



# PVXp™ 15 DSP

## 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.



# ENGLISH

## Introduction

Thank you for purchasing the powered Peavey PVXp™ 15 DSP powered speaker system. The PVXp™ 15 DSP features a reliable bi-amped power section that provides a total of 830 Watts of peak available dynamic power. With that much available power, speaker protection is critical. Advanced digital signal compression prevents audible overload, protecting the speakers from harmful distortion at high output levels. This powered enclosure also includes heavy duty speaker drivers; it features a 15" woofer with a 2-3/8" voice coil and a 50 oz. magnet, this is coupled with the RX14 compression driver that includes a 1.4" titanium diaphragm on a 100-degree horizontal x 50 degree vertical pattern asymmetrical horn.

The PVXp™ 15 DSP provides a balanced input via a combination jack that accepts a balanced TRS 1/4" input, as well as a balanced XLR input and summed RCA jacks. There are two balanced Thru outputs, a male XLR and a 1/4" TRS. The LCD display and EQ presets, along with other operating parameters are accessed via a one-knob selector.

## Features

- \* Two-way bi-amplified analog amp powered speaker system
- \* 15" heavy-duty woofer with a 2-3/8" voice coil & 50 oz. magnet
- \* RX™ 14 compression driver, with 1.4 inch titanium diaphragm
- \* 630 watts peak dynamic woofer power, 200 watts peak dynamic tweeter power
- \* DSP processing is 64 bit double-precision
- \* DSP I/O is at 48 kHz and 24 bits, with low-jitter, professional grade components
- \* Fan cooled for maximum reliability
- \* Patented Quadratic Throat Waveguide™ technology, 100 by 50 degree coverage
- \* Asymmetrical horn aims the sound down 10 degrees, at the audience, not over their heads.
- \* Input is via a combo female XLR and 1/4" TRS phone jack with balanced input
- \* A Mic/Line switch provides for two different gain settings
- \* Thru output is via a male XLR jack and 1/4" TRS phone jack
- \* Multiple Factory Preset EQ settings
- \* Rugged plastic injection-molded trapezoidal enclosure
- \* Full-coverage perforated steel grille, with powder coat finish
- \* Pole mount molded-in for 1 3/8" diameter poles
- \* Top, bottom and right side flying point inserts

## Description

The PVXp™ 15 DSP is a two-way sound reinforcement system based on a heavy-duty Pro 15" woofer and a RX14 titanium diaphragm dynamic compression driver mounted on a 100 by 50 degree coverage Quadratic Throat Waveguide™. Its sleek, modern appearance, coupled with excellent performance, offer an outstanding package. The lightweight-yet-rugged injection-molded plastic enclosure with molded-in stand mount cup facilitates portable use for live music or P.A. sound. The trapezoidal cabinet has three handles for ease of portability, and an extra 45-degree angled section on the right side to allow use as a floor monitor. Five sets of flying/mounting points, two on the top, two on the bottom, and one on the side, with a total of 16 cabinet inserts, provide for the ultimate in installation flexibility. A black, powder-coated, perforated steel grille provides driver protection and a professional appearance.

The heavy-duty 15" woofer has a 2-3/8" voice coil diameter, and a 50 oz. magnet for 200 watts continuous worth of chest-pounding bass. The RX14 compression driver tweeter is coupled to a Quadratic Throat constant directivity waveguide, covered under US patent #6,059,069, with smooth, even response, low distortion and good high frequency dispersion.

This horn has an asymmetrical vertical polar response, aiming the main energy lobe down 10 degrees, so it is directed at the audience instead of over their heads. The vertical polar pattern is +15 degrees, -35 degrees. This helps reduce ceiling reflections for greater clarity and gain before feedback.

Advanced Digital Signal Processing (A.D.S.P.) provides the crossover function, driver limiting, as well as the driver EQ to enable the speaker system to provide an accurate and neutral sound for any type of music. The DSP processing uses 64 bit double-precision to ensure accurate and transparent sound processing, and the input/output sections use a 48 kHz sampling rate at 24 bits for maximum fidelity. Low-jitter clocking and professional grade components insure the sound quality is superb.

An extremely flexible system of EQ presets and adjustments is implemented in the speaker system's DSP computing core, and accessible via the rotary push-to-select knob and the LCD display.

The PVXp™ 15 DSP speaker system power amplifiers providing the bi-amplification are low-distortion ultra-reliable fan-cooled units providing a total of 830 peak available dynamic power for the system.

There is 630W peak available dynamic power for the woofer, and 200W peak available dynamic power for the tweeter. The power supply for both amps is a switch-mode type, that provides reliability coupled with low cost. Both amplifiers feature sophisticated signal compression, which virtually eliminates audible power amplifier clipping. Cooling is provided via a low-noise fan, for reliable operation under any conditions.

Input is via a combo female XLR and 1/4" TRS phone jack with balanced input to the DSP preamp/EQ electronics, and a Level control. A Mic/Line switch allows for use of a microphone via the extra gain available when in the "Mic" position.

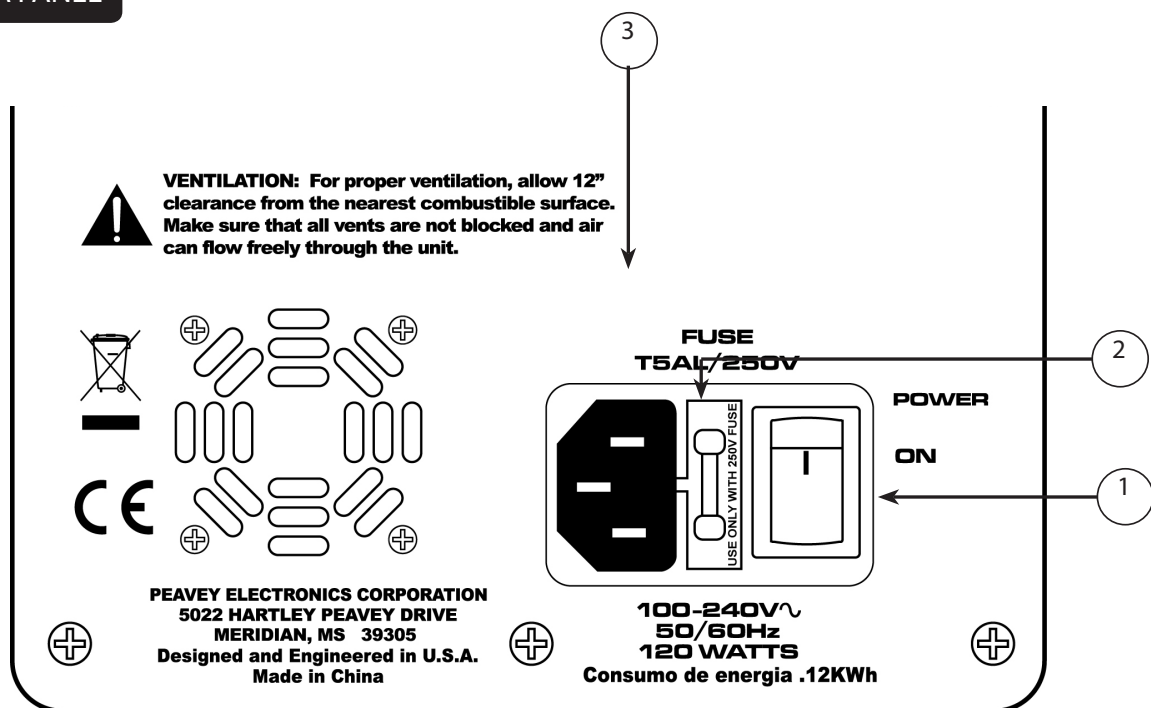
The included thru output consists of a male XLR jack and paralleled 1/4" jack. This output allows linking of additional speaker systems, or feed the signal to a powered subwoofer, etc.

#### Applications

The Peavey PVXp™ 15 DSP has a variety of applications such as sound reinforcement, public address, side fill system, karaoke or musical playback.

A typical signal source for the line-level inputs of the Peavey PVXp™ 15 DSP would be a sound reinforcement mixing console (mixer) or the output from a CD player, MP3 player or tape deck. A dynamic microphone can be connected directly via the XLR input and used when the Mic/Line switch is placed into the "Mic" position as well.

## LOWER REAR PANEL



### ON-OFF SWITCH (1)

This rocker switch supplies AC power to the PVXp™ 15 DSP when switched to the ON position. The ON position is with the top of the switch pushed “in” or nearly flush with the rear panel.

### FUSE (2)

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.

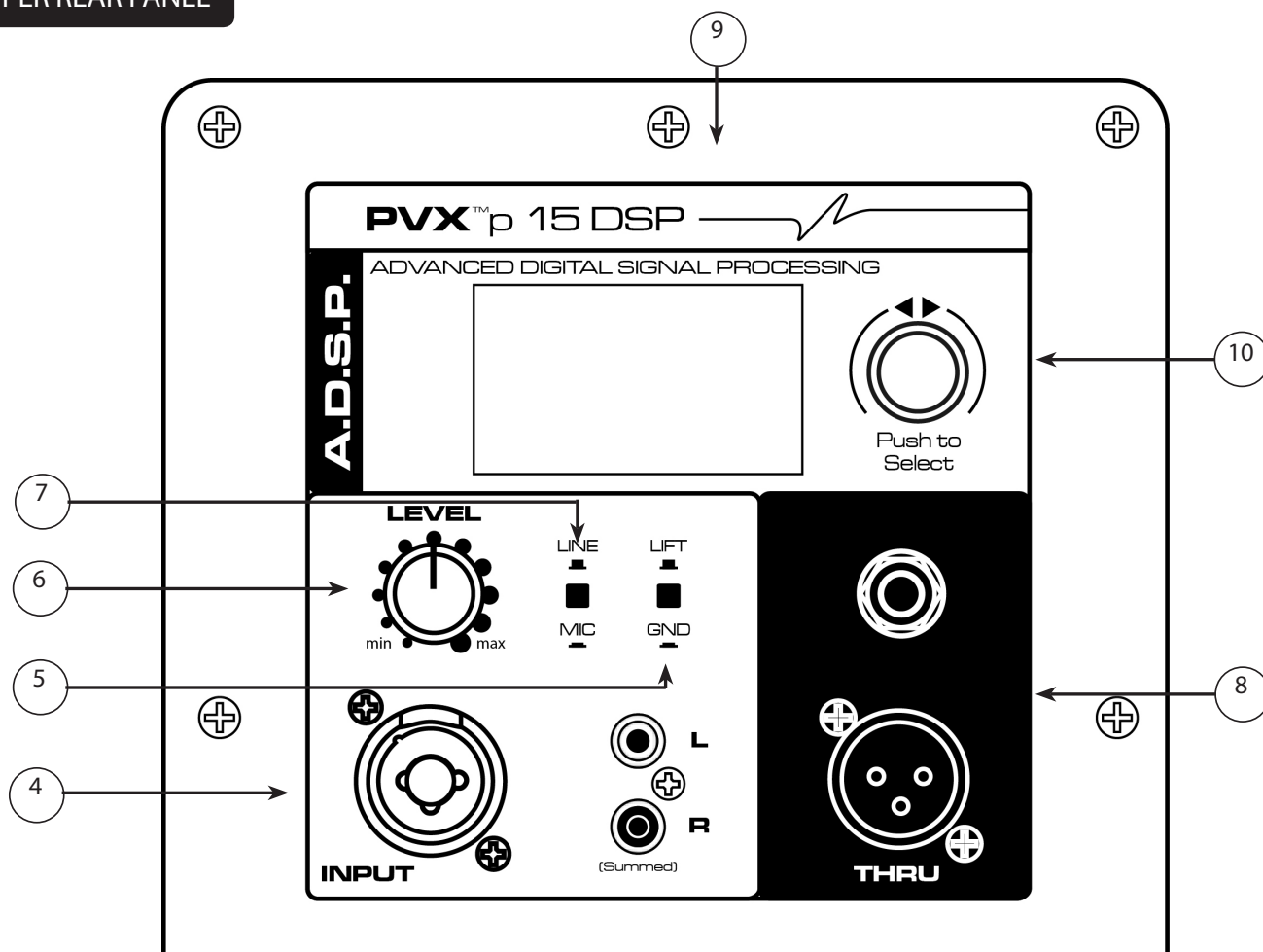
It is recommended that to assure future convenience of having a spare, that a spare fuse be obtained and placed in the hollow compartment at the earliest convenient time.

### IEC POWER CORD CONNECTION (3)

This receptacle is for the IEC line cord (supplied) that provides AC power to the unit. It is very important that you ensure the PVXp™ 15 DSP has the proper AC line voltage supplied.

Please read this guide carefully to ensure your personal safety as well as the safety of your equipment. Never break off the ground pin on any equipment. It is provided for your safety. If the outlet used does not have a ground pin, a suitable grounding adapter should be used and the third wire should be grounded properly. To prevent the risk of shock or fire hazard, always be sure that the mixer and all other associated equipment are properly grounded.

## UPPER REAR PANEL



### INPUT (4)

The line-level input is of the medium impedance balanced type. The jack is a combo female XLR and 1/4" TRS connector. Sensitivity of this input is 0.48 volts for full output, when the MIC/LINE switch (7) is in the LINE position. Also included are two summed RCA jacks that provide an unbalanced input for connecting a cd or MP3 players.

### Gnd LIFT switch (5)

Allows the shield to be disconnected from the chassis ground to alleviate hum from ground loops.

### Level (6)

Controls the gain or output level of the input signal. It is used to directly set the system output level for a given input signal.

### MIC/LINE switch (7)

Switches between LINE level gain (out position) and MIC level gain (in position). MIC position increases gain 33 dB to allow use of most dynamic microphones.

NOTE: Phantom power is not supplied on the INPUT (4) jacks.

## OPERATING INSTRUCTIONS

### THRU jacks (8)

These jacks are intended for the use of linking multiple PVXp™ DSP's in a line or to provide a feed to a powered subwoofer, or other electronics that needs to receive a full range version of the input signal.

### LCD Display (9)

Provides a menu read-out manipulated and activated by the Push-To-Select button (10)

### Push-To-Select button (10)

Rotary knob that allows the user to select and choose menu options on the LCD display screen (9). Pushing the button in till it detents makes a menu choice.

## 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 PVXp™ 15 DSP 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 PVXp™ 15 DSP 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 PVXp™ 15 DSP 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 PVXp™ 15 DSP 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 128 dB at 1 M from the speaker!

### **Connecting AC Power To The PVXp™ 15 DSP**

The PVXp™ 15 DSP 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 PVXp™ 15 DSP. For maximum undistorted output, do not connect any other device to the same extension cord that the PVXp™ 15 DSP 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. Built-in muting will engage when the proper sequence of steps is taken.

### ***Use of the PVXp™ 15 DSP with a Speaker Stand***

The PVXp™ 15 DSP has a stand mount cup molded-in so that the system can be stand mounted on a standard 1 3/8" (36mm) diameter stand pole.

When using stands or poles, be sure to follow these precautions:

- A. Check the stand or pole specs to make sure that it can support the weight of the PVXp™ 15 DSP (51 lbs./23.2 kg), and observe all safety precautions stated by the stand manufacturer, including the maximum height the stand is rated for.
- B. Always place the stand on a flat, level and stable surface, and be sure to fully extend the stand legs as per the stand manufacturer's instructions.
- C. Try to make sure that the stand legs are oriented for the least danger of tripping to those in the vicinity of the stand. Never block a doorway or hallway with the legs of a stand.
- D. Try to route cables so that people will not trip over them, or tip the speaker over. Use of duct tape, cable channels or guards, or other appropriate tie-down/cover-up devices should be carefully considered and implemented.
- E. When installing or de-installing the speaker on the stand, it is a good practice to have a helper if possible, it can be hard to "thread the needle" and mate the stand cup to the stand pole while holding the PVXp™ 15 DSP speaker system at arm's length. It is also helpful if someone holds the speaker stand and pole down while the PVXp™ 15 DSP is removed from the stand pole, this prevents the PVXp™ 15 DSP from pulling the pole up with it.
- F. When using stands outdoors, never attach banners or flags to the stands or the PVXp™ 15 DSP speaker system, strong winds may cause the speaker to blow over. If there is a possibility of windy conditions, then it may be prudent to consider weighting or locking down the stand legs to prevent the PVXp™ 15 DSP speaker system from being blown over.

### ***Connecting a Signal to the PVXp™ 15 DSP***

There are a variety of ways to input a signal to the PVXp™ 15 DSP.

The input (4) provides either a balanced mic- or line-level input, allowing the use of a 1/4" TRS (tip-ring-sleeve) type phone plug or a male XLR plug.

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 PVXp™ 15 DSP end. Check any input changes carefully, always turning the Level control down before plugging and unplugging cables, or lifting the ground.

Use of high quality, premium cables is recommended for the PVXp™ 15 DSP, 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 PVXp™ 15 DSP. It is usually a good idea to leave some slack at the input to the PVXp™ 15 DSP and also to tape the cables down or run them under a cable guard to avoid anyone tripping over them or pulling the PVXp™ 15 DSP over when stand mounted..

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

The PVXp™ 15 DSP is equipped with a Level control (6) 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 0.48 V RMS for full-rated output with the line level position of the Mic/Line Switch (7). When driving the PVXp™ 15 DSP from a mixer, it may be advantageous to reduce the input sensitivity by turning the Level control to the half-way point. The PVXp™ 15 DSP™ will now more closely match a typical power amp.



If the mixing board indicates clipping of its output signals, then all of the PVXp™ 15 DSP power capability is not being utilized cleanly. Clipping the signal before it gets to the PVXp™ 15 DSP is not optimal. Reduce the mixer output level and turn up the Level control on the PVXp™ 15 DSP.

The amplifiers in the PVXp™ 15 DSP are equipped with “Soft Limiting” circuitry and the LCD will show when this circuitry has engaged by replacing the normally displayed characters with the word “LIMIT”. If the sound seems heavily compressed, check the LCD; if it is displaying “LIMIT” more than occasionally, then the drive level from the mixer (or the Level control on the PVXp™ 15 DSP) needs to be reduced.

When first turning on the sound system, switch on all upstream electronics first, then the PVXp™ 15 DSP 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 PVXp™ 15 DSP Level control set to the desired setting (one-third way up recommended to start).

It is not good practice to turn the Level control on the PVXp™ 15 DSP 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 PVXp™ 15 DSP, and then turn the PVXp™ 15 DSP 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 PVXp™ 15 DSP***

We recommend that the Power switch (1) 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.

## USING THE A.D.S.P.

**EQ Modes:** The EQ modes are used to shape the tone of the sound coming out of the speaker. The selections are as follows:

- Music: Tuned for general music use
- EDM: Used to enhance electronic dance music
- DJ KS 1: Standalone use (no Subwoofer), Indoors
- DJ KS 2: Used with Subwoofer, Indoors
- DJ KS 3: Used with Subwoofer, Outdoors
- KSC: Emulates the sound of popular speakers
- Rock, Country, Hip-Hop: Optimizes the speaker for these typical genres
- Acoustic: Used to enhance acoustic performances
- Voice: Gently rolls off the extreme highs and lows to enhance spoken word
- Church: Tuned for the typical church environment
- Monitor: Optimizes the speaker’s frequency response while being used as a floor monitor

**Locate:** Used to optimize the speakers response based on its location. The selections are Pole, Floor and Wall.

**Treble:** The treble control can be used to boost or cut the high frequency response of the speaker up to +/-6dB. It can be used to brighten a dull sound or to reduce harshness.

Rotate the “Push-to-Select” knob to choose the amount of boost or cut in 1dB increments from +6 dB down to -6dB. these tone changes occur on top of an existing factory EQ preset.

To exit the treble menu, press the “Push-to-Select”, the cursor will then shift back to the “function” side of the LCD.

**Bass:** The bass control can be used to boost or cut the low frequency response of the speaker up to +/-6dB. It can be used to add bass to a “thin” source or to remove boomy bass from the speakers.

Rotate the “Push-to-Select” knob to choose the amount of boost or cut in 1dB increments from +6 dB down to -6dB. these tone changes occur on top of an existing factory EQ preset.

To exit the treble menu, press the “Push-to-Select”, the cursor will then shift back to the “function” side of the LCD.

**P. Save (Power Save):** The power save settings are “on” and “off”. In the “off” position, the LCD is illuminated at all times. In the “on” position, the LCD is illuminated until the user stops using the controls. The LCD backlight will turn off about 1 minute after the last on screen change. To turn the backlight back on, simply rotate the “Push-to-Select” knob.

**Bright:** Various conditions (like bright sun) or even the position of the speaker can sometimes make the LCD difficult to see or read. Two adjustments have been included to improve the visibility of the LCD. The first is a brightness adjustment. It varies the brightness of the illuminated characters on the screen. Turning the adjustment clockwise makes it brighter, while turning it counter-clockwise makes the characters dimmer.

**Contr (Contrast):** The second adjustment is the contrast. The contrast adjustment can be used to improve the viewing angle of the LCD. This may need to be adjusted if the speaker is overhead (like on a pole) or on the floor. You may have to try some experimenting with this control to improve the visibility of the LCD.

**System Reset:** Selecting the “System Reset” returns the DSP section to the factory settings. There is a confirmation screen to prevent accidental changes.

**System Info:** Selecting the “System Info” displays the copyright information and firmware version of the operating system. Push the “push-to-select” knob again to return to the function screen.

## TROUBLESHOOTING

### 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 (1) is in the ON position and check the IEC power cord connection (3) 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 (2). (See the Rear Panel: FUSE section, for safety instructions.)

Once assured your unit is getting AC power, check that the PVXp™ 15 DSP 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 PVXp™ 15 DSP has been subjected to direct sunlight or excessive heat, the built-in thermal protection may have been triggered. If so, turn off the PVXp™ 15 DSP 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 PVXp™ 15 DSP is producing a hum or buzz, this can be AC outlet related. Try plugging the PVXp™ 15 DSP into a different AC outlet. Sometimes, if a different circuit (breaker) is used for the mixer and for the PVXp™ 15 DSP, 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 PVXp™ 15 DSP's 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 PVXp™ 15 DSP 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 PVXp™ 15 DSP, 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 PVXp™ 15 DSP.

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 (6) control on the PVXp™ 15 DSP has not been set too low. Check that the input plug is fully seated in the input jack on the rear panel of the PVXp™ 15 DSP. Ensure that a power amp has not been plugged into the input jack of the PVXp™ 15 DSP. 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 PVXp™ 15 DSP has built-in EQ to smooth and extend the natural response of the speakers. If excessive additional bass boost or HF boost have been added externally to the PVXp™ 15 DSP, 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.

Finally, realize that even though the PVXp™ 15 DSP is a powerful and high output unit, it does ultimately have limits, and it may need additional powered units (or a subwoofer) to provide enough sound output or coverage. In this case, try turning the mixer levels down a little to see if that clears things up. If, after checking all the things listed to check and anything else you can think of to check safely, and the system still exhibits problems, carefully note all conditions and check with your Peavey dealer for advice.

### **Care and Maintenance**

Your PVXp™ 15 DSP 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 PVXp™ 15 DSP 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 PVXp™ 15 DSP, as they could damage the cabinet. Do not allow ANY fluids to drip inside the PVXp™ 15 DSP.

## **Touchup**

For an overall finish enhancement and protective coating, use gloves to apply a plastic finish protector, such as Armor-All® protectant or a similar product, to the surface of the plastic cabinet only. Note that the cabinet will be slippery after these treatments; rub them down vigorously with a dry, lint-free cloth to minimize this.

## **Check for Secure Hardware**

After the first few weeks of use and periodically thereafter, check the hardware of the PVXp™ 15 DSP for tightness, including the rear panel screws and the screws that hold the baffle and rear cabinet together.

The unit is subject to a great deal of vibration, and this could cause them to loosen with use.

## **Architectural and Engineering Specifications**

The powered loudspeaker system shall have a frequency response from 58 Hz to 20 kHz. The peak SPL with inaudible distortion shall reach 128 dB with music as a source, when measured at a distance of 1M and driven to full output capacity. The system shall utilize a Peavey Pro 15 15" heavy-duty woofer and a Peavey® RX™ 14 1.4" titanium diaphragm dynamic compression driver. The nominal radiation pattern shall be 100° in the horizontal plane, and 50° in the vertical plane. Axis of the vertical main polar lobe is angled down 10 degrees, resulting in the angular pattern with respect to straight ahead being +15, -35 degrees.

The powered, bi-amplified loudspeaker system shall have an input channel consisting of a medium impedance input connector consisting of one combo female XLR and 1/4" TRS phone jack on the rear panel.

There shall be a Thru (output) connector consisting of a male XLR jack and a 1/4" TRS jack.

The system power amplifiers shall have an unfiltered frequency response of 20 Hz to 20 kHz which deviates no more than 0, -3 dB up to rated power, hum and noise better than 90 dB below rated power, and THD and IMD typically of less than 0.5%.

The woofer amplifier shall be capable of 230W continuous into a 8 ohm nominal load, and the tweeter amplifier shall be capable of 90 W continuous output into a 8 ohm load, and both shall incorporate independent signal compression.

The input signal shall be electronically divided into high frequencies and low frequencies by a Linkwitz-Riley fourth order slope line-level crossover at 2.1 kHz. The low frequencies shall be processed to provide bass boost, subsonic filtering and overall response shaping, and the high frequencies shall be equalized for response-shaping. The enclosure shall be constructed of injection-molded ABS with a UL flame rating, and reinforcing ribs internally. A handgrip shall be incorporated on each side near the woofer and towards the front, and on the right side of the cabinet.

A separate powder-coated metal grille shall be provided for horn and woofer protection. The cabinet shall incorporate a pole mount for speaker stand use, four tall sturdy rubber feet for floor standing use, and a group of four mounting point inserts on the top and bottom each, and on the right side, for flying use.

The outside dimensions shall be: 28.25" (71.8cm) tall x 18.90" (48.0 cm) wide x 18.71" (47.5 cm) deep, and the weight shall be 51 lbs. Power requirements shall be: 120 Watts nominal, 100-240VAC, 50/60 Hz. The loudspeaker system shall be called a Peavey® PVXp™ 15 DSP.

## FLYING INFORMATION

### Flying the PVXp™ 15 DSP

IMPORTANT SAFETY INFORMATION FOR THE MOUNTING AND FLYING OF THE PEAVEY PVXp™ 15 DSP

**CAUTION:** Before attempting to suspend this speaker, consult a certified structural engineer. Speaker can fall from improper suspension, resulting in serious injury and property damage. Other enclosures may NOT be suspended below one, nor should additional weight be suspended from one of these units. Use only the correct mating hardware. All associated rigging is the responsibility of others.

This Peavey loudspeaker should be suspended overhead only in accordance with the procedures and limitations specified in the User's Manual and possible manual update notices. This system should be suspended with certified rigging hardware by an authorized rigging professional and in compliance with local, state or provincial, and federal or national suspension ordinances.

Maximum enclosure angle from vertical hang is 30 degrees.

Always use a suitable safety chain or wire rope, attached to an unused group of fly points or to the cabinet as directed by a certified structural engineer, and firmly attached to a suitable structural member as indicated by a certified structural engineer.

The recommended range of torque for the mounting bolts is 3.5 to 4.0 foot-lbs. (4.75 to 5.42 N-m). DO NOT OVERTIGHTEN! If an insert spins free, it has been damaged, and the cabinet can not be safely flown from that set of inserts!

Never transport the cabinet while mounted on an array bracket or other mounting bracket, as this may unduly stress the mounting inserts.

The use of threadlocker (blue type/medium strength) on the mounting bolts is recommended, as are the appropriate lock washers, to ensure that the mounting hardware will not vibrate loose over time.

### GROUPING OF INSERT SETS

#### Group A

A set of two M10 inserts on the top, designed to hang the cabinet using the proper eyebolts.

#### Group B

A set of two M10 inserts on the bottom, designed to hang the cabinet using the proper eyebolts.

#### Group C

A set of four M8 inserts on the top, designed to be used with the Peavey® Versamount™ 70+ mounting bracket.

#### Group D

A set of four M8 inserts on the right side, designed to be used with the Peavey Versamount 70+ mounting bracket.

#### Group E

A set of four M8 inserts on the bottom, designed to be used with the Peavey Versamount 70+ mounting bracket.

For Group A and B, always use both inserts as a pair; NEVER use just one insert to fly a cabinet!

For Group C, D and E, Always use all four inserts of a given group as a set; NEVER use just one insert to fly a cabinet! The four insert groupings are meant to have all four inserts used at once within a group.

Group E should only be used with the Versamount 70+ oriented beneath the cabinet, and at an angle less than 30 degrees from vertical.

#### **SPECIFICATIONS FOR INSERT MATING HARDWARE**

Group A and Group B should use an M10 forged steel shoulder-type lifting eyebolt, which meets the requirements of DIN 580 or ASTM A489. They should only be used in pairs, and in conjunction with the rear most pair of M8 inserts on the same surface as a pull-back/aiming adjustment, using M8 eyebolts of a similar specification. The length of the threaded shank on the eyebolts should not exceed 3/4" (approx. 20 mm), so that it does not bottom-out in the insert. Thread pitch: 1.5 mm per thread.

Group C and D should use an M8, grade 8.8 or better, 1.25 mm per thread, metric bolt, that does not penetrate the cabinet beyond the cabinet surface more than 3/4" (approx. 20 mm). When using a Peavey Versamount 70+ mounting bracket and lock washer, the length of the bolt should not exceed 1.125" (approx. 30 mm).

Group E should use an M8, grade 8.8 or better, 1.25 mm per thread, metric bolt, that does not penetrate the cabinet beyond the cabinet surface more than 0.472" (12 mm). When using a Peavey Versamount 70+ mounting bracket and lock washer, the length of the bolt should not exceed 3/4" (approx. 20 mm).

#### **WARNING! (note to structural engineer)**

The thread insertion depth past the surface of the cabinet of the end of the mounting bolt should not be more than 0.787" (20 mm) for insert groups A, B, C and D, and not more than 0.472" (12 mm) for Group E.

If these thread insertion depths are exceeded, then the inserts may be damaged or unseated from the cabinet, severely compromising the mounting integrity of the cabinet!

For maximum mounting strength, safety and reliability, the bolt threads should engage at least 10 mm of depth for Group A and B, and at least 8 mm of depth for groups C, D and E.

The PVXp™ 15 DSP mounting insert groups C, D and E are designed to be used with the Peavey Versamount 70 Plus mounting bracket (00454470 black, 00454460 white), as well as the Impulse® 15" array bracket (00475780 black, 00479360 white). It can also be used with the Peavey Wall-Mount Speaker Stand (00922940 black, 00487390 white), which will fit into the built-in stand mount cup on the bottom of the cabinet.

## SPECIFICATIONS

**Frequency Range, 1 meter on-axis, swept-sine in ½ Space environment:** 49 Hz to 20 kHz

**Frequency Response, 1 meter on-axis, swept-sine in anechoic environment:** 58 Hz to 20 kHz ( $\pm 3$  dB)

**Usable Low Frequency limit (-10 dB point anechoic):** 52 Hz

**Nominal sensitivity (1W @1M, swept sine input in anechoic environment):** 97 dB (average)

**Maximum Sound Pressure Level (1 meter):** 128 dB SPL peak with music

**Radiation Angle measured at -6 dB point of polar response:** Nominal: 100 degrees horizontal X 50 degrees vertical (Axis of the vertical main polar lobe is angled down 10 degrees, resulting in the angular pattern with respect to straight ahead being +15, -35 degrees)

**Transducer Complement:** Heavy-duty 15" woofer with 2-3/8" voice coil & 50 oz. magnet, RX™14 1.4" titanium diaphragm dynamic compression driver

**Box Tuning Frequency:** 57 Hz

**Electroacoustic crossover frequency:** 2,100 Hz

**Crossover type:** Advanced DSP based filter also providing driver EQ, level matching, bass boost, limiting, compression and subsonic filtering.

**Crossover Slopes:** 24 dB/octave (4th order) low pass, 24dB/octave (fourth order) high pass, Linkwitz-Riley filter.

### **Input Connections:**

One combo female XLR and 1/4" phone jack providing balanced line-level operation from the 1/4" jack section, and high-output dynamic microphone operation from the XLR section. Two summed RCA jacks provide an unbalanced input for connecting cd or MP3 players.

**Output Connections:** One male XLR and one 1/4" phone jack. The Thru jacks are intended for the use of linking multiple PVXp™15 enclosures in a line or to provide a feed to a powered subwoofer, or other electronics that needs to receive a full range version of the input signal.

**Enclosure Materials & Finish:** Black ABS plastic with textured surface, black powder-coated perforated grille. Also available in white.

**Mounting provisions:** Unit has two sets of two M10 inserts, one pair on the top, and one pair on the bottom. Additional mounting points are a set of four M8 inserts on the top, and a set of four on the right side in the handle recess, and a set of four on the bottom, which use the Peavey Versamount 70+ mounting bracket. Four rubber feet provide vibration free floor or stage use, and a molded-in stand mounting cup is on the bottom.

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

Front: 28.25 in. x 18.90 in. x 18.71 in.      718 mm x 480 mm x 475 mm

Rear: 26.25 in. x 10.25 in. x 18.71 in.      667 mm x 260 mm x 475 mm

**Net Weight:** 51 lbs. (23.2 kg)

**ELECTRONICS AND AMPLIFIER SPECIFICATIONS:**

**Internal power amplifiers (@120 VAC line):**

Total of 830 watts peak available dynamic power

Woofer - 630 watts peak available dynamic power

**Continuous Power\*:** 230 watts @ less than 1% distortion

Tweeter - 200 watts peak available dynamic power

**Continuous Power:** 90 watts @ less than 1% distortion.

\* Before thermal pull-back activates.

**Electronic Input Impedance (Nominal):**

Line: 2.2 k ohms balanced (1/4"), 10 k ohms unbalanced 1/4"

Mic: 2.2 k ohms balanced (XLR) No phantom power available.

**Input Sensitivity for Full Output (Level full CW):** 0.48V RMS in the Line position,  
0.01V RMS in the Mic position.

**Infrasonic filter protection:** 36 dB/octave roll-off

**Nominal Amplifier Frequency Response:** +0, -3 dB from 20 Hz to 20 kHz

**Hum and Noise:** Greater than 90 dB below rated power

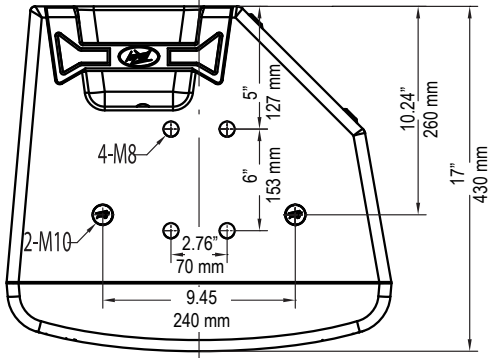
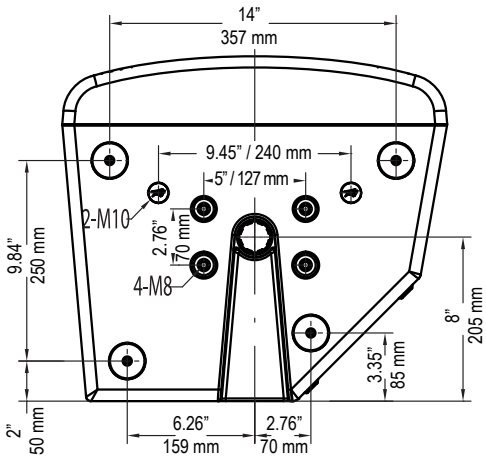
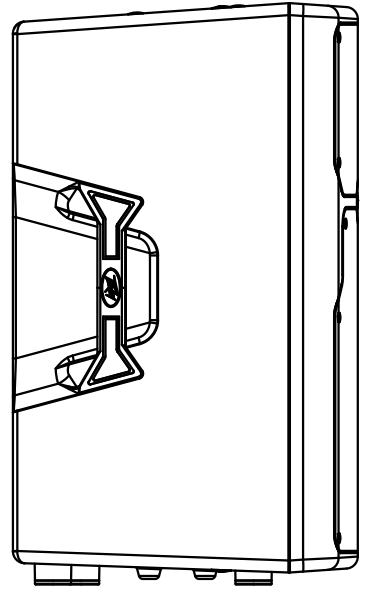
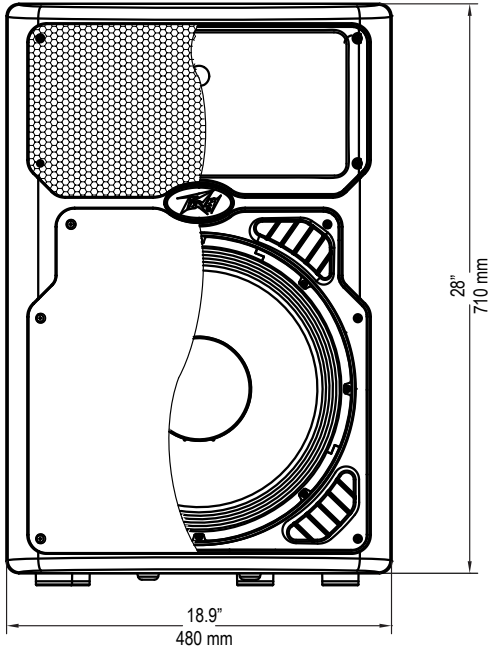
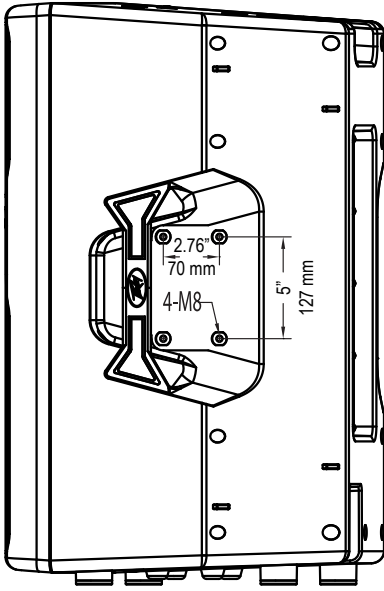
**THD and IM:** Typically less than 0.5 %

**Damping Factor:** Greater than 100 @ 1000 Hz, 8 Ohms

**Power requirements of Peavey PVXp 15 System:** Nominal 120 Watts, 100-240 VAC 50-60 Hz

\*specifications and features subject to change without notice.







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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