

Fender[®]

THE SOUND THAT CREATES LEGENDS

**BXR 300C
BXR 300R**

Owner's Manual

P/N 040294

INTRODUCTION

The Fender BXR 300 AMPLIFIER is the most recent effort in state of the art bass amplifier technology, and is a member of the FENDER BXR series. The design execution of the BXR 300 was carried out with the aid of some of today's best players, and represents years of thought and consideration in the determination of features and specifications. The features included in the BXR 300 will provide a forum for almost every conceivable playing style from "contemporary" to those yet to come.

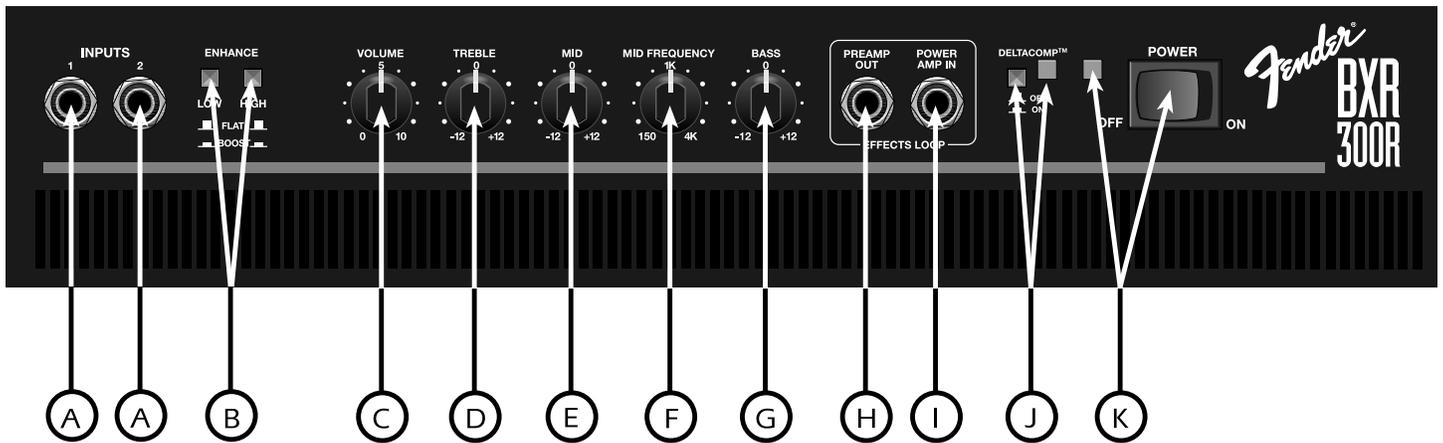
This manual covers all the features and functions for both BXR 300 models; the BXR 300R (rack mount) and the BXR 300C (1-15 combo).

Much attention has been given to those who would like to take advantage of the new signal processing devices which have appeared in recent time. Processors from simple battery powered devices to professional rack mounted studio types may be used. This facility is accomplished through the use of "PREAMP OUT" and "POWER AMP IN". The preamp section of the BXR 300 features two inputs, of differing sensitivity. A pair of buttons called "ENHANCE" are provided to allow enhancement of the low or high end of the spectrum. Active "BASS" and "TREBLE" controls allow response tailoring of the high and low frequency areas of the sounds you and your instrument produce.

The "MID" and "MID FREQUENCY" controls allow up to 20 decibels of boost or cut of the mid frequencies from 150 Hz to 4kHz. The rugged 300 Watt power amplifier was designed to give reliable service under all conditions and is equipped with our exclusive DELTACOMP™ adaptive compression system. When DELTACOMP™ engages, it is practically impossible to cause the power amplifiers to clip (distort). With DELTACOMP™, apparent compressor release time is kept short yet waveform distortion is kept to a minimum at low frequencies.

The BXR 300R is designed to perform well with almost any high quality speaker system, but performs best when used with members of the FENDER BXR and HM series. Speakers in these series include the BXR-115 , with a single fifteen inch FENDER special design driver, BXR-215 with two fifteen inch FENDER special design drives, BXR-410 with four ten inch FENDER special design drivers or the BXR SPECTRUM, employing one eighteen inch and two ten inch FENDER special design drivers and a BI-AMP ready crossover network.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE UNIT TO RAIN OR MOISTURE.



FRONT PANEL DESCRIPTIONS

The front panel contains all items necessary for system operation and observation. Please read this section of the manual carefully to make sure you understand all the operational features of your new Fender BXR 300. The Front Panel is similar for both the 300R and 300C.

(A) INPUT: Two inputs are provided;

Input 1 - High gain

Input 2 - Low gain

The high gain input (INPUT 1) should be used for most instruments. This input can handle as much as 3.5 volts R.M.S., while the low gain input (INPUT 2) accepts 7 volts R.M.S. without audible distortion. For both cases this is greater than any active bass with a 9 volt battery can produce. If you are using a bass with dual 9 volt batteries, or a "hot" passive bass it might be wise to try input 2. For the rare case where two players want to use one amplifier, or where two instruments are to be used during the performance, both inputs may be used.

(B) ENHANCE: *HIGH ENHANCE* provides high frequency boost. *LOW ENHANCE* provides low frequency boost, while eliminating sub-sonic noises below 40 Hz.

(C) VOLUME: This control sets the gain of the preamp and serves as an adjustment for the "loudness" of the amplifier.

(D) TREBLE: - adjusts the high frequency part of the spectrum. Turning the treble up will cause the sound to become "BRIGHT" or more "CRISP".

(E) MID: - Can be used to add or subtract the frequency range set by MID FREQUENCY control.

(F) MID FREQUENCY: - Adjusts the frequency of boost or cut by the MID control.

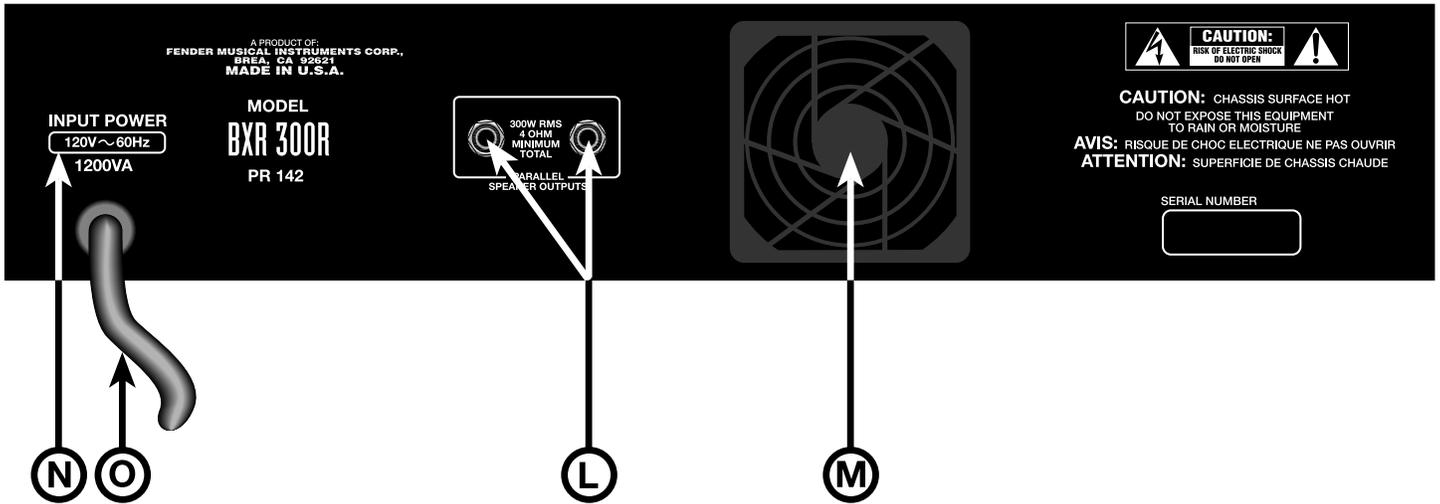
(G) BASS - adjusts the low frequency part of spectrum, the area where the "deep" fundamentals reside.

(H) PREAMP OUT: The preamp jack is a source of signal as it appears at the power amp input. This jack can be used as a "LINE OUT" or as a "SEND" point for an external effects device.

(I) POWER AMP IN: Use of this jack allows the default input signal from the preamp to be replaced by an external source, (usually the "return" from an effects device).

(J) DELTACOMP™: With this button in, DELTACOMP™ is active, in the out position, DELTACOMP™ is deactivated, and a special ASYMMETRIC LIMITER circuit is enabled. The LED next to this button indicates that the power amplifier has reached full power and that either DELTACOMP™ or LIMITING has occurred, depending which position that the switch is in. The unit may seem louder without DELTACOMP™ since the power amp will be allowed to go into clipping. With DELTACOMP™ on, your volume level will be rather loud before the compressor turns on; this is normal.

(K) POWER: Turns the BXR 300 on or off.



REAR PANEL DESCRIPTIONS

(L) SPEAKER: Speaker connections are four ohms minimum. The two jacks are wired in parallel. The BXR 300 is not designed for speaker impedance lower than 4 ohms total.

(M) TWO SPEED FAN: The two speed fan normally runs at low speed, and will automatically go to high speed when things get loud. High speed operation during high level performance is quite OK. If you suddenly reduce your level, the fan speed (if high) may take a while to return to low (normal) speed. Do not block air flow to the rear of the amplifier.

(N) POWER RATING: This indicates how much power the amplifier can "draw" from the wall socket when the amplifier is at full power (1200VA). The marking directly below indicates what the wall socket Voltage and frequency must be. Incorrect line voltage will damage your amplifier and VOID THE WARRANTY!

(O) LINE CORD: The line cord should be connected to a suitable power source, with the correct voltage and frequency, as shown in the power rating at the amplifier rear (item N above). if your not sure check some other piece of equipment in your area. DO NOT ALTER THE AC PLUG.

FIGURE #1

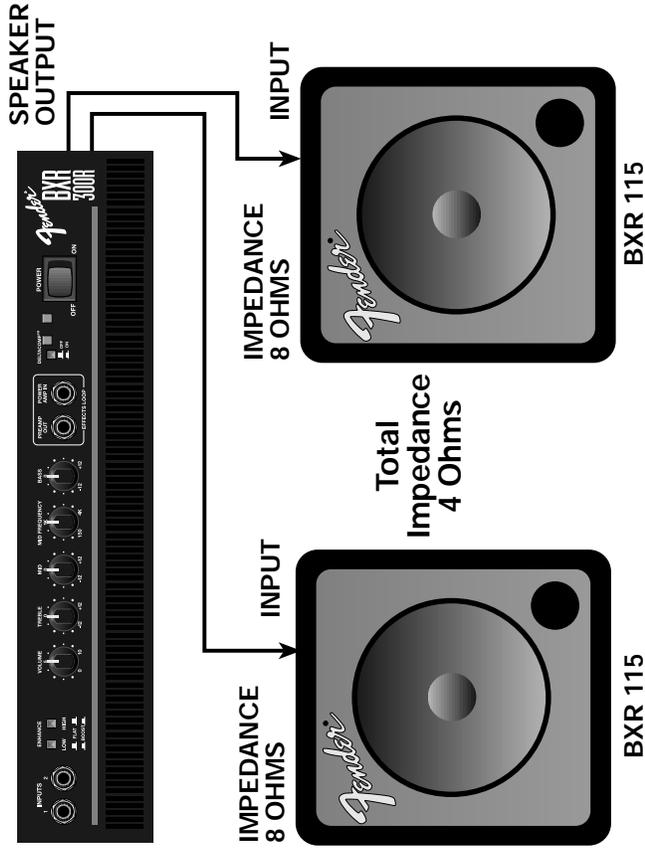


FIGURE #2

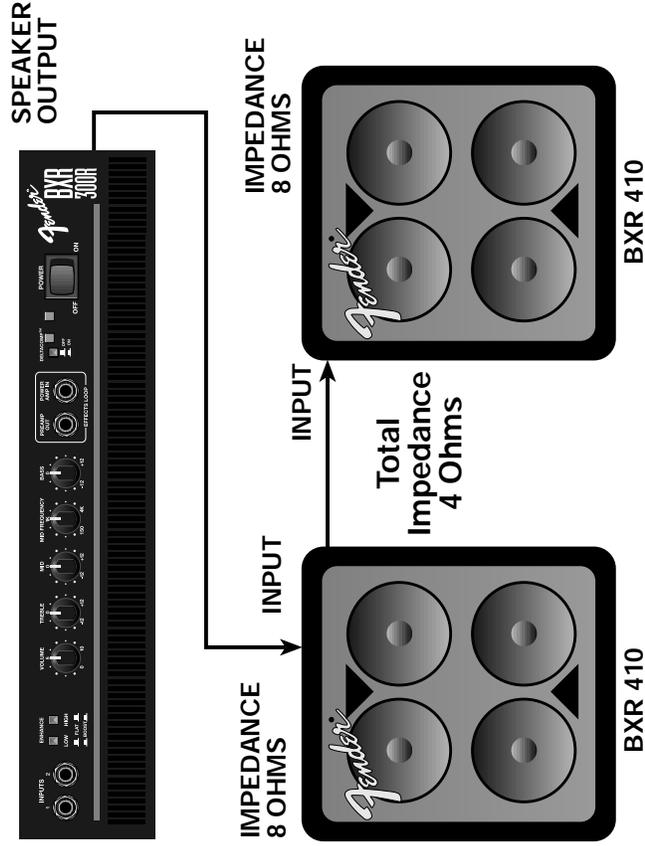


FIGURE #3

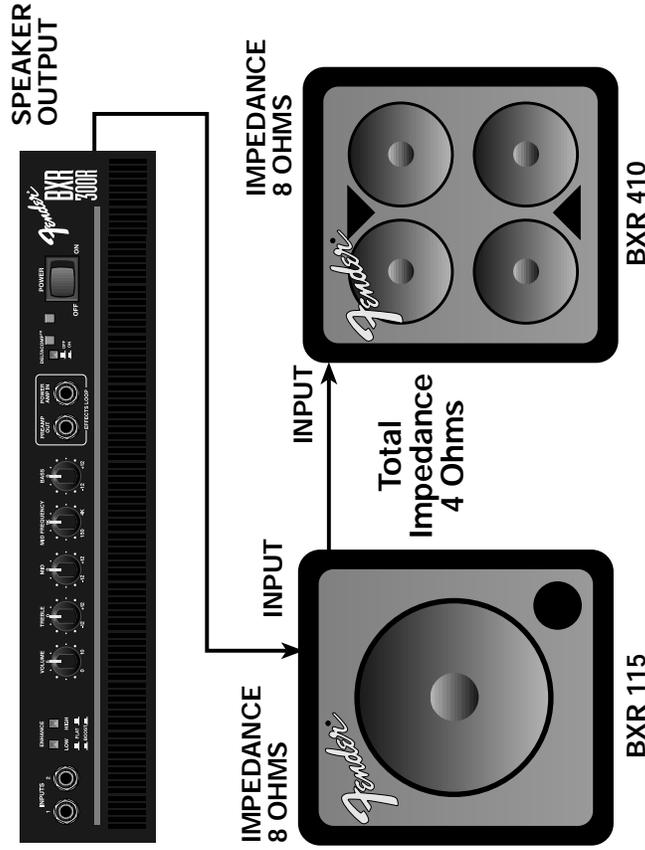
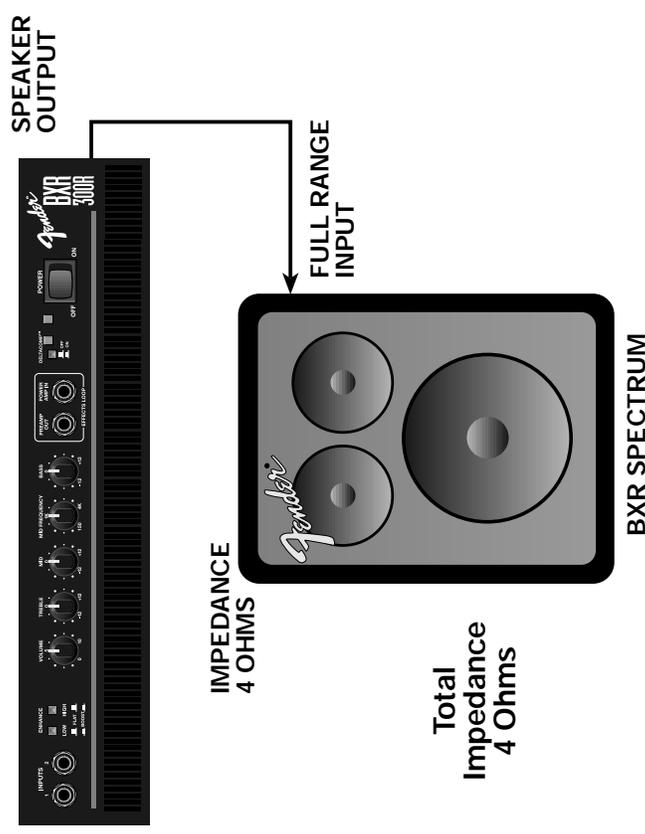


FIGURE #4



SUGGESTED FIRST TIME OPERATION

If this the first time you've used a FENDER BXR 300 we suggest that you try the following first time control setting procedure.

Be sure the speaker is connected with a speaker cable (not an instrument cable) and the line cord is plugged into a suitable power source. If you own a BXR 300C, the internal 15 inch speaker will already be connected.

Depress the two "ENHANCE" buttons and turn the VOLUME to zero (7 O'CLOCK) and the TREBLE, MID, MID FREQUENCY, and BASS to "0" (12:00 O'CLOCK), and DELTACOMP™ off. With your instrument connected, press the power rocker switch to "ON" The RED PILOT lamp will illuminate, and the fan in the rear panel will begin to rotate slowly.

Advance the volume while playing a few notes on the bass. Experiment with the controls to become familiar with the features that are available to you.

SETTING UP EXTERNAL SIGNAL PROCESSING

External signal processors may be used as previously described. Devices used with the preamp out, power amp in may be set up as follows:

Connect the "PREAMP OUT" to the input jack of the effects device, and the "POWER AMP IN" to the output jack of the effects device. Read the owner's manual for the device as required. if you get no sound when the device is in the "IN" mode, you may have the wires to the external device crossed (exchanged) or the device may not be turned on.

SUGGESTED SPEAKER ARRANGEMENTS WITH BXR 300R

There are an almost infinite number of speaker setups possible, what with the variety of speaker systems available. We will attempt to describe four typical situations.

FIGURE 1 is a common connection favored by the bassist who wants extremely high level. it should be noted that two 15" speakers have 50% more cone area than one 18" speaker.

FIGURE 2 is an example of two FENDER BXR 410 's connected in parallel.

FIGURE 3 shows a BXR 115 and a BXR 410 connected in parallel, which provides a well balanced wide range arrangement.

FIGURE 4 illustrates one FENDER BXR SPECTRUM system operating in full range mode. With it's 18" woofer, the SPECTRUM is ideal for five string bass.

PARALLEL SPEAKERS

When speakers are connected in parallel, as in the example of **FIGURE 1, 2, and 3** above, the impedance of two equal systems will halve. impedance of equal impedance systems will have a new impedance equal to the individual identical impedance divided by the number of systems. The minimum for the FENDER BXR 300 is 4 ohms, there is no maximum (if no speakers are connected, no harm will result).

MECHANICAL OPTIONS

For those users who will not be "rack mounting" their BXR 300R we have provided the option of removable rack ears. with the rack ears removed, an optional strap handle kit may be installed. If you should use a handle kit other than FENDER, be sure that the mounting screws protrude no more than 1/2 inch past the mounting plane (underside) of the handle.

If you decide at a later time to re-install the rack ears, make sure that you use the same screws that were originally supplied.

SPECIFICATIONS

POWER AMPLIFIER SECTION:

Power output	300 Watts
Rated load impedance	4 Ohms
Distortion at rated power	Less than .05%
Damping factor, at 4 Ohms	Greater than 100
Power bandwidth	20 Hz - 20 kHz
Input sensitivity	1.33 volt R.M.S.
Input impedance	>10k Ohms
Slew factor	Greater than 1
Signal to noise ratio	-100 dB Re/300 Watts
DELTACOMP™ range	20 dB

PREAMP :

Input impedance:	Input 1 > 100k Ohms
	Input 2 > 800k Ohms

Sensitivity:	Volume at max., enhance buttons out, all equalization controls at 12 o'clock, power amp at 300 Watts, 4 ohms	Input 1 < 10mV
		Input 2 < 20mV

Equalization range:

Enhance:	Low +9dB at 80 Hz.
	High +12dB at 5kHz.
Bass:	+/- 14dB at 40 Hz.
Treble:	+/- 17dB at 5kHz.
Mid:	+/- 20 dB at 150 Hz through 4kHz.

Overall signal to noise ratio, volume at min.,	-95 dB below rated output
--	---------------------------

PHYSICAL SPECIFICATIONS:

BXR 300R

Width (rack ears installed)	19 inches
Width (without rack ears)	17 inches
Height	3.5 inches
Depth	10.125 inches
Weight	19 lbs.

BXR 300C

Width	21-7/8 inches
Height	29-11/16 inches
Depth	15-5/8 inches
Weight	78 lbs.
Speaker	1 -15" Fender Special Design (part number 027577)

A product of:

FENDER MUSICAL INSTRUMENTS

1130 Columbia Street, Brea, California