# Operation Manual

## PCS Series
Professional Rackmount Power Amplifiers

![PCS Amplifiers](image)

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(soundbarrier logo)
13. Unplug this apparatus during lightning or when unused for long periods of time.
14. Refer all servicing to qualified and authorized service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. The apparatus shall be connected to a MAINS socket outlet with a protective grounding connection.
16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.

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Before you get started
Congratulations on your purchase of this Sound Barrier product! This product was carefully packaged in our factory to ensure transport. We recommend that you carefully examine the packaging and its contents for any signs of physical damage that may have occurred during transit.

• If the unit is damaged, please DO NOT RETURN IT TO US, but notify the authorized dealer from which you purchased the product from, otherwise claims for damage or replacement may not be guaranteed.
• Always use the original packaging to avoid damage due to storage or shipping.
• Never let unqualified persons tamper with or operate this product or its packaging.
• Please dispose of all packaging materials in an environmentally responsible fashion.

Initial Operation
Be sure that there is enough space around the unit allow to for proper cooling ventilation. To avoid overheating please do not place your mixing console on high-temperature equipment such as radiators or power amplifiers.

• Please make sure that all units have a proper ground connection. For your safety, never remove or disable the ground conductor from the unit or on the AC power cord. The unit should always be connected to a mains socket outlet with a protective grounding connection.
• When installing the product, ensure the appliance coupler or power cord is easily accessible for disconnection the unit from mains.

Rack Mounting
This amplifier is designed for standard 19” rack mounting as well as “Stack” mounting without a cabinet. Use 4 screws and washers for mounting to the front rack rails. It is highly recommended that the amplifiers weight is supported in the rear, especially for mobile use where the amplifier will be subjected to strong vibrations.

Repair Service
Read the terms and conditions of the warranty (included in the packaging) carefully.
Should your Sound Barrier equipment malfunction, it is our intention to have it repaired as quickly as possible. To arrange for warranty service, please contact the authorized Sound Barrier dealer from which you purchased the equipment from. If the original dealer cannot be located you may contact us via email at techhelp@soundbarrier.com so we may put you in contact with nearest authorized Sound Barrier repair center. A list of authorized Sound Barrier dealers can be found on our web site at www.soundbarrier.com

Equipment Features:
Full Product Specifications and Features are available for each individual model within this manual. Please continue reading the rest of this booklet to familiarize yourself with this product.
1) POWER SWITCH: To turn the unit ON or OFF, press the upper or lower portion of this switch. Before turning on the amplifier, check all connections arid turn down the level controls. Momentary muting is normal when turning the amplifier ON or OFF.

CAUTION: Make sure all your equipment is connected prior to powering ON your amplifier.

CAUTION: Make sure all your equipment is powered OFF prior to powering OFF your amplifier.

2) POWER LED INDICATORS: These LED's illuminate when the amplifier power is turned ON.

3) PROTECT LED INDICATORS: These LED's illuminate if the amplifier's output is shorted, the load impedance is too low or if there is an internal malfunction. When either of these LED's is illuminated, turn off the power and check the output's connections to verify that everything is installed and connected correctly.

4) CLIP LED INDICATORS: The LED's illuminate if any section of the power amplifier's output is within 3dB of clipping. Occasional blinking of the LED's are acceptable but if they illuminate more than intermittently you should turn down either the amplifier's level or reduce the output level of the connected audio devices to avoid audible distortion.

5) SIGNAL LED INDICATORS: These LED indicators illuminate to confirm the presence of an input signal greater than 100mV on that specific channel.

6) LEVEL CONTROLS: Controls the level of signal coming into each channel. The actual voltage attenuation is shown in dB's. Turn the control clockwise if the CLIP LED's illuminate more than intermittently.

7) BRIDGE LED INDICATORS: These LED's illuminate when the amplifier is in BRIDGE MODE.

8) PARALLEL LED INDICATORS: These LED's illuminate when the amplifier is in PARALLEL MODE.

9) 4Ω LED INDICATORS:

10a) 1/4" TRS INPUT CONNECTORS
10b) XLR INPUT CONNECTORS: The 1/4" TRS and XLR connectors are compatible with balanced inputs. Since the 1/4" TRS and XLR connectors are internally wired in parallel, you can parallel this unit with another amplifier by using the 1/4" TRS of the XLR output the signal to the input connectors of another amplifier. The 1/4" TRS jack can also be used for unbalanced inputs. Balanced connections are recommended as they are less prone to AC hum (1/4" connectors are NOT BALANCED). For long cable runs a source output impedance of 500 ohms is needed to avoid signal loss. For short cable runs an unbalanced signal input should be suitable. For stereo (two-channel) operation, use the inputs for both CH-1 and CH-2; for parallel or bridged mono operation, use only CH-1 input. (See MODE SELECTOR SWITCH below for more explanation.)

11) MODE SELECTOR SWITCH: The PCS series amplifiers offer 3 modes of operation: PARALLEL, STEREO & BRIDGED. Slide the switch to one of the three positions for your application.

PARALLEL (MONO) INPUT: This mode allows both channels to operate in parallel with the same signal and without requiring a Y-cord. In this mode the inputs for both channels are internally connected, so that you only need to feed a signal into one of the channels. This still offers independent level control of each channel. It also enables easy “daisy-chaining” with other amps by using the other channel of input connectors.

WARNING: Do not select this “Parallel” mode when feeding the amplifier with 2 separate signals.

WARNING: Do not use both unbalanced and balanced cables in the same set-up as that can unbalance all the connections when daisy-chaining, resulting in hum.

STEREO INPUT: This is the most common mode generally used, and allows independent control of 2 separate signals such as stereo playback, main and monitor live mixes, and bi-amp operation (highs frequencies in one channel and lows frequencies in the other).

BRIDGED MONO: This mode combines the power of both channels to drive a single speaker. In this mode the amp produces 4 times the peak power and 3 times the sustained power into a 4 or 8 ohm speaker than each channel can deliver separately in stereo or parallel mode. Connect the input signal to CH-1 input for bridged mono operation.

WARNING: In this mode the amplifier can deliver high power into a speaker. Make sure that the speaker, connectors and wiring can handle the output.

WARNING: For prolonged overdriven outputs into a 4 or 8 ohm speaker the mains fuse may blow, so care must be taken not to overload the amplifier in such operation.

12) SENSITIVITY SELECTOR: A switch on the rear of the amplifier allows the maximum amplification attainable to be set directly in the input stage. The amplifier has a 1.5V and 0.7V voltage gain setting along with a 1.4V sensitivity setting.

13) GROUND LIFT SWITCH: Switch to LIFT position to disconnect the chassis from the ground, if necessary to eliminate any humming sounds caused by ground loops.

14) L/R CHANNEL OUTPUT CONNECTORS: Connections are as described on the rear panel and in the CONNECTIONS section of this manual.

15) CIRCUIT BREAKER: AC circuit breaker. If the breaker continuously blows or trips, shut off the unit and have it serviced by qualified service personnel.

16) POWER CONNECTOR: The cord connector is used to connect the AC power source to your power amplifier. Use the AC Power cable included.

17) AC SELECTOR SWITCH: This amplifier has been designed to adapt to both American voltage standard (110VAC-120VAC,60HZ) and European Standard (220VAC-240VAC,50HZ). Originally, the voltage switch is set to adapt to American voltage standard. If you want to plug into a European standard voltage, simply move the switch to the 220V position. To prevent damaging your system or yourself please ensure that the unit is disconnected prior to setting the unit to the proper voltage.
1) POWER SWITCH: To turn the unit ON or OFF, press the upper or lower portion of this switch. Before turning on the amplifier, check all connections and turn down the level controls. Momentary muting is normal when turning the amplifier ON or OFF.

**CAUTION:** Make sure all your equipment is connected prior to powering ON your amplifier.

**CAUTION:** Make sure all your equipment is powered OFF prior to powering OFF your amplifier.

2) POWER LED INDICATORS: These LED's illuminate when the amplifier power is turned ON.

3) PROTECT LED INDICATORS: These LED's illuminate if the amplifier/output connection is shorted, the load impedance is too low or if there is an internal malfunction. When either of these LED's is illuminated, turn off the power and check the output's connections to verify that everything is installed and connected correctly.

4) CLIP LED INDICATORS: The LED's illuminate if any section of the power amplifier's outputs are within 3 dB of clipping. Occasional blinking of the LED's are acceptable but if they illuminate more than intermittently you should turn down either the amplifier's level or reduce the level output of the connected audio devices to avoid audible distortion.

5) SIGNAL LED INDICATORS: These LED indicators illuminate to confirm the presence of an input signal greater than 100mV on that specific channel.

6) LEVEL CONTROLS: Controls the level of signal coming into each channel. The actual voltage attenuation is shown in dB's. Turn the controls counter clockwise if the CLIP LED's illuminate more than intermittently.

7) BRIDGE LED INDICATORS: These LED's illuminate when the amplifier is in BRIDGE MODE.

8) PARALLEL LED INDICATORS: These LED's illuminate when the amplifier is in PARALLEL MODE.

9) dB LED INDICATORS: Indicate the signal level of each channel shown in dB's.

10a) XLR INPUT CONNECTORS

10b) COMBI (XLR & 1/4") INPUT CONNECTORS: The XLR & COMBI connectors are compatible with balanced inputs. Since the XLR and COMBI connectors are internally wired in parallel, you can parallel this unit with another amplifier by using the XLR or COMBI to output the signal to the input connectors of another amplifier. Balanced connections are recommended as they are less prone to AC hum (1/4" connectors are NOT BALANCED). For long cable runs a source output impedance of less than 500 ohms is needed to avoid signal loss. For short cable runs an unbalanced signal input should be suitable. For stereo (two-channel) operation, use the inputs for both CH-1 and CH-2; for parallel or bridged mono operation, use only CH-1 Input. (See MODE SELECTOR SWITCH below for more explanation.)

11) MODE SELECTOR SWITCH: The PCS series amplifiers offer 3 modes of operation: PARALLEL, STEREO & BRIDGED. Slide the switch to one of the three positions for your application.

**PARALLEL (MONO) INPUT:** This mode allows both channels to operate in parallel with the same signal and without requiring a Y-cord. In this mode the inputs for both channels are internally connected, so that you only need to feed a signal into one of the channels. This will allow independent level control of each channel. It also enables easy "daisy-chaining" with other amps by using the other channel of input connectors.

**WARNING:** Do not select this "Parallel" mode when feeding the amplifier with 2 separate signals.

**WARNING:** Do not use both unbalanced and balanced cables in the same set-up as that can unbalance all the connections when daisy-chaining, resulting in hum.

**STEREO INPUT:** This is the most common mode generally used, and allows independent control of 2 separate signals such as stereo playback, main monitor live mixes, and bi-amp operation (right frequencies in one channel and low frequencies in the other).

**BRIDGE (MONO) MODE:** This mode combines the power of both channels to drive a single speaker. In this mode the amp produces 4 times the peak power and 3 times the sustained power into a 4 or 8 ohm speaker so each channel can deliver separately in stereo or parallel mode. Connect the input signal to CH-1 input for bridged mono operation.

**WARNING:** In this mode the amplifier can deliver high power into a speaker. Make sure that the speaker, connectors and wiring can handle the output.

**WARNING:** For prolonged overdriven outputs into a 4-ohm speaker the mains fuse may blow, so care must be taken not to overload the amplifier in such operation.

12) SENSITIVITY SELECTOR: A switch on the rear of the amplifier allows the maximum amplification attainable to be set directly in the input stage. The amplifier has a 1.5V and 0.7V voltage gain setting along with a 1.4V sensitivity setting.

13) COMPRESSOR SELECTOR: When the switch is in the OFF position the compressor is bypassed. This compressor only works when the sensitivity switch is set to 10V.

14) GROUND LIFT SWITCH: Switch to LIFT position to disconnect the chassis from the ground, necessary to eliminate any humming sounds caused by ground loops.

15) LR CHANNEL OUTPUT CONNECTORS: Connections are as described on the rear panel and in the CONNECIONS section of this manual.

16) CIRCUIT BREAKER: AC circuit breaker. If the breaker continuously blows or trips, shut off the unit and have it serviced by qualified service personnel.

17) POWER CONNECTOR: The cord connector is used to connect the AC power source to your power amplifier.
1) **POWER SWITCH**: To turn the unit ON or OFF, press the upper or lower portion of this switch. Before turning on the amplifier, check all connections and turn down the level controls. Momentary muting is normal when turning the amplifier ON or OFF.

**CAUTION**: Make sure all your equipment is connected prior to powering ON your amplifier.

**CAUTION**: Make sure all your equipment is powered OFF prior to powering OFF your amplifier.

2) **POWER LED INDICATORS**: These LED's illuminate when the amplifier power is turned ON.

3) **PROTECT LED INDICATORS**: These LED's illuminate if the amplifier input connection is shorted, the load impedance is too low or if there is an internal malfunction. When either of these LED's is illuminated, turn off the power and check the output connections to verify that everything is installed and connected correctly.

4) **CLIP LED INDICATORS**: The LED's illuminate if any section of the power amplifier's outputs are within 3dB of clipping. Occasional blinking of the LED's is acceptable but if they illuminate more than intermittently you should turn down either the amplifier's level or reduce the output level of the connected audio devices to avoid audible distortion.

5) **SIGNAL LED INDICATORS**: These LED Indicators illuminate to confirm the presence of an input signal greater than 100mV on that specific channel.

6) **LEVEL CONTROLS**: Controls the level of signal coming into each channel. The actual voltage attenuation is shown in dB's. Turn the controls counter clockwise if the CLIP LED's illuminate more than intermittently.

7) **BRIDGE LED INDICATORS**: These LED's illuminate when the amplifier is in BRIDGE mode.

8) **PARALLEL LED INDICATORS**: These LED's illuminate when the amplifier is in PARALLEL mode.

9) **dB LED INDICATORS**: Indicates the signal level at each channel from 200mV.

10a) **XLR INPUT CONNECTORS**

10b) **COMB (XLR & 1/4") INPUT CONNECTORS**: The XLR & COMB connectors are compatible with balanced inputs. Since the XLR & COMB connectors are internally wired in parallel, you can parallel this unit with another amplifier by using the XLR or COMB to output the signal to the input connectors of another amplifier. Balanced connections are recommended as they are less prone to AC hum (1/4” connectors are NOT BALANCED). For long cable runs a source output impedance of less than 600 ohms is needed to avoid signal loss. For short cable runs an unbalanced signal output should be suitable. For stereo (two-channel) operation, use the inputs for both CH-1 and CH-2; for parallel or bridged mono operation, use only CH-1 input. (See MODE SELECTOR SWITCH below for more explanation.)

11) **MODE SELECTOR SWITCH**: The PCS series amplifiers offer 3 modes of operation: PARALLEL, STEREO & BRIDGE. Slide the switch to one of the three positions for your application.

13) **Sensitivity SELECTOR**: A switch on the rear of the amplifier allows the maximum amplification attainable to be set directly in the input stage. The amplifier has a 1.5V and 0.7V voltage gain setting along with a 1.4V sensitivity setting.

14) **GROUNDS LIFT SWITCH**: Switch to LIFT position to disconnect the chassis from the ground. If necessary to eliminate any humming sounds caused by ground loops.

15) **L/R CHANNEL OUTPUT CONNECTORS**: Connections are as described on the rear panel and in the CONNECTIONS section of this manual.

16) **CIRCUIT BREAKER**: AC circuit breaker. If the breaker continuously blows or trips, shut off the unit and have it serviced by qualified service personnel.

17) **POWER CONNECTOR**: The cord connector is used to connect the AC power source to your power amplifier.
PCS6000

1) POWER SWITCH: To turn the unit ON or OFF, press the upper or lower portion of this switch. Before turning on the amplifier, check all connections and turn down the level controls. Momentary muting is normal when turning the amplifier ON or OFF.

CAUTION: Make sure all your equipment is connected prior to powering ON your amplifier.

2) POWER LED INDICATORS: These LEDs illuminate when the amplifier power is turned ON.

3) PROTECT LED INDICATORS: These LED’s illuminate if the amplifier’s output connection is shorted, the load impedance is too low or if there is an internal malfunction. When either of these LED’s is illuminated, turn off the power and check the output’s connections to verify that everything is installed and connected correctly.

4) CLIP LED INDICATORS: The LED’s illuminate if any section of the power amplifier’s outputs are within 3dB of clipping. Occasional blinking of the LED’s are acceptable but if they illuminate more than intermittently you should turn down either the amplifier’s level or reduce the output level of the connected audio devices to avoid audible distortion.

5) SIGNAL LED INDICATORS: These LED indicators illuminate to confirm the presence of an input signal greater than 100mV on that specific channel.

6) LEVEL CONTROLS: Controls the level of signal coming into each channel. The actual voltage attenuation is shown in dB’s. Turn the controls counter clockwise if the CLIP LED’s illuminate more than intermittently.

7) dB LED INDICATORS: Indicated the signal level of each channel shown in dB’s.

8a) XLR INPUT CONNECTORS

8b) COMBI (XLR & 1/4”) INPUT CONNECTORS: The XLR & COMBI connectors are compatible with balanced inputs. Since the XLR and COMBI connectors are internally wired in parallel, you can parallel this unit with another amplifier by using the XLR or COMBI to output the signal to the input connectors of another amplifier. Balanced connections are recommended as they are less prone to AC hum (1/4” connectors are NOT BALANCED). For long cable runs a source output impedance of less than 600 ohms is needed to avoid signal loss. For short cable runs an unbalanced signal input should be suitable. For stereo (two-channel) operation, use the inputs for both CH-1 and CH-2, for parallel or bridged mono operation, use only CH-1 input. (See MODE SELECTOR SWITCH below for more explanation.)

10) GROUND LIFT SWITCH: Switch to LIFT position to disconnect the chassis from the ground. If necessary to eliminate any humming sounds caused by ground loops.

11) MODE SELECTOR SWITCH: The PCS series amplifiers offer 3 modes of operation: PARALLEL, STEREO & BRIDGED. Slide the switch to one of the three positions for your application.

PARALLEL (MONO) INPUT: This mode allows both channels to operate in parallel with the same signal and without requiring a Y-cord. In this mode the inputs for both channels are internally connected, so that you only need to feed a signal into one of the channels. This will allow independent level control of each channel. It also enables easy “daisy chaining” with other amps by using the other channel of input connectors.

WARNING: Do not select this “Parallel” mode when feeding the amplifier with 2 separate signals.

WARNING: Do not use both unbalanced and balanced cables in the same set-up as that can unbalance all the connections when daisy chaining, resulting in hum.

STEREO INPUT: This is the most common mode generally used, and allows independent control of 2 separate signals such as stereo playback, main and monitor live mixes, and bi-amp operation (highs in one channel and lows in the other).

BRIDGED MONO: This mode combines the power of both channels to drive a single speaker. In this mode the amp produces 4 times the peak power and 3 times the sustained power into a 4 or 8-ohm speaker than each channel can deliver separately in stereo or parallel mode. Connect the input signal to CH-1 input for bridged mono Operation.

WARNING: In this mode the amplifier can deliver high power into a speaker. Make sure that the speaker, connectors and wiring can handle this output.

WARNING: For prolonged overdriven outputs into a 4 ohm speaker the mains fuse may blow, so care must be taken not to overload the amplifier in such operation.

12) SENSIVITY SELECTOR: A switch on the rear of the amplifier allows the maximum amplification attainable to be set directly in the input stage. The amplifier has a 0.5V and 0.7V voltage gain setting along with a 1.4V sensitivity setting.

13) GROUND LIFT SWITCH: Switch to LIFT position to disconnect the chassis from the ground. If necessary to eliminate any humming sounds caused by ground loops.

16) CURTAIN BREAKER: AC circuit breaker. If the breaker continuously blows or trips, shut off the unit and have it serviced by qualified service personnel.

17) POWER CONNECTOR: The cord connector is used to connect the AC power source to your power amplifier.