

MESA/BOOGIE

.50 CALIBER SERIES

OWNER OPERATING INSTRUCTIONS

MESA/BOOGIE
The Spirit of Art in Technology

CONGRATULATIONS! You've just become the proud owner of the boldest sounding, easiest operating 50-watt amplifier there is... and you're sure to enjoy it! When friends and strangers come up to compliment you on your tone, you can smile knowingly... and hopefully you'll tell them a little about us! Because word-of-mouth is still the best way to spread the news about MESA/Boogie.

GREAT SOUND Many months of patient, painstaking R & D were spent developing the .50 Caliber so it would deliver professional quality sound that lives up to the MESA/Boogie reputation. (So even though the big Mark III Boogies have more power and more features, your .50 was designed and built as a totally professional, no compromise instrument.) We figure that once you're hooked on a great amp performance, you'll find yourself playing better and enjoying it more.

GREAT SIMPLICITY One of the .50 Caliber's greatest virtues is its incredible simplicity of operation. It's nearly impossible to come up with a bad sound or a wrong setting. And here to help you get started, is a brief explanation of your new amp's features and controls.

FRONT PANEL FEATURES

INPUT JACK This 1/4 inch guitar jack is the instrument input to your studio amplifier. Patented "Dual Mode" circuitry makes this single jack work for both Rhythm and Lead ... providing very high headroom for sparkling clean rhythm and super high gain for monstrous lead playing. Be sure to use a good quality, shielded guitar cord.

FOOTSWITCH JACK This 1/4 inch jack connects to the Lead/Rhythm footswitch via the un-shielded cabled provided. When the red LED on the footswitch box is illuminated, the .50 Caliber is in the RHYTHM mode... Red equals Rhythm. Stepping on the button switches the amp into the LEAD Mode and the light goes out.

Should you lose or forget your footswitch, you can activate the Lead mode by plugging a cable into the footswitch socket and shorting the tip of the other plug against the chassis or one of the metal handle caps.

VOLUME This control is active in both Rhythm and Lead Modes. It establishes the amplifier's overall sensitivity to your guitar's output and must be mixed in conjunction with the Master.

In the Rhythm mode, the maximum clean setting is usually around 6 (varies with stronger or weaker pickups) and most players find their favorite cleanest brightest spot between 3 and 5. But if you want some break-up in the Rhythm mode, turn the volume up high.

In the Lead mode the Volume knob is intentionally less sensitive so that there is no need to "re-set" it for the two modes. With most guitars, distortion begins around 2 with a real nice sounding blues-type tone reminiscent of old Fenders turned up loud. Settings above 3 or 4 produce the more modern, more monstrous distortion sounds. Gain and distortion increase slowly as the Volume setting is increased, often producing the tightest, best sounding heavy crunch tone between 7 and 9.

To prevent undesirable squealing, noise, and feedback, the Volume should be reduced as playing loudness via the Master is increased. We only recommend running the Volume above 6 when the Master is below 6.

MASTER This control regulates the power amplifier level and the actual overall loudness. If you run the Volume at 10 and the master below 1 (in the Lead mode) Grandma can nap in the next room while you annihilate Manhattan with monstrous metal performance. You'll still get the sound and feel of big amps cranked way up!

Turning up the Master begins to reveal the .50 Caliber's monstrous sound-per-watt capability...it's noticeably louder than other comparably rated amps! The maximum performance for loud, clean rhythm and hot, high-gain lead playing comes around 5 and 7 on the Volume and Master controls. This puts the amplifier right in the middle of its range for great sound and easy footswitchability. The taper of the two controls is gradual enough so that dialing in both great lead and great rhythm sounds is quite easy to do.

However, the taper of the Master control gets radical above 7 and begins to unleash the maximum from your .50's power section. And this power amp has been designed to deliver its greatest crunch when turned up smoking loud! But you must turn down the Volume control as you increase the Master. A maximum setting would be 3-4 on the Volume and 8 or 9 on the Master.

When you want to turn down to soft playing levels and continue to footswitch between Lead and Rhythm, merely turn down the Master. This will preserve the volume balance between the two modes. Note: Settings of Volume control below 2 or 3 with Master settings also low may cause an imbalance in channel volume levels.

TREBLE This is the most powerful of the three rotary tone controls. At high settings (7 ½ and above) it will appear to minimize the effect of the Bass and Middle. But they will become the stronger controls when the Treble is set below 5. For those who split hairs tonally and want the very best, most bubbly, funky clean tones, you should find the exact spot on the Treble where all the tone controls are balanced. This will usually be somewhere between 5 and 7. Some players are very particular about the exact spot - say "6 ¼ or 6 ¾" - for their ideal tonal balance.

When playing hard-core crunch, especially at the very soft practice volumes, the .50 will usually sound better with the Treble and Presence set quite high, or all the way up. This will also help produce sustain and harmonic jumps at soft playing levels.

For silky, warm, and round jazz tones, run the .50 Caliber in the Rhythm mode with the Treble set low and Bass and Middle turned up higher. Add sparkle with the Presence control.

BASS, MIDDLE You've already read some recommendations for these settings in the TREBLE section, and because the tone controls are interactive, all three must be used together.

That "sweet spot" setting for maximal funky clean tones also depends on the right amount of Bass and Middle. Between 4 and 6 for both these controls will usually give the best balance against "that perfect Treble setting" where the tone is springy and bright but not hard sounding.

The Bass and Middle response has been very carefully designed to allow fatness in the Rhythm mode while avoiding tubbiness or flab when footswitching to a crunch, lead or metal tone.

REVERB The .50 Caliber amplifier includes a 3-spring miniature Hammond-Accutronics unit and all tube send/return electronics. Tonal quality is outstandingly good. Note: If both Reverb and Master controls are set extremely high, acoustical feedback between the speaker and spring may occur. This does not indicate a fault or malfunction with the amplifier, and is only caused by an inappropriate and unnecessary combination of settings. Should this "reverb howl" begin to occur, turn down either the Master or the Reverb.

PRESENCE This control lets you dial in your exact choice of extreme high frequencies and sets up the basic brightness of the overall tone. Brighter tones generally sound clearer and cleaner while less bright tones are "warmer". Season to your liking... most players run the Presence between 5 and 9.

REAR PANEL FEATURES

FUSE Should your .50 Caliber Boogie blow its fuse, be sure to replace it with a similar amperage, slow-blow type. Should the fuse repeat its blowing, check for a bad power tube. Often it will light up red hot all over the large metal plate inside. Repeated instantaneous fuse blowing indicates a bad rectifier diode or a shorted filter capacitor. Any of these events is very uncommon in the .50 Caliber Boogies.

GROUND This switch is often helpful in reducing buzzes which originate in the AC power wiring outside the amplifier. Leave the switch in its center OFF position unless position A or B definitely helps. This usually occurs only when the ground pin on the AC plug is being defeated via a ground-lift adapter at the wall socket. In the center OFF position your Boogie cannot be the source of annoying "ground shocks" to the microphones, etc.

DIRECT This feature provides a variable strength signal output originating right from the speaker jack. Thus, good tone is supplied, all Effects and Reverb are included, and there is absolutely no loss of the Boogie's tone when running from the Direct to a mixing board or another amplifier. But bear in mind that speakers themselves exert a tremendous coloration to the tone, -primarily by rolling off the highs very steeply above 5 to 6 kilohertz. Consequently, many players will still prefer the recorded sound of a microphone "listening" to the speaker.

In some sophisticated set-ups, players run the Direct into their effects rack and then from the last effect device into other external amplifiers. This is the Steve Lukather/Bob Bradshaw hookup. But such a set-up cannot route the last effect output back into the original Boogie. Also note that a speaker or load resistor must remain plugged into a speaker jack when using the Direct. Otherwise the amplifier will operate improperly and damage may result from running without a load. Suggested value of the load resistor is 8 ohms, 50 watts minimum.

EFFECTS SEND AND RETURN These jacks provide a low-noise patch loop within the .50's preamp for hooking up external accessories. Compatibility is quite good with most external devices although many will require you to trim down their attenuators to prevent overload.

The Send jack can also provide an external "preamp out" signal without breaking the speaker, turn up the Master. If you don't want to hear the .50's power output, turn the Master to 0.

Plugging signal from another source into the Return Jack provides access to the .50's power amplifier section. Remember to adjust the Master to an appropriate setting for best signal-to-noise.

SPEAKER JACKS One 4-ohm and one 8-ohm speaker jack are provided. Use the 8-ohm jack for maximum power and clarity with the enclosed combo 12-inch speaker. Use the 4-ohm jack when adding an extension speaker or when plugging into a 2X12 box. The 8-ohm jack should be used when running into a Boogie 4x12, as these cabinets are 8-ohm rated.

You are encouraged to experiment with the speaker matching. For example, plugging the enclosed 12-inch combo speaker into the 4-ohm jack gives a slightly different sound... One you may prefer in some cases.

GRAPHIC EQUALIZER This optional feature is lots of fun to use and it certainly does expand the .50 Caliber's tonal flexibility. (But for those who opt not to add the optional EQ... don't worry! All of the R & D for tonal performance was conducted without using the Graphic Equalizer... so that it wouldn't become necessary.) Although there are hundreds of different ways to set the Graphic, there is one that's particularly classic and helpful... the "V" setting. Move the first and last sliders about three-fourths of the way up. Move the second and fourth sliders two-thirds of the way up. Move the center slider about three quarters of the way down... then fine tune your sound using just this center slider.

You'll hear how a slight adjustment at the 750 Hz position makes a dramatic difference in the sound whether you're playing with moderate distortion, heavy distortion or perfectly clean. This setting makes the amp seem even bigger, bolder, stronger, and hazier... especially at very soft playing levels.

CAUTION The .50 Caliber Boogie is intended to offer its full range of great sounds at any volume from very soft to quite loud. And in order to do this, the controls must be very powerful. When turning up the Master and playing quite loudly, you should expect to reduce the Volume and possibly the Treble and/or Presence. Otherwise, you push the 12AX7 preamp tubes beyond their reasonable range, and noise, feedback or ringing may occur. This will be normal and does not indicate a malfunction in the amplifier. It's like having a Ferrari that takes tight corners great... and also goes 160 miles per hour straight. Just because it can go fast on the straight-a-way doesn't mean it can also take tight corners wide open! Similarly, your .50 Caliber has been designed and built both to play quite loudly and to simulate the characteristics of loud playing at soft volumes by turning up its high gain preamp. But you cannot run both the Volume and Master controls wide open at the same time. There will always be a best operating point between the two controls that balances preamp gain (from the Volume) against power amp loudness (from the Master). Like the tires on the Ferrari, you will have to maintain your 12AX7 preamp tubes, much more carefully if you insist on "flying around those hairpin turns" with everything wide open!

MAINTENANCE Excessive noise, feedback, squealing or rattling sound coming through the speaker is almost always the result of a deteriorated 12AX7 preamp tubes. This is most often the first or second

tube on the right, as seen from the rear. Checking the preamp tubes in a tube tester is almost useless. The best procedure is to substitute a tube that's known to be good and non-noisy for each tube in your amplifier, one-at-a-time. Here are general guidelines. If the problem appears only in the Lead mode, then the culprit is V1, furthest to the right, but may also be in V2 or V3. If the problem is in the Rhythm mode only, then V2 is usually the problem (V2 is second from the right, seen from the rear). Sometimes it also can be V3. If the Reverb is noisy or has a problem, replace V4.

Sometimes the insides of the power tubes themselves can be heard rattling. If the power is weak and your tone is flat, try replacing the larger power tubes, type EL84, also known as 6BQ5. We strongly recommend you use only genuine MESA tubes. (Your amplifier guarantee is valid only when all the tubes are MESA brand or come from us.) Power output tubes are like guitar strings; they begin to deteriorate as soon as they're put into use. You may notice improved performance by replacing your EL-84's every few months. But do not change the 12AX7 tubes unless a specific problem comes up. Their aging is very slow and you won't likely hear any improvement by changing them unless one has become noticeably noisy.

Your combo-type amplifier is equipped with a special tube clamping plate for protection against vibration as well as from flying footswitches and other debris which might be stashed in the back. To gain access to the tubes, merely release the barbed nylon catches and the aluminum plate will fold down on concealed hinges. Changing 12AX7 preamp tubes is easier if you first remove one or two of the larger power tubes. Make certain you have all the tube pins aligned properly before pushing them in.

If your amp is fitted with an EWM speaker, you may need to remove the four mounting screws on the top of the cabinet and slide the chassis back before gaining enough access to change a 12AX7.

After rough handling of the amplifier or when replacing tubes, make certain they are plugged all the way into their sockets and are centered within the metal holes of the chassis sheet metal. A tube that is leaned over in its socket can vibrate and buzz against the metal chassis, causing annoying noises. Note: A power tube that is crooked can also reduce clean volume levels dramatically, and cause break-up similar to a bad speaker. Should this sound occur, insure that your power tubes are seated squarely in their sockets.

ENJOY Most of all... enjoy your .50 Caliber Boogie. It's really a great sounding amplifier and it's been built to satisfy professional demands for performance and reliability. And it should last a lifetime with only moderate care and maintenance. It is extremely user-friendly and there's almost nothing you can do to damage it, short of accident or obvious abuse. We've put our most into the design of the .50 Caliber so can get the most out of your playing. We've consciously made it feel "real spongy" so it helps your playing... even smoothes over your little mistakes! (Or as one good player said, "It makes my sloppiness sound like expressiveness... I love it!")

We're still a small, personable company of (mostly) musicians and we always like hearing from other musicians and Boogie owners... so drop us a card sometime. And remember: The essence of music is the PLAYING! So grab your guitar and GO FOR THE GUSTO!

Very Best Wishes
MESA/Boogie Ltd.

Randall Smith
Designer & President