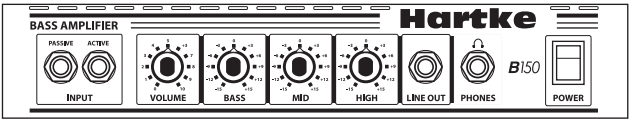
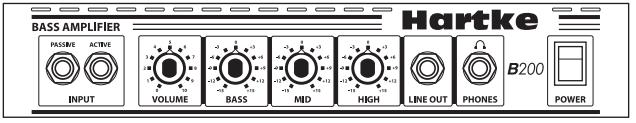
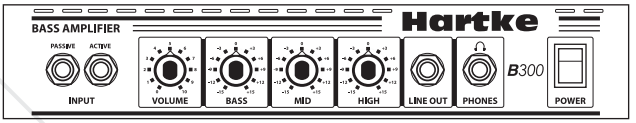
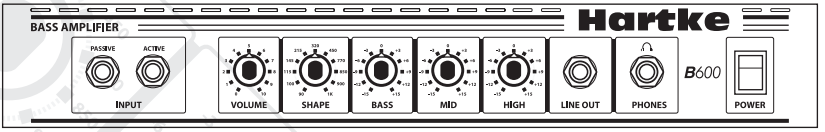
B SERIES

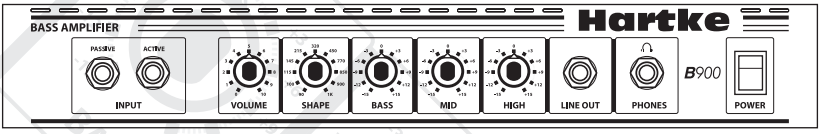
BASS COMBO











Hartke

Hartke B Series
Combo Bass Amplifier Features

The Hartke B Series offers all the newest concepts in state-of-the-art bass amplification at an extremely affordable price. Here are some of its main features:

- Bipolar circuit design ensures that every nuance of your bass performance is reproduced faithfully.
- Dual inputs that accommodate a broad range of input levels, so that you can use the B Series with pretty much any kind of bass, from passive models to those with active circuitry. It is almost impossible to overload the input of a B Series bass amplifier!
- Three bands of high-quality equalization, allowing you to create a broad range of tonal colors for your bass instrument.
- Line-level effects loop send (Preamp Out) and return (Amp In) jacks that allow you to connect to professional outboard effects processors.
- The B600 and B900 models feature Hartke's original Kickback bass speaker enclosure design, allowing the amplifier to be placed flat on the floor or in a tilt-back position for increased high-end clarity and directionality.
- A separate headphone output which automatically disconnects the speaker output, allowing use as a high-quality practice amp.
- A unique front-panel line-level output for interfacing with PA systems or recording mixing consoles.
- Included is a matched Hartke 8-ohm speaker mounted in a specially designed cabinet for clean, crisp sound.
- In the B600 and B900 models, a unique contour filtering system called "Shape" which activates a multi-band equalization curve specially designed to enhance the sound of the electric bass. The front panel Shape control enables you to continuously sweep a filter through various frequency areas in order to customize the effect of the curve to the specific tonal characteristics of your particular bass instrument.
- A steel grill helps protect the speaker from bumps and bruises when you are transporting your amplifier.
- Removable power cord supplied with the correct plug for your geographic area.
- Rugged construction makes the B Series eminently road-worthy.

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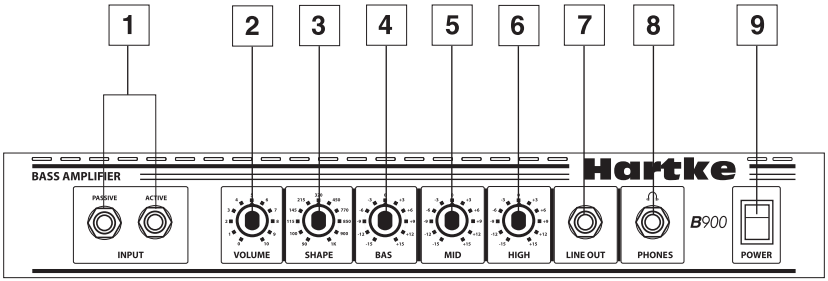
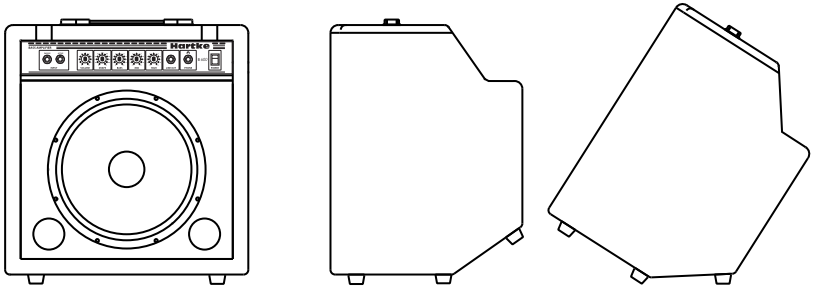
Guided Tour - Front Panel





B600 and B900 Kickback Enclosure

1. Inputs - Connect your bass guitar to one of these standard 1/4" unbalanced jacks. If your bass has passive electronics (that is, if it has no battery), connect it to PASSIVE INPUT, which is designed to handle low-level signals. If your bass has active electronics (that is, if it has a battery), connect it to ACTIVE INPUT, which employs a 10 dB pad and is designed to handle hotter bass pickup signals.

2. Volume control - This is the overall volume control. For best signal-to-noise ratio, keep the output of your bass at or near maximum and adjust the B Series Volume to the desired level.

3. Shape control (B600 and B900 only) - This control applies a specialized 20 dB notch filter to the specified frequency area so that you can customize the effect of the Shape curve to best complement your particular bass instrument. Moving the Shape control clockwise causes the notch filter to be applied to higher frequencies while moving it counterclockwise causes it to be applied to lower frequencies. At the fully clockwise position, the filter is applied to the 1 kHz frequency area; this will act to attenuate mid-range frequencies and give your bass a deep, low tone. At the fully counterclockwise position, the filter is applied to the 90 Hz frequency area; this will act to attenuate low frequencies and give your bass a biting, trebly sound. For more information, see the "Using Equalization and Shape" section on page 8 in this manual.

4. Bass EQ control - This control provides approximately 15 dB of cut or boost at 100 Hz, with a peak (bell) curve. When the knob is at the 12 o'clock ("0") position, there is no boost or attenua-

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tion (that is, flat response). As it is turned clockwise from the "0" position, the frequency area is boosted; as it is turned counterclockwise from the "0" position, the frequency area is attenuated. For more information, see the "Using Equalization and Shape" section on page 8 in this manual.

5. Mid EQ control - This control provides approximately 15 dB of cut or boost at 830 Hz, with a peak (bell) curve. When the knob is at the 12 o'clock ("0") position, there is no boost or attenuation (that is, flat response). As it is turned clockwise from the "0" position, the frequency area is boosted; as it is turned counterclockwise from the "0" position, the frequency area is attenuated. For more information, see the "Using Equalization and Shape" section on page 8 in this manual.

6. High EQ control - This shelving control provides approximately 15 dB of cut or boost at 5 kHz. When the knob is at the 12 o'clock ("0") position, there is no boost or attenuation (that is, flat response). As it is turned clockwise from the "0" position, the frequency area is boosted; as it is turned counterclockwise from the "0" position, the frequency area is attenuated. For more information, see the "Using Equalization and Shape" section on page 8 in this manual.

7. Line Out - This standard unbalanced 1/4" jack provides a line-level post-EQ and post-Volume (and, in the B600 and B900 models, post-Shape) output signal from the B Series. You'll usually use this to connect the B Series signal to a line-level input when interfacing with PA systems or recording mixing consoles. The signal from this output is the same as that from the Preamp Out on the rear panel (see #3 on page 5).

8. Headphones jack - Connect any standard stereo headphone (600 ohms or less) to this standard 1/4" stereo jack. When a plug is inserted into the headphone jack, the speaker output is disconnected, allowing you to use your B Series as a practice amplifier. The level of the signal sent to the headphones is determined by the setting of the Volume knob—at the point where a connected speaker would clip, the headphones will clip.
WARNING: Because even the smallest B Series amplifier is capable of generating extremely high headphone signal levels, *always* **start with the Volume knob at minimum and then** *slowly* **turn it up. In particular, a clicking sound is an indication of distortion and possible damage to the headphones (and/or your hearing!); don't let things get to that point!**

9. Power switch - Use this to power the B Series on or off. When powered on, an LED inside this switch is lit.

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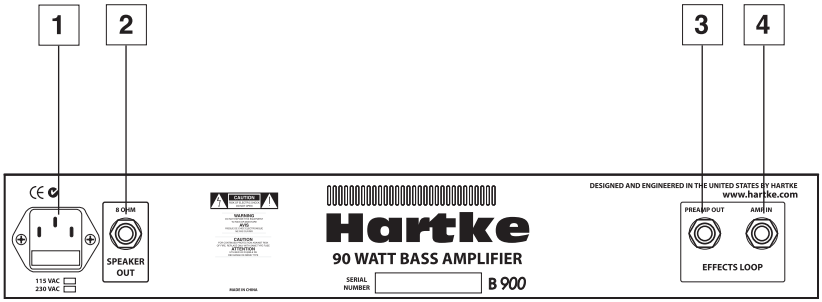
Guided Tour - Rear Panel



1. AC Inlet - Attach the grounded AC power cord here to connect your B Series amplifier to mains power. This cord comes supplied with the appropriate plug for your geographic area.

CAUTION: *Do not use an adapter to defeat the third grounding pin on this plug or severe electric shock may result!*

The fuse holder comes from the factory with the appropriately rated fuse for your model. If you need to change this fuse for any reason, replace it with one that has the same exact rating.

2. Speaker Output – The SPEAKER OUTPUT jack is used to connect the internal speaker to the amplifier. Your B Series amplifier has been designed to match the internal speaker, so we recommend that you do not connect an external bass speaker to your amplifier. If you do, be sure to match the power rating of your amplifier to the connected speaker. In some cases, under powering a high power speaker can damage the connected amplifier. DO NOT connect any speaker with any impedance rating that is lower than 8 Ohms. Doing so may void your warranty.

3. Preamp Out (Effects Loop Send)- Use this 1/4" unbalanced jack to send signal to a professional outboard effects processor.* Output level is approximately 0 dB to +4 dB and is post-EQ and post-Shape but unaffected by the setting of the Volume control. The signal from this output is the same as that from the Line Out on the front panel (see #7 on page 4).

4. Amp In (Effects Loop Return)- Use this 1/4" unbalanced jack to return signal from a professional outboard effects processor.*

** In-line effects (such as footpedals) intended for low signal levels should be placed between your bass and the front panel B Series amplifier Input and not connected with the rear panel Effects Loop jacks.*

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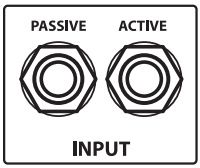
Setting Up and Using Your Hartke B Series Combo Bass Amplifier

Setting up your Hartke Systems B Series Combo Bass Amplifier is a simple procedure which takes only a few minutes:

1. Remove all packing materials (save them in case of need for future service) and decide where the amplifier is to be physically placed. To avoid potential overheating problems, make sure that the rear panel is unobstructed and that there is good ventilation around the entire unit.

2. Connect the 3-pin AC plug into any grounded AC socket. Don't turn the B Series on just yet, though.

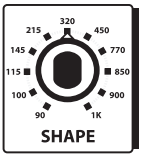


3. Use a standard music instrument cable to connect your bass to one of the Input jacks on the front panel. If your bass has passive electronics (that is, if it has no battery), connect it to Passive Input which is designed to handle low-voltage signals. If your bass has active electronics (that is, if it has a battery), connect it to Active Input, which has a 10 dB pad and is designed to handle hotter bass pickup signals.

4. On the front panel of the B Series, turn the Volume control to its minimum (fully counterclockwise) position, set all three EQ controls to their "0" (12 o'clock) position, and, if you are using a B600 or B900 , set the Shape control to its 12 o'clock position.

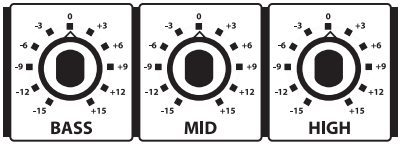
5. Press the front panel Power switch in order to turn on your B Series amp; the LED in the switch will light up.

6. Set the output of your bass to maximum and then, while playing, slowly turn the B Series Volume control up until the desired level is achieved. It's nearly impossible to overload the B Series amplifier, so if you hear distortion even at low Volume settings, check for a faulty cable (if it's good, simply back off the output of your bass).



7. If you are using a B600 or B900 , turn the Shape knob both clockwise and counterclockwise to hear the effect of the Shape curve and filter on the sound of your bass. Leave the Shape knob at the point where it best complements your particular instrument and playing style.

8. Adjust the three equalization controls to taste (when you get a great setting that complements your instrument and playing style, it's a good idea to write it down for future use).



9. Test the headphone output by turning the Volume control to its minimum (fully counter-

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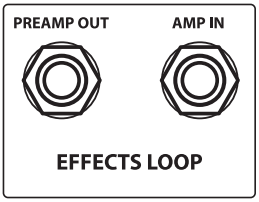
Setting Up and Using Your Hartke B Series Combo Bass Amplifier

clockwise) position and then connect a standard stereo headphone to the front-panel Headphones jack. While playing your bass, *slowly* turn the Volume control up—you should hear sound from the headphones and none from the connected speaker. We recommend the use of large size headphones (those with large transducers) for optimum bass reproduction.

10. If you need to connect the B Series to a PA system or a recording mixing console, connect a cable between the front-panel Line Out output and a line-level input on the mixer. (See #7 on page 4 in this manual for more information on the use of the B Series Line Out).

11. If you're using a professional external signal processor that has line-level inputs and outputs, turn your B Series amp off momentarily and then connect a standard audio cable between the rear panel Preamp Out jack and your effects processor input and another standard audio cable between the Amp In jack and your effects processor output (if required, multiple effects processors can be daisy-chained together, output to input). Then turn the B Series amp back on and play your bass while adjusting the controls of your effects processor(s). For best results, set both the input and output gain of all connected effects processor(s) to 0 dB (unity gain), so that there is no increase or decrease in level whether the effects are switched in or out.



If you encounter difficulty with any aspect of setting up or using your Hartke B Series Bass Combo Amplifier, you can call Samson Technical Support (1-800-372-6766) between 9 AM and 5 PM EST, or contact your local distributor.

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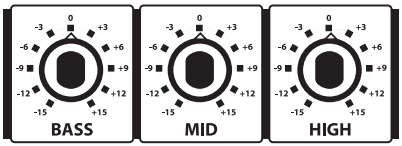
Using Equalization and Shape

The Hartke Systems B Series Bass Amplifier gives you enormous control over shaping the sound of your bass, using a process called *equalization*. To understand how this works, it's important to know that every naturally occurring sound consists of a broad range of pitches, or *frequencies*, combined together in a unique way. This blend is what gives every sound its distinctive tonal color. The B Series EQ controls allow you to alter a sound by boosting or attenuating specific frequency areas—they operate much like the bass and treble controls on your hi-fi amp, but with much greater precision.



The B Series offers three bands of equalization. Each EQ knob (labeled *Bass*, *Mid*, and *High*, respectively) affects a different frequency area (100 Hz, 830 Hz, and 5 kHz, respectively) and provides approximately 15 dB of boost and attenuation. We carefully selected these frequency areas because they have maximum impact on bass signals. For example, the Low (100 Hz) control affects the very lowest audible frequencies (in fact, most humans cannot hear below 20 Hz), while the High (5 kHz) control affects the "twang" of a bass string.

When an EQ knob is in its center detented position ("0"), it is having no effect. When it is moved right of center, the particular frequency area is being boosted; when it is moved left of center, the frequency area is being attenuated. Turning all EQ controls up the same amount will have virtually the same effect as simply turning up the Volume; conversely, turning them all down the same amount will have virtually the same effect as turning down the Volume. Both approaches are pointless (after all, that's why we gave you a Volume control!)

In many instances, the best way to deal with equalization is to think in terms of which frequency areas you need to attenuate, as opposed to which ones you need to boost. Be aware that boosting a frequency area also has the effect of boosting the overall signal; specifically, too much Low EQ boost can actually cause overload distortion or even harm the connected speaker.

In addition, the B600 and B900 models provide a unique Shape control which employs a *notch filter* to remove specific frequency areas. At the same time, it overlays a special equalization curve that is designed to improve the sound of electric bass instruments. This curve provides boost at certain frequency areas and attenuation at other frequency areas. As the Shape knob is turned clockwise, the notch filter is imposed on higher frequency areas; as it is turned counterclockwise, the filter is imposed on lower frequency areas. At the fully clockwise position, the filter is applied to the 1 kHz frequency area, making for a deep, rich tone; at the fully counterclockwise position, the filter is applied to the 90 Hz frequency area, making for a bright, twangy tone.

The specific EQ (and/or Shape) you will apply to your bass signal is very much dependent upon your particular instrument and personal taste and playing style. However, here are a few general suggestions:

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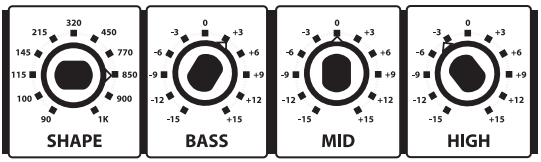
Using Equalization and Shape

- For that super-deep reggae or Motown sound, boost the Low EQ slightly while attenuating the High EQ. If you're using a B600 or B900 , set the Shape control to approximately 850 Hz.

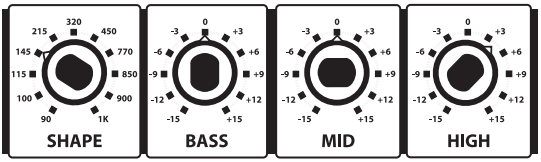
- To remove boxiness and make your instrument sound more "hi-fi," try attenuating the Mid EQ control. If you're using a B600 or B900 , set the Shape control to approximately 320 Hz.



- For a twangy, cutting sound, try boosting the High EQ. (putting new roundwound strings on your bass will help a lot also!). If you're using a B600 or B900 , set the Shape control to approximately 145 Hz.

- Whenever you get a really good EQ (and/or Shape) setting for a particular instrument or song, *write it down* (you'd be amazed how easy it is to forget these things!).

As you experiment with the EQ and Shape controls of the B Series, don't forget that your bass



also provides significant EQ control in the form of its pickup and tonal settings—this can be particularly effective in instruments that have active circuitry.

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Specifications

1. Rated Output Power (@ 1 kHz, 4 ohm, 5% THD)

B150	15 Wrms
B200	20 Wrms
B300	30 Wrms
B600	60 Wrms
B900	90 Wrms

2. Rated Input Level (@ 1 kHz)

Input 1	-20 dBu
Input 2	-10 dBu

3. Total Harmonic Distortion (@ 1 dB below rated output, 1 kHz typical)

B150	0.1%
B200	0.1%
B300	0.1%
B600	0.05%
B900	0.07%

4. Signal To Noise Ratio (re: 1 Wrms @ 1 kHz)

B150	67 dB
B200	67 dB
B300	66 dB
B600	65 dB
B900	70 dB

5. Dynamic Range (re: Rated output @ 1 kHz)

B150	80 dB
B200	80 dB
B300	75 dB
B600	80 dB
B900	90 dB

6. Signal Gain

Input 1 to Line Out / Preamp Out	+30 dB (B200), +30 dB (B200), +30 dB (B300) +30 dB (B300), +30 dB (B900
Input 1 to Speaker Out	+46 dB (B150),+48 dB (B200), +55 dB (B300) +57 dB (B300), +61 dB (B900)
Input 2 to Line Out / Preamp Out	+20 dB (B150),+20 dB (B200), +20 dB (B300) +20 dB (B300), +20 dB (B900)
Input 2 to Speaker Out	+36 dB (B150),+38 dB (B200), +45 dB (B300) +47 dB (B300), +51 dB (B900)

7. Equalizer

Low (100 Hz)	±15 dB
Mid (830 Hz)	±15 dB
High (5 kHz)	±15 dB

8. Headphone Output

200 mW (typical) @ 600 ohms

9. Fuse Type 3AG fast-acting (US & Japan), 50T time delay (UK & European)

10. Fuse Rating

US & Japan

0.5A (B200), 1.0A (B300), 2.0A (B300), 3.0A (B900)

UK & European T250M (B200), T500M (B300), T1M (B300), T1.6M (B900), T?M

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