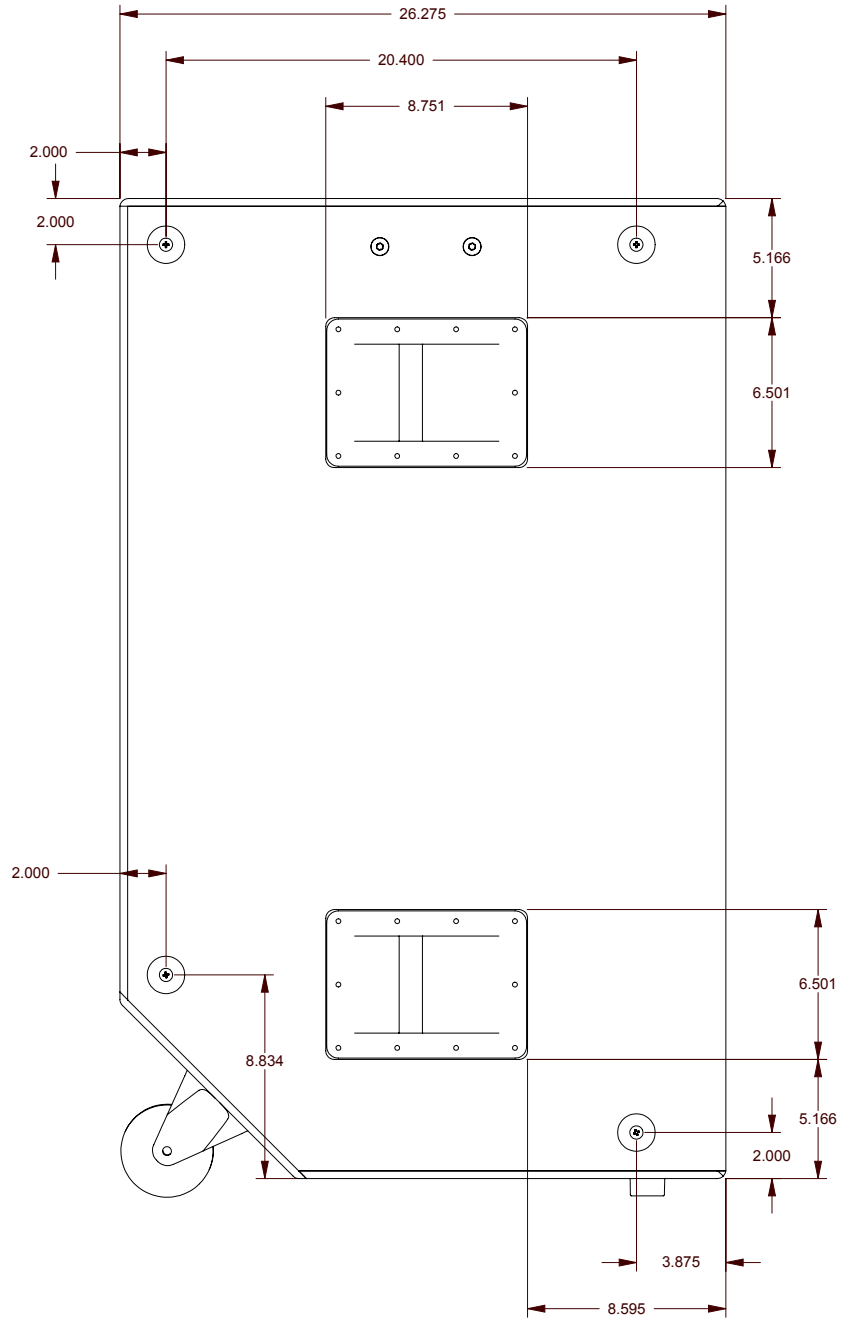
The woofers loaded into the cabinet shall be two Peavey® Lo Max® 18” 8 ohm woofers.

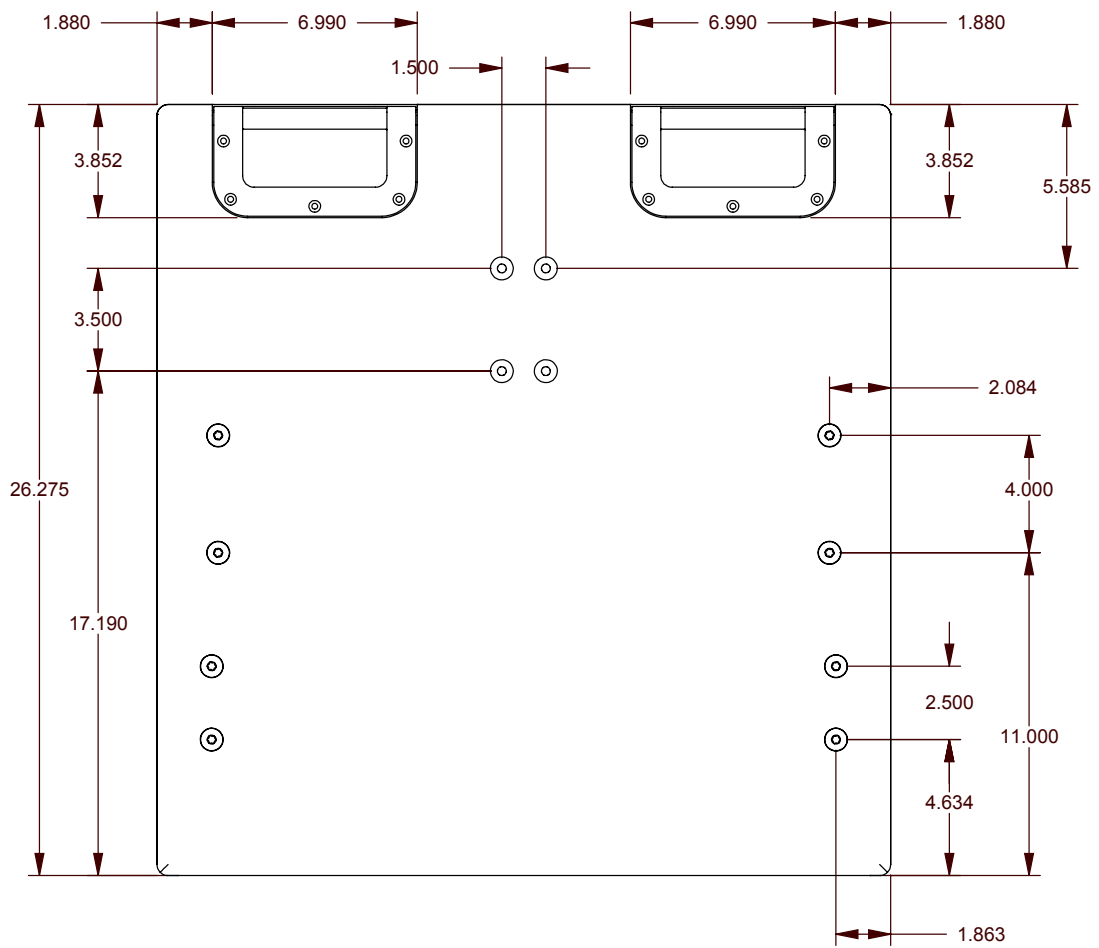
The enclosure vents shall incorporate the Univent™ air pumping system to aid cool air circulation through the cabinet. The maximum continuous power handling for a single cabinet shall be 2,400 watts, maximum program power of 4,800 watts and a peak power input of at least 9,600 watts, with a minimum amplifier headroom of 3 dB. The cabinet shall have two 4” diameter fixed caster wheels on the rear bottom corner for tilt back rolling transport on flat level surfaces. The outside dimensions shall be 42.88 inches high by 25.56 inches wide by 26.18 inches deep. The weight shall be 183 pounds. The loudspeaker system shall be a Crest Audio® model Versarray™ 218 Mk3 Sub.

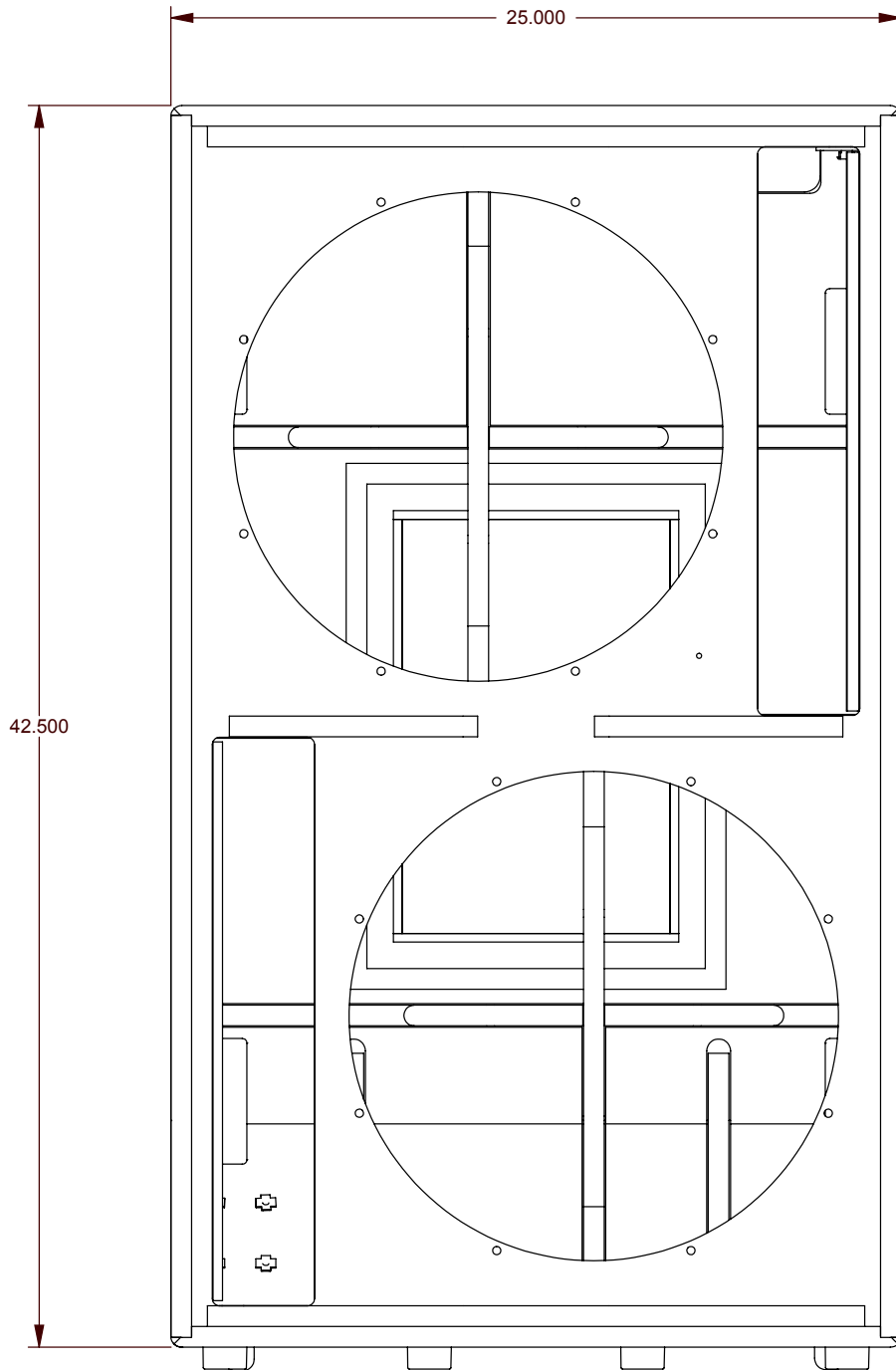
**WARNING!** The Crest Audio® Versarray™ 218 Mk III Sub is extremely efficient and handles a lot of power! This  sound system can permanently damage hearing! Use extreme care setting the overall maximum loudness! Due to the clear, clean sound output of the Crest Audio® Versarray™ 218 Mk III Sub and the lack of distortion or obvious distress, the sound level seems much lower than it actually is. This system is capable of SPL's in excess of 140 dB at 1 meter from the speaker!













[www.peaveycommercialaudio.com](http://www.peaveycommercialaudio.com)

Warranty registration and information for U.S. customers available online at  
[www.peaveycommercialaudio.com/warranty](http://www.peaveycommercialaudio.com/warranty)  
or use the QR tag below



Features and specifications subject to change without notice.

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Logo referenced in Directive 2002/96/EC Annex IV  
(OJL317/08, 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