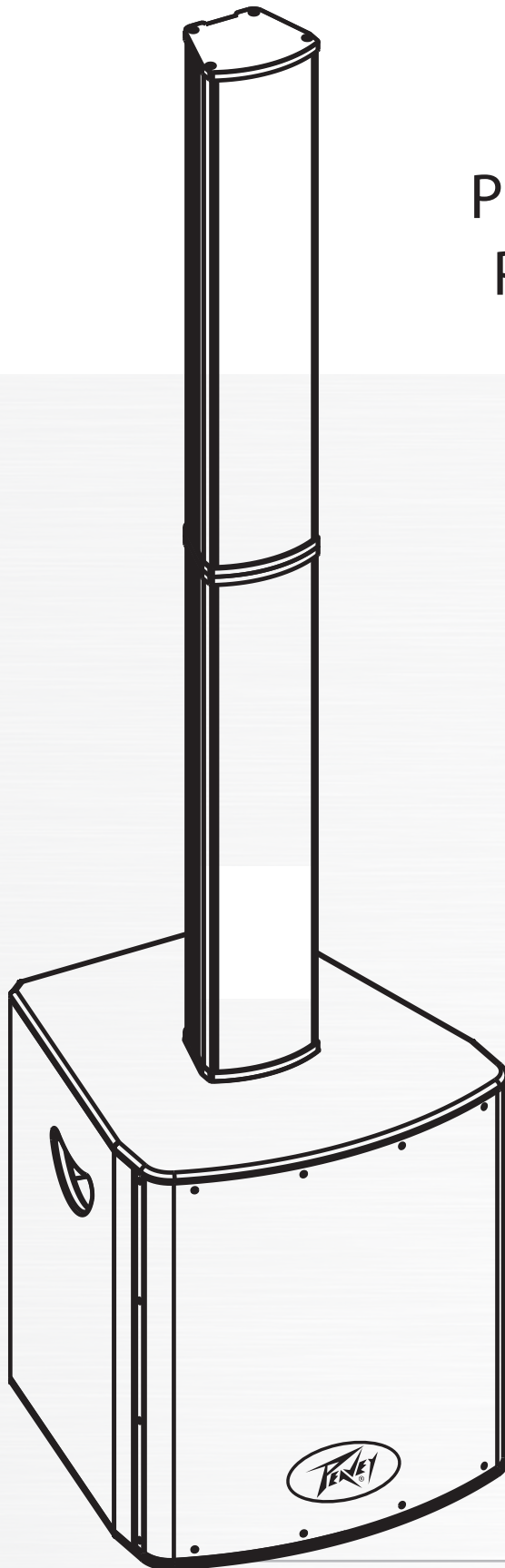




# P<sup>2</sup>® VERTICAL ARRAY POWERED SPEAKER SYSTEM

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Operating  
Manual





### FCC/ICES Compliancy Statement

This device complies with Part 15 of the FCC rules and Industry Canada license-exempt RSS Standard(s). Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

**Warning:** Changes or modifications to the equipment not approved by Peavey Electronics Corp. can void the user's authority to use the equipment.

**Note –** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **Caution**

The equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.



Features and specifications are subject to change without notice.

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P<sup>2</sup><sup>™</sup>

Vertical Array Powered Speaker System

Congratulations on purchasing the Peavey P<sup>2</sup> Vertical Array Powered Speaker System. This compact and powerful system is a perfect solution for the weekend warrior, singer songwriter or DJ.

## FEATURES:

- Compact and portable design, with clear, powerful sound.
- 12" Powered Subwoofer
- Eight 3 1/2" drivers internally crossed over.
- 3 Channel input mixer with independent level control per channel.
- Channel 1 XLR/1/4" combi with mic/line pad switch.
- Channel 2 L/R 1/4" input
- Channel 3 L/R RCA Stereo inputs.
- Master Signal/Clip LED Indicator
- DSP voicing controls
- XLR line level out for linking systems

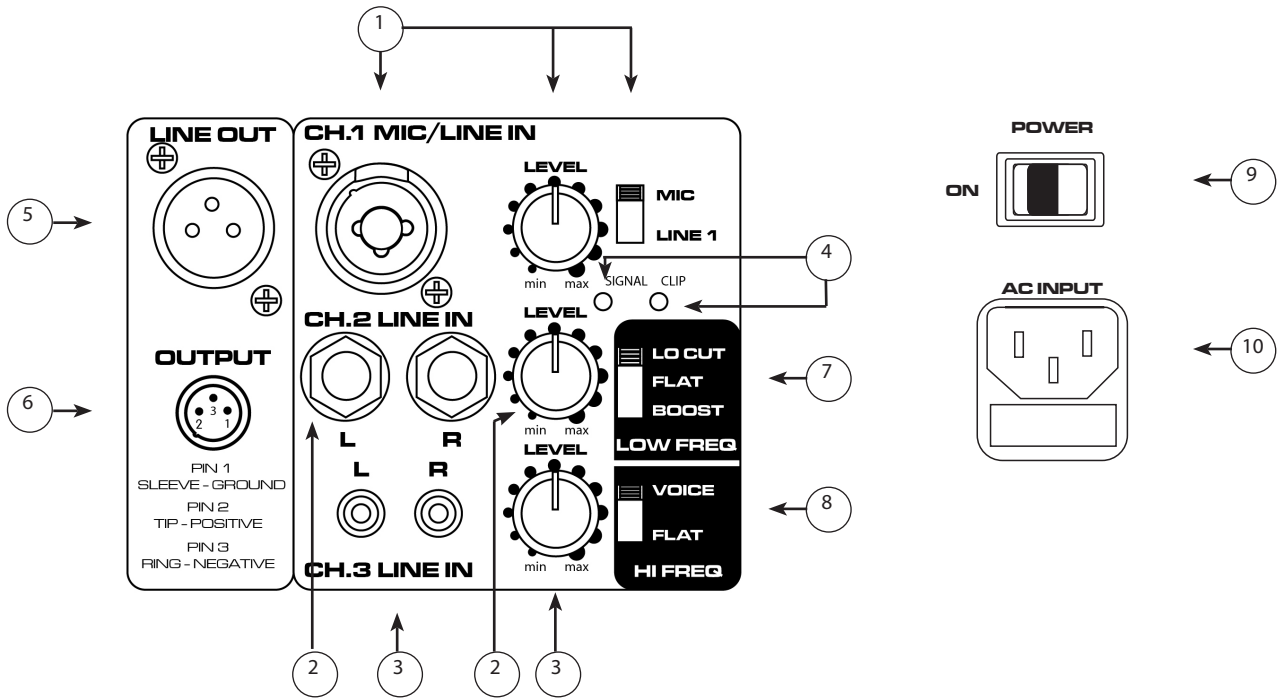
## Description:


The compact and portable Peavey P<sup>2</sup> Vertical Array Powered Speaker System, produces powerful and clear audio, thanks to its 12" powered Sub and eight 3 1/2" drivers. The P<sup>2</sup> is equipped with a 3 Channel input mixer with independent level control per channel, Master Signal/Clip LED indicators, DSP voicing controls, and an XLR line level out for linking the P<sup>2</sup> to other systems.



Installation Note:

This unit must have the following clearances from any combustible surface: top: 8", sides: 12", back: 12"



- 1 **CHANNEL 1 INPUT:** XLR combi 1/4" input with mic/line pad switch.  
**LEVEL:** controls the gain level of Channel 1.  
**INPUT SELECT:** allows user to select between MIC or LINE INPUT for Channel 1.
- 2 **CHANNEL 2 INPUT:** features 1/4" stereo inputs.  
**LEVEL:** controls the gain of Channel 2.
- 3 **CHANNEL 3 INPUT:** Channel 3 features stereo RCA inputs.  
**LEVEL:** controls the gain of Channel 3.
- 4 **MASTER SIG/CLIP LEDs:** these LEDs indicate whether or not a signal is present (SIG shines red), and if the signal is clipping (Clip flashes red).
- 5 **LINE OUT:** non-powered XLR line level out for linking systems together.
- 6 **OUTPUT:** Connect your recording device to the output. This output is independent of master volume level for optimized recording level.
- 7 **LOW FREQUENCY SHAPE SWITCH:** This three way switch allows shaping of the low frequencies by either boosting, leveling or cutting the low frequency response.
- 8 **HIGH FREQUENCY SHAPE SWITCH:** This two way switch allows shaping of the high frequencies.
- 9 **POWER SWITCH:** To turn ON / OFF the P<sup>2</sup> Vertical Array Speaker System. 

**10 AC INPUT/ Fuse In IEC Jack: 100V-240V~50Hz/60Hz**

Connect to main power (100~240V AC) with the included power chord. It is built-in with one electrical fuse. If damaged, please replace the fuse with the same specification.

**Fuse In IEC Jack**

To replace the fuse, be sure to remove the IEC power cord from the IEC socket. The fuse holder tray is located beneath the IEC socket cavity. Pry the fuse holder tray out with a small flat blade screwdriver placed under the center of the top edge of the fuse tray, and gently lever the fuse tray out. The fuse is held in a clip in the fuse tray, and should be removed and replaced with a fresh 5 X 20mm 250V type fuse of the appropriate current rating. A spare fuse should be located in a hollow compartment in the fuse tray, below and behind the clip, this would be the one that is NOT clipped into the fuse tray clips.

Then, once the fresh fuse has been put in place, re-insert the fuse tray into the IEC connector assembly, and make sure it is fully seated and flush with the outside of the IEC connector assembly.

It is recommended that to assure future convenience of having a spare, that a spare fuse be obtained and placed in the hollow compartment at the earliest convenient time.

## Cautions

### Cautions

The unit must be disconnected from the AC power source before any work is done on it. Refer all servicing to qualified service personnel.

The back plate can become hot to the touch. Do not block or cover the fan or the exhaust louvers from ventilation. There must be a minimum of 4" of space behind the fan. Do not allow the airflow to become blocked by objects such as curtains or drapes, thermal building insulation, etc. It is recommended that the rear of the P2™ not be placed in a closed space or a space that has no fresh, cool airflow.

Be sure to keep the microphone away from the front of the speaker after connecting it to the input, and while setting the microphone level, or very loud feedback will occur! Damage to the system is likely if this occurs!

DO NOT connect the inputs of the P2™ to the output of a power amplifier. The inputs are meant to be driven from a line-level strength signal.

DO NOT remove the protective metal grille.

**WARNING!** The P2™ is very efficient and powerful! This sound system can permanently damage hearing! Use extreme care setting the overall maximum loudness!

The apparent sound level of the P2 can be deceiving due to its clear, clean sound output. The lack of distortion or obvious distress can make the sound level seem much lower than it actually is. This system is capable of SPL in excess of 122 dB at 1 M from the speaker!

**WARNING!** Due to the nature of the plug in connections of the array speakers to the Sub, please be careful to always place the P2 on a flat surface (no more than 5° angle).

## P2™ System Connection

### *Connecting AC Power To The P<sup>2</sup>*

The P<sup>2</sup> comes with an 6-foot IEC connection AC power cord. If you are using an extension cord or power strip with this powered speaker, make sure it is of good quality and of a sufficient current capacity to maintain safety and maximize the power output capability of the P<sup>2</sup>. For maximum undistorted output, do not connect any other device to the same extension cord that the P<sup>2</sup> is connected to. Do not exceed the rated current capacity of the extension cord with the sum total of all units connected to it.

When first plugging in the AC cord, make sure the power switch is in the Off position, and then turn it On only once the power cord has been connected.

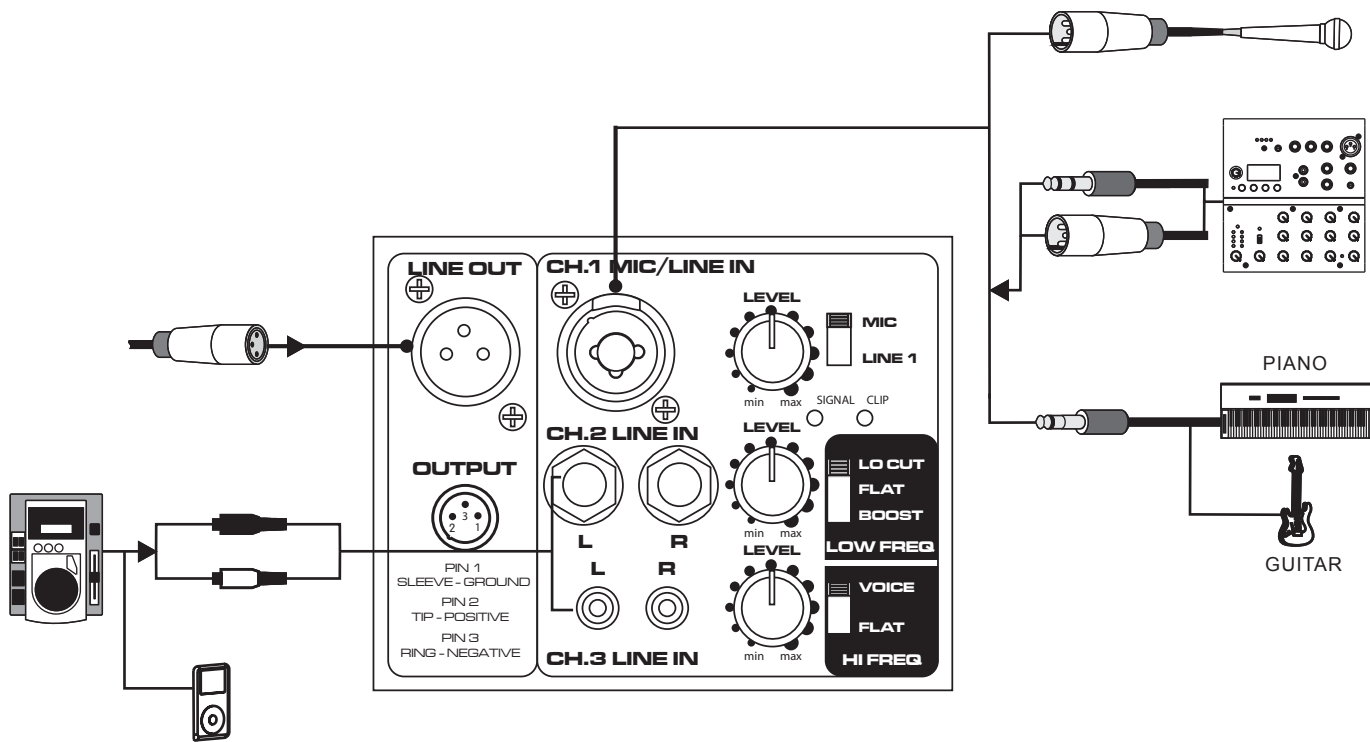
Power on sequence:

1. Minimize the output level of mixer (or other audio source).
2. Turn on the audio source devices, such as CD players, mixers, instruments.
3. Turn on the P<sup>2</sup>. After that, the output level can be increased step by step.

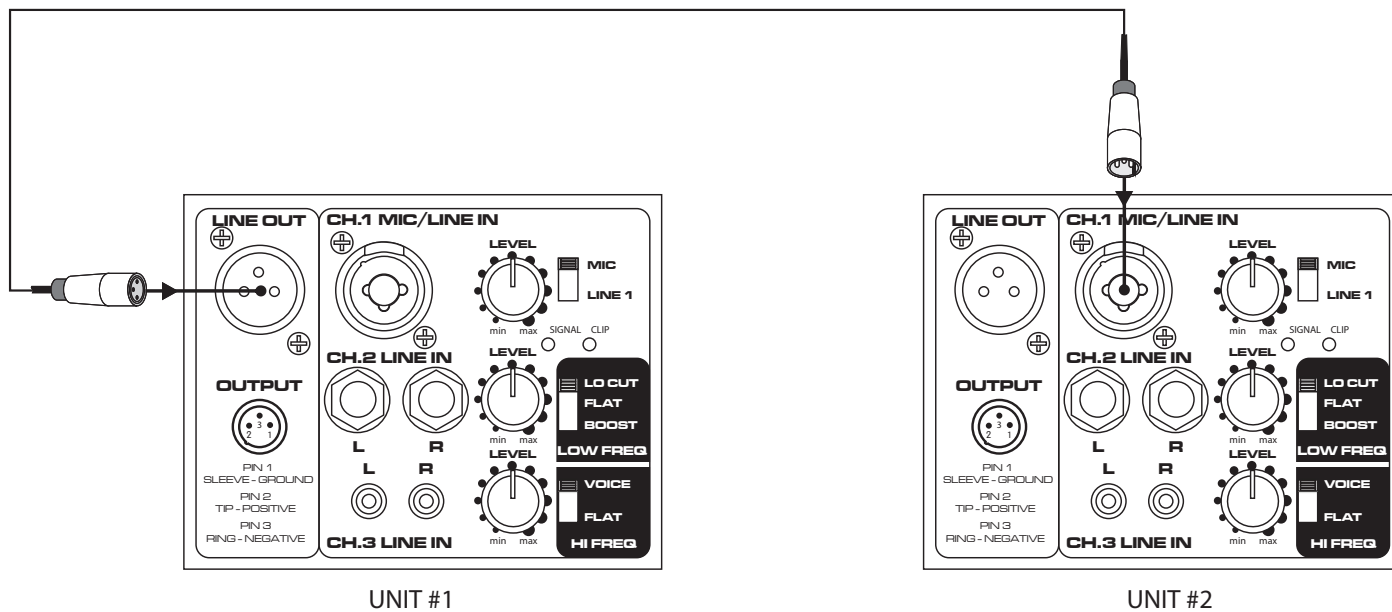
Power off sequence:

1. Turn off the P<sup>2</sup>.
2. Turn off all the audio source devices.

# P2™ Input Connection



Connecting multiple units together.



### ***Connecting a Signal to the P<sup>2</sup>***

There are a variety of ways to input a signal to the P<sup>2</sup>.

The inputs provide either a balanced mic- or line-level input, allowing the use of a 1/4" TRS (ring-tip-sleeve) type phone plug, a male XLR plug, 1/4" stereo\* jacks (channel 2), or RCA connectors (channel 3).

Do not connect cables to the jacks while the unit is ON and the Level knob is turned up! While a standard single-ended 1/4" phone plug-equipped cable will work well and the balanced input circuitry will provide some interference rejection, a balanced cable using either the balanced TRS 1/4" phone plug or the XLR plug will provide superior interference rejection and performance.

Sometimes, with difficult interference problems, it will be helpful to lift the shield ground ( Pin #1 of an XLR) of a balanced cable at the P<sup>2</sup> end. Check any input changes carefully, always turning the Level control down before plugging and unplugging cables.

Use of high quality, premium cables is recommended for the P<sup>2</sup>, as these usually have better shielding and materials and will provide greater long-term reliability. The best option is a shielded balanced cable no longer than necessary to reach the P<sup>2</sup>. It is usually a good idea to leave some slack at the input to the P<sup>2</sup> and also to tape the cables down or run them under a cable guard to avoid anyone tripping over them or pulling the P<sup>2</sup> over when stand mounted.

### ***Level Control Adjustment***

The P<sup>2</sup> is equipped with Level controls on the input to facilitate use in many different applications. With the Level control adjusted fully clockwise, gain is at maximum and the input sensitivity is 1.0 V RMS for full-rated output with the line level position of the Mic/Line switch. When driving the P<sup>2</sup> from an external mixer, it may be advantageous to reduce the input sensitivity by turning the Level control to the halfway point. The P<sup>2</sup> will now more closely match a typical power amp.

If the mixing board indicates clipping of its output signals, then all of the P<sup>2</sup> power capability is not being utilized cleanly. Clipping the signal before it gets to the P<sup>2</sup> is not optimal. Reduce the mixer output level and turn up the Level control/s on the P<sup>2</sup>.

When first turning on the sound system, switch on all upstream electronics first, then the P<sup>2</sup> with its Level control fully counterclockwise (all the way down). Begin checking levels with the mixer output level controls all the way down, and bring them up slowly with the P<sup>2</sup> Level control/s set to the desired setting (one-third way up recommended to start).

It is not good practice to turn the Level control/s on the P<sup>2</sup> all the way up and then try to control level only from the mixer, this approach would tend to pick up excess noise. Best practice would be to run a "hot" signal from the mixer down the cable to the P<sup>2</sup>, and then turn the P<sup>2</sup> Level control up only as much as necessary to reach full desired output. With this approach, it is necessary to verify the mixer output is not clipping.

### ***Disconnecting AC Power to the P<sup>2</sup>***

We recommend that the Power switch (9) be used to turn the unit off first, and then the AC power cord can be removed, this minimizes stress to the power amplifiers and the transducers from turn-off transients. The power switch has an arc suppression capacitor to help during turn-off, and tends to make a clean disconnect from the AC power, while the power cord IEC connector can make intermittent contact before finally becoming fully disconnected, e.g., as when wiggling the cord.



### ***No Output at All***

First, make sure the unit has AC power and is turned ON. Make sure the LCD on the power amp module is illuminated.

If not, make certain the ON/OFF switch (9) is in the ON position and check the IEC power cord connection (10) by ensuring it is fully engaged and seated. Make certain the AC line cord is plugged into a working AC outlet. Finally, check the fuse (10). (See **Fuse In IEC Jack** section, for safety instructions.)

Once assured your unit is getting AC power, check that the P<sup>2</sup> is getting a signal. Temporarily disconnect the cable running to its inputs and connect it to some other device capable of reproducing the signal (i.e., a power amp and speaker). If this produces a signal, make sure that all Level controls being used have been turned up to a satisfactory level (one-third to halfway).

If the P<sup>2</sup> has been subjected to direct sunlight or excessive heat, the built-in thermal protection may have been triggered. If so, turn off the P<sup>2</sup> and let it cool for a sufficient amount of time.

If there is still no output, contact your authorized Peavey dealer or the Peavey International Service Center.

### ***Hum or Buzz***

If the P<sup>2</sup> is producing a hum or buzz, this can be AC outlet related. Try plugging the P<sup>2</sup> into a different AC outlet. Sometimes, if a different circuit (breaker) is used for the mixer and for the P<sup>2</sup>, it can cause hum problems. Unless it is not practical, it is best to use the same wall outlet (breaker) to supply power to both the mixer and the powered speaker.

Ensure that shielded cables have been used to route the signal to the P<sup>2</sup> input. If speaker cables with 1/4" plugs are used as input cables instead of shielded cables, they will be prone to hum or buzz.

Hum may be ground loop related. It may be helpful to lift the shield ground (Pin #1) on a balanced cable at the P<sup>2</sup> end. Check any input changes carefully by first turning down the Level control, before plugging and unplugging cables, or lifting the shield ground at the speaker end.

Check to make sure light dimmers are not on the same circuit as the P<sup>2</sup>, the mixer or any source devices. If light dimmers are used, then it may be necessary to turn them full ON or full OFF to eliminate or reduce hum. This is a typical AC wiring/light dimmer interference problem, not a design flaw of the P<sup>2</sup>.

The third wire (ground plug) on the AC plug should NEVER be removed or broken off, as this is a potential safety hazard.

### ***Distorted or Fuzzy Sound***

First, ensure the mixer (signal source) is not clipping or being overdriven. Make sure the Level control on the P<sup>2</sup> has not been set too low. Check that the input plug is fully seated in the input jack on the rear panel of the P<sup>2</sup>. Ensure that a power amp has not been plugged into the input jack of the P<sup>2</sup>. If an extension cord is being used to provide the AC power to the unit, insure that it is of sufficient current capacity and that it is not also being used to supply power to any other device.

The P<sup>2</sup> has built-in frequency shaping to smooth and extend the natural response of the speakers. If excessive additional bass boost or HF boost have been added externally to the P<sup>2</sup>, it could cause premature overload at

high SPL. Reduce the amount of any external (mixer, rack) EQ and see if that clears up the distortion.

### ***Care and Maintenance***

Your P<sup>2</sup> is a sturdy and durable product and will provide years of reliable use if properly cared for. Use common sense and read the safety warnings to avoid hazardous operating conditions.

The unit must be disconnected from the AC power source before any work is done on it. Refer all servicing to qualified service personnel.

### ***Sunlight/Heat***

Avoid prolonged exposure to direct sunlight, as this may cause the unit to overheat and thermally shut off.

Excessively hot operating conditions can also cause a thermal shutdown.

Do not store in extremely hot or cold conditions or extremely high humidity. Always allow unit to come to room temperature before use.

### ***Cleaning***

Never clean the P<sup>2</sup> while plugged in or turned ON! When the unit has been fully disconnected from AC power sources, use a dry cloth to remove soil or other dirt. Never use strong solvents on the P<sup>2</sup>, as they could damage the cabinet. Do not allow ANY fluids to drip inside the P<sup>2</sup>.

## P<sup>2</sup>™ Specifications

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Power Supply:	100-240VAC~ 50/60Hz
Power Consumption:	230W
Dimensions:	WxDxH: 17.25"x 18.9" x 68" (438.15mm x 481mm x 1727mm)
Net Weight:	76 lbs (34.5 kg)
Sub Weight:	57.1 lbs (25.9 kg)
Satellite Weight (x 2):	18.5 lbs (8.4 kg)
Power Output:	Woofer:130 watts peak available power, 65 watts Cont. into 8 Ohms ( THD 1 % ) Tweeter:120watts peak available power, 60 watts Cont. into 8 Ohms ( THD 1 % )
Frequency Response:	56 Hz ~ 20K Hz ( +/- 10 dB )
Crossover Frequency:	Sub to pole: 150Hz Top module to bottom module: 2 kHz
Max SPL:	122dB
Input Sensitivity:	MIC:30mV +/-5mV LINE:1V +/-0.1V
Dispersion:	50 degrees Horizontal by 35 degrees Vertical
Nominal Impedance:	8 Ohms
S. P. L.:	93dB ±3dB (1w/1m)
Woofer:	12 inch X1
Tweeters:	3 1/2 inch X8



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

Warranty registration and information for U.S. customers available online at  
[www.peavey.com/warranty](http://www.peavey.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  
(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