



DPE™ 2P-4P

Bi-Amplified Class D Powered Speaker System

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.



DPE™ 2P-4P

Thank you for purchasing the class D powered Peavey® DPE™ 2P-4P. The DPE 2P-4P features a bi-amped power section that provides 1200 watts of peak power for the woofer and 150 watts of peak power for the compression driver tweeter, both with Peavey DDT™ compression. Featuring a 15" Black Widow® woofer and the RX™ 22CT true compression driver, the DPE 2P-4P provides two independent mixed input channels, each with Gain control and a mic/line gain switch. Each channel features a combo jack with balanced input 1/4" TRS & female XLR and a level control.

Features

- Bi-amplified powered speaker system
- 1200 watts peak woofer power, both power amps have DDT compression
- Fan cooled
- 15" Black Widow® woofer
- Peavey RX™ 22CT compression driver tweeter on a Quadratic Throat Waveguide™
- DSP-controlled DynaQ™ circuit provides tone shaping options, including automatic equal loudness contour
- Peak SPL up to 131 dB with music!
- Two independent mixed input channels, with Gain control and mic/line gain switch
- Each channel features a combo jack with 1/4" TRS & female XLR balanced input
- Channel 2 features an extra pair of RCA input jacks
- Output connectors include: XLR, TRS 1/4" jack connectors
- Steel handles on each side, DPE-4P has a handle on the top rear to use the built-in rear casters
- Perforated steel grille
- Rugged wooden enclosure
- Pole mount (for DPE-2P only)
- Reduced weight – DPE 2-P 67 lbs. /30.4 kg
DPE 4-P 103 lbs. /46.7 kg

DESCRIPTION

The Peavey DPE™ 2P-4P is a powered, bi-amplified, two-way speaker system engineered to provide very high levels of performance in a compact powered loudspeaker. This two-way powered system is comprised of a 1200 W peak class D power amplifier driving a 15" Black Widow® woofer. The RX™ 22CT true compression tweeter is driven by a 150 W peak dynamic power amplifier, and is coupled to a Quadratic Throat Waveguide™ with a coverage pattern of 100° horizontal by 50° vertical.

The DPE 2P-4P is capable of up to 131 dB peak SPL. The enclosure utilizes plywood in a modified-trapezoidal form, with a coated perforated steel grille to offer an attractive yet durable powered speaker system. The cabinet and grille are black.

Two independent mixed input channels each offer a level control and a balanced input to the preamp/EQ electronics. Each channel has a combo female XLR and 1/4" TRS phone jack. It is switchable between mic-level and line-level sensitivity. Channel 2 has an additional pair of RCA input jacks. A line out section has XLR, and TRS 1/4" phone jacks. These outputs allow line-level linking of additional speaker systems, or recorder outputs, etc.

Extensive tone shaping is available via a DSP-controlled DynaQ™ circuit which offers Bass Enhancement, Contour, and a Music or Speech mode.

The Contour circuit is for accentuating bass and treble at low listening volume levels.

The power amplifiers providing the bi-amplification are low-distortion, switch type amplifiers providing 1200 W peak dynamic power into the nominal 4 ohm load of the woofer, and a 150 W peak available power into the nominal 8 ohm load of the tweeter. The woofer amplifier uses IPR2™ switching technology, and the power supply for both amps is a switch mode type for low weight and high efficiency. Both amplifiers feature DDT™ compression, which virtually eliminates audible power amplifier clipping. Cooling is via a forced-air fan.

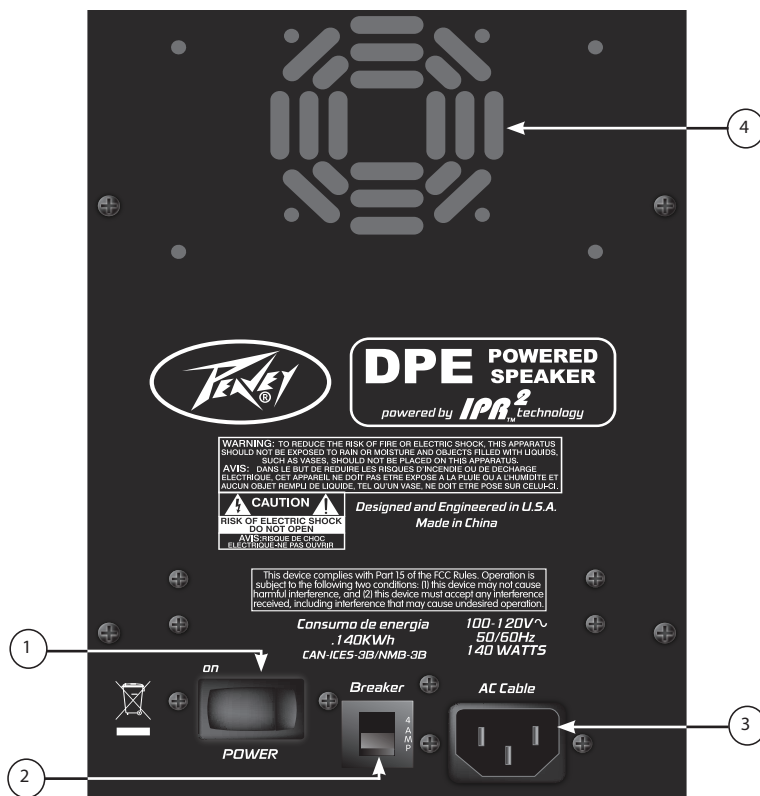
Steel handles on each side, DPE-4P has a handle on the top rear to use the built-in rear casters.

The combination of the digital signal-processed dynamic EQ circuitry coupled with the selected woofer and compression tweeter provides a clarity and impact far beyond conventional powered enclosures. The switching type power amps and switch-mode power supply, provide this high level of technological sophistication at a light weight and reasonable cost.

APPLICATIONS

The Peavey DPE™ 2P-4P has a variety of applications, including sound reinforcement, public address, side fill system, karaoke and music playback. A typical signal source for the line-level inputs of the Peavey DPE 2P-4P 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 as well.

LOWER REAR PANEL



ON-OFF SWITCH (1)

This rocker switch supplies AC power to the DPE™ 2P/4P when switched to the ON position. The ON position is with the left side of the switch pushed "in" or nearly flush with the rear panel.

CIRCUIT BREAKER (2)

The unit is AC power line protected from overloads and fault conditions with a 6 amp circuit breaker (domestic) and with a 3 amp circuit breaker (export). This breaker should not trip unless there is a fault in the amplifier circuitry or an abnormal operating condition, which causes excessive mains current to flow. If the breaker trips, set the Power switch (1) to OFF, and after waiting a brief period of time for the breaker to cool, reset the breaker.

If the circuit breaker trips, the center button will pop outward approximately 1/4", and can be reset by pushing upward and inward. Under normal (not tripped) conditions, the center button is relatively flat.

If the unit continues to trip the breaker, or trips it immediately after being reset, do not keep resetting it, the system should be taken to a qualified Peavey Service Center for repair.



IEC POWER CORD CONNECTION (3)

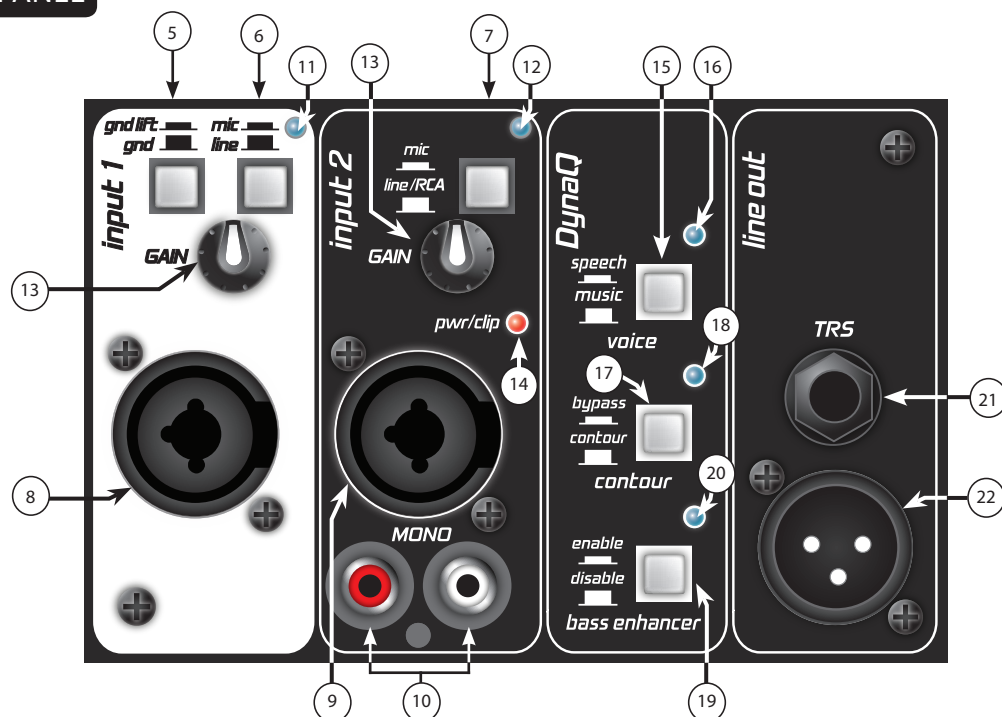
This receptacle is for the IEC line cord (supplied) that provides AC power to the unit. It is very important that you ensure the DPE™ 2P-4P has the proper AC line voltage supplied. You can find the proper voltage for your DPE2P-4P printed next to the IEC line (power) cord on the rear panel of the unit.

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.

COOLING FAN VENTS (4)

The DPE 2P-4P is equipped with an internal cooling fan. In order to avoid damage, DO NOT block the cooling vents!

UPPER REAR PANEL



GROUND LIFT SWITCH (5)

Switches the XLR (8,9) PIN 1 (shield) from direct contact with ground in the event that hum occurs with the input cables connected. ALWAYS TURN THE GAIN (13) DOWN ALL THE WAY BEFORE OPERATING THIS SWITCH TO AVOID LOUD POPS OR BUZZES! Turn the gain back up slowly and cautiously to determine if an improvement in the hum or buzz has been made.

MIC/LINE SWITCH, PRESENT ON BOTH INPUT 1 AND INPUT 2 (6,7)

Switches the sensitivity of the input from line-level to mic-level sensitivity. Pushed in, the sensitivity is set for mic-level input signals. When the switch is not pushed in, the sensitivity is padded by 30 dB so it is suitable for line-level signals. Note that this switch changes the input's sensitivity, but does NOT provide phantom power in the MIC position, thus the microphone used must be dynamic type microphone.

INPUT 1 (8)

Input 1 is switchable between line-level gain and mic-level gain. The line-level input is medium impedance balanced. The jack (8) on the input 1 panel is a combo female XLR and 1/4" TRS connector. The signal to input 1 is mixed with the signal from input 2 and fed to the internal crossover and signal processing.

INPUT 2 (9)

Input 2 is switchable between line-level gain and mic-level gain. The line-level input is medium impedance balanced. The jack (9) is a combo female XLR and 1/4" TRS connector. Input 2 also has a pair of RCA phono jacks (10) wired in parallel with the above listed inputs. These are mixed in parallel with each other and are Mono inputs (not stereo inputs). The signal to input 2 is mixed with the signal from input 1 and fed to the internal crossover and signal processing.

MIC/LINE SWITCH LED, PRESENT ON BOTH INPUT 1 AND INPUT 2 (11,12)

Illuminates green when Mic/Line switch (5 and/or 6) is in line-level mode, and yellow when the Mic/Line switch is in mic-level mode.

GAIN, PRESENT ON BOTH INPUT 1 AND INPUT 2 (13)

Controls the gain (level) of the input channel with which it is associated. It is used to directly set the system output level for a given input signal.

POWER/CLIPPING LED PRESENT ON INPUT 2 (14)

These are located to the right and down from the GAIN knob of input channel 2. It will be green when the DPE™ is turned on. It turns red when either of the power amps clip or when the input channel is overloaded.

DynaQ™ SECTION (C)

The DynaQ section provides for a variety of tone shaping options, or the selection of a nominally flat response. The Music/Speech switch (15) provides a dynamic bass and treble boost that is signal level dependant (Fletcher-Munson type compensation) when in the "Music" or "Out" switch position. When in the "Speech" or "In" switch position, the boost is turned off, as is any Bass Enhancement if activated, and low-pass and high-pass filters are engaged to help roll-off the frequency extremes to assure a clean and clear vocal presentation. The "Speech" position is useful for direct interface of a dynamic microphone to the inputs of the DPE 2P-4P. When the Music/Speech switch is pushed in, and the Speech mode is engaged, the LED (16) to the upper right glows green.

THIS SWITCH IS OVERRIDDEN IF THE CONTOUR/BYPASS SWITCH (17) IS IN THE BYPASS MODE. THE ASSOCIATED LED (18) WILL REFLECT THIS CONDITION.

THE CONTOUR/BYPASS SWITCH (17)

The Contour/Bypass switch (17) provides a flat response in the "Bypass" or "in" position. The "Contour" or "Out position allows the positions of the other two DynaQ™ switches to affect the tone. This switch overrides the other two switches in the DynaQ section, as the other two switches have no effect when in Bypass mode. When the Contour/Bypass switch is pushed in and is in Bypass mode, the LED (18) to the upper right glows Red. If either of the other two DynaQ switches (15,19) are engaged, the associated LED's (16,20) go out to indicated that their function has been bypassed.

THE BASS ENHANCER/BYPASS SWITCH (19)

Provides a dynamic bass boost that is signal level dependant (Fletcher-Munson type compensation) when in the "Bass Enhancer" or "In" switch position. When in the "Bypass" or "out" switch position, the low frequencies are reproduced in a nominally flat manner.

When the "Bass Enhanced/Bypass" switch is pushed in, and the "Bass Enhancer" mode is engaged, the LED (20) to the upper right glows Green.

THIS SWITCH IS OVERRIDDEN IF THE CONTOUR/BYPASS SWITCH IS IN THE BYPASS MODE OR THE MUSIC/SPEECH BUTTON IS IN THE SPEECH MODE THE ASSOCIATED LED WILL REFLECT THIS CONDITION.

If full Fletcher-Munson type dynamic bass and treble boost were desired, then the switch settings would be:

Music/Speech switch (15): Music mode (button Out, LED dark)

Contour/Bypass switch (17): Contour mode (button Out, LED dark)

Bass Enhancer/Bypass switch (19): Bass Enhance mode (button In, LED lit green)

Then a single push of the Contour/Bypass switch (17) can restore the speaker to noinally flat response, while with the same starting point settings, a single push of the Music/Speech button (15) can provide a Speech contour with no Fletcher-Munson type contouring and with roll-offs at the frequency extremes.

LINE OUT SECTION

Line Out is intended to link multiple DPE™ 2P-4P's in a line or to provide a feed to other electronics that needs to receive a full range line-level version of the input signal. The connectors available are a 1/4" TRS phone jack (21), and a male XLR jack (22). The output level is controlled by the gain controls (13) for input 1 and input 2, and is the sum total of any signals present at inputs 1 and 2.

To meet EMC requirements place a ferrite core (Peavey P/N 30501664) on the line out cable with four turns of the user supplied cable through the core.

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 opening from ventilation. There must be a minimum of 4" of space behind the heat sink. 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 DPE 2P-4P 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 switching the mic/line sensitivity switch to the IN position 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 DPE 2P-4P to the output of a power amplifier. The inputs are meant to be driven from a mic or line-level signals.

DO NOT remove the protective metal grille.

WARNING! The DPE 2P-4P is very efficient and powerful! This sound system can permanently damage hearing!

Use extreme care setting the overall maximum volume! The apparent sound level of the DPE 2P-4P 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 131 dB at 1 meter distance from the speaker!

CONNECTING AC POWER TO THE DPE 2P-4P

The DPE 2P-4P comes with a 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 DPE 2P-4P. For maximum undistorted output, do not connect any other device to the same extension cord that the DPE 2P-4P 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.

SPECIAL NOTE FOR PERMANENT INSTALLATION

When installing the DPE 2P-4P, AC power runs will be used and a certified electrician should be consulted to be sure that all AC wiring complies with local codes and regulations. It is also advisable to use a cable clip properly affixed to the cabinet to relieve strain on the IEC power cord connected to the amplifier module at (2) so the power cord cannot be pulled out or vibrate loose.

USE OF THE DPE 2P WITH A SUBWOOFER POLE

The built-in stand mount cup allows use with the Peavey DPE™ 118P Sub and the accessory pole that it is designed to use, which is included with the Sub.

The pole used is 29 1/2" long and has a nominal diameter of 1-3/8".

Always be sure to place the subwoofer used in this manner on a flat, level and stable surface.

USE OF THE DPE 2P WITH A SPEAKER STAND

The DPE 2P 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:

Check the stand or pole specs to make sure that it can support the weight of the DPE™ 2P (DPE 2P 67 lbs./30.5 kg), and observe all safety precautions stated by the stand manufacturer, including the maximum height for which the stand is rated.

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.

Orient the stand legs 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.

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.

When installing or un-installing the speaker on the stand, it is a good practice to have a helper if possible, as it can be hard to "thread the needle" and mate the stand cup to the stand pole while holding the DPE 2P speaker system at arm's length. It is also helpful if someone holds the speaker stand and pole down while the DPE 2P is removed from the stand pole; this prevents the DPE 2P from pulling the pole up with it.

When using stands outdoors, never attach banners or flags to the stands or the DPE 2P speaker system, as strong winds may cause the speaker to blow over. If there is a possibility of windy conditions, it may be prudent to consider weighting or locking down the stand legs to prevent the DPE 2P speaker system from being blown over.

CONNECTING A SIGNAL TO THE DPE 2P-4P

There are a variety of ways to input a signal to the DPE 2P-4P. The two inputs (8,9) provide either a balanced mic- or line-level input, allowing the use of a 1/4" TRS (ring-tip-sleeve) type phone plug OR a male XLR plug.

Unbalanced inputs are also provided, as the 1/4" input (8,9) can take a standard single-ended (tip-sleeve) phone plug. Alternatively, the RCA phono jacks (10) of input 2 can be used. The RCA jacks do not provide a Left and Right stereo input, as the DPE 2P-4P is a monophonic sound source. Instead, the two jacks mix and buffer any two RCA sourced signals and send them on to the Gain control of input 2 (1 3).

Do not connect cables to the jacks while the unit is ON with the Gain knob(s) turned up! While a standard single-ended 1/4" phone plug-equipped cable will work well and the balanced input circuitry of the inputs (8,9) 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 on a balanced cable at the DPE 2P-4P end by only using the ground lift switch (5). Check any input changes carefully, always turning the gain control down before plugging and unplugging cables or engaging the ground lift switch.

Use of high quality, premium cables is recommended for the DPE 2P-4P, as these usually have better shielding and materials and will provide greater long-term reliability. The best option is a shielded, balanced XLR cable no longer than necessary to reach the DPE 2P-4P. It is usually a good idea to leave some slack at the input to the DPE 2P-4P and also to tape the cables down or run them under a cable guard to avoid anyone tripping over them or pulling the DPE 2P-4P over when stand mounted.

GAIN CONTROL ADJUSTMENT

The DPE 2P-4P is equipped with a Gain control (13) on each of the two input channels to facilitate use in many different applications. With the Gain control adjusted fully clockwise, gain is at maximum and the input sensitivity is 0.200 V RMS for full-rated output. When driving the DPE 2P-4P from a mixer, it may be advantageous to reduce the input sensitivity by turning the Gain control to the halfway point. The DPE 2P-4P will now more closely match a typical power amp.

If the mixing board indicates clipping of its output signals, then all of the DPE 2P-4P power capability is not being utilized cleanly. Clipping the signal before it gets to the DPE 2P-4P is not optimal. Reduce the mixer output level and turn up the Gain control(s) on the DPE 2P-4P.

The amplifiers in the DPE 2P-4P are equipped with DDT™ and multiple LED indicators to show that DDT has engaged (15,16, front grille logo).

If the sound seems heavily compressed, check these indicators; if it is blinking RED more than occasionally, then the drive level from the mixer (or the Gain control/s {13} on the DPE 2P-4P) needs to be reduced.

When first turning on the sound system, switch on all upstream electronics first, then the DPE™ 2P-4P with its Gain control(s)

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 DPE 2P-4P Gain control/s set to the desired setting (one-third of the way up is recommended to start).

It is not good practice to turn the Gain control(s) on the DPE 2P-4P all the way up and then try to control level only from the mixer, as this approach would tend to pick up excess noise. The best practice would be to run a "hot" signal from the mixer down the cable to the DPE 2P-4P, and then turn the DPE 2P-4P Gain 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.

If a particular input channel is unused, the best practice is to turn the Gain knob all the way down, or fully counter-clockwise. This minimizes any possible noise pick-up from the unused channel.

MIC/LINE SWITCH ADJUSTMENT

The mic/line switch (6,7) provides for the increased gain needed for microphone use into the two inputs.

Set the Mic/Line switch to "out" for line-level signal use and set it "in" for mic-level use. The associated LED indicator (11,12) which is located up and to the right of the switch, will glow green for a line-level setting, and yellow for a mic level setting.

The unit is normally shipped with the button in the line-level or "out" position. However, before each use it is a good idea to check for the proper position of the switch, as it could be toggled inadvertently during transport or set-up.

Due to the 30 dB of extra gain that this switch provides, DO NOT leave it in the "in" position for line-level input signal use! This could result in input-stage clipping of the DPE 2P-4P and cause unnecessary distortion.

DISCONNECTING AC POWER TO THE DPE 2P-4P

We recommend that the Power switch (3) 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.

TROUBLESHOOTING

NO OUTPUT AT ALL

First, make sure the unit has AC power and is turned ON. Make sure the various LED's on the inputs of the power amp module are illuminated (11 and 12 will always be illuminated either red or green).

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 circuit breaker (2). (See the Rear Panel: circuit breaker section for safety instructions.)

Once assured your unit is getting AC power, check that the DPE™ 2P-4P 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 Gain controls (13) being used have been turned up to a satisfactory level (one-third to halfway).

If the DPE 2P-4P has been subjected to direct sunlight or excessive heat, the built-in thermal protection may have been triggered. If so, turn off the DPE 2P-4P 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 DPE 2P-4P is producing a hum or buzz, the problem could be AC outlet related. Try plugging the DPE 2P-4P into a different AC outlet. If a different circuit (breaker) is used for the mixer and for the DPE 2P-4P, it can sometimes 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 DPE 2P-4P's inputs. 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 on a balanced cable at the DPE™ 2P-4P end by only using the ground lift switch (5). Check any input changes carefully by first turning down the gain control(s) (13) before plugging and unplugging cables, or lifting the shield ground at the speaker end by using the Ground Lift switch (5).

Check to make sure light dimmers are not on the same circuit as the DPE 2P-4P, the mixer or any source devices. If light dimmers are used, 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 DPE 2P-4P.

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

CARE AND MAINTENANCE

Your DPE 2P-4P 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 DPE 2P-4P 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 DPE 2P-4P, as they could damage the cabinet. Do not allow ANY fluids to drip inside the DPE 2P-4P.

TOUCHUP

To touch up the painted surfaces of the DPE™ 118P Sub, you can use Peavey® Black Touch-Up paint (part # 00052110). Never paint the enclosure or other parts while the unit is plugged in or turned on!

CHECK FOR SECURE HARDWARE

After the first few weeks of use and periodically thereafter, check the hardware of the DPE™ 2P-4P 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 60 Hz to 18 kHz. The peak SPL with inaudible distortion shall reach 131 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® 15" Black Widow® BWX woofer and a Peavey RX™22CT true compression driver tweeter. 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 vertical pattern with respect to straight ahead being +15, -35 degrees.

The powered, bi-amplified loudspeaker system shall have two input channels capable of being mixed together with independent level controls. On the rear panel, it shall have a group of medium impedance input connectors. For one channel, these connectors will consist of a combo female XLR and 1/4" TRS phone jack. For the other channel, the connectors will consist of two RCA phono jacks and a combo female XLR and 1/4" TRS phone jack.

The combo female XLR and 1/4" TRS phone jack of each channel will have a gain adjust pad that provides 30 dB of gain adjust and provides for switching between line-level input signals and mic-level input signals.

The input section shall have a push button activated, and DSP-controlled EQ system that provides for various combinations of nominally flat frequency response, response filtered at the frequency extremes, response with dynamic boost of just the high frequencies, and response with dynamic boost at the low and high frequencies (Fletcher-Munson style compensation).

There shall be a group of line out connectors consisting of a male XLR jack, and a 1/4" TRS phone jack.

The system power amplifiers shall have an unfiltered frequency response of 10 Hz to 20 kHz which deviates no more than +0, -1 dB up to rated power, a damping factor greater than 100 @ 1 kHz into 8 ohms, hum and noise better than 90 dB below rated power, and THD and IMD of less than 1.0%.

The woofer amplifier shall be capable of 450 W continuous into a 4 ohm nominal load, and the tweeter amplifier shall be capable of 75 W continuous output into a 8 ohm load. Both shall incorporate independent DDT™ 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 1.9 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 15 mm plywood. Steel handles shall be incorporated on each side.

DPE-4P has a handle on the top rear to use the built-in rear casters.

A powder-coated metal grille shall be provided for woofer protection. The DPE-2P cabinet shall incorporate a pole mount for speaker stand use, four tall sturdy rubber feet for floor standing use.

The DPE-4P shall include rear bottom corner casters, with two rubber feet in front.

The outside dimensions shall be: 29.25" (74.3 cm) tall x 18.75" (47.6 cm) wide x 16.88" (42.9 cm) deep, and the weight shall be 67 lbs. Power requirements shall be: 700 Watts nominal, 100-120 VAC, 50/60 Hz Domestic and 220-240 VAC, 50/60 Hz (Export). The loudspeaker system shall be called a Peavey DPE™ 2P.

The outside dimensions shall be: 46.13" (117.2 cm) tall x 18.75" (47.6 cm) wide x 16.88" (42.9 cm) deep, and the weight shall be 103 lbs. Power requirements shall be: 700 Watts nominal, 100-120 VAC, 50/60 Hz Domestic and 220-240 VAC, 50/60 Hz (Export). The loudspeaker system shall be called a Peavey DPE™ 4P.

DPE™ 2P - 4P SPECIFICATIONS

Frequency Response:

52 Hz – 20 kHz

Low Frequency Limit (-3 dB point):

60 Hz

Usable Low Frequency Limit (-10 dB point):

52 Hz

Internal Power Amplifiers:

Woofer - 1200 watts peak available power

Continuous Power: 450 watts @ less than 1% distortion

Tweeter - 150 watts peak available power

Continuous Power: 75 watts @ less than 1% distortion

Nominal Sensitivity (1W @ 1M, Swept Sine Input in Anechoic Environment):

100 dB (average)

Maximum Sound Pressure Level:

131 dB music peak

Nominal Radiation Angles:

100° horizontal by 30° vertical

Transducer Complement:

15" * Black Widow® woofer, Model 1508-4 DPE and RX™22CT compression driver tweeter

Box Tuning Frequency (FBOX):

61 Hz

Electoacoustic Crossover Frequency:

2,000 Hz

Crossover Type:

Internal DSP-controlled Electronic two-way crossover with driver EQ, level matching, bass boost and subsonic filtering

Crossover Slopes:

24 dB/octave (Fourth order) low pass, 24 dB/octave (Fourth order) high pass, both with staggered poles and driver EQ. Unit has horn spatially aligned with woofer, so there is no need for phase alignment or time delay of the signals.

Electronic Input Impedance (NOMINAL):

10 k ohms unbalanced

20 k ohms balanced line level

24 k ohms balanced mic level

Input Connections:

Input 1:

One combo female XLR/ 1/4" phone jack providing balanced operation, with switch-selectable mic- or line-level sensitivity

Input 2:

One combo female XLR/ 1/4" phone jack providing balanced operation, with switch-selectable mic- or line-level sensitivity.

Two RCA phono-type jacks, which are buffered and mixed to monophonic for a summed signal. These are NOT a stereo input, as the DPE™ 2P-4P is a single full-range sound source.

Output Connections:

One male XLR balanced output, one 1/4" TRS balanced phone-type jack.

Cabinet Material:

Wood

Mounting:

Subwoofer pole-mounting or speaker stand, and 4 rubber feet for floor or stage use.

Dimensions (H x W x D)

DPE-2P:

29.25" (74.3 cm) x 18.75" (47.6 cm) x 16.88" (42.9 cm)

DPE-4P:

46.13" (117.2 cm) x 18.75" (47.6 cm) x 16.88" (42.9 cm)

Net Weight:

DPE 2-P: 67.0 Lbs. (30.5 kg)

DPE 4-P: 103.0 Lbs. (46.7 kg)

ELECTRONICS AND AMPLIFIER SPECIFICATIONS

Electronic Input Impedance (NOMINAL):

Balanced inputs: 20 k ohms line level sensitivity selected, 2.4 k ohms mic level sensitivity selected

Mic Switch Sensitivity Increase:

30 dB

Push-button EQ modes of DynaQ™:

Flat Frequency Response

Filtered roll-off of high and low frequencies (Speech Mode)

Dynamic boost to high frequencies (Contour)

Dynamic boost to both high and low frequencies, (Fletcher-Munson type compensation, Contour and Bass Enhancer)

Nominal Amplifier Frequency Response:

0+, -1 dB from 10 Hz to 20 kHz

Hum and Noise:

Greater than 90 dB below rated power

DDT™ Dynamic Range:

Greater than 22 dB

THD and IM:

Typically less than 0.1%

Damping Factor:

Greater than 100 @ 1000 Hz, 8 ohms

Power Requirements of Peavey DPE 2P-4P System:

Nominal 700 watts

Operating voltage:

100 - 120VAC 50/60 Hz (domestic)

220 - 240VAC 50/60 Hz (export)

All power measurements made at 120 VAC and 240 VAC.

***Specifications subject to change without notice.**

NOTES

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Features and specifications subject to change without notice.

Peavey Electronics Corporation 5022 Hartley Peavey Drive Meridian, MS 39305 (601) 483-5365 FAX (601) 486-1278



Logo referenced in Directive 2002/96/EC Annex IV
(OJ(L)37/36, 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