



B800



BRX212



BRX112NEO

The **B800** bass head offers classic natural bass tone and high power headroom. The **BRX212** and **BRX112NEO** combos unleashes this power into state-of-the-art Neodymium 12" drivers, adding a dedicated high frequency amp for the extended range titanium horn.

All this is cased in a Baltic Birch plywood cabinet, featuring built-in casters and retractable handle, sealed with our tough Duratex™ finish.

Four discrete Class A input stages produce the harmonic basis for the preamp right from the input jack. It begins with a boutique flat response, then we add 6 tone controls for you to carve out your signature sound. Harmonic content increases as you turn up the Drive control, capable of producing a meaty growl at maximum settings.

Solid design and bullet-proof construction will give you years of use.

- Discrete Class A input stages
- Preamp DRIVE and master VOLUME controls
- Six EQ controls: SUB BASS, BASS, LOW MID, MID, HIGH MID, and TREBLE
- Active/Passive input gain switch with input CLIP indicator
- Signal MUTE front panel switch or optional FS22 footswitch
- EFFECT LOOP front panel bypass switch or optional FS22 footswitch
- DIRECT OUT balanced XLR with independent LEVEL control, switchable "Pre-Post" and "Ground Lift", DC isolated
- TUNER output jack independent of MUTE switch
- Internal OPTO clip-activated power amp limiter with *limiter free* normal operation
- High current SPEAKON® connectors and steel 1/4" speaker jack
- Metal shaft controls with threaded metal bushings mounted directly to front panel
- All steel chassis
- High density Baltic Birch plywood cabinet with Duratex™ polyurethane finish
- Recessed casters and retractable steel handle for tilt-and-roll portability
- 12" Neodymium magnet cast aluminum frame woofers
- Titanium diaphragm extended range HF driver
- Dedicated 50w amp for HF driver with LEVEL control

For your records, record the following information.

Serial No. _____ Invoice Date _____

GETTING STARTED QUICKLY

If you are like most players, you probably want to plug in your new amp and get started playing right away. Before you start, be sure your amp is plugged into the correct AC voltage.

1. With POWER off, make sure a speaker cabinet is connected to one of the SPEAKER OUTPUTS.
2. Set the VOLUME and DRIVE to "0", and set the ACTIVE INPUT switch for your type of bass.
3. Set all tone controls to their center "5" position. This is the "FLAT" setting for the amp.
4. Now, turn the amp ON. Turn the output level of the bass guitar fully up. Gradually increase the amp VOLUME control to the desired level. If no sound is heard, turn down the VOLUME control and check the MUTE and PROTECT LEDs.
5. Increasing the DRIVE control will add harmonic richness to your sound. Turning up the DRIVE also increases volume. Re-adjust the VOLUME after adjusting the DRIVE.
6. Adjust the tone controls to your liking. Keep in mind that turning up a tone control isn't always the answer. Sometimes turning down one of the MID controls will get you the sound you want. Depending on your speakers you may get more volume and clearer bass from your cabinet by lowering the SUB BASS control and increasing the BASS or LO MID control.
7. Adjust the rear HF LEVEL control for the titanium driver's amp. Turning up the level will add articulation and clarity to your sound.
8. Need more volume? There is a limit to the amount of volume a speaker can produce. Even though the **B800/BRX212/BRX112NEO** is a powerful amp, adding more speakers is the only way for substantially more output. Every time you double your speakers, your acoustic output goes up by a factor of four.

Have fun exploring the features and sounds of the **B800/BRX212/BRX112NEO**. Take the time with your new amp to realize its full potential - and yours!

DESIGNED FOR THE RIGORS OF TOURING

The **B800** amp is constructed using a heavy-duty 16 gauge steel chassis that is galvanized before being painted to prevent rust. Connections include Speakon™ output connectors and a full featured XLR Direct Out. Controls feature metal shafts and threaded metal bushings mounted directly to the front panel. All internal cabling is securely tied and harnessed. Every circuit card is MIL SPEC, double-sided, through-hole plated, fire retardant FR-4 glass epoxy. Toroid transformers are used as they are the engineer's choice for greater power supply current while reducing weight and magnetic "hum" fields. The Baltic Birch plywood cabinet is covered in virtually indestructible Duratex™ weatherproof polyurethane.

RECEIVING INSPECTION

INSPECT YOUR UNIT FOR DAMAGE which may have occurred during shipping. If damage is found, please notify the shipping company and CARVIN immediately.

SAVE THE CARTON & ALL PACKING MATERIALS. In the event you have to reship your unit, always use the original carton and packing material. This will provide the best possible protection during shipment. CARVIN and the shipping company are not liable for any damage caused by improper packing.

SAVE YOUR INVOICE. It will be required for warranty service if needed in the future. SHIPMENT SHORTAGE. If you find items missing, they may have been shipped separately. Please allow several days for the rest of your order to arrive before inquiring.

RECORD THE SERIAL NUMBER on the enclosed warranty card and below on this manual for your records. Keep your portion of the card and return the portion with your name and comments to us. You may register your warranty online @carvin.com/registration.

B800/BRX212/BRX112NEO SPECIFICATIONS:

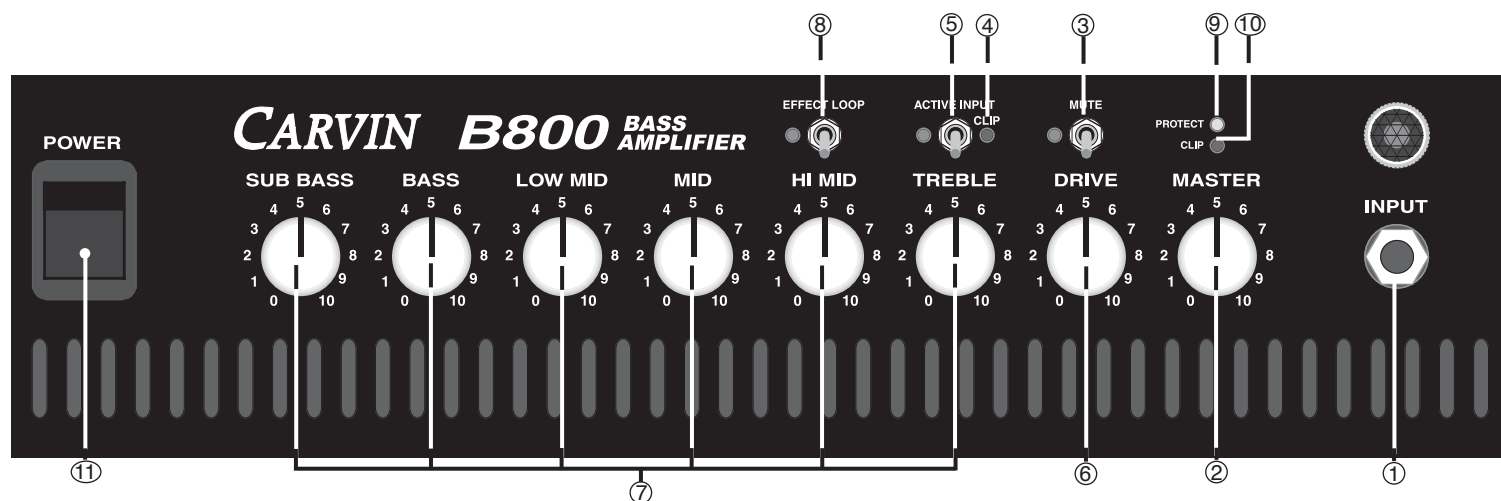
Frequency Response	20 Hz to 20kHz	
Output Power		
8Ω	THD < 1%	300w (BRX112NEO)
4Ω	THD < 1%	500w (BRX212)
2Ω	THD < 1%	800w
8Ω High Frequency	3kHz-22kHz	50w (combos only)
Input Impedance	>200kΩ	
BRX112 frequency response	35 - 22k Hz	
BRX212 frequency response	39 - 22k Hz	
Low Freq. Drivers	Two 12" Neodymium 8Ω/300w, total 4Ω/600w	
High Freq. Driver	1" Titanium 50w/8Ω	
AC Requirements	120VAC 60 Hz or 240VAC 50 Hz optional models	
Power Requirements	800VA	
Dimensions	16.75W x 18D x 30.25H (BRX212) 22"H x 17"W x 18"D (BRX112NEO) 4.25"H x 17.25"W x 12"D (B800)	
Shipping Weight	B800: 22lbs. BRX212: 69lbs. BRX112NEO: 47lbs.	
Warranty	One year parts and labor	

CARVIN

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1. INPUT JACK

The 1/4" **INPUT** jack accommodates both passive and active instruments. The high impedance *Class A* input stage offers enough headroom to perform without clipping even when used with most active basses. Input gain is adjusted with the **DRIVE** control and the **ACTIVE INPUT** switch.

2. VOLUME CONTROL

The **VOLUME** control adjusts the output level to the speakers. Adjusting the **DRIVE** control can also change your speaker output level.

3. MUTE SWITCH AND LED

The **MUTE** switch will stop all output signals with the exception of the **TUNER** and **EFFECT SEND** signals. The **MUTE** function can also be remotely controlled from the rear **FOOTSWITCH JACK** using a Carvin FS-22 footswitch. The blue LED next to the **MUTE** switch will light whenever the amp is muted. The footswitch will have no effect if the front panel **MUTE** switch is in the UP position.

4. CLIP LED

The red **CLIP** LED indicates that the input is near clipping. Since the **B800** preamp is designed with several *Class A* input gain stages and the ability to be overdriven, the **CLIP** LED monitors only the first input stage and will not indicate when the **DRIVE** control is set to overdrive the preamp. The input stage offers enough headroom to perform without clipping even when used with most active basses. To avoid input clipping, reduce the bass level or reduce the output level of devices placed between the bass and the input jack.

5. ACTIVE INPUT SWITCH AND LED

The **ACTIVE INPUT** switch is used to match the input gain of the amp to instruments that contain active electronics. If the preamp is being prematurely overdriven, flip the **ACTIVE INPUT** switch to the ON position. If the output of your bass is low and you are not getting enough volume from the speakers, be sure the **ACTIVE INPUT** switch is OFF and increase the **DRIVE** control. The blue LED indicates ACTIVE INPUT mode is ON.

See also DRIVE control (#6).

6. DRIVE CONTROL

The **DRIVE** control adjusts the input gain to the preamp and the level of harmonics in the signal. With the **DRIVE** control set low, both input gain and harmonics are at a minimum. Increasing the **DRIVE** control causes the Class A gain stages to introduce more harmonics resulting in a rich sound typical of vintage tube amps. With the **DRIVE** control set near maximum,

overdrive sounds can be produced. The **DRIVE** control can be used with the **ACTIVE INPUT** switch to get the sound you want. To reduce preamp overdrive while retaining the harmonics of a high **DRIVE** level setting, turn the **ACTIVE INPUT** switch ON or reduce the level on the bass guitar. Turning the **ACTIVE INPUT** switch OFF will make preamp overdrive easier. See also ACTIVE INPUT switch (#5).

7. TONE CONTROLS

The six **TONE CONTROLS** on the **B800** are designed with the center frequencies most requested by professional bass players. This EQ is very effective for getting the sounds you desire out of each instrument.

8. EFFECT LOOP SWITCH AND LED

The **EFFECT LOOP** switch engages the rear effects loop connections. The effects loop can be turned on with the **EFFECT LOOP** switch on the front panel or by using the optional **FS22** footswitch. When the front panel switch is in the UP position, the loop is engaged regardless of the footswitch. The status of the effects loop is indicated on the front panel by the BLUE LED next to the **EFFECT LOOP** switch.

See also EFFECT LOOP SEND/RETURN jacks (#5).

9. AMP CLIP LED

The **AMP CLIP** LED indicates that the power amp is being driven too hard.

10. PROTECT LED

The **PROTECT** LED indicates that the power amp has gone into one of its protect modes.

11. POWER SWITCH / (PROTECT RESET)

Push the upper portion of the **POWER SWITCH** to turn the amplifier on. If the large blue power indicator is on but no sound is coming out of the speakers, the amp may have gone into one of its protection modes. To reset the amp, turn the power off for 30 seconds and then turn the amp back on. If the problem persists, check for; a) The speaker impedance is too low for the amp, b) bad speaker cable, c) damaged speaker or, d) blocked rear fan intake.

HELPFUL HINTS

- 1) **NO SOUND FROM AMP:** The MUTE function has been inadvertently engaged, speakers have been improperly connected or Effect Loop has been improperly connected.
- 2) **NO HIGH FREQUENCIES:** Tweeters or midrange drivers have been damaged from too much power.
- 3) **WEAK BASS:** The speaker systems are wired out of phase to each other. To correct, reverse the wires on one of the speaker connectors.
- 4) **DIR XLR HUM:** Try switching the rear GND LIFT switch IN or OUT. Check for noise from external effects or bad cabling.



rear view/built-in casters
BRX212



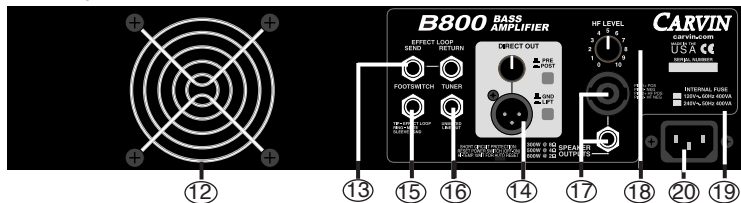
rear view close-up
BRX212



handle release button
BRX212

REAR PANEL CONTROLS

BRX212/BRX112NEO



12. COOLING VENTS

The rear vents are for cooling the internal power amps. Provide a minimum of 3" of clearance for adequate ventilation. Blocking the air flow to these vents will cause the amp to thermally protect and turn the speaker relays off. If this happens, clear the obstruction first, keep the power on, and turn the guitar volume down allowing the amp to cool. The amp will engage the speaker relays when cooling conditions return to normal.

13. EFFECT LOOP SEND/RETURN JACKS

The **EFFECT LOOP - SEND** and **RETURN** jacks are used to connect external effects into the B800 signal chain. The loop is inserted after the DRIVE and TONE CONTROLS but before the VOLUME control. To use the effects loop, connect the **SEND** jack to the input of the effects unit and connect the **RETURN** jack to the output of the effects unit. The effects loop can be turned on with the **EFFECT LOOP** switch on the front panel or by using the optional **FS22** footswitch. When the front panel switch is in the UP position, the loop is engaged regardless of the footswitch. The status of the effects loop is indicated on the front panel by the BLUE LED next to the **EFFECT LOOP** switch.

14. DIRECT OUT XLR

The **DIRECT OUT XLR** is a balanced output that can be configured in a number of different ways. The **PRE / POST** switch is used to select a pre or post preamp feed. In the "**PRE**" (OUT) position, a direct feed is taken off of the **INPUT** jack and is similar to using a direct input box at the bass guitar output. In the "**POST**" (IN) position the feed is post the preamp section and contains all of the signal that is sent to the power amp and speakers. To set the output, use the **DIRECT OUT LEVEL** control. A **GND/LIFT** switch is also available for the **DIRECT OUT XLR** jack. Set this switch for the lowest noise when using this output. When the **GND/LIFT** switch is depressed, the signal ground is lifted from this jack thus eliminating any ground loops between the **B800** direct out and the gear it is feeding.

15. FOOTSWITCH

Connect the optional **FS22** footswitch to remotely control the MUTE function and the EFFECTS LOOP bypass. The first button on the **FS22** turns the MUTE on and off and the second button turns the EFFECTS LOOP on and off. Any standard footswitch with a stereo plug will work.

16. TUNER LINE OUT JACK (UNMUTED)

The **TUNER LINE OUT** jack is provided as a place to hook up a tuner. This output is unaffected by the MUTE function so that you may tune your bass quietly.

17. SPEAKER OUTPUTS

The B800 amp contains 1/4" and **SPEAKON™** speaker output connectors. Multiple speakers can be attached to either the 1/4" or **Speakon™** jacks so long as the total impedance is not below 2Ω. See **SPEAKER COMBINATIONS AND OHMS** chart. On the BRX212 and BRX112 combo's the 4 pined **Speakon** is wired: 1+, 1- for the full range 800W amp and 2+, 2- for the 50W high frequency amp. The extra **Speakon** on the cabinet can be used for extension speakers (minimum of 4 ohms) with the combo's internal speaker.

18. HF AMP OUTPUT LEVEL

The BRX212 features a separate amplifier for the internal high frequency horn. This volume controls the output level for the high frequency amp.

19. INTERNAL FUSE

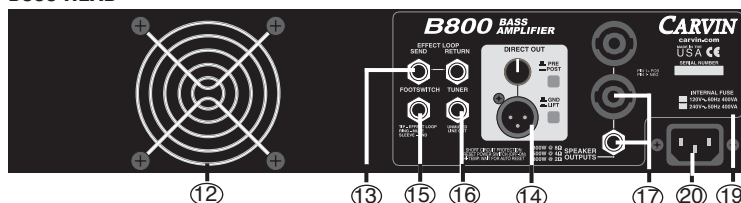
If there are high AC voltage surges or if the amp is used with excessive loads, the internal fuse will protect your amp from damage. If the fuse fails, the proper replacement fuses for 120 VAC models are; **15 AMP** 250VAC slow blow.

240 VAC models; **10 AMP** 250 VAC slow blow.

20. AC LINE CORD

All B800 Series bass amplifiers are supplied with detachable three conductor AC line cords. Make sure the cord is securely inserted into the back of the unit. Never defeat the ground of the AC line cord as it is there for your protection. If you must plug into a two prong outlet, use a quality 3 to 2 prong grounded adapter and properly ground it.

B800 HEAD



FOR MAXIMUM OUTPUT:

- To get more output, use multiple speakers or enclosures. Every time you double your speakers, your acoustic output goes up by a factor of four. Load the amplifier down to its lowest minimum impedance for maximum RMS power.
- To get the highest output from your **B800** bass amp use two 4 ohm speakers. Plug two **Speakon™** cables into the rear **SPEAKER OUTPUT** connectors or daisy-chain another **Speakon™** from speaker to speaker. Two 4 ohm speakers will give you a total impedance of 2 ohms, which is the maximum power from your amp. If you use more than two 4 ohm speakers, your amp will shut off and go into the "protect" mode. To reset, turn your amp off and connect only two 4 ohm speakers.
- Speakon™** cables are recommended for your bass rig because of their high current capacity. While the standard 16 GA 1/4" cables will work OK with your system, the **CARVIN SP5** 12 GA **Speakon™** cables will allow you to drive as much as 20% more power at high power levels extracting every watt from your B800 bass amp.

SPEAKER COMBINATIONS and OHMS (Ω):

Four x 8Ω cabinets = 2Ω	(OK)
Three x 8Ω = 2.66Ω	(OK)
Two x 8Ω = 4Ω	(OK)
Two x 4Ω = 2Ω	(OK)
One 8Ω and One 4Ω cabinet = 2.66Ω	(OK)
Two 8Ω and One 4Ω = 2Ω	(OK)
One 2.66Ω and One 8Ω = 2Ω	(OK)
Two x 2Ω = 1Ω	(not recommended)
Three x 4Ω = 1.33Ω	(not recommended)
Two x 4Ω and One 8Ω = 1.6Ω	(not recommended)
One 2.66Ω and One 4Ω = 1.6Ω	(not recommended)

The B800 is a very powerful amplifier. As with any amplifier, make sure your speakers are suitable for the available wattage. Driving speakers with too much wattage will cause them to distort and eventually fail. If distorted sound is coming from the speakers, reduce the volume until the distortion stops.



This symbol 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.

CAUTION

**RISK OF ELECTRIC SHOCK
DO NOT OPEN**



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



IMPORTANT! FOR YOUR PROTECTION, PLEASE READ THE FOLLOWING:

WATER AND MOISTURE: Appliance should not be used near water (near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

POWER SOURCES: The product should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

GROUNDING OR POLARIZATION: Precautions should be taken so that the grounding or polarization is not defeated.

POWER CORD PROTECTION: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or adjacent them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

SERVICING: The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

FUSING: If your unit is equipped with a fuse receptacle, replace only with the same type fuse. Refer to replacement text on the unit for correct fuse type.

SAFETY INSTRUCTIONS (EUROPEAN)

The conductors in the AC power cord are colored in accordance with the following code.

GREEN & YELLOW—Earth BLUE—Neutral BROWN—Live

U.K. MAIN PLUG WARNING: A molded main plug that has been cut off from the cord is unsafe. **NEVER UNDER ANY CIRCUMSTANCES SHOULD YOU INSERT A DAMAGED OR CUT MAIN PLUG INTO A POWER SOCKET.**

LIMITED WARRANTY

Your Carvin product is guaranteed against failure for 1 YEAR unless otherwise stated. Carvin will service and supply all parts at no charge to the customer providing the unit is under warranty. Shipping costs are the responsibility of the customer. **CARVIN DOES NOT PAY FOR PARTS OR SERVICING OTHER THAN OUR OWN. A COPY OF THE ORIGINAL INVOICE IS REQUIRED TO VERIFY YOUR WARRANTY.** Carvin assumes no responsibility for horn drivers or speakers damaged by this unit. This warranty does not cover, and no liability is assumed, for damage due to: natural disasters, accidents, abuse, loss of parts, lack of reasonable care, incorrect use, or failure to follow instructions. This warranty is in lieu of all other warranties, expressed or implied. No representative or person is authorized to represent or assume for Carvin any liability in connection with the sale or servicing of Carvin products. **CARVIN SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

When RETURNING merchandise to the factory, you may call for a return authorization number. Describe in writing each problem. If your unit is out of warranty, you will be charged the current **FLAT RATE** for parts and labor to bring your unit up to factory specifications.

MAINTAINING YOUR EQUIPMENT

Avoid spilling liquids or allowing any other foreign matter inside the unit. The panel of your unit can be wiped from time to time with a dry or slightly damp cloth in order to remove dust and bring back the new look. As with all pro gear, avoid prolonged use in caustic environments (salt air). When used in such an environment, be sure the amplifier is adequately protected by rack, covers, etc..



CAUTION

RISK OF ELECTRIC SHOCK

REFER SERVICING TO QUALIFIED SERVICE PERSONNEL! THIS UNIT CONTAINS HIGH VOLTAGE INSIDE!