IPR2™ 2000/3000
IPR2™ 2000/3000 DSP
Power Amplifiers

Operating Manual

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ENGLISH

IPR2™ 2000 / 3000

Power Amplifier

Congratulations on your purchase of an IPR2™ power amplifier, designed for years of reliable, flawless operation under rigorous use. The groundbreaking IPR2 series utilizes an advanced design that allows Peavey engineers to dramatically reduce weight while increasing output power, reliability and thermal efficiency. IPR2 Series amplifiers are designed with a resonant switch-mode power supply and a high-speed class D topology that yields the highest audio resolution and efficiency available. This revolutionary amplifier offers the sonic superiority and unsurpassed reliability for which Peavey is famous, in an extremely efficient and lightweight design. Advanced technology and extensive protection circuitry allow operation with greater efficiency into difficult loads and power conditions. The DDT™ (Distortion Detection Technique) circuitry ensures trouble-free operation into loads as low as 2 ohms. DDT protects drivers and ensures that sonic integrity is maintained, even in extreme overload conditions. The IPR2's high-efficiency design allows the amplifier to operate at very low temperatures, and does not require massive heat sinks to cool. For your safety, read the important precautions section, as well as input, output and power connection instructions.

Although the IPR2 amplifier is simple to operate and housed in an ultra-strong, ultra-lightweight chassis, improper use can be dangerous. This amplifier is very high-powered and can put out high voltages and sizable currents at frequencies up to 30 kHz. Always use safe operating techniques when operating this amplifier.

Before you apply power to your amplifier, it is very important to ensure that the product has the proper AC line voltage supplied. You can find the proper voltage for your amp printed next to the IEC line (power) cord on the rear panel of the unit. Each product feature is numbered. Refer to the front-panel diagram in this manual to locate the particular features next to its number.

Please read this guide carefully to ensure your personal safety as well as the safety of your amplifier.

FEATURES:

- **2 channel independent crossovers**
- **DDT™ protection**
- **Revolutionary IPR2 class D topology**
- **Detented input controls**
- **Combination XLR and 1/4" inputs**
- **Two pole combination twist lock and 1/4" (6.3mm) phone plug outputs**
- **Ultra-light weight**
- **Individual signal patch 1/4" (6.3mm) jacks on each channel**
- **LED illuminated**
- **Standby, LED power present indication**

VENTILATION: For proper ventilation, allow 12" clearance from nearest combustible surface.

Make sure that vents are not blocked and air can flow freely through the unit.

NOTE: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate 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 to 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 and experienced radio/TV technician for help.

Front Panel

IPR2™ 3000

IPR2™ 2000

1 **AC POWER SWITCH**
This button triggers the relay that provides power to the amplifier. This button indicates power is connected to the amplifier by glowing dimly while the amplifier is off (or in standby). When the switch is depressed, the amplifier will turn on and the switch will illuminate brightly.

2 **PEAVEY LOGO**
While the amplifier is off, the logo is illuminated dimly to indicate power is connected. When the amplifier is on, the logo will illuminate brightly.

3 **INDICATORS**
The IPR2™ amplifiers feature five front-panel LED indicators per channel: ACTIVE, SIGNAL, DDT™, TEMP and DC. These LED indicators inform the user of each channel's operating status and warn of possible abnormal conditions.

4 **ACTIVE LED**
The Active LED indicates that the channel is operational. It illuminates when the amplifier is in normal operation. If the Active LED goes off, the channel is not operational.

5 **SIGNAL LED**
The LED lights when its channel produces an output signal of about 4 volts RMS or more. The Signal LED indicates whether a signal is reaching and being amplified by the amplifier.

6 **DDT™ (DISTORTION DETECTION TECHNIQUE) LED**
A channel's DDT™ LED will light at the onset of clipping. If the LEDs are flashing quickly and intermittently, the channel is just at the clip threshold. A steady, bright glow means the amp is clip limiting, or reducing gain to prevent severely clipped waveforms from reaching the loudspeakers.

7 **TEMP LED**
In the unlikely event of an unstable thermal condition, amplifier protection will be activated and will shut down the offending channel. The Temp LED will remain illuminated until safe operating temperatures have returned.

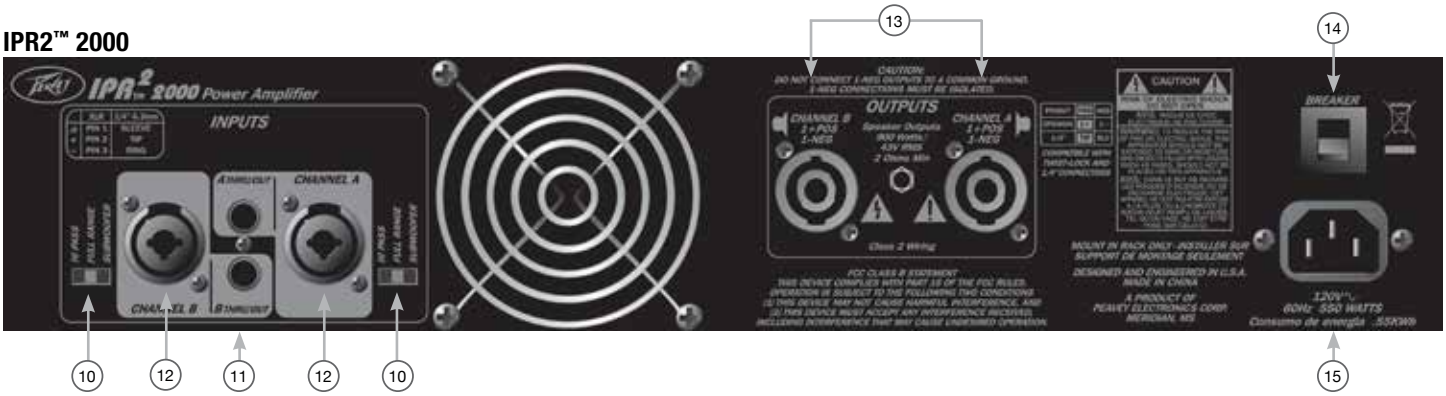
8 **DC LED**
In the event of abnormal operating conditions, the IPR2 has built-in amplifier protection. Under conditions that would normally damage the loudspeaker, the DC LED will illuminate and the amplifier will automatically attempt to restart to correct the condition. If the amplifier does not return to normal operating status, contact your local authorized service center.

9 **INPUT ATTENUATORS**
Whenever possible, set the attenuators fully clockwise to maintain optimum system headroom. The input attenuator controls, located at the front panel (one for channel A, one for channel B), adjust signal attenuation for their respective amplifier channels in all modes. See the specifications at the end of this manual for standard voltage gain and input sensitivity information.

Rear Panel

IPR2™ 3000

IPR2™ 2000



(10) CHANNEL MODE SWITCH:

HIGH PASS
This position is used to activate the HIGH PASS filter for the corresponding channel. This filter will limit the frequencies sent to the associated amplifier channel to frequencies above 100 Hz. In situations where separate subwoofer cabinets are being used, this position would indicate connecting the mid-high frequency speaker cabinet to the channel associated with the HIGH PASS switch.

FULL RANGE
As the name implies, the Full Range position on this switch allows all frequencies to pass to the amplifier. Normally used when connecting a full range speaker enclosure to the amplifier's output.

SUBWOOFER
This position is used to activate the LOW PASS filter for the corresponding channel. This filter will limit the frequencies sent to the associated amplifier channel to frequencies below 100 Hz. In situations where separate subwoofer cabinets are being used, this position would indicate connecting the subwoofer speaker cabinet to the channel associated with the Subwoofer switch.

(11) THRU/OUT JACKS
This 1/4" (6.3mm) jack supplies parallel output signals from the associated channel for patching to this amplifier and/or additional power amplifier inputs.

(12) CONNECTING INPUTS
This 1/4" (6.3mm) jack is a parallel connection to the input connector for patching to this amplifier and/or additional power amplifier inputs. A TRS plug must be used to maintain a balanced connection.

(13) CONNECTING OUTPUTS
All models have one two-pole twist lock and 1/4" (6.3mm) phone plug combination connector per channel. All four speaker connection wires must be isolated from each other.

(14) CIRCUIT BREAKER
In the unlikely event of operating conditions that may potentially damage the amplifier, the circuit breaker may trip. After inspecting the cables and connections, the amplifier can be reset. If the circuit breaker trips a second time, contact the local Peavey authorized service center.

(15) AC POWER INLET:
This is the receptacle for an IEC line cord, which provides AC power to the unit. Connect the line cord to this connector to provide power to the unit. Damage to the equipment may result if improper line voltage is used. (See line voltage marking on unit).

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 make sure that the amplifier and all associated equipment is properly grounded.

NOTE: FOR U.K. ONLY
As the colors of the wires in the mains lead of this apparatus may not correspond with the colored markings identifying the terminals in your plug, proceed as follows: (1) The wire which is colored green and yellow must be connected to the terminal which is marked by the letter E, or by the Earth symbol, or colored green or green and yellow. (2) The wire which is colored blue must be connected to the terminal which is marked with the letter N, or the color black. (3) The wire which is colored brown must be connected to the terminal which is marked with the letter L, or the color red.

IPR2™ 2000 Specification Sheet

Rated Watts 2ch x 2 ohms	1100 watts 20ms repetitive burst / 900 watts 1% THD both channels driven @ 1kHz.
Rated Watts 2ch x 4 ohms	600 watts 20ms repetitive burst / 570 watts 1% THD / 530 watts 0.15% THD, both channels driven @ 1kHz.
Rated Watts 2ch x 8 ohms	370 watts 20ms repetitive burst / 325 watts 1% THD / 300 watts 0.15% THD, both channels driven @ 1kHz.
Minimum Load Impedance	2 ohms
Maximum RMS Voltage Swing	55volts
Frequency Response	10Hz - 30kHz; +/- 3 dB at 1 watt, eight ohms.
20Hz - 20kHz 2ch x 2 ohms	<0.25% @ 650 watts 20Hz to 4kHz, decreasing to 530 watts @ 20kHz, both channels driven.
20Hz - 20kHz 2ch x 4 ohms	<0.15% @ 470 watts 20Hz to 10kHz, both channels driven.
20Hz - 20kHz 2ch x 8 ohms	<0.15% @ 260 watts 20Hz to 10kHz, both channels driven.
Input CMRR	> - 69 dB @ 1 kHz.
Voltage Gain	x 60 (+35 dB)
Crossover	100Hz switchable 2nd order high pass and 3rd low pass per channel.
Crosstalk	> -70dB @ 1kHz @ 250 watts power @ 8 ohms.
Hum and Noise	> -105 dB, “A” weighted referenced to rated power @ 4 ohms.
Slew Rate	> 12V/µs
Damping Factor (8 ohms)	> 170:1 @ 20Hz - 1kHz @ 8 ohms.
Input Sensitivity	.775 volts +/- 3% for 1kHz 4 ohm rated power, .68 volts +/- 3% for 1kHz 2 ohm rated power.
Input Impedance	15k ohms, balanced and 7.5k ohms unbalanced.
Current Draw @ 1/8 power in VA (watts)	540 (315) @ 2 ohms, 370 (185) @ 4 ohms, 240 (115) @ 8 ohms.
Current Draw @ 1/3 power in VA (watts)	1250 (760) @ 2 ohms, 750 (425) @ 4 ohms, 460 (240) @ 8 ohms.
Idle Consumption	90VA, 40watts.
Cooling	Temperature dependent variable speed 80 mm DC fan.
Controls	2 front panel attenuators, crossover select switch for HPF, Normal and LPF
Indicator LEDs	Five LED indicators per channel: Active, Signal, DDT™, Temperature and DC
Protection	Thermal, DC, subsonic, incorrect loads, under and over voltage.
Connectors	Inputs: Dual Combination 1/4” & XLR, Outputs: Dual 1/4” signal patch, dual twist lock connectors.
Construction	0.062” thick aluminum
Dimensions	3.5”x19”x 10.5” behind front panel + 0.6” for handle
Net Weight	3.23 kg (7.12 lbs.*)
Gross Weight	4.31 kg (9.5 lbs.)

Rated power readings made with BW: 20 Hz to 22 kHz. All power measurements made @ 120 VAC or 240VAC.

2 ohm steady state sine wave power is time limited by circuit breaker

*Net Weight does not include power cord.

IPR2™ 3000 Specification Sheet

Rated Power 2ch x 2 ohms	1750 watts 20ms repetitive burst / 1450 watts 1% THD both ch. driven @ 1kHz.
Rated Power 2ch x 4 ohms	950 watts 20ms repetitive burst / 900 watts 1% THD / 815 watts 0.2% THD, both ch. driven @ 1kHz.
Rated Power 2ch x 8 ohms	525 watts 20ms repetitive burst / 500 watts 1% THD / 430 watts 0.15% THD, both ch. driven @ 1kHz.
Minimum Load Impedance	2 ohms
Maximum RMS Voltage Swing	70 volts
Frequency Response	20 Hz - 22 kHz; +/-.05dB @ 4 ohms
20Hz - 20kHz 2ch x 2 ohms	<0.15% @ 1,200 watts 20 Hz to 3 kHz, decreasing to 1,100 watts @ 20 kHz, both ch. driven.
20Hz - 20kHz 2ch x 4 ohms	<0.15% @ 650 watts 20 Hz to 20 kHz, both ch. driven.
20Hz - 20kHz 2ch x 8 ohms	<0.15% @ 375 watts 20 Hz to 20 kHz, both ch. driven.
Input CMRR	> - 76 dB @ 1 kHz.
Voltage Gain	x 75 (+37dB)
Crossover	100 Hz switchable 2nd order High pass and 3rd order Low Pass per ch.
Crosstalk	> -68 dB @ 1 kHz @ 400 watts @ 8 ohms.
Hum and Noise	> -101.5 dB, "A" weighted referenced to rated power @ 4 ohms.
Slew Rate	> 12V/µs
Damping Factor (8 ohms)	> 215:1 @ 20 Hz - 1 kHz @ 8 ohms
Input Sensitivity	0.775 volts +/- 3% for 1 kHz 4 ohm rated power, 0.730 volts +/- 3% for 1 kHz. 2 ohm rated power
Input Impedance	15 kilohms, balanced and 7.5 kilohms unbalanced.
Current Draw @ 1/8 in VA (watts)	960 (535) @ 2 ohms, 615 (315) @ 4 ohms, 400 (200) @ 8 ohms
Current Draw @ 1/3 in VA (watts)	2065 (1360) @ 2 ohms, 1215 (735) @ 4 ohms, 740 (420) @ 8 ohms
Idle Consumption	160VA, 75 watts
Cooling	Temperature dependent variable speed 80 mm DC fan.
Controls	2 front panel attenuators, crossover select switch for H.P.F, Normal and L.P.F.
Indicator LEDs	Five LED indicators per channel: Active, Signal, DDT™, Temperature and DC
Protection	Thermal, DC, subsonic, incorrect loads, under and over voltage
Connectors	Dual combination 1/4" XLR, dual male XLR input thru, two twist lock connectors
Construction	0.062" aluminum
Dimensions	3.5"x19"x 10.5" behind front panel + 0.6" for handle
Net Weight	5.62 kg (12.4 lbs.*)
Gross Weight	6.80 kg (15.0 lbs.)

Rated power readings made with BW: <10 Hz to 22 kHz. All power measurements made @ 120 VAC or 240VAC.

2 ohm steady state sine wave power is time limited by circuit breaker and AC limitations.

*Net Weight does not include power cord.

Features and specifications subject to change without notice.

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