

EBS 802

HIGH DYNAMICS LINEAR BASS AMP



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The EBS 802 High Dynamics Bass Amp

EBS excellence in solid-state technology is well known and runs through the veins back to when the company started in 1988.

The World's stage spotlight landed on EBS when the company introduced their first solid-state hybrid amps in the late 90s'. Since then, EBS has developed into a thriving business that covers most of a bass players' needs.

The new EBS 802 is the new cornerstone of the EBS amplifications program. Engineered to be the new reference amp to define the 'EBS sound'.

The EBS 802 amp is entirely Made in Sweden.

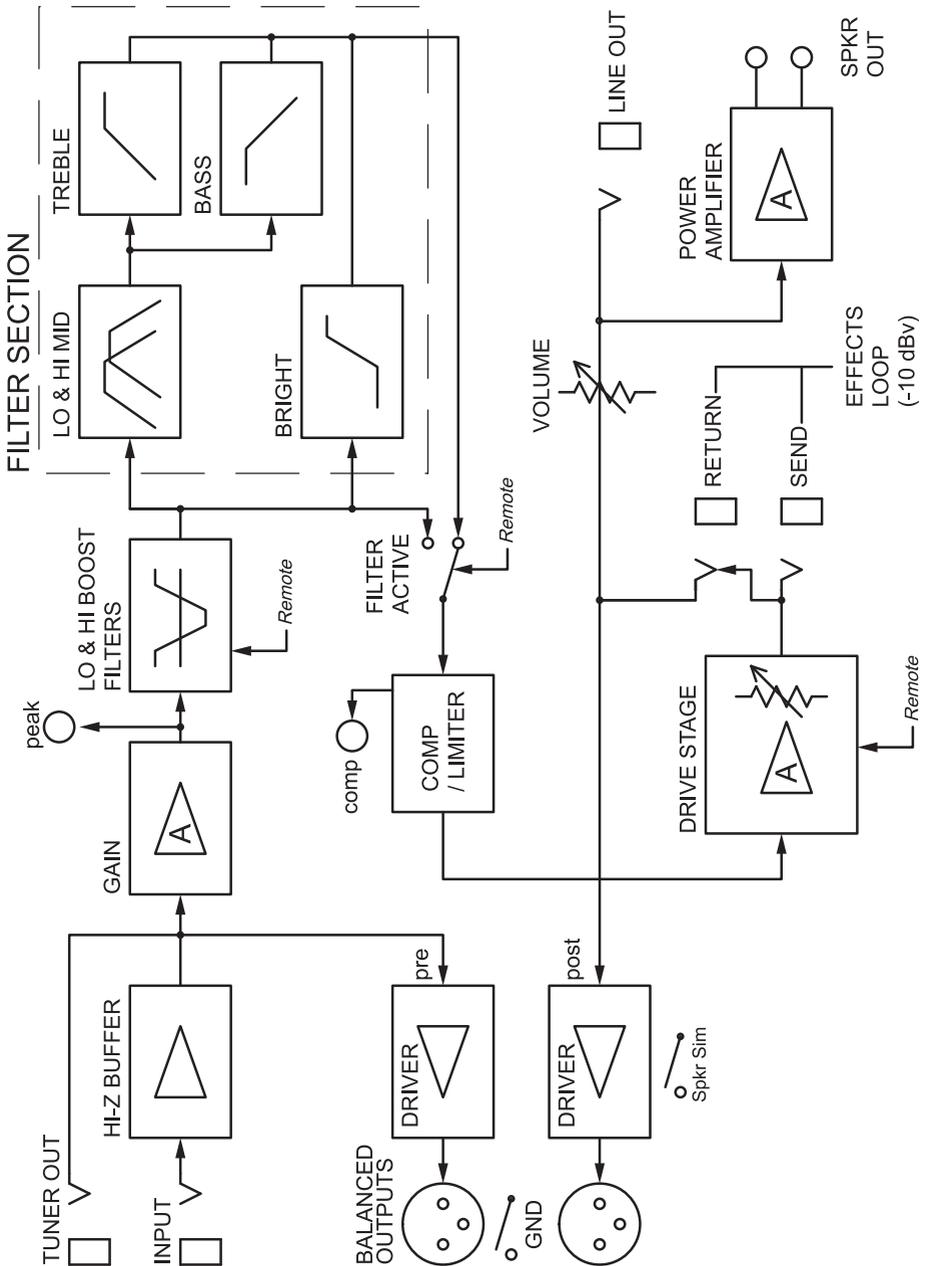
GETTING STARTED...

1. Carefully unpack the bass head.
2. Check that all knobs are set fully counter-clockwise besides the EQ controls marked BASS, LO & HI MID and TREBLE which should be set to the mid position and the toggle switch next to the BASS control to "100". Make also sure all push switches are set to their outer positions. Now the EBS 802 settings are "zeroed" and ready to be personalized.
3. Connect one or more speaker cabinets to the speaker output. The amp can handle a 2 ohms load.
4. Turn on the POWER switch and then the STANDBY switch, so that both lights light up.
5. Plugin your bass. While plucking the strings as hard as you would during your hardest playing, gradually increase the GAIN knob until the peak LED starts to flash at peaks.
6. Move over to the VOLUME knob and adjust for the desired output volume.

BUILDING THE SOUND...

7. The first tonal shaping circuitry is the Character Filters next to the GAIN control. These filters provide a LO and/or HI boost prior to further fine-tuning of your sound.
 8. Press the Filter Active pushbutton to activate the filter section.
 9. The EQ controls marked with + and - signs, either boost or cuts the selected frequency band. Note the switches next to the BASS and TREBLE knobs, that sets the center frequency for these filters. The switches can be used to cut frequencies that create unwanted feedback or to boost frequencies of your choice, depending on how you use the control knob connected to the switch. Further, the LO and HI MID sections work in conjunction with a frequency control knob for precise adjustment of the midrange.
 10. Increase or decrease the level and vary the frequency of the filters that have that option. Notice how the sound is affected. An A/B comparison can be made by toggling the filter active switch.
 11. Proceed to the COMP/LIMIT knob. This control adjusts the compression and is useful when playing very dynamic or loud.
 12. Turn up the COMP/LIMIT knob to mid and max position. Notice how the peaks in volume will straighten out as you play harder and harder.
 13. Now, increase the BRIGHT level gradually and play your bass. The BRIGHT filter is a high pass filter that works on the highest frequencies of the bass to give enhanced ambiance and presence.
 14. Increase the DRIVE level gradually until the desired level of overdriven sound is reached.
- This was a brief introduction to get you started with the EBS 802.

EBS 802 – BLOCK DIAGRAM



EBS 802 – FRONT PANEL CONTROLS



1. INPUT. A low noise, high impedance instrument input that can be used for both passive and active instruments.

2. HI & LO BOOST.* The Boost filters operate independently from the other preamp filters. This gives the user the opportunity to preshape the sound before the final processing by boosting either the lows or highs, or both at the same time.

3. GAIN adjusts the instruments' signal strength before the filters. For optimum signal level, turn up the GAIN knob until the PEAK led starts flashing from the strongest signal from the instrument.
Note: A correctly set GAIN is vital for the signal processing to work properly in the EBS 802.

4. COMP/LIMIT. A low noise compressor limiter that works fast and effectively, tightening up the sound and preventing the bass head from saturating at peaks when approaching the headroom limit. The COMP/LIMIT knob sets the compression ratio, i.e. The signal strength relation between the input and output; the higher ratio the more compression. The LED intensity dynamically indicates the amount of compression during play.

5. FILTER ACTIVE.* This switch activates the filter section described under point 6.

6. FILTERS. The filter section contains five enhanced performance filters:

BASS is a 'shelving' type 12dB/oct slope phase compensated bass filter with a wide gain range. It works in conjunction with a flip-switch control to set the corner frequency at 60, 80 or 100 Hz. Pick a corner frequency, then move the Bass control towards + to boost or - to cut in the range you have chosen.

LO MID and HI MID makes possible for individual control of a certain frequency in the low-mid respectively high-mid range. Both filters consists of one control that cuts or boosts in the frequency you choose with the control right next to it. LO MID covers frequencies from 95 to 3000Hz. HI MID works in the range of 200 to 7000Hz.

TREBLE is a shelving type filter controlling the higher mids and treble registers, giving presence and ambience to the sound. The associated switch selects the center frequency of operation.

BRIGHT is an advanced high pass filter capable of producing bright high treble timbre, without adding practically any noise.

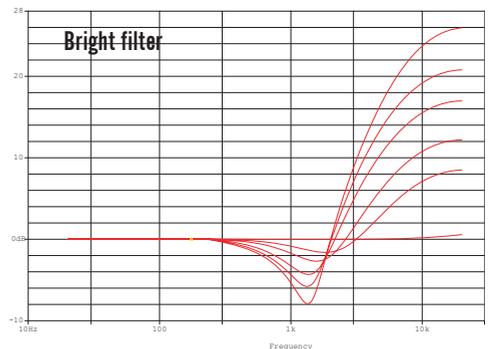
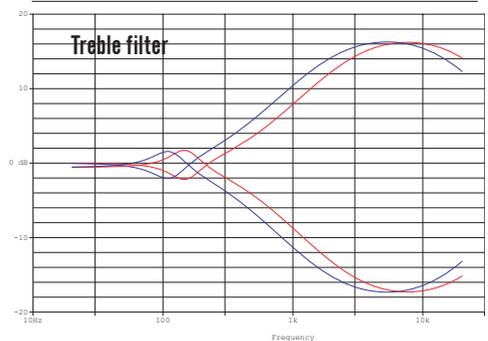
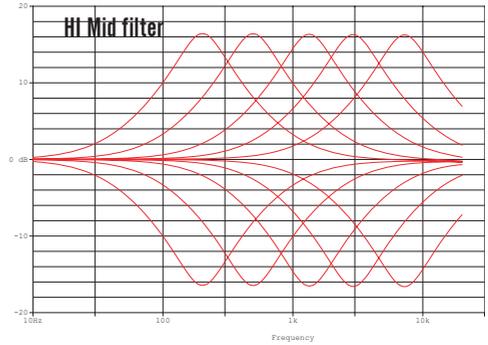
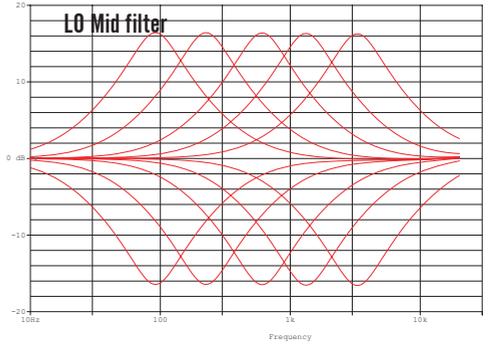
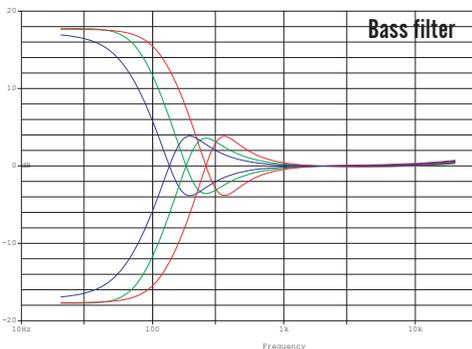
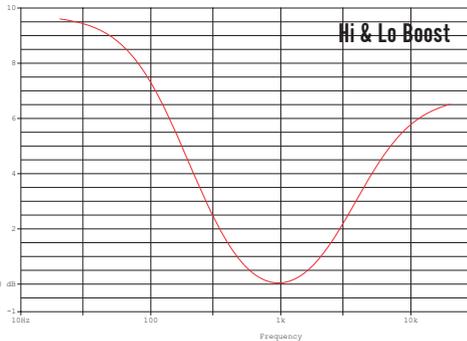
7. DRIVE.* The DRIVE knob controls the amount of gain in the tube emulation stage, and provides an extra gain all the way up to 34 dB. The gain is compensated over this section producing a warm overdrive while the output remains more or less constant.

This control also compresses the sound when turning up level up to maximum, producing pure limitation. This Drive function can be controlled by a footswitch remotely. See rear panel descriptions for more details.

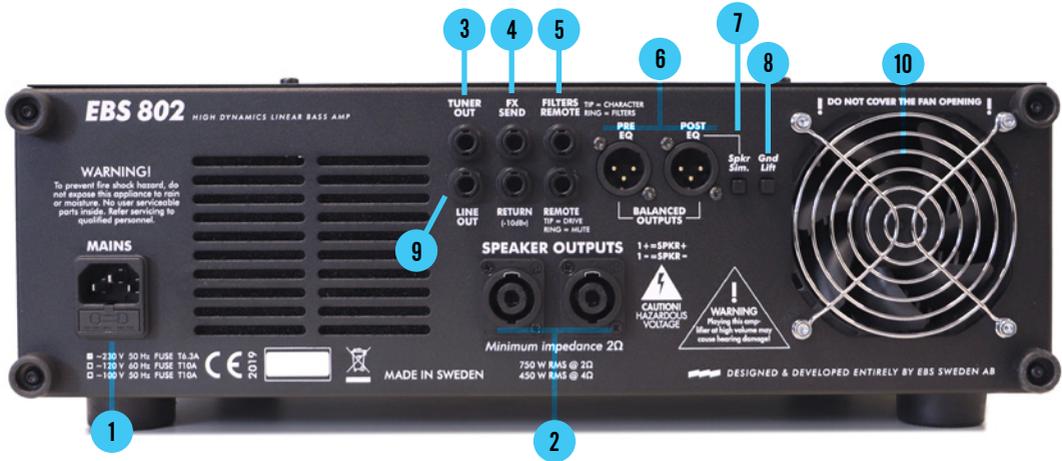
8. VOLUME. The VOLUME knob controls all volume in the unit, controlling the poweramp and LINE output. The balanced output (XLR) is not affected by the setting of this knob.

9. STANDBY. Indicates operation status of the amp and brings all outputs up from mute condition. **POWER.** Powers the amplifier head.

** Note: These features can be switched on and off with a footswitch (EBS RM-4, sold separately). The footswitch can be connected from the back of the amp and also features a Mute switch.*



EBS 802 – REAR PANEL FEATURES



1. MAINS. Connect your power cable to the mains input.

2. SPEAKER OUTPUTS. Connect your speakers here. Minimum load is 2 ohms, which means you can connect two 4 ohm speakers at the same time.

Note: The EBS 802 produces 750W RMS @ 2 Ohm, 450 W RMS @ 4 Ohm.

3. TUNER OUT. This output is taken directly after the input buffer stage and can be used to connect to a tuner.

4. EFFECTS LOOP. This is a serial effects loop for the use of external units such as box or rack effects. Nominal level is set for use with standard stomp boxes. The loop puts the external effects after the filter, compressor and drive sections.

5. REMOTES. The EBS 802 is equipped with two remote jacks for controlling the HI and LO Boost and Filter Active switches, engage the Drive, as well as a Mute function with foot switches. The EBS RM-4 footswitch is recommended, but you may use other footswitch pedals too. Refer to the rear panel screen print and technical specification for further info how to connect your footswitch.

Note: Each of the filter switches on the front panel needs to be set to inner position in order to be remotely controlled.

6. BALANCED OUTPUTS. A balanced output functions as a high quality line box for connecting to PA mixing consoles or to studio or broadcast recording units, with high noise immunity. The volume level does not effect these outputs. Use the PRE EQ output for a clean, unprocessed signal. Use the POST EQ for a signal processed by the amps preamp signal. You can use both outputs at the same time.

7. SPKR SIM. The switch activates a speaker simulator filter. This filter intend to give the character of a miked bass cabinet applied to the POST EQ output signal.

8. GND LIFT SWITCH. Lifting ground is a great aid in many occasions eliminating ground noise and hum. When required, set this switch to Lift position to disconnect the ground from the balanced outputs.

9. LINE OUT. This is a fullrange output that will drive multiple poweramps, extending the power of the system. The signal present at this output is taken after the volume control.

10. SYSTEM FAN. The amps performance is maintained among other techniques with a fan controlling the temperature of the unit. Make sure not to cover the ventilation openings of the amp! **IMPORTANT!**

SPEAKER RECOMMENDATIONS FOR THE EBS 802 AMPLIFIER

Due to the amount of power the amp delivers, some speaker models/combinations are not recommended to use with this amp. See below which cabinets we recommend in the ProLine and NeoLine series. Other cabinets can be used too, but make sure they meet the specifications when it comes to power handling.

THE EBS PROLINE cabinets are entirely made in Sweden, just like the amplifier.

Transparency, balance, and natural warmth characterize the sound of the ProLine cabinets. For many, they represent the 'EBS' signature sound.

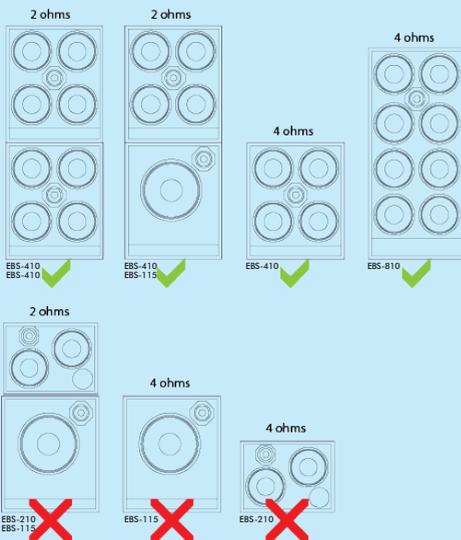
The illustration below shows the recommended setups when using EBS ProLine cabinets.

THE EBS NEOLINE are lightweight Neodymium cabinets with superior, dynamic range and an unmatched power handling throughout the frequency spectrum.

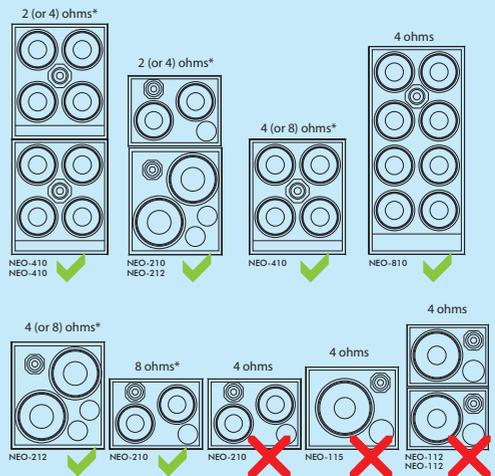
They can handle extreme lows, and the response is snappy and superfast.

The following setups are recommended when using EBS NeoLine cabinets.

EBS PROLINE SPEAKERS WITH EBS 802 BASS AMP



EBS NEOLINE SPEAKERS WITH EBS 802 BASS AMP



INPUT:	Input Impedance		2 Mohms // 33 pF
GAIN:	Gain Range	min/max	-∞/ +30 dB
	Gain Peak LED		+10 dBv
	Frequency Response	+0 / -3 dB	20 -20.000 Hz
BOOST:	HI:	Type	Shelving High Pass
		Gain	+3 dB @ 10 kHz
	LO:	Type	Shelving Low Pass
		Gain	+7 dB @ 40 Hz
COMP/LIMIT:	Compressor Gain		0 dB
	Attenuation	max	24 dB
	Compression Ratio	max	3:1
	Attack (80%)	typ.	<10 ms
	Release (80%)	typ.	100 ms
FILTER SECTION:	Bass Filter:	Type	12 dB/oct. Shelving
		Frequency Setting	60/80/100 Hz
		Gain Range	+/-16 dB
	Lo Mid Filter:	Type	Bandpass Filter
		Frequency Range	95 -3.000 Hz
		Q	0.8
	Hi Mid Filter:	Gain Range	+/-16 dB
		Type	Bandpass Filter
		Frequency Range	200 -7.000 Hz
	Treble Filter:	Q	0.8
		Gain Range	+/-16 dB
		Type	Shelving
	Bright:	Gain Range	+/-16 dB
		Frequency Setting	5.5/8.0 kHz
		Type	Shelving
DRIVE SECTION:	Gain Range	min/max	0 / 34 dB
	Low End Compensation		< 350 Hz
BALANCED OUTPUT:	Output Level	Nominal	-10dBv
	Frequency Response	+0/-3 dB	10-20.000 Hz
	XLR Connections		1-GND, 2-Hot, 3-Cold
	Options		GND Lift, Pre and Post EQ, Spkr sim(Post EQ)
EFFECT LOOP:	Loop Signal Level	nominal	-10 dBv
	Gain		Unity (1:1)
	Output Impedance		<100 ohms
	Input Impedance		100 kohms // 100 pF
LINE OUT:	Output Impedance		2 kohms
	Signal Level	nominal	0 dBv
TUNER OUT:	Output Impedance		250 ohms
	Signal Level		as input
	Function:		Connect to GND for bypass. TIP = Drive
		FILTER JACK:	RING = Filter Section TIP = Character
	Function:		Connect to GND for bypass.
	Threshold:		0.7 V
	Current :		3 mA suitable for LED
POWER AMP:	Output Power	@4 ohms	450 W RMS
		@2 ohms	750 W RMS
	Minimum Load Impedance		2 ohms
	Protection		DC, thermal and high frequency (HF).
AUXILIARY INFO:	Power Requirements		max 900 W
	Mains Protection:		T6.3A Fuse (230V) T10A Fuse (100/120V)
	Dimensions (WxDxH)	max	48 x 36 x 13 cm (19" x 14" x 5.2"(3U))
	Weight	net	14.4 kg (32 lbs)

Specifications are subject to change without notice!

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