BEARE EXTRA

User Manual

Serial Number	
Timber	
Speaker	
Other	

Thank you for purchasing a Beare Extra!

The Extra is a moderately-powered (40 watt), dual 6L6, all-tube guitar amplifier with versatile tone-shaping options in a portable format.

Each amplifier features:

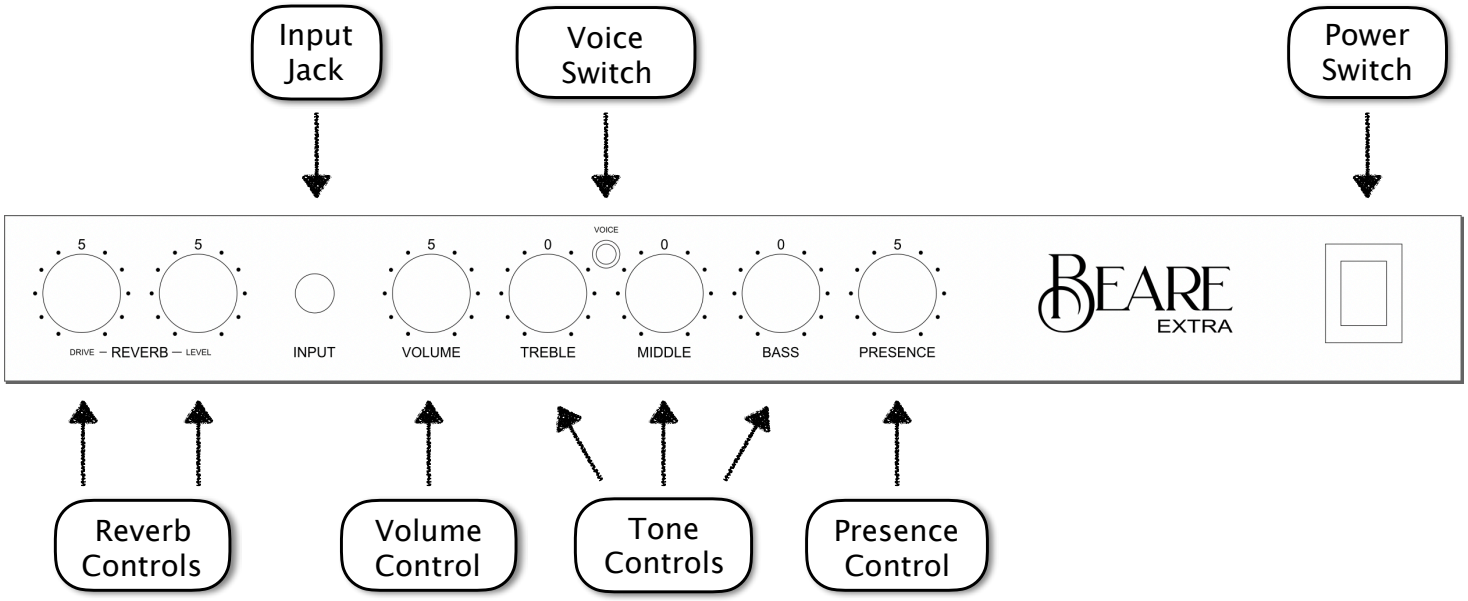
- hand-wired circuitry
- optimum components
- finger-jointed, solid timber cabinetry
- baltic birch baffle

Each amp is built personally by myself with the utmost care and attention to detail. If you have a problem with anything regarding this amp - I want to know about it!

Enjoy your new amp,

Kym Beare
kym@beareamps.com.au

Front Panel



Power Switch

Light is illuminated when amp is active. Allow the tubes to warm up (10-15 seconds) before playing. You may experience a "pop" when switching off. This is normal and won't cause any damage.

Presence Control

With the Presence control disengaged (zero) the response is similar to American "Black Panel" amps. Increase the Presence control to achieve a JCM-style high-frequency response.

The Voicing switch and Presence control allow many differing guitars and pedals to be catered for. For example: Humbuckers can benefit from the increase in high-end from the Presence control.

Tone Controls

The Extra produces an extremely well-balanced frequency response with exceptional clarity. Play the amp with the controls noon for a period of time to allow your ears to adjust to the Extra's increased clarity. Its also worth experimenting with rolling your guitar's volume control back a fraction to vary the amount of top-end.

The Extra has been designed to sound great with the tone controls set at noon or "0" on the control panel.

Front Panel Continued...

As you increase the volume control and the amp begins to distort there is a corresponding increase in bass frequencies due to the nature of tube distortion. You may wish to decrease the bass control to counteract this effect.

Voicing Switch

The voicing switch allows you select between American (Up) and British (Down) high-mid frequency characteristics.

Generally speaking I recommend selecting the American Voice and Presence off for clean, beautiful single-coil tones. British Voicing with Presence around 5 is perfect for thick, crunchy Hard Rock tones.

Volume Control

The Extra is not intended to be a "high-gain" amp but rather a platform for pedals to create the desired drive tones. The volume control will remain clean until approximately "5" and beyond that will cause a gradual increase in distortion to a medium level drive. To achieve higher amounts of distortion from the amp use a clean or treble boost.

Input Jack

Insert the cable from your guitar or last effect here.

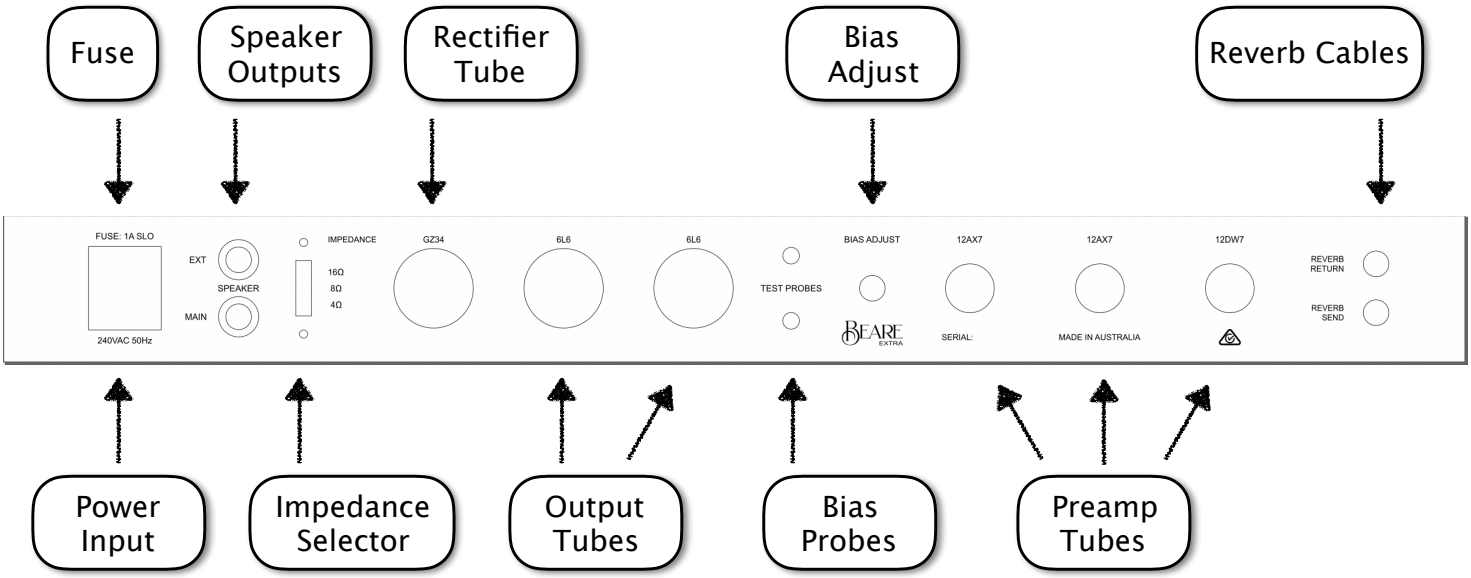
Reverb Level

Adjusts the level of the Reverb return.

Reverb Send

The Reverb Send controls the amount of signal being sent to the reverb tank. Begin with the control on 10. As the overall volume of the amplifier increases so does the level of the signal being sent to the reverb tank. This may result in distortion of the reverb effect. To avoid distortion reduce the Reverb Send.

Rear Panel



Fuse

Use only a 1 Amp 250V Slo-Blow fuse. M205 sized.

Power Input

Required power is 240 Volts AC 50Hz with an IEC C13 plug connecting to this socket.
For your safety, ensure your cable has a functioning ground / earth.

Speaker Outputs

The MAIN SPEAKER output must be used at all times. If adding an extension cabinet connect it to the EXT SPEAKER output. The EXT SPEAKER output is wired in parallel with the MAIN SPEAKER output.

Impedance Selector

Ensure the correct impedance is selected to match the speaker(s) being used. If using multiple speakers see "Using 2 Speaker Cabinets" below. Ensure the amplifier is OFF before changing the impedance selection.

Rectifier Tube

Converts (rectifies) AC into DC. Use only GZ34.

Rear Panel Continued...

Output Tubes

AKA "power tubes". Use 6L6 or 5881 only.

Test Probes

Insert the probes of your mulitmeter here ensuring probe colour matches the jack colour. See "Biasing Procedure" below.

Bias Adjust

Use a small flat-bladed screwdriver to adjust the bias voltage as described in "Biasing Procedure" below.

Preamp Tubes

Use 12AX7 only where indicated.

Use 12DW7 (Reverb circuit) only where indicated.

Reverb Cables

The cables send (white) and return (red) the signal to the reverb tank in bottom of the cabinet. Ensure cable colours match those of the jacks.

Time to Replace Tubes?

When to replace the tubes depends on how much use the amp gets. Preamp and rectifier tubes should last 3-5 years. Output tubes may need replacing every year with heavy use.

Important! Always replace tubes with the same type as indicated.
Ensure tubes are cool before touching.

Caution! The tubes must be correctly oriented. The large tubes have a "key" that mates to a notch in the tube socket. The smaller tubes have a space in the pins. Ensure this corresponds to the spacing of the tube socket. Be careful not to bend the pins.

Warnings!

1) There are no user serviceable parts inside the chassis. There may be however, voltages that can be fatal - even when the amp is off and disconnected from mains power!
2) A speaker(s) must be connected before applying power to the Extra otherwise serious damage can occur.
3) Do not exposure the amplifier to moisture or liquids.
4) See "Biasing Procedure" below before setting the bias.
5) Tubes get very hot. Do not touch tubes during, or for some time after, operating the amplifier. Allow substantial ventilation around the rear of the amplifier.

Biasing

Your Extra is configured in Fixed-Bias and the bias must be checked / adjusted when changing output tubes. If you are unfamiliar with this procedure please consult a qualified amp technician.

Biasing Procedure

1) Ensure the amplifier is connected to the speaker before applying power.
2) Connect your multimeter - black probe to black test point and red probe to the red test point.
3) Turn your multimeter to the Volts setting, millivolts if available.
4) Apply power and allow tubes to warm-up.
5) Using a flat head screwdriver adjust the bias pot (Bias Adjust) until the meter reads the desired setting.

Important! 6L6 and 5881 have different dissipation values and therefore must be biased accordingly.
6L6: Settings between 92 and 98mV (0.092 to 0.098V) are appropriate with the factory setting being 95mV.
5881: Settings between 77 and 83mV (0.077 to 0.083V) are appropriate with the factory setting being 80mV.

Important! Do not exceed this range as it can lead to tube failure or failure within the amplifier.

Using 2 Speaker Cabinets

While one speaker is certainly sufficient to get the most out of your Extra there are times when you may wish to add a second speaker cabinet.

Key concepts:
- Both cabinets must be the **SAME** impedance, eg 8 ohms.
- Combining impedances in parallel results in an overall impedance of **HALF** the original impedances.
- Ensure the correct impedance is selected on the **IMPEDANCE SELECTOR** switch.

Example 1: 8 ohm cab + 8 ohm cab in parallel = 4 ohm overall impedance. Therefore select the 4 ohm setting on the Impedance switch.

Example 2: 16 ohm cab + 16 ohm cab = 8 ohm overall impedance. Therefore select the 8 ohm setting on the Impedance switch.