



Owner's Reference

Owner's Reference BHK Signature Preamplifier

Instructions for Use



BHK Signature Preamplifier™

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15-071-01-1

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Rev A



Introduction

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Important Safety Instructions



Read these instructions
Heed all warnings
Follow all instructions



WARNING. TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

Clean only with a dry cloth.

Do not place flammable material on top of or beneath the component.

All PS Audio components require adequate ventilation at all times during operation. Rack mounting is acceptable where appropriate.

Do not remove or bypass the ground pin on the end of the AC cord unless absolutely necessary to reduce hum from ground loops of connected equipment. This may cause RFI (radio frequency interference) to be induced into your playback setup. All PS products ship with a grounding type plug. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Unplug this apparatus during lightning storms or when unused for long periods of time.

When making connections to this or any other component, make sure all components are off. Turn off all systems' power before connecting the PS Audio component to any other component. Make sure all cable terminations are of the highest quality.

There are no user serviceable fuses inside this product.

THERE ARE NO USER-SERVICEABLE PARTS INSIDE ANY PS AUDIO PRODUCT. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL

Please contact your authorized dealer, distributor, or PS Audio if you have any questions not addressed in this reference manual.

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The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.



The lightning flash with arrowhead within a triangle is intended to tell the user that parts inside the product are a risk of electric shock to persons.





Introduction

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Thank You

Thank you for your purchase of the PS Audio® BHK Signature Preamplifier.

The PS Audio BHK Signature Preamplifier (BHK Preamplifier) is a state-of-the-art instrument designed to provide amplification, control, and interfacing tasks between a 2-channel power amplifier, or headphones, and sources in a high end music system.

Designed by Bascom H. King

Designed by world-renowned analog circuit designer, Bascom H. King, (BHK) the BHK Preamplifier represents the culmination of one man's half century of design experience, as well as a lifelong passion—an obsession really—with the art of perfect amplification. BHK has designed some of the finest audio equipment in the world from renowned companies like Constellation Audio, Marantz, Conrad Johnson, and Infinity. PS Audio is proud to have provided the platform and engineering resources that allowed BHK to place his best efforts in this, his only signature preamplifier worthy of his namesake on the front panel.

A special thank you must go to our engineering team and in particular, PS Audio Chief Engineer, Bob Stadtherr, for his tireless efforts and work building Bascom's dream preamplifier. A true dream team.

Dual 12AU7 Triodes

The BHK Signature Preamplifier features two 12AU7 dual triode vacuum tubes in the input stage that act as a zero feedback balanced input amplification pair. A unique self biasing constant current source and user selectable switch combination allows those who like to roll their own tube selections to place any acceptable 6, 7 or 12 series vacuum tubes inside the preamp. The twin hand-selected vacuum tubes that ship with the BHK are the preferred models we recommend and use in PS Audio's Music Room One reference system.

5 Single Ended and Balanced Inputs

The BHK Signature Preamplifier features 5 identical balanced and single ended inputs. Each of the inputs, whether single ended (RCA) or balanced (XLR) are immediately converted to a pure balanced signal by the dual triode vacuum tube for lowest distortion, highest linearity performance. Input switching is accomplished through hand-selected double-pole double-throw, gold plated relays that we've chosen for their sonic neutrality. The signals, once selected, are passed directly to the attenuator controlling both volume and balance.

Unique Volume and Balance Controls

The volume and balance control duties are handled by a combination of an input stepped attenuator, built around the highest quality passive components for coarse volume adjustments, coupled with controlling the actual gain of the vacuum tube for finer steps. This unique topology, which can be controlled from either the front panel rotary controller or the remote control, provides the lowest possible impact on music passing through—and is one of the primary reasons the BHK Signature presents music in such a revealing, open manner.

Class A MOSFET Design

The BHK Signature preamplifier output stage is a high-bias class A MOSFET design that is unaffected by cable and power amplifier interface challenges. Simultaneous connections of both single ended (RCA) and balanced (XLR) outputs have minimal impact on the delicate vacuum tube gain stage and provide remarkable isolation between source components and the power amplifier of your system.



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This high current low impedance Class A output stage is part of the reason the BHK Signature delivers music in such an effortless fashion. One of the first qualities owners of the preamplifier will appreciate is its remarkable ability to isolate source and control from the power amplifier – and one of the principle factors in the BHK Signature's extraordinary life-like presentation of music, preserving every nuance in your media.

The Headphone Amplifier

Not every system is based exclusively around the loudspeaker and power amplifier. Many of today's finest systems incorporate high-end headphones as either an adjunct to the main system or are the main system. Built into the BHK Signature is a state of the art headphone amplifier capable of delivering near perfect performance for any high-end headphone. The BHK Signature headphone amplifier was borne from years of work on such products as the Audeze King (designed by BHK) among others. Extremely low–near zero–output impedance, zero feedback, transformer coupled, MOSFET and discrete, the internal headphone amplifier inside the BHK Signature is a tour de force that honors the music the designer worked so hard to preserve.

Oversize Power Transformer

The BHK Signature leverages an oversized toroidal analog power supply feeding 5 MOSFET based discrete regulators. Each of the regulators is based on years of experimenting and listening to find the best sounding architecture.

All Discrete Construction

Most modern audio products rely upon surface mount components to pass audio signals. PS Audio also uses sophisticated surface mount parts in our digital products because they have advantages unavailable with through-hole technology. The same cannot always be said for high-end analog electronics, like those inside the BHK Signature Preamplifier. When compromise is not an option, analog audio products benefit from incorporating through-hole discrete parts in the signal path. Hand-selected through-hole PRP resistors, high grade Audiophile capacitors and the finest of discrete parts are used throughout the BHK Signature Preamplifier. Nothing was spared in its design. Even the solder we use has been auditioned for best sound.

Balanced Design

Regardless of the type of input, single ended (RCA) or balanced (XLR), the vacuum tube input stage remains fully balanced for lowest distortion and highest linearity.

Standby Mode

It is important for any high-end audio product to remain active for best sound quality, and the BHK Signature is no exception. Using the front panel PS logo button, the preamplifier can easily be placed in standby mode or activated to play music. When in standby mode, all the internal solid state circuitry such as the headphone amplifier, voltage regulators and high current output stage remain active, while the input vacuum tubes are turned off, thus preserving their life.

The front panel OLED display on the BHK Signature Preamplifier is deceptively simple. Touch the single button to switch inputs, or use the supplied remote control. But hold down the front panel button and you enter the setup mode. Here, HT bypass modes for each input, as well as custom input naming can be accommodated to customize the BHK Signature to your system.

Extended Frequency Response

Though humans, even those with the best of hearing, cannot perceive frequencies extending beyond 20kHz or below 20Hz, it is sonically critical a high-end preamplifier extend its reach beyond those limits. It has been demonstrated, time and again, that audio amplification products with extended bandwidth sound more open and natural than their frequency restricted counterparts. Reasons vary, but essentially, an unrestricted bandwidth of both high and low frequencies assures zero phase shift performance in the audio band that permits overtones their full harmonic richness and transient rise



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The Quest for Perfection

times identical to the recording – and all without compromise. The BHK Signature extends well beyond 100kHz on the top end, and well below 0.1Hz on the low end. This extended bandwidth is partly responsible for the effortless presentation of music BHK preamplifier owners enjoy.

The BHK Signature is the culmination of one man's quest for musical perfection, coupled with one company's obsession to bring musical truth to as many people as it can. PS Audio has consistently sought out the finest design talent both from within and from outside, for the benefit of music lovers around the world. The BHK Signature embodies the lifelong design experience of Bascom H. King, and executed by PS Audio's chief engineer, Bob Stadtherr – responsible for mechanizing everything inside that makes it work. A strong engineering and production team, lead by Dave Paananen, coupled with the ears, experience, and design chops of one of the legends of high-end audio, Bascom H. King, help make the BHK Signature one of the finest preamplifiers the world has ever enjoyed.

Proudly built in Boulder, Colorado by hand.



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Location

A good location for BHK Preamplifier is in a cabinet or on a shelf at an easily accessible height.

Care should be taken to keep it away from power amplifiers or large potentially hum inducing products. The IR (infrared) receiver for the remote is located to the left of the volume control knob. A direct line of sight will help with the BHK's IR sensor.

The BHK Preamplifier is part of the PS Audio PerfectWave family and designed to stack on top of each other if they are not placed on separate shelves. To do this, remove the feet from the unit you wish to place on top of the stack. Carefully place the top unit so it rests on the bottom unit. You will note that the bottom of the corners of each PerfectWave piece is specially designed to mate with the top corners of another PerfectWave.

Inputs

The BHK Preamplifier features 5 analog inputs, accessible via the 5 balanced XLR connectors or the associated 5 single ended RCA connectors. Analog sources connected to either the RCA or XLR inputs will be treated as balanced signals.

Only one of the input types, XLR or RCA, may be connected on each input. You cannot connect both RCA and XLR on the same input at the same time. Choose one per input only.

The BHK Preamplifier has two output receptacle types: RCA and XLR. The RCA connector delivers a single ended output for compatible power amplifiers. The XLR connector delivers a balanced signal to compatible power amplification devices.

Outputs

Users may connect both the RCA and the XLR outputs at the same time. This permits users to use one output for a power amplifier, the other for a subwoofer (for example). Please be advised that the XLR output has twice the output voltage as the RCA input. Typically, this results in 6dB louder sound through units connected via the XLR input. Care should be taken to match levels accordingly.

Unpacking the Unit

- Carefully unpack the unit. Use the included cotton gloves to remove the unit and place in the chosen location.
- The piano black top cover has a protective plastic film. Remove this film.
- Connect the BHK Preamplifier to your analog sources using the appropriate connections.
- Connect the BHK Preamplifier to your power amplifier using the appropriate connections.
- Connect the AC cable into the receptacle in back and plug the unit into your Power Plant or into the wall. The BHK Preamplifier is sensitive to the quality of the incoming AC power as well as the input AC power cable. We recommend the use of a PS Audio Power Plant regenerator for the AC power, and quality power cable. Care and attention placed in these sensitive areas pays benefits in sound quality and helps maximize your investment in this quality musical instrument.

PS Audio Factory Warranty

PS Audio products come from the factory with a 3-year warranty. Please register your new BHK Signature Preamplifier. Registration takes just a few minutes, helps us inform you about future upgrades, keeps track of your serial number and allows us to maintain the highest standards of product quality of any company.



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Warranty Registration

To register your new unit, look on the back panel of the BHK Preamplifier and note the serial number. Using any web browser, go to www.psaudio.com and click on **Register Products**.

Once you have completed the registration process you can then go to the PS website and look at the My Registered Products page. The link to this page is located at the top right hand corner of the website once you are logged in. If you do not have web access you may register the unit via mail or phone. Notification of upgrades to this product will be available only to registered owners via the web and email. Full warranty information is included in this manual at the end.

CONNECTING TO SOURCES



Connecting to Analog Sources

Each of the 5 inputs on the BHK Preamplifier has both an RCA and an XLR input available. Only one of these connectors may be used at a time on any one input. If your source component has both RCA and XLR outputs available to connect to the preamplifier, it is always preferable to connect via the balanced, XLR if possible. Once connected, either through the RCA or the XLR connector, the BHK Preamplifier will now be connected without any further action on the user's part (some preamplifiers require the user to select between RCA/XLR via a switch).

Each of the 5 inputs on the preamplifier are identical and you may select any to connect to any source other than directly to a turntable.

Use an External Phono Preamplifier

The BHK Preamplifier does not have a built in RIAA phono preamplifier. If you wish to use a turntable, you will need to purchase a separate phono preamplifier first, such as our NuWave Phono Preamplifier or the upcoming BHK Phono Preamplifier. Once purchased, use any of the 5 inputs on the BHK Preamplifier to connect the phono stage output.

Assign Input Names

You can assign each of the inputs a unique name. You may also choose any one of the 5 inputs as a home theater bypass. These options are available via the front panel command screen. Please refer to the front panel setup menu later in this manual, for details.



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Connect the Preamplifier to the Power Amplifier

The BHK Preamplifier is designed to connect to your power amplifier. You can use either the XLR balanced outputs or the single ended RCA outputs to connect. If you are bi-amping, it is permissible to employ an RCA or XLR external splitter.

If you wish to use one set of outputs for the power amplifier, like the XLR connectors, and the RCA to feed a subwoofer, (for example) this works fine.

Connecting cables of any length of 50 feet or less are acceptable, though cables longer than 10 feet may be less problematic if they are balanced interconnects.

The quality of the connecting cable is important. Pay particular attention to the output cable pedigree as it can have an impact on the performance qualities of the sound.

Trigger Jacks

There are two trigger ports on the rear panel of the BHK Preamplifier. Each of the two trigger jacks outputs a +12V signal to connected equipment when the BHK Preamplifier front panel standby button is activated. The +12V signal will stop when the BHK preamplifier is in standby mode. These trigger outputs are typically used to switch on/off compatible power amplifiers when the BHK Preamplifier is active. The matching BHK Signature 250 or 300 power amplifier series has matching trigger inputs, as do many other power amplifier types.

Activate the Rear Panel Power Switch

POWER UP THE UNIT

Once everything is connected, including the power cable to an appropriate AC power source, it is time to power up the BHK Preamplifier. Switch the master power switch, located on the rear panel of the BHK Preamplifier, to the ON position. We recommend this master power switch be left in the ON position and AC power continue to be supplied even when the preamplifier is not in use.

Press the Standby Button

Push the front panel PS Logo Standby/Operate button, located on the top left corner of the front panel of the BHK Preamplifier.





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Front Panel Logo Standby Button

The front panel PS logo button is the Ready/Operation Mode control for the BHK Preamplifier. This control has two modes: Ready Mode and Operational Mode. Ready Mode (Standby) is designed to keep power on to critical internal circuitry including power supply capacitors, thermally sensitive semiconductors and integrated circuits. In the Ready Mode the vacuum tubes are switched off to preserve their life. In addition, the outputs are also turned off, but all the unit's critical internal solid state circuitry remains active.

As soon as the button is pressed you enter the Operational Mode and the front panel display will show the initializing information and begin a 30 second countdown as the vacuum tube is activated. At the conclusion of the 30 second countdown, the outputs are activated and the BHK Preamplifier is ready for operation.

Choose an Input

SELECT THE INPUT

The first step is to select the input you wish to play. This can be accomplished with the remote control or through the front panel selector and display.

Touch the selector button to the left of the screen. The first press will show the active input. Touch again and you toggle to the next input.



Custom Naming

INPUT NAMING

For greater convenience it is possible to assign a custom name to each input such as phono, DAC, etc. To name each input, you must first enter the setup display. Select the input you wish to change. Once selected, hold the selector button down for 3 seconds to enter the display mode.

The first screen is balance. Press the selector button once again, while in the setup mode, to toggle to the input naming screen. The input already selected will appear. Depress and hold the selector button until the Name Edit Screen is displayed.

The cursor sits under the letter you can modify, in this example, the cursor is sitting under the first letter of Input, "I". The alpha numeric string choices below the name selects the first character (or space) displayed. In this example the A will be selected. Rotate the volume knob to choose which letter you desire. Press the selector button and that letter will appear as part of the name and the cursor will move to the next letter in the name. Repeat the process until you spell the input name. There is one space included, as well as a back character < that will move the cursor back one space. There is also an escape character, ^, which leaves the edit menu without further changes. Press and hold the



selector button to leave the naming edit screen.

Home Theater
Bypass

HT BYPASS FUNCTION

The BHK Preamplifier features the ability to assign any of the 5 inputs as a Home Theater Bypass. The purpose of this function is to enable surround sound users a fixed volume level when playing movies, or when the input volume level is controlled outside the BHK Preamplifier. In some cases, home



theater owners may share the front left and right loudspeakers with their home theater setup, enabling them to use the BHK preamp as their 2-channel control center when playing music, then using the same left and right front channels when watching a film.

To assign any one of the 5 channels as the HT input (where you would connect the left and right channels of your SSP to), press and hold the left button to enter the setup mode.

Toggle the button until you reach the HT setup mode. Press and hold the select button to enter the HT Setup edit menu. Rotate the level control until you select the appropriate input you wish to assign as the HT input.

In this example we will select Input 2 as the HT input. Press the selector button to assign the HT channel to Input 2.



Next you need to set the level for the assigned channel. Once in HT mode, the assigned level will be

fixed by this setting. The next screen appears. when you select the desired channel.

In this example Input 2 is set to the HT mode and using the level control, we have assigned level 77. If you are happy with that level, press the selector button to finish. You can always return to this menu and readjust the level if you need to.

In some cases you may wish to either change the input or you may wish to turn off the HT bypass mode. To do either, start the above process over by entering the setup menu (press and hold the selector button). Toggle to the HT menu, press and hold the select button to enter the HT Edit mode.



Using the level control, turn the knob until you get to the all zero input. Then press the selector button again to set the choice.

Channel Balance

SETTING THE BALANCE

In rare cases it may be necessary to change relative level between the left and right channels. This is handled by the balance control. The balance control can be accessed through the supplied remote control, or through the setup menu.

To access Balance through the setup menu, enter the setup menu (press and hold the button for 3 seconds).

To adjust the balance between channels, turn the rotary control to the left or the right and the display will reflect the changes you have made.

Once the balance has been set, either by the remote control or through the setup menu, the display will always remind you by placing an arrow to the side of the volume numbers as to the direction the balance is skewed towards. A right facing arrow, for example, indicates the balance has shifted louder on the right channel.

To go back to perfect balance, simply reverse the process of setting the channel imbalance.



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Control Software

VERSION NUMBER

The BHK Preampfier is 100% analog in its signal path. Control and display functions are handled by a microprocessor operating on the display board. The microprocessor runs the display, responds to the volume control and the remote control. No digital processing of any kind occurs in the BHK Preampfier signal path. Think of the microprocessor as taking care of the housecleaning chores.

The microprocessor runs on software. Unlike our DirectStream DAC, which also uses software, no change in sound quality of the BHK Preampfier will ever be affected by a change in software, since it is never related to the signal path in any way. The display will show the Version of software installed. Changes to the software would be rare. Once in the setup menu, the version is displayed.

+12v Trigger

TRIGGER SETTINGS

The BHK Preamplifier offers twin trigger output ports. These ports are located on the rear panel of the BHK Preamplifier, and are labeled Trigger Out. Triggers are 12 volt switches designed to control connected equipment. When the BHK Preamplifier is switched from the Ready Mode (Standby) from the front panel PS logo button, to the Operation Mode, the trigger output will switch from OFF to produce +12 volts. When connected to a compatible piece of equipment, such as a power amplifier, the trigger will turn on or off the power amplifier. Thus, pressing the front panel button to turn on the BHK Preamplifier, will also turn the rest of the system on.

The trigger function includes an adjustable delay. It makes sense to let the preamplifier have a few seconds to start warming up before turning on the power amplifier with the trigger jack. To set the delay time, enter the setup menu (press and hold the button for 3 seconds). Toggle the selector button to the Trigger menu.

Turn the level control up or down to adjust the length of delay time for the trigger output to activate. Once you have the desired delay time, press the button on the left side of the display to set the time and return to the operational menu.



Changing Tubes

TUBE ROLLING

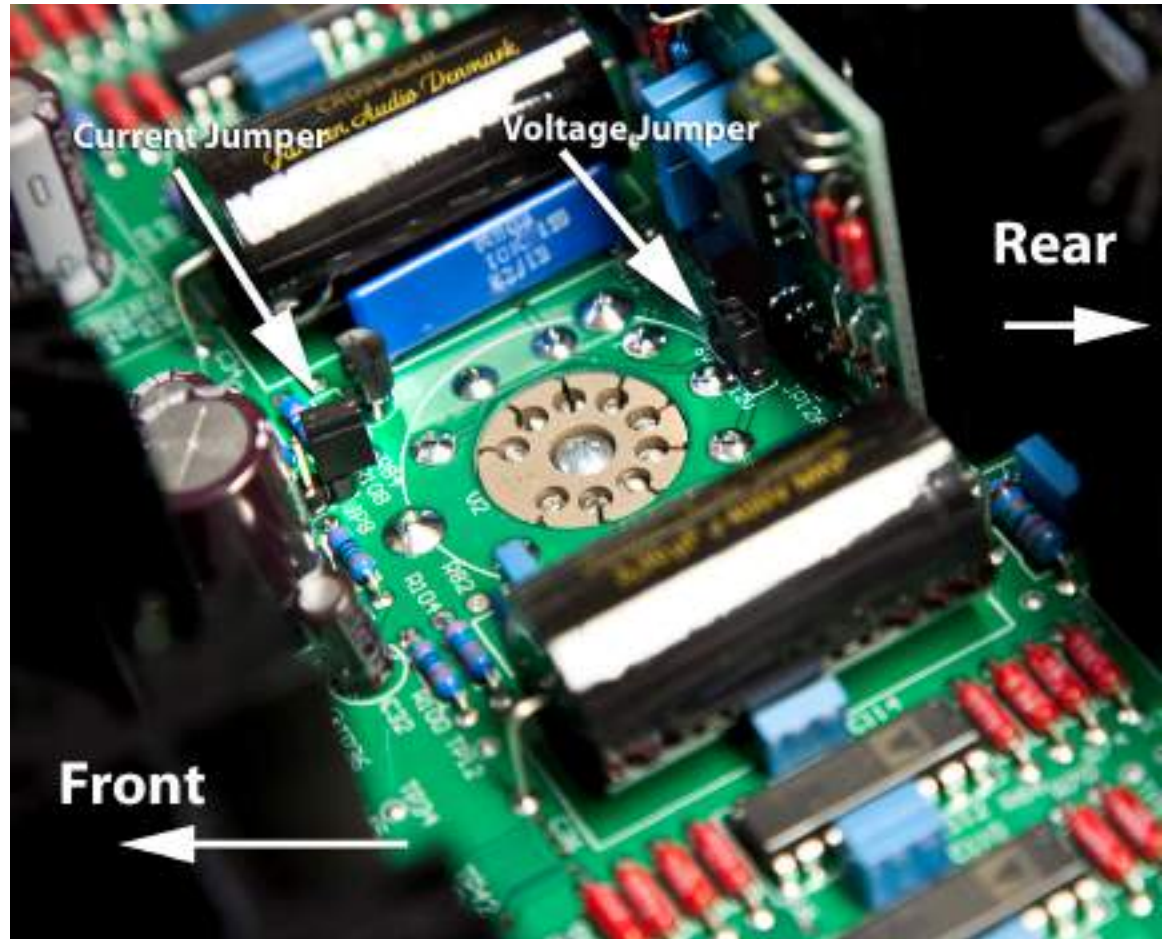
The BHK Preamplifier ships with a matched pair of 12AU7 vacuum tubes that we have hand selected. As with any vacuum tube based product, the sound of the system depends on the type of tubes in use. You may wish to experiment with other tubes in a process commonly referred to as tube rolling.

To access the tubes, first remove the AC power cord from the rear of the BHK Preamplifier. **DO NOT ATTEMPT TO ACCESS INSIDE THE PREAMPLIFIER WHILE IT IS CONNECTED TO AC POWER. THERE ARE LETHAL VOLTAGES INSIDE.**

Remove the top cover grille using a small screwdriver. Carefully remove the tubes and replace with the new ones. Place the top cover back on before powering the unit back up again.

The BHK preamplifier is supplied with 12AU7 dual triode vacuum tubes. These have a heater (filament) voltage of 12 volts (that's what the "12" in 12AU7 indicates). Replace these tubes with a similar design that runs on +12 volts for its filament voltage.

It is possible to use a lower voltage tube, such as a 6 or 7 series dual triode. To use a +6 or 7 volt tube, you must change the filament voltage. This can be accomplished by moving two jumpers,



labeled JP11A and JP12A, inside the BHK Preamplifier. You can also change the bias current running through the tube if you wish. The bias we use from the factory is 4 milliamperes. Using the second internal jumper set, labeled JP7 and JP8, this can be increased to 5 milliamperes by using the supplied connector to jumper JP7 and JP8 (they are normally not jumpered for 4 ma). If you don't understand these setting and terms, best to probably leave it at the factory setting. Otherwise, if you really need to know, contact our service department.

HEADPHONE AMPLIFIER

The BHK Preamplifier features a state of the art discrete MOSFET headphone power amplifier inside. Designed with a love of high-end headphones in mind, Bascom King built a stunning amplification device internal to the preamplifier.

Headphones

The circuit takes the signal after the volume control and the vacuum tube, but before the preamplifier's MOSFET output stage. Specific to headphones, the internal MOSFET headphone amplifier is capable of driving nearly any headphone made.



When you insert the headphone jack into the front panel headphone connector, the preamplifier will automatically disconnect the preamplifier outputs. This permits the use of headphones without also having the loudspeakers play at the same time.

THE REMOTE CONTROL

The BHK Preamplifier comes with a remote control that will handle most functions on the preamplifier. The device is an infra red operated hand-held instrument that must be pointed at the BHK Preamplifier to work. Controls are mostly self explanatory.

OFF

The BHK Preamplifier remote control features a separate OFF button that places the BHK Preamplifier in the Ready (Standby) mode to preserve the life of the vacuum tubes. As long as the rear panel AC master power switch remains on, the solid state circuitry inside the instrument remains ready to perform at its best, quickly. We recommend using the remote OFF function when you have finished a listening session (or manually toggle it off from the front panel logo button).



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ON

The master ON button will take all PS Audio PerfectWave products out of Ready (Standby) mode. If just the BHK Preamplifier has been placed in Ready Mode, pressing this button will turn it back on without affecting any other piece of PerfectWave gear.

DIM

The DIM function on the remote control blanks the display on the preamplifier. The display will return for 7 seconds whenever any button on the remote is pressed, then blank again. To turn the DIM feature off, press the master ON button.





Troubleshooting

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Doesn't Seem to Turn On	<p>If the front panel lights and display are not functional, check to make sure you have the unit plugged into an AC outlet. Check to make sure the rear panel master power switch is in the UP and ON position. Press the front panel PS Audio Logo button, located on the far left corner of the preamplifier's front panel.</p> <p>Make sure the display DIM function has been deactivated. Press the master ON button on the remote control.</p>
Turns On or Off Without Warning	<p>If the unit inexplicably turns on or off, check to make sure the front panel Standby button, the PS logo light, isn't sticking to the sides of the front panel. Humidity, shipping, excessive movement can sometimes pressure the logo button to stick. Pushing it in and out with small force, or wiggling it can often free the button.</p>
No Sound	<p>If no sound comes out of the system with the BHK Preamplifier connected, there are several areas to check.</p> <p>First check the BHK preamplifier itself. Make sure you're on the correct input. Push the select button to the left of the display screen. One push displays the input you're currently on. Make certain that is the one you wish to be playing.</p> <p>Next make certain you haven't engaged the Mute function. When engaged from the remote control, an M will appear to the right of the volume level on the front panel display. Press the Mute button just above the word Preamp on the remote control to disengage.</p> <p>If you're playing on loudspeakers, check to make sure you haven't got a headphone or headphone jack plugged into the BHK Preamplifier's headphone input. The preamp's outputs are automatically disconnected when a headphone jack has been inserted.</p>
Channel Imbalance	<p>If there is too much energy in one channel or the other, when you believe there should be equal levels per channel, check to make sure you haven't inadvertently engaged the balance control. The balance control is located on the remote right above the word Preamp. Touch either the left or right facing arrow and the display should show a 0 if the balance has not been engaged.</p> <p>If the balance control has been activated, you will also see a right or left facing arrow to the side of the level indicator's numeric value on the BHK Preamplifier's screen.</p>
Volume Control Does Not Respond	<p>If, for some reason, the volume control does not respond, it may mean you are in the HT (Home Theater) mode. Switch inputs and see if another input does respond to the volume control. When in the HT mode, an HT will appear near the bottom of the BHK Preamplifier's screen. You can turn the HT feature on or off via the setup menu. Please refer to this manual's section on setting the HT mode.</p>
If You Have Hum	<p>If you experience a hum through the speakers or the headphones this can be caused by several things. The first is the source. If there is an excessive amount of buzz or noise from the loudspeaker, it may</p>



Troubleshooting

Owner's Reference BHK Signature Preamp

be caused by a ground loop, a light dimmer in the home, poor AC power, or any number of causes. The quickest way to determine where to start your search is to simply turn the BHK Preamp off, disconnect the audio cables between it and the amplifier, and see if the hum goes away when you turn the amplifier back on. If it does, it's most likely a problem with your power amplifier. Please refer servicing questions to the manufacturer.

Hum Busting

If this doesn't solve the problem, reconnect the BHK Preamp and follow these easy humbusting tips.

The easiest way to figure out where ground loop problems lie is by the process of elimination. You need to determine where the hum or buzz is coming from within your system.

If you've determined, through the first step in this tutorial, that the power amplifier does not have hum when disconnected from the system, your next step would be to disconnect all inputs to the preamp. Once these are disconnected, and the preamp is connected only to the power amplifier, turn the system on and again, listen for hum. Should the hum now appear, it is likely a ground loop interaction with the power amp. Try an AC cheater plug to break the ground loop. Cheater plugs are simple devices that convert a three prong AC plug into a two prong AC plug and in the act of converting three prongs, to two prongs, the ground from the wall socket is disconnected. Try one of these on the preamp, or the power amp, or both.

If you determine that there is still no hum present when the preamp and power amp are connected with no inputs, then selectively begin plugging in your various sources to the preamp one at a time. After each connection, check for hum until you discover the humming culprit.

Cable and set top boxes for televisions, surround processors, and any device that is connected to a television cable or satellite dish can cause a loud buzz and should always be suspect. If, by the process of elimination described above, you determine it is a component like a cable box that is causing the hum/buzz to occur, and using a cheater plug doesn't help matters, it may be necessary to isolate the cable connection (CATV) with an isolation transformer. This inexpensive device is available at most Wal Mart, Radio Shack or department store type outlets and is sometimes called a 'matching transformer'. If you have problems finding one, call your local cable TV company for advice. The matching transformer will be placed between the cable TV and the set top box, cable converter, or surround/video processor.

Just remember, take the system down to its simplest level of connection. Find a way to hook the system up with as many pieces of the system missing or not connected. Keep it simple and get it to the point where the hum's gone. Then start adding back components one at a time until the hum returns.

Finding the problem is 9/10th of the work in finding a solution.



Warranty

Owner's Reference BHK Signature Preamplifier

Limited Three Year Warranty

Should I Register My Product?

- Registering your product validates the warranty start date.
- If you do not register your product within 30 days of service, a copy of your purchase receipt from an authorized PS Audio dealer may be used as a proof of purchase to establish the warranty start date.
- If no proof of purchase from an authorized PS Audio dealer or registration is provided, the production date of the product will be used to determine the warranty start date.
- Registration can be completed online, by phone, by mail, or by email.
- You may wish to sign up for PS Audio's monthly newsletters, specials, product updates, and/or Paul's Daily Posts.

What Does this Warranty Cover?

This warranty covers defects in material and workmanship for products purchased from PS Audio or its authorized dealers and agents.

What Will PS Audio Do to Correct the Problem?

In the event your product fails your sole remedy under this limited warranty shall be to return the product to PS Audio or an authorized PS Audio repair center. The product will be repaired without charge for parts or labor, replaced, or the purchase price refunded through the original point of purchase, at the option of PS Audio.

What is the Period of Coverage?

This limited warranty is in effect for 3 years from the date the unit was first purchased from PS Audio or its dealers and agents.

Who Pays for Shipping?

You are responsible to pay for the safe and proper shipment of the warranted product to PS Audio or its authorized repair center.

PS Audio or its authorized repair center will pay the cost of returning the repaired or replacement product to you under this warranty.

What Does this Warranty Not Cover?

- This warranty does not cover damage due to: Accidents, carelessness, improper transportation, misuse, neglect, or abuse
- Failure to follow the operating instructions that are provided by PS Audio in the owner's manuals (available for download at psaudio.com)
- Use in any manner inconsistent with PS Audio's operating instructions (available for download at psaudio.com)
- Lack of routine maintenance
- Connection to an improper voltage supply
- Alterations or modifications to the unit



Warranty

Owner's Reference BHK Signature Preamplifier

- Improper or unauthorized repair, including repairs not authorized by PS Audio or a PS Audio authorized repair center
- Fire, lightning, flood, "acts of God," or other contingencies beyond the control of PS Audio
- Products purchased through an unauthorized source (if you have questions as to whether or not a dealer is authorized, please contact customer support at psaudio.com)
- Products with a factory-applied serial number that has in any way been altered, defaced, or removed

Limitations on PS Audio's Obligations Under this Warranty

- In no event will PS Audio's liability to you exceed the original purchase price of the unit.
- This warranty does not cover the cost of custom installation, customer instruction, setup adjustments, or signal reception problems.
- This warranty does not cover consequential and incidental damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- In the event your warranted product cannot be repaired, PS Audio will replace or refund the unit. We reserve the right to replace any out-of-stock, discontinued, or limited edition products with a comparable product. Discontinued products may not be available for warranty replacement.

How Can the Warranty be Transferred?

This warranty is for the benefit of the original purchaser of the product. The warranty may be transferred to a subsequent purchaser during the 3 year warranty period. To do this, you must contact PS Audio directly to set up transfer of registration.

How Do I Get Warranty Service?

To locate an authorized PS Audio repair center, for service assistance, or for help with the operation of a product or just for information, please contact PS Audio customer support.

Warranty Service Within the US

- You must first obtain a Return Merchandise Authorization Number (RMA#) to receive warranty service and prior to returning any item. Contact PS Audio or an authorized PS Audio repair center to receive an RMA#.
- You must put the RMA# on all returns. If it is not clearly marked, PS Audio will return the package back to you, freight collect.
- You should include a description of the problem, along with the RMA# inside the packaging.
- Original packaging should be used for the safe transit of your PS Audio unit to the repair center. If you do not have the original packing, PS Audio can sell and ship to you replacement packaging.
- You are responsible for the cost of shipping the product to a PS Audio authorized repair center. You should insure the product for its full retail cost in the event it gets lost or damaged in transit. PS Audio is not responsible for damage incurred in products sent to us.
- Shipping your product in non-PS Audio packaging may void this warranty. PS Audio reserves the right to charge you for new factory packaging to return your product after a repair.



Warranty

Owner's Reference BHK Signature Preamplifier

How State Law Applies

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Warranty Service Outside of the US

PS Audio has authorized distribution in many countries of the world. In each country, the authorized importing distributor has accepted the responsibility for warranty of products sold by that distributor. Warranty service should be obtained where the product was purchased.

Changes to Our Products

PS Audio reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any products without notice or obligation to any person.

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