B|AMP™
Owner's Manual

Bergantino

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All Features and specifications are subject to change without notice.
This list is subject to change without notice.

WARNING: This amplifier is capable of producing sound pressure levels that may damage your hearing. Always operate at a safe listening level or use hearing protection if operating at higher levels.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

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Manual Version: 1.0

Important Safety Instructions

Read these instructions:
Please read all Safety and Operating instructions before connecting and operating this product. This manual should be kept for future reference.

Verify AC Circuit Capacity Before Use:
Your new Bergantino **B|AMP** comes equipped with a UPS (Universal Power Supply) capable of operating from 100 – 240VAC (~), 50/60Hz with no user adjustments or switching necessary. The high power output of your amplifier may require heavy current draw under Full-Load conditions. Connecting multiple amplifiers to the same circuit, or connecting the amplifier to the same circuit used by other heavy power devices, such as high-wattage lights, may cause circuit breakers to trip. It is always a good idea to avoid using any audio equipment on the same AC circuit as equipment with motors, such as air conditioners or refrigerators. This will lessen the possibility of power variation and electrical start-up noise affecting your sound.

Earth Grounding Connection:
To prevent electric shock, do not remove the grounding plug on the power cord, or use any plug or extension cord that does not have a grounding plug provided. Make certain that the AC outlet is properly grounded as well. Do not use an adapter plug with this product.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus:
To avoid safety hazards, use only the power cord supplied with your unit. We do not recommend using an extension cord with this product. Damaged power cords should be replaced immediately with cords meeting factory specifications. If a replacement cord is used, make certain that it is of consistent quality and gauge as the original and is UL/IEC Certified. When disconnecting the power cord from an AC outlet, always pull the plug, never pull the cord. If you do not intend to use the amplifier for a considerable length of time, disconnect the plug from the AC outlet.

Do not use this apparatus near water:
Never expose the amplifier to rain, moisture, dripping or splashing water. Do not place objects filled with liquids on or nearby the amplifier.

Do Not Open The Amplifier Enclosure:
There are no user-serviceable components inside this product. Opening the amplifier enclosure may present a shock hazard, and modification to the product will void your warranty. If liquid enters the unit, or any metal object such as a piece of wire accidentally falls inside the enclosure, disconnect the unit from the AC power source immediately and consult an authorized service station.

Unpacking:
The carton and packing materials used in shipping your new amplifier were specially designed to cushion it from the shocks and vibration that occur during transport. We suggest that you save the carton and packing materials for use in shipping, in the event you move, or the amplifier needs repair.

Introduction

Congratulations on your choice of the Bergantino Audio Systems' **B|AMP** as your amplifier and welcome to the Bergantino family! First we would like to thank you for choosing Bergantino Audio Systems as your amplifier company. This is something we never take for granted. We are confident that your new amplifier will bring you many years of trouble free use and we feel that our high quality design and build standards will help you reach your creative goals.

The Bergantino Audio Systems' **B|AMP** is an incredibly flexible, state-of-the-art Bass Amplifier, designed to deliver maximum performance, yet simple and intuitive to operate. The **B|AMP** takes a completely new approach to bass amplification by considering and including the speaker cabinet's response and its environment as part of the amplification signal path. No other bass amplifier on the market has the ability to manage speaker and system performance like the **B|AMP**. This is accomplished through our **Profile EQ** system along with many other important and useful design features including:

- DSP, Embedded System Controlled, Bass Amplifier
- LCD Display
- Multifunction Tone Controls; 4-Band EQ w/ Adjustable frequency range
    - BASS: +/- 9dB Variable from 40Hz to 120Hz
    - LMID: +/- 9dB Variable from 150Hz to 800Hz
    - HMID: +/- 9dB Variable from 800Hz to 3kHz
    - TRBL: +/- 9dB Variable from 3kHz to 9kHz
- Programmable Filters
    - Programmable bright switch: +3dB to +12dB in 1dB increments, variable from 2kHz to 10kHz in 500Hz increments
    - Variable High-Pass Filter (VHPF): Adjustable from 30Hz to 80Hz in 2Hz increments
    - Variable Feedback filter: Adjustable from off to -6dB to -12dB in 1 dB increments. Frequency range from E1 (41Hz) to G3 (196Hz) in half step increments
- On-Board Programmable Chromatic Tuner stable down to the low B fundamental
- Auxiliary input and headphone jack for personal monitor and practice use
- Effects send and return loop
- Studio quality Direct Output, software selectable Pre or Post EQ
- Software Selectable Line Output (Pre-amp or tuner out)
- UPS – Universal power supply 115VAC- 240VAC 50/60Hz
- Software selectable Phase output (Normal or Reverse)
- 2 User Programmable Memory Settings
- USB Port
    - Load Custom Speaker Profiles
    - Software Upgradable
    - Expandable System Architecture
- Power Section: 700W RMS at 4-Ohms, 800W RMS at 2.67-Ohms and 2-Ohms
    - Software selectable, speaker impedance matching for optimal power transfer down to 2-Ohm minimum load.

Speaker Profiles = Intelligent Equalization:
Having your speaker cabinet EQ'd and matched to the acoustic environment frees up your tone controls to be creative elements, rather than being used to 'fix' a speaker design or a bad acoustic space.

Cool Running = Reliability:
The **B|AMP** uses a Class D amplifier topology that generates less than half the heat of conventional amplifiers. This keeps the amp running a lot cooler and makes it much more reliable. To cool the amp when it's being driven hard, we've incorporated a temperature sensitive fan cooling system. When the amp is under a light load, the fan is off. If the amp should reach a specified operating temperature, the micro-controller in the **B|AMP** will turn the fan on automatically until it is cooled to a safe operating temperature. This type of thermal management will ensure years of trouble free use.

Quick Start

The **Bergantino Audio Systems' B|AMP** is designed to be incredibly flexible, yet simple to operate. All controls have a well-defined purpose and are designed to be as intuitive as possible. These directions will help take you through the basics and give you a good start for setting up your sound, especially if you own a currently available, Bergantino speaker cabinet. However, it is highly recommended to read on to learn all the features of the B|AMP in order to realize all its very useful features and benefits!

1. **Plug the B|AMP in:**
With the power switch in the Off position, connect the supplied power cord from the amplifier AC receptacle, to an AC power outlet of proper voltage and power rating (see safety information for more details).

2. Connect your speaker cabinets:
Connect your speaker cabinet(s) to either of the SpeakOn outputs (these are wired in parallel so you can use either one). Be sure not to exceed the minimum recommended speaker load.

The minimum recommended speaker loads for the **B|AMP** is user programmable in the software program menus for 2-Ohm, 2.67-Ohm and 4/8-Ohm operation. **The initial default setting is 4/8-Ohm.**

3. Plug in your bass:
Using an instrument cable, connect your bass to the Input jack and turn the power switch on. If you have active tone controls on your bass, turn all of the controls to the middle or flat position and adjust the volume to the maximum point you would normally use. If you have a passive bass, turn all tone and volume controls all the way up.

4. Front panel control settings:
When you first turn on the **B|AMP** the tone controls will be set flat and no speaker profiles will be installed. Set the Instrument Gain and Master Volumes at 0 (off).

5. Select Speaker Profile
If you're using a currently offered Bergantino speaker model, push and hold the **Prog** button to the right of the LCD display for 3 seconds to get into Program Mode. Quickly push the **Prog** button 3 times to get to the **Profile Select** screen. Turn the Bass/Filters knob (right or left) until your speaker model appears on the display. Once your speaker is displayed on the LCD display you can either press and hold the **Prog** button for 3 seconds to get back to the home screen, let it time out automatically after 15 seconds, or press the **Mute** button 2 times consecutively. Your speaker profile is now loaded into the **Profile EQ** section of the **B|AMP**'s DSP processor.

The screen below shows the CN212 profile being selected and loaded into the B|AMP's Profile EQ section.

```
Profile Select
CN212
```
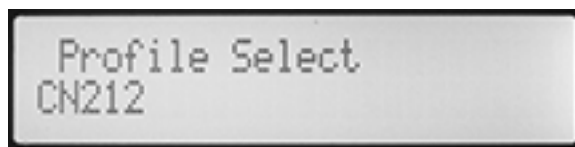
If you're not using a currently offered model, you can download the Profile for many of our older, discontinued Bergantino cabinets as well as some Bergantino cabinet combinations from our website (www.bergantino.com) onto a FAT32 formatted thumb drive, and load it into one of the 12 dedicated Profile memory slots via the USB port (see **Profile Select** menu below).

> ⇨ The currently selected **Profile** will be loaded into the DSP profile filters upon each recycling of power until a new one is selected.

6. Input level and Master Volume settings:
For proper operation, it is **very important** to adjust *all* gain levels properly. To adjust the Input gain level, first turn the Master volume and Input Gain of the **B|AMP** all the way down (CCW). Next, put the volume controls on your instrument at the maximum level you will be using them at and play your bass like you normally would, including hard dynamic attacks. Gradually increase the Input Gain control (clockwise) until the **OL** (overload) indicator just begins to flash. Once flashing, reduce the Input Gain (CCW) by 1/8 of a turn for some additional headroom before clipping.

If the **OL** led doesn't come on at all with the Input gain turned all the way up, chances are you're either using a more traditional, single coil, low output bass, or you enjoy playing with a lighter touch. That's ok and perfectly normal. If this is the case, keep the input gain turned all the way up for best S/N ratio and select **Lo Output** for **Instrument Level** in the **Extended Amplifier's Feature** section under **Program Mode** to compensate for overall gain.

Important!: If using an active bass and the Input gain level of the **B|AMP** is near or below 9:00 in order to keep the **OL** led from flashing, it is highly recommended you turn down the volume on your bass, or preferably if equipped, turn the gain down on your onboard preamp. This is very important as to not overdrive the input of the **B|AMP**. Some onboard preamps have internal adjustable gain controls. If you have active/passive switching capabilities on your bass, it is best to adjust the active gain such that it matches the passive gain with all tone controls set flat. In other words, you want to adjust your onboard preamp to have unity gain. This will ensure maximum headroom for you onboard preamp as well as best gain matching of your bass to the **B|AMP**'s input stage.

> ⇨ Remember, the purpose of an onboard preamp is to buffer the pickups from long cable runs and to provide active tone controls for tone shaping, *not* to increase your overall output level and volume. That is what your amplifier is for!

Once you've matched the maximum signal from your bass without overloading the input stage of the amplifier, increase the Master volume of the **B|AMP** by turning the Master volume knob in a clockwise direction to the desired level. You should be hearing your bass quite well at this point. You should now **only** use the Master volume now to achieve your desired sound level.

> ⇨ For clear, undistorted sound, it's very important not to overdrive the input stage of the **B|AMP**. If you increase in level any tone or volume control on your bass after adjusting the input gain, you should check to make sure the **OL** indicator isn't flashing.

Front Panel Controls and Operation
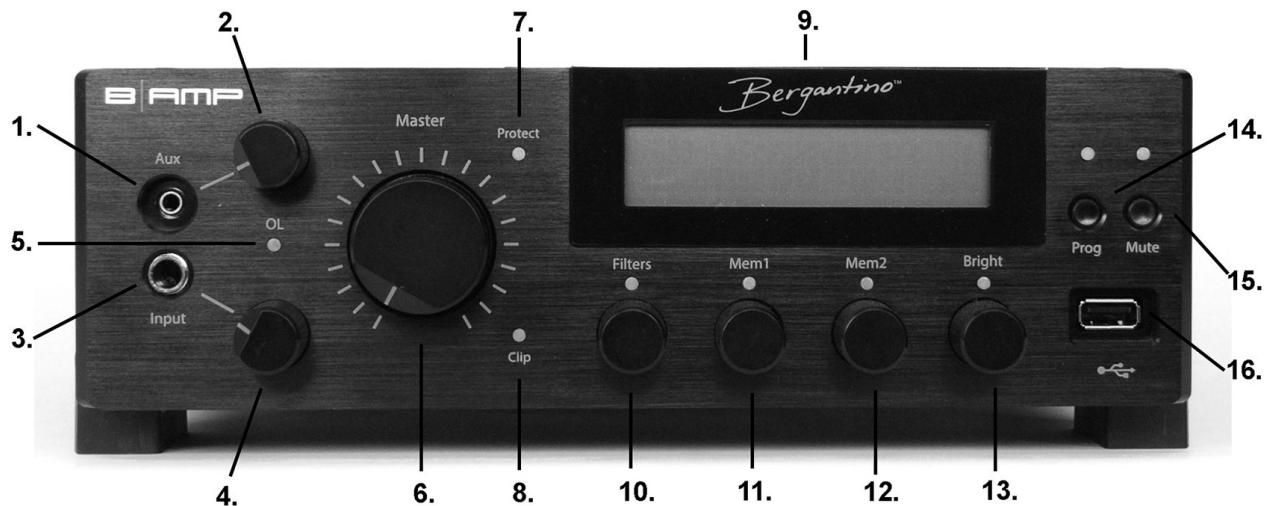
1. Aux Input: A standard 1/8" mini stereo jack to plug in an external sound source (iPod, MP3 player, etc.). The Aux Input does *not* go to the DI. Maximum, unclipped input level is 2Vrms.

2. Aux Gain: Gain control for the Aux input device. Adjust this knob to achieve the desired level of your Aux Input source and to obtain the relative balance between this source and your instrument. If the **OL** indicator illuminates, turn down Aux Gain level on **B|AMP** until it no longer flashes. If it still flashes with level all the way down, turn level down from device connected to Aux input and then readjust Aux Gain level.

3. Input: A 1/4" unbalanced input jack to plug in an active or passive bass into a studio quality, high impedance, input buffer.

4. Input Gain: Gain control for the Instrument input. Adjust this level to obtain maximum input gain before any flashing of the **OL** indicator occurs.

5**. OL (overload) Indicator:** Indicates the input stage of the **B|AMP** is being overdriven when flashing yellow. If an overload condition is indicated, turn appropriate gain knob (Aux or Input) counterclockwise to reduce gain until no flashing occurs and adjust Master volume to achieve desired volume. Also learn more about properly adjusting the Input gain of the B|AMP in the **Instrument Level** section of the **Program Mode** part of this manual.

6. Master (volume): This control raises and lowers the Master volume of the **B|AMP**.

7. Protect (indicator): Should the amp experience a fault (over heat, over current) the amp will mute the output and this LED will turn red until the condition is corrected. Check and make sure there are no obvious conditions causing the amp to enter protect mode such as a shorted speaker cable or the fan or vent holes being blocked on the outside of the unit.

8. Clip (indicator): This indicator will flash yellow when the **B|AMP** senses an overdriven or clipped signal at its output. This is an indication that the amplifier is being driven beyond its ability to produce a clean, undistorted output signal. It's ok and normal to see the flashing of this indicator on loud peaks. However, continuous, sustained illumination of this indicator should be avoided.

⇨ There are Proprietary and musical Compressor/Limiters programmed into the **B|AMP's** DSP to help prevent the **B|AMP** from being overdriven to a point of audible distortion.

9. LCD Display: The LCD (liquid-crystal display) display serves many functions and displays everything from basic tone control settings (home screen) to the many levels of software based menu screens in the **B|AMP**.

10. Filters/BASS Control: This control has multiple functions:
As a Tone Control, turning the control Left or Right from the home screen will decrease or increase the level of the Bass frequencies in 1dB increments, from -9db to +9db. The level in dB will be shown above on the LCD display.

⇨ The screen below shows an example of the B|AMP's home screen where the gain of all 4 tone controls can be adjusted.

```
BASS   LMID    HMID     TRBL
 1dB   -1dB     2dB      1dB
```

If you push and hold the **Filters/BASS** control for 2 seconds, you will be able to adjust the center frequencies of all 4 tone controls. The frequency range of the Bass control is from 40Hz to 120Hz, variable in 5Hz increments. You can return to the home screen by pressing any of the 4 tone control knobs, or if left idle for 5 seconds, the LCD display will return to the home screen automatically.

⇨ The screen below shows the B|AMP's semi-parametric EQ screen after pressing and holding any of the 4 tone controls for 2 seconds.

```
BASS   LMID    HMID     TRBL
60hz  250hz    1.0k     4.0k
```

When the **Filters/BASS** control is pressed and released, it displays the filter's screen that includes a **VHPF** screen (Variable High Pass Filter) and Variable Feedback filter.

```
VHPF    Variable Feedback
OFF        E1   41Hz OFF
```

```
VHPF    Variable Feedback
40Hz       E1   41Hz OFF
```
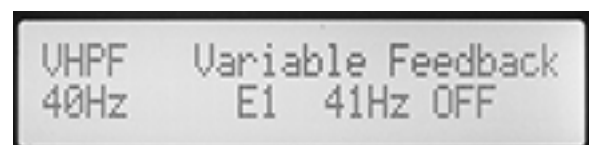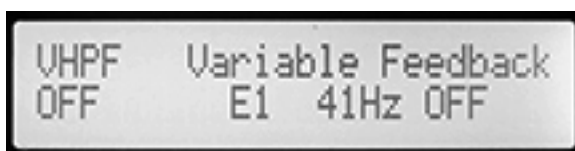
The **VHPF** (turn Bass/Filters knob to adjust frequency) allows frequencies *above* the displayed frequency to pass while cutting frequencies below. Factory default is 40Hz. Turning this knob adjusts the cut-off frequency from 32Hz – 80Hz in 2Hz increments. Use this control to clean up the very low end of the bass frequencies, which can often muddy the low-end program information and needlessly stress your speaker system and waste amplifier headroom.

⇨ To help minimize needless stress on speakers and maximize amplifier and overall system headroom, it is advisable to set this control at 40Hz (factory default setting) or higher, if further low frequency attenuation is needed.

The **Variable Feedback** filter is intuitively designed to help you identify and sweep the note frequencies from E1 (41Hz) – G3 (196Hz) in single note (1/2 step) increments, and adjust the gain from **OFF** to -6db to -12dB in level to help eliminate or minimize problem feedback issues with electro-acoustic instruments.

```
VHPF     Variable Feedback
40Hz       E1   41Hz  -6dB
```
```
VHPF     Variable Feedback
40Hz       E1   41Hz -12dB
```
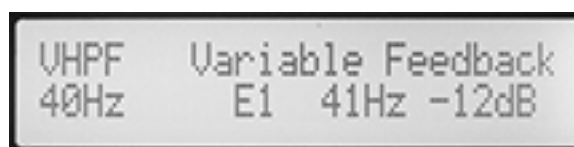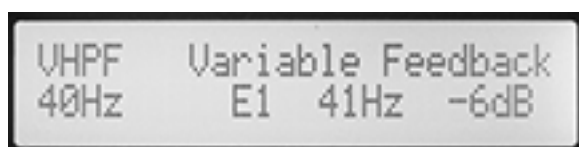
To use, try to identify the note on your instrument that is feeding back the strongest _**from the location in which you will be playing**_ (very important as feedback is affected by the proximity of the instrument to the boundaries and sound source in which it is near). While muting your instrument or amp, press and release the filter knob and then turn the L/Mid or H/Mid knob to the note (i.e. E1) that is feeding back the strongest. Turn the TRBL knob CCW to set the cut level between -6db and -12db, then un-mute the amp or instrument and go back to the same location you will be playing from and see if the feedback has been eliminated or reduced. You may need to try this a few times and adjust the amount of cut in gain accordingly.

➔The green **Filters** LED indicates that either one or both of the filters are engaged.

While in the Filter screen, you can return to the home screen by pressing any of the tone controls, or if left idle for 10 seconds, the LCD display will return to the home screen automatically.

11. Mem1/LMID Control: This control has multiple functions:
As a Tone Control, turning the control Left or right from the home screen will decrease or increase the level of the Lo-Mid frequencies in 1dB increments, from -9db to +9db. The level in dB will be shown above on the LCD display.

Push and hold this control for 2 seconds, and you will be able to adjust the center frequencies of all 4 tone controls. The frequency range of the **LMID** control is from 150Hz to 800Hz, variable in 50Hz increments. You can return to the home screen by pressing any of the tone controls, or if left idle for 5 seconds, the LCD display will return to the home screen automatically.

If a tone setting has been previously stored in this location, when quickly pushed and released, that tone setting will be loaded into the DSP's tone filters, including the state of the bright

switch. (See **Mem1/Mem2 Save** on how to save settings to this location). Push this knob again, and you will be taken back to the previous home screen.

12. Mem2/HMID Control: This control has multiple functions:
As a Tone Control, turning the control Left or Right from the home screen will decrease or increase the level of the High-Mid frequencies in 1dB increments, from -9db to +9db. The level in dB will be shown above on the LCD display.

Push and hold this control for 2 seconds, and you will be able to adjust the center frequencies of all 4 tone controls. The frequency range of the **HMID** control is from 800Hz to 3kHz, variable in 100Hz increments. You can return to the home screen by pressing any of the tone controls, or if left idle for 5 seconds, the LCD display will return to the home screen automatically.

If a tone setting has been previously stored in this location, when quickly pushed and released, that tone setting will be loaded into the DSP's tone filters, including the state of the bright switch. (See **Mem1/Mem2 Save** on how to save settings to this location). Push this knob again, and you will be taken back to the previous home screen.

13. Bright/TRBL Control: This control has multiple functions:
As a Tone Control, turning the control Left or Right from the home screen will decrease or increase the level of the Treble frequencies in 1dB increments, from -9db to +9db. The level in dB will be shown above on the LCD display.

If you push and hold this control for 2 seconds, you will be able to adjust the center frequencies of all 4 tone controls. The frequency range of the **TRBL** control is from 3kHz to 9kHz, variable in 500Hz increments. You can return to the home screen by pressing any of the tone controls, or if left idle for 5 seconds, the LCD display will return to the home screen automatically.

When this control is quickly pressed and released, it activates the **Bright** filter. Use this control to add some sparkle or snap to your final tonal contour. (See **Bright Adjust Menu** in **Program Mode** on how to program the frequency and gain of this filter)

14. Prog (Program Button): From the **Home Screen**, press and hold the **Prog** button for 3 seconds to enter Program Mode. The green **Prog** LED will illuminate (See **Program Mode)**. *Or* while pressing and holding the **Prog** button, press **Mem1** or **Mem2** to save a tone setting in that location (See **Mem1/Mem2 Save** in Extended Amplifier Features).

15. Mute: When **Mute** is engaged, the red Mute LED will illuminate and the amplifier's Main output, DI output, and Line output (except when tuner is selected for the Line out) will be muted.

If the **B|AMP**'s tuner is disabled (see Tuner section in **Program Mode**), the following screen will be shown on the LCD display.

If the **B|AMP**'s tuner is enabled, a fully digital chromatic tuner is activated and displayed on the LCD display.

The first screen indicates there is no signal detected by the **B|AMP**'s tuner. The second screen indicates a properly tuned **A1** string. The third and fourth screens show a sharp **F#2** and a flat **G2** respectively.

```
No Input Detected
```

```
              A1
              X
```

```
     F#2
       <<<<<
```

```
              G2
              >>>
```
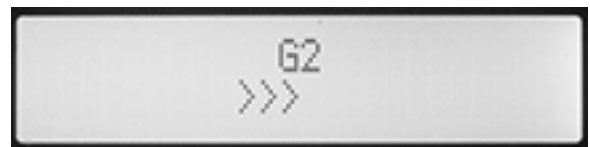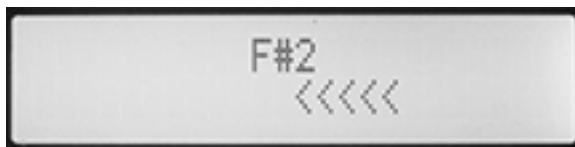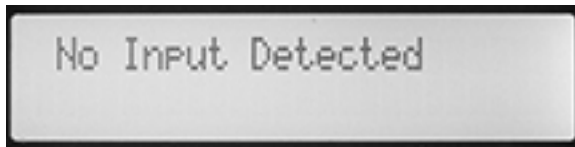
16. USB Port: This port will support a FAT32 formatted thumb drive to load speaker profiles into program memory and also perform firmware updates when or if they become available.

⇨ **WARNING!!!** The USB port is not designed or intended for charging USB devices such as cell phones, ipods, etc. Plugging in any device other than a thumb drive could adversely affect the operation of the **B|AMP**.

Rear Panel Controls and Operation
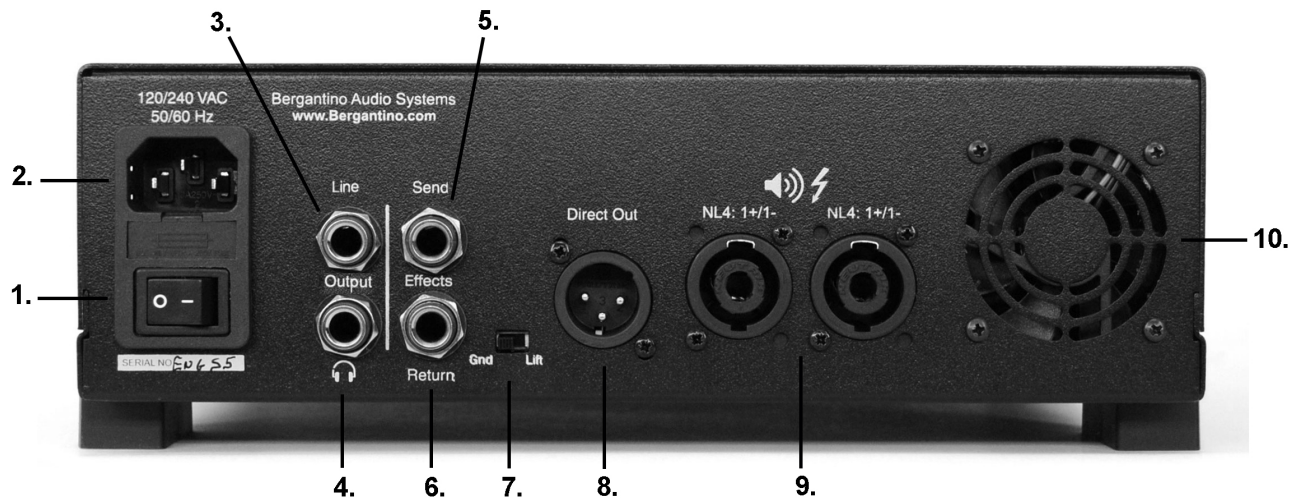
1. Power Switch: Turns the amplifier on or off.

2. AC Receptacle: The power cord is detachable and plugs in here.

3. Line (output): This output is software selectable in **Program Mode**. It can be programmed as a preamp out (post Master volume), or it can be programmed as a tuner output. This connecter is a ¼" unbalanced output. The default setting is **Pre-Out**.

4: Headphone (output): 1/4" Stereo headphone jack designed to drive full-range headphones.

5. Effects Send: Unbalanced 1/4" connector used when sending a full range, instrument level, mono signal to an external device (effects, processors, etc.).

6. Effects Return: Unbalanced 1/4" connector that accepts an instrument or line level return from external effects that are connected in a "series loop". It has a **1Vrms** max. input level. If the **OL** LED illuminates, turn down levels from previous gain stages in the signal chain.

7. Ground Lift: This switch disconnects the ground on the balanced Direct Out, XLR output to eliminate hum and buzz when the amplifier is connected to equipment that is running on a different ground system.

8. Direct Out: Studio quality DI sends an electronically balanced output signal eliminating the need for an external DI. This output can be selected to be **PRE- EQ** or **POST- EQ** (software selectable in **Program Mode**). The factory default setting is **Pre-EQ**. The DI is 48V phantom power protected.

9. Speaker Outputs: Parallel SpeakOn output connectors (Neutrik NL4 1+/1-). The minimum recommended speaker load for the **B|AMP** is user programmable down to a 2-Ohm minimum load. See **Program Mode** section for setting up the **B|AMP** for proper impedance matching. A minimum of 16awg speaker cable is highly recommended.

10: Cooling Fan: The onboard microcontroller monitors the amplifier temperature and engages the cooling fan when needed to reduce the amplifier temperature. The fan can be turned from **Auto** to **On** in **Program Mode** for extreme usage conditions.

Note: The fan is automatically set to Auto upon each power recycle.

Extended Amplifier Features

Mem1/Mem2 Save
You can save and store 2 independent tone settings in memory for future recall. The parameters that are saved are the BASS, LMID, HMID, TRBL (center frequency and gain), and Bright settings.

Once you've determined the tone setting you want to save, while pressing and holding the **Prog** button, press the desired Mem location where you would like to store that tone setting (**Mem1** or **Mem2**). The green LED over that memory location will illuminate indicating the tone setting is now saved in that memory location.

To recall these setting at a later time, just push the appropriate Mem control knob and release. The saved settings will now be loaded into the DSP and the green LED will illuminate. To go back to the previous home screen, just push the same Memory control knob again.

Program Mode

Most of the **B|AMP**'s extended and unique features are accessed in the **Program Mode**. To enter program mode, from the Home Screen, press and hold the **Prog** button for 3 seconds. The green **Prog** LED will turn on and the first menu screen will appear on the LCD display (**Instrument Level** Menu). The green **Prog** LED will stay on for the duration of the time you're in program mode. By quickly pressing and releasing the **Prog** button while in program mode, you will be able to cycle through the various program menus until you reach the desired menu. To leave program mode and go back to the **Home Screen**, press and hold the **Prog** button again for 3 seconds, or the Program Mode will eventually time out to the home screen after 15 seconds of no activity. You can also press **Mute** 2 times to quickly return to the **Home Screen**.

Screen 1 – Instrument Level
This menu allows you to select between using a **Hi Output** instrument (> 0.3 Volts) and a **Lo Output** instrument (< 0.3V). When **Lo Output** is selected, an increase in gain is programmed into the **B|AMP** to compensate.

<div align="center">

Turn the **Bass/Filters Knob** to select the desired Instrument output level:
Hi Output ⇔ Lo Output

</div>

⇨ Note: Some active basses may have outputs comparable to a single coil, passive bass while some passive basses may have outputs comparable to a more traditional active bass. Be sure to select **Instrument Level** accordingly.

```
Instrument Level
Hi Output
```

```
Instrument Level
Lo Output
```

Properly Adjusting Input Gain

If using an active bass, start in **Hi Output** mode (Factory default setting), and with the input gain fully off, play your bass like you normally would, including hard dynamic attacks. Gradually turn the input gain up until you can see the **OL** led flash on the front panel of the **B|AMP**. Once the **OL** led flashes, back off the knob 1/8 of a turn for additional headroom before clipping. This is the optimal input level for your bass and playing style. Keep the **Instrument Level** in **Hi Output** mode for this instrument.

If you can't get the **OL** led to flash when the input gain is turned all the way up, that's ok. Leave the input gain turned all the way up and select **Lo Output** for **Instrument Level** and re-adjust Master volume accordingly.

If using a passive instrument, start in **Hi Output mode** also and follow procedure described above. If the **OL** led flashes under your normal playing conditions, stay in **Hi Output** mode. If not, select **Lo Output** for **Instrument Level**, keeping the Input gain turned all the way up.

⇨ For best S/N ration, when **Lo Output** mode is necessary, the instrument gain should be turned all the way up.

⇨ If the **OL** indicator flashes before reaching 9:00 on the **Input** gain knob, turn the volume down on your bass, or, if your bass has a gain adjustment on its onboard preamp, turn that gain down instead. Failure to do so could allow the input stage of the **B|AMP** to be overdriven, limiting the dynamic range of your signal and creating unnecessary distortion. In addition, if the output of your active bass is too hot, you could unnecessarily and unknowingly be clipping your onboard preamp, introducing a distorted signal to your amplification system right out of the gate! Try to adjust your bass' active output level to be the same as its passive level to ensure maximum dynamic range and headroom before clipping. Remember, if your overall gain is set too high, boosting any of your tone controls could easily clip your overall signal at the output of your onboard preamp!

Screen 2 – DI Select menu
This menu allows you to select whether the **Pre EQ** or **Post EQ** signal is sent to the DI output.

- **Turn the Bass/Filters Knob to select DI Output**:

```
DI Select
Pre-EQ
```
```
DI Select
Post-EQ
```
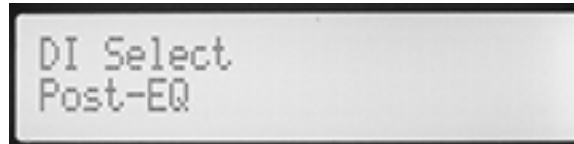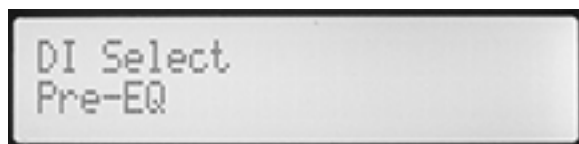
Pre-EQ: This signal includes input gain and effects loop, but *no* tone controls

**Post-EQ**: This signal includes input gain, effects loop **and** tone controls.

⇨ The **B|AMP**'s Profile EQ section will never go to the DI output, thus never to the FOH system. This is an important feature of the **B|AMP**'s architecture, as it allows the profiles to properly EQ your stage system without interfering with the FOH system. Your Post EQ DI contains only your tone adjustments, not your speaker EQ!

Screen 3 – Bright Filter Adjust Menu
This menu allows you to adjust the center frequency and gain parameters of the Bright filter. When the bright function is engaged from the home screen by pushing the Bright control knob, the parameters you adjust in this menu will be loaded into the DSP's Bright filter.

⇨ Be sure to engage the **Bright** function while in the **Home Screen** before entering program mode so you can test the results of your adjustments in real time while in this screen.
- **Turn the Bass/Filters knob to adjust frequency from 2kHz to 10kHz in increments of 500Hz.**
- **Turn the Trbl/Bright knob to adjust gain in increments of 1dB from +3dB to +12dB.**

Below shows the Bright filter adjusted to a center frequency of 4.5khz and a gain of +6db. Whenever the Bright function is engaged from the home screen, these parameters will be loaded into the B|AMP's Bright filter EQ.

```
         Bright Filter Adjust
4.5khz                    6db
```
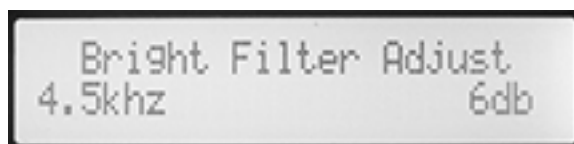
Screen 4 – Profile Select
This menu allows you to select one of the **B|AMP**'s stored speaker Profiles and load it into the Profile EQ section of the **B|AMP**'s DSP processor.

Turn the **Bass/Filters** knob (Left or Right) until the desired Profile appears on the LCD display. Once displayed, the selected profile will be loaded into the Profile EQ section of the B|AMP's DSP processor. The following screen shows the CN212 profile being selected and loaded into the **B|AMP**'s Profile EQ section.

```
Profile Select
CN212
```
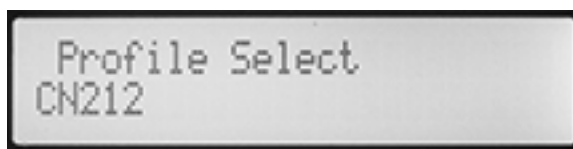
Screen 5 – Profile USB Load

This menu allows you to load new profiles, via the **B|AMP**'s USB port, from a FAT32 formatted thumb drive into one of the twelve dedicated Profile memory locations of the **B|AMP**. In this menu, the **B|AMP** will read any file off the thumb drive with a **.PRF** extension. You will be able to scan and select which speaker profile you would like to import from the thumb drive and choose which dedicated profile memory location you would like to store it in for future recall. You can also overwrite any currently saved profile with a new one. Once stored and power is recycled, you will be able to load this new profile into the DSP's profile filters from the **Profile Select** menu above.

To load speaker Profiles:
- **Insert thumb drive loaded with .prf files into B|AMP'S USB port**
- **Turn the Bass/Filters knob to select Profile on your USB thumb Drive you want to store in memory**
- **Turn the Treble/Bright knob to select which memory location to store the profile**
- **Press any knob to Store Profile.**

The first screen below shows the software prompting the user to insert a USB thumb drive into the **B|AMP**'s USB port in order to load a new speaker Profile (*.PRF file). The second screen shows the CN212 profile being loaded into memory slot 3 of the **B|AMP**'s profile memory.

```
Profile USB Load
Insert Profiles on USB
```

```
            PROFILE MENU
CN212.PRF        CN212  3
```

⇨ **Once loaded into one of the twelve B|AMP's Profile memory slots, the new speaker profile can be loaded into the B|AMP's Profile EQ filters from the Profile Select menu above.**

⇨ **Important! After loading Profiles and removing thumb drive from USB port, you must recycle power.**

Screen 6 – Line out Select

This menu allows you to select which signal is routed to the line out jack on the back of the **B|AMP**. You have 2 choices, the preamp out signal (which is post Master volume), or tuner out, which will allow you to hook up your own tuner to the Line out jack and receive an unprocessed signal from the input stage of the **B|AMP**.

- **Turn Bass/Filters Knob to select Line out**
Pre-Out ⇔ Tuner

```
Line Out
PRE-OUT
```

```
Line Out
TUNER
```
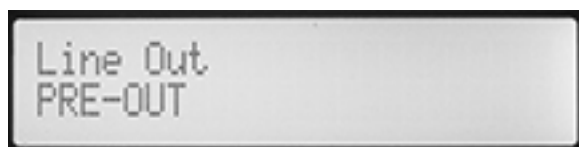
Note: If Tuner is selected, this output will not be muted when the B|AMP'S Mute function is engaged, allowing music signal to pass to a user supplied tuner during system muting. If Pre-Out is selected, this output will be muted along with the B|AMP's Main and DI outputs.

Screen 7 – Speaker Impedance Select

This menu allows you to condition your **B|AMP** to be safely used with various speaker loads. It can select between 4/8-Ohm, 2.67-Ohm and 2-Ohm loads. **The 4/8-Ohm setting is the default setting and should be used for both 4-Ohm and 8-ohm speaker loads.**

Warning! Selecting an impedance higher than the one plugged into the **B|AMP can allow the amp to enter protect mode, reducing the output level of the amp or muting the output all together until the underlying condition is rectified.

⇨ **Conversely,** selecting an impedance lower than the one plugged into the **B|AMP** will limit you from utilizing the **B|AMP**'s full power capabilities.

## Be sure to calculate your speaker impedances properly!

4-Ohm = 1 x 4-Ohm **or** 2 x 8-Ohm;
2.67-Ohm = 1 x 8-Ohm **+** 1 x 4-Ohm **or** 3 x 8-Ohm;
2-Ohm = 2 x 4-Ohm **or** 4 x 8-Ohm
- **Turn Bass/Filters knob to select desired Impedance**
4/8-Ohm ⇔ 2.67-Ohm ⇔ 2-Ohm

⇨ Below are three screens indicating the impedance options of the **B|AMP**.

```
Speaker Impedance Select
4/8 Ohm
```

```
Speaker Impedance Select
2.67 Ohm
```

```
Speaker Impedance Select
2 Ohm
```
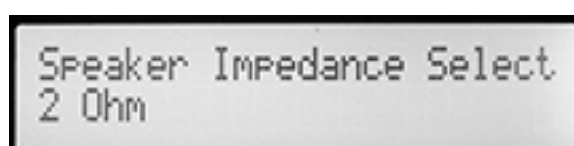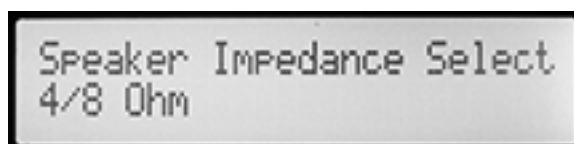
⇨ When **2-Ohm** operation is selected, the fan is automatically engaged.

Screen 8- Main Phase Menu

This menu allows you to reverse the phase of the main amplifier's output (including pre-out, if selected as the line out) to help eliminate any possible feedback or phasing issues experienced in a live or recording environment. It does not affect the phase of the DI out.

- **Turning the Bass/Filters knob**
  Normal ⇔ Reverse

```
Main Phase
Normal
```
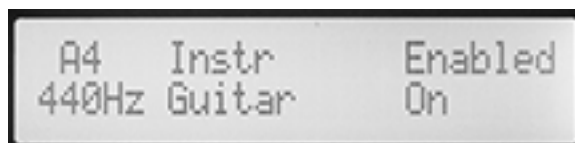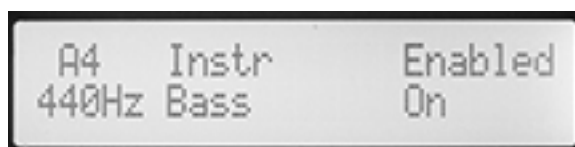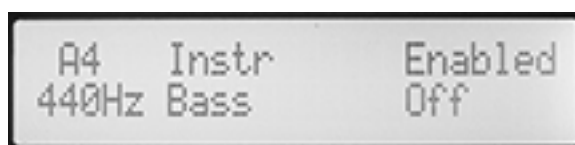
```
Main Phase
Reverse
```
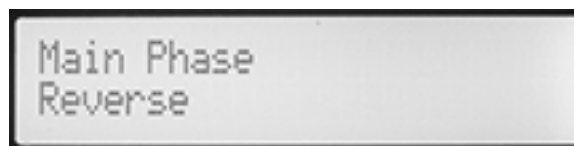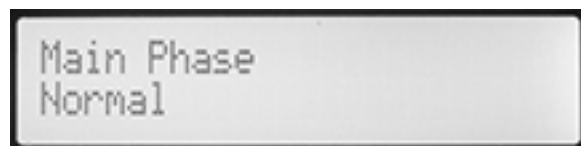
Screen 9 – Tuner Frequency, Instrument Select and Enable Menu

This menu allows you to choose the A4 reference frequency for instrument tunings. Ranges from A432 – A448 can be selected using the **BASS/Filters** knob.

```
A4     Instr      Enabled
432Hz Bass        On
```

```
A4     Instr      Enabled
448Hz Bass        On
```

It also allows you to optimize the tuner's speed and accuracy for either Bass or Guitar by turning the **LMID/Mem1** knob to the desired instrument. And, you can enable or disable the tuner function in this menu by turning the **TRBL/Bright** knob to the desired selection. If enabled, when Mute is engaged, the LCD display will turn into a very fast and accurate chromatic tuner optimized for the instrument selected.

```
A4     Instr      Enabled
440Hz Bass        Off
```

```
A4     Instr      Enabled
440Hz Bass        On
```

```
A4     Instr      Enabled
440Hz Guitar      On
```

The factory default is **A=440**.

Screen 10 – Fan Menu

This menu allows you to select **Auto** or **On** for fan control. Although not recommended, it can be useful if you're playing an outside venue in direct sunlight such that the case temperatures can get unusually warm just by the effects of the direct sun. Turning the fan **on** will keep air circulating through the case minimizing any heating issues under these extreme conditions. **Auto** only turns the fan on when a specified temperature is reached and is the default setting. It will be selected automatically upon power up.

- **Turning BASS/Filters knob**
  Auto ⇔ On

```
Fan
AUTO
```

```
Fan
ON
```
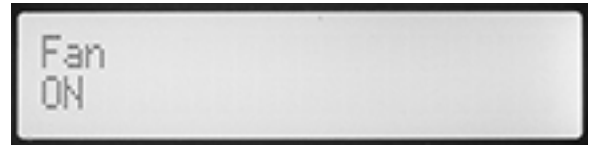
⇨ The fan is automatically engaged when 2-ohm operation is selected.

Screen 11 – Contrast Adjust Menu

This menu allows you to adjust the contrast of the LCD Display.
- **Turn Bass/Filters knob to adjust contrast**

```
Contrast
20
```

Screen 12 – Factory Reset Menu

This menu allows you to return to original factory settings.

```
FACTORY RESET Enter 1234
&Press to reset      0000
```

- **Turn** BASS/Filters knob until a 1 appears in first position.
- **Turn** LMID/Mem1 knob until a 2 appears in the second position.
- **Turn** HMID/Mem2 knob until a 3 appears in the third position.
- **Turn** TRBL/Bright know until a 4 appears in the fourth position.

```
FACTORY RESET Enter 1234
&Press to reset      1234
```

- **Press** any knob to return to original factory settings.

⇨ This reset will **Not** erase any stored Speaker Profiles in the **B|AMP**'s memory, but it will erase any stored user memory settings in **Mem1** and **Mem2**.

⇨ It is **Not** recommended to do a Factory Reset with a speaker connected to the **B|AMP**'s output, as audible pops may be heard.

Screen 13 – Software Rev. Menu

This menu displays the current version of the software loaded into your **B|AMP**.

```
Bergantino Audio
Version 1.1
```
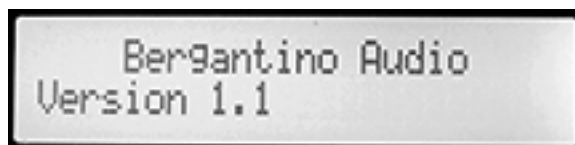
It will also be displayed upon power up on the welcome screen menus.

Firmware Upgrade

If new software becomes available for your **B|AMP**, you can upgrade the firmware via the USB port by doing the following:

- Load the firmware *.hex file onto a FAT32 formatted thumb drive.
- Rename the file to bampfw.hex (all lower case)
- With the **B|AMP**'s power off, insert the thumb drive into the USB port
- While holding the **Prog** button in, turn the **B|AMP** on and continue to hold the **Prog** button in until the green **Prog** led turns on.
- Once the **Home Screen** appears on the LCD display, remove thumb drive and recycle power.
- Your new software is ready to go!

Installation and Maintenance

Installation: To ensure proper operation and to avoid potential safety hazards, place the unit on a firm, level surface.

Make certain that proper space is provided for ventilation. Never block the fan or the fan vent holes on the side of the amplifier. If the amplifier will be installed in a rack or other enclosed area, make sure that there is sufficient air movement within the enclosure to allow proper cooling. Consult your dealer or Bergantino Audio Systems for more information if needed.

Avoid installation in extremely hot or cold locations, and areas that are exposed to direct sunlight, or near heating equipment.

Moving the Unit: Before moving the unit, be certain to disconnect any interconnection cords with other components, and make sure that you disconnect the unit from the AC outlet.

Cleaning: When the unit gets dirty, clean only with a dry cloth. Never use benzene, thinner, alcohol, or other volatile cleaning agents. Do not use abrasive cleaners, as they may damage the finish of metal parts. Avoid spraying insecticides near the unit.

Maintenance: Your new amplifier is rugged. It was built to give you years of trouble-free operation, if it is operated in accordance with the instructions contained in this manual. The only maintenance required is cleaning. If you are going to move your amplifier around frequently, we recommend a travel case to protect it from scratches and road wear. Do not use excessive force in handling control buttons, switches and controls. Do not use solvents such as benzene or paint thinner to clean the unit. Wipe off the exterior with soft cloth.

To avoid damaging your speakers and other playback equipment, turn off the power of all related equipment before making any connections.

No user serviceable parts inside. Refer service to qualified personnel. Always unplug AC power before removing chassis. EXPORT MODELS: Make certain grounding conforms to local standards. Always insure that amplifier is properly grounded. When replacing fuse, use only same type and rating.

READ AND FOLLOW INSTRUCTIONS OF PROPER USAGE.

Specifications

B|AMP Specifications:
Output Power:(User selectable in Program Mode)
700Watts @ 4-Ohm
800Watts @ 2.67-Ohm
800Watts @ 2-Ohm

Maximum Input Levels:
Main Input: 1Vrms (post gain control)
Aux. Input: 2Vrms
Effects Return: 1Vrms

Input/Output Impedances:
Input Impedance	1M Ohm
Aux. input Impedance	20k Ohm
Send output Impedance	600 Ohm
Return input Impedance	20k Ohm
Line Output Impedance	600 Ohm
DI Output Impedance	600 Ohm

Tone Controls (Peaking Type):
BASS: +/- 9dB Variable from 40Hz to 120Hz
LMID: +/- 9dB Variable from 150Hz to 800Hz
HMID: +/- 9dB Variable from 800Hz to 3kHz
TRBL: +/- 9dB Variable from 3kHz to 9kHz

Filters:
Variable High Pass Filter (VHPF): Variable from 30Hz to 80Hz in 2Hz increments.

Variable Feedback Filter (VFBF): Adjustable from off (0dB) to -6dB to -12dB in 1 dB increments. Frequency range from 40Hz to 196Hz (E1- G3) in half step increments.

Bright Filter: Adjustable +3dB to +12dB in 1dB increments. Variable from 2kHz to 10kHz in 500Hz increments.

Cooling: micro-controlled low noise fan

Amplifier Protection: Full short circuit and thermal protection.

Dimensions (HxWxD): 10.5 W x 8.375"D x 3.75"H

Weight: 6.5 lbs.

Power Requirements:
100VAC-240VAC 50/60Hz
6.3 Amps (Internal T6.3A/250V fuse)
Maximum power consumption: 700 Watts

Warranty Information

Bergantino Audio Systems, 1 Main Street, Whitinsville, MA 01588 U.S.A. warrants to you, the ORIGINAL PURCHASER of the Bergantino Audio Systems **B|AMP**, for a period of two (2) years from the date of purchase by the original purchaser (the "warranty period") that the new Bergantino Audio product is free of defects in materials and workmanship. We further warrant the new Bergantino Audio product regardless of the reason for failure, except as excluded in this Warranty.

You can register your warranty at http://bergantino.com/warranty-registration

ITEMS EXCLUDED FROM THIS Bergantino Audio WARRANTY
This Bergantino Audio Warranty is in effect only for failure of a new Bergantino Audio product that occurred within the Warranty Period. It does not cover any product, which has been damaged because of any intentional misuse, accident, negligence, or loss, which is covered under any of your insurance contracts. This Bergantino Audio Warranty also does not extend to the new Bergantino Audio product if the serial number has been defaced, altered, or removed.

WHAT THE WARRANTOR WILL DO
We will remedy any defect, regardless of the reason for failure (except as excluded), by repair or replacement. Warranty work can only be performed at our authorized service centers or at the factory. Warranty work for some products can only be performed at our factory. We will remedy the defect and ship the product from the service center or our factory within a reasonable time after receipt of the defective product at our authorized service center or our factory. The customer will bear the expenses of shipping the product to Bergantino Audio in remedying the defect, including surface shipping costs in the United States, while return shipment will be borne by Bergantino Audio. (You must bear the expense of shipping the product between any foreign country and the port of entry in the United States including the return shipment, and all taxes, duties, and other customs fees for such foreign shipments.)

HOW TO OBTAIN WARRANTY SERVICE
You must notify us of your need for warranty service within the warranty period. All components must be shipped in a factory pack, which, if needed, may be obtained from us for a minimal charge. Corrective action will be taken within a reasonable time of the date of receipt of the defective product by our authorized service center or us. If the repairs made by us or our authorized service centers are not satisfactory, notify our authorized service center or us immediately.

DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES
YOU ARE NOT ENTITLED TO RECOVER FROM US ANY INCIDENTAL DAMAGES RESULTING FROM ANY DEFECT IN THE NEW Bergantino Audio PRODUCT. THIS INCLUDES ANY DAMAGE TO ANOTHER PRODUCT OR PRODUCTS RESULTING FROM SUCH A DEFECT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

WARRANTY ALTERATIONS
No person has the authority to enlarge, amend, or modify this Bergantino Audio Warranty. This Bergantino Audio Warranty is not extended by the length of time that you are deprived of the use of the new Bergantino Audio product. Repairs and replacement parts provided under the terms of this Bergantino Audio Warranty shall carry only the unexpired portion of this Bergantino Audio Warranty.

DESIGN CHANGES
We reserve the right to change the design of any product from time to time without notice and with no obligation to make corresponding changes in products previously manufactured.

LEGAL REMEDIES OF PURCHASER
THIS Bergantino Audio WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS; YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE. No action to enforce this Bergantino Audio Warranty shall be commenced after expiration of the warranty period.

THIS STATEMENT OF WARRANTY SUPERSEDES ANY OTHERS CONTAINED IN THIS MANUAL FOR Bergantino Audio PRODUCTS.