

MESA/BOOGIE

STUDIO SERIES

OWNER OPERATING INSTRUCTIONS



**CONGRATULATIONS!** You've just become the proud owner of the liveliest sounding, easiest operating, small caliber 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 Boogie.

**GREAT SOUND** Many months of patient, painstaking R & D were spent developing the Studio Series 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 Studio 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 Studio Boogie's greatest virtues is it's 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 cable provided. When the red LED on the footswitch box is illuminated, the Studio Boogie 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 Studio Boogie's monstrous sound-per-watt capability...it's much louder than other comparably rated amps! The maximum performance for loud, clean rhythm and hot, high-gain lead playing comes around 5 and 5 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 at 7 and unleashes the maximum from your Studio's power section. And this power amp has been designed to deliver its greatest crunch when turned up smoking loud! Even with the single 12 inch combo speaker, your friends will be blown away by the Studio Boogie's big, tight low end...it truly has the fat chunking sound of a 4x12!

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 1/2 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 6 and 7. Some players are very particular about the exact spot...say "6 1/4 or 6 3/4"...for their ideal tonal balance.

When playing hard-core crunch, especially at very soft practice volumes, the Studio 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 Studio Boogie 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 Studio combo amplifier includes a totally self-contained 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 springs 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 Studio 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 silicon rectifier diode or a shorted filter capacitor. Any of these events are very uncommon in the Studio amplifiers.

**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 adaptor 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 their 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, 25 watts minimum.

**EFFECTS SEND & RETURN** These jacks provide a low-noise patch loop within the Studio'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 Studio's internal signal path. So if you also want to hear sound coming from the Studio's speaker, turn up the Master. If you don't want to hear the Studio's power output, turn the Master to 0.

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



**SPEAKER JACKS** One 4 ohm jack and one 8 ohm speaker jack are provided in the Studio Boogie. 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'll be nicely surprised at how well your Studio responds when driving bigger cabinets...incredibly loud for the rated power output.

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 Studio Boogie'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 and stronger...especially at very soft playing levels. You can probably drive your friend to despair by "killing their big stack tone" with your little Studio Boogie! Try it...it's great fun to watch his ego short-out when his monster stack sounds puny and veiled next to your trusty little Boogie! Especially when you plug into his speaker cabinet!

**CAUTION** The Studio 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 Studio Boogie has been designed and built to both 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 very, very carefully if you insist on "flying around those hairpin turns" with everything wide open!

**MAINTENANCE** Excessive noise, feedback, squealing or rattling is almost always the result of a deteriorated 12AX7 preamp tube. This is most often the first or second tube on the right, as seen from the rear. Checking the preamp tubes with 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 is only in the Lead mode, then the problem usually is in 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.

If the power is weak and your tone is flat, try replacing the larger power tubes, type EL-84, also known as type 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.

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 Studio 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 Studio so you can get the most out of your playing. We've consciously made it feel "real spongy" so it helps your playing...even smooths 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! And playing means FUN! This Boog was built FOR YOU! So grab your guitar and GO FOR THE GUSTO!

# MESA/BOOGIE STUDIO .22

## Sample Settings

STYLE	SOUND	VOLUME	MASTER	TREBLE	BASS	MIDDLE	REVERB	PRESENCE
ROCK -	CLEAN RHYTHM SMOKING LEAD	4	4	6.5	3.5	5	3	8
ROCK -	CHUNKING RHYTHM SCREAMING LEAD	7	6	7	3	3	2.5	7
METAL-	FAT GRINDING RHY. SEARING LEAD	8	5	8	3	2	2	10
BEDROOM METAL-	CRUNCH RHYTHM INSANE LEAD	10	1	10	2	0	3	8
BLUES-	DRIVING RHYTHM SOULFUL SINGING LEAD	4	7	6.5	4	4	3	8
FUSION-FUNKY	BREATHING RHYTHM ARTICULATE LEAD	3.5	5	6.75	4	5	2.5	9
JAZZ -	ROUND WARM RHY.	3	4	5	5	5	3	7
COUNTRY -	CLEAN SPARKLING LEAD	3	4	7	3	4	3.5	8

NOTE: Extreme settings (above 6,6) of both the Master AND Volume controls may cause pre-amp tube oscillation. Should this occur, reducing either control will reduce this oscillation.