

MESA/BOOGIE[®]

BASS 400[™]

Owner's Manual

Greetings from the Home of Tone®

CONGRATULATIONS! You've just become the proud owner of the world's finest bass amplifier. When people come up to compliment you on your tone, you can smile knowingly... and hopefully you'll tell them a little about us! This amplifier has been designed, refined, constructed and tested to deliver maximum musical performance of any style, in any situation. And it is very easy to operate.

BASS 400™

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IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.

Keep these instructions.

Heed all warnings.

Follow all instructions.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Only use attachments/accessories specified by the manufacturer.

Unplug this apparatus during lightning storms or when unused for long periods of time.

Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

To insure proper ventilation always make sure there is at minimum four inches (101.6mm) of space behind the rear of the apparatus. The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths, curtains, etc. Do not impede ventilation by placing objects on top of the apparatus which extend past the rear edge of its cabinet.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

The AC plug is the mains disconnect. The plug should remain accessible after installation.

WARNING: EU: permission from the Supply Authority is needed before connection.

WARNING: Always make sure proper load is connected before operating the amplifier. Failure to do so could pose a shock hazard and may result in damage to the amplifier.

Do not expose amplifier to direct sunlight or extremely high temperatures.

Always insure the amplifier is properly grounded. Always unplug AC power cord before changing fuse, tubes or removing chassis. Use only same type and rating when replacing fuse.

Avoid direct contact with heated tubes. Keep amplifier away from children.

To avoid damaging your speakers and other playback equipment, turn off the power of all related equipment before making the connections.

Do not use excessive force when handling buttons, switches and controls. Do not use solvents such as benzene or paint thinner to clean the unit.

Always connect to an AC power supply that meets the power supply specifications listed on the rear of the unit. Export models: always insure unit is wired for proper voltage. Make certain grounding conforms with local standards.

YOUR AMPLIFIER IS LOUD! EXPOSURE TO HIGH SOUND VOLUMES MAY CAUSE PERMANENT HEARING DAMAGE!

Your Mesa/Boogie Amplifier is a professional instrument. Please treat it with respect and operate it properly.

READ AND FOLLOW INSTRUCTIONS OF PROPER USAGE.

BASS 400™

Operating Instructions

INTEGRATED SYSTEM

The idea behind this amplifier is to assemble all the elements of a custom rack system into one perfectly matched unit. Your BASS 400™ includes two separate (and slightly different) bass preamps, plus a versatile tone control network, an adjustable effects loop, an optional six-band graphic equalizer, and special driver and buffer circuits feeding a highly dynamic power amplifier. All were created especially for bass.

WHY VACUUM TUBES?

Most musicians know that tube amps are unbeatable for guitar... but what about bass? Isn't it better to have a big, clean high-power transistor amplifier? We don't think so. And our proof is that your BASS 400™ will offer superior tone, more usable power and better reliability than solid state systems costing two to three times as much! In our years of research we have made some surprising discoveries: the best sounding power amplifier for bass is quite different than the one we use for guitar. And it is very different from the best power designs for keyboard or stereo fidelity. Transistor systems are designed primarily for "laboratory conditions", not the real world of live music. Your BASS 400™ will demonstrate the big difference: you'll hear knock-out punch (without the farting attack) and clear, distinct pitch (without boominess or mud.)

CHANNEL ONE

Input 1 and Volume 1 offer a high headroom preamp which you might find preferable for active type basses. The gain is slightly lower than Channel 2 and the tonal personality is somewhat different. The Pull Bright switch built into Volume 1 can be great for funk bass as it accentuates the harmonics above the Treble control region.

CHANNEL TWO

Input 2 and Volume 2 recreate the classic sounds of the D-180™, predecessor to your BASS 400™. The gain is slightly higher and may be better suited for traditional basses than Channel One. But be certain to sample both Channels because their tonal personalities are both usable with very interesting differences. It is even possible to pre-set the two channels and footswitch between them using our separate A-B Footswitch Box.

TONE CONTROLS

The BASS 400™ uses traditional type tone controls which have been especially tailored for bass, and whose ranges can be extended by use of the Pull Shift switches. The Treble control, when set high, becomes the most powerful of the three. At settings of 7 and above it will minimize the effect of the Bass and Middle, but they will become the stronger controls when the Treble is below 5. Most players find a "sweet spot" between 4 and 7 where the tonal balance is just right for them. Pulling out the Treble Shift alters its frequency center-point downward, toward the upper mid-range. (And since there is more musical energy at these frequencies, your amp will seem to get a little louder as well.) Using either Bright switch injects an extra dose of high treble. The Bass Control is wide ranging and its power can be boosted by using the Pull Shift. Your BASS 400™ (especially when used with our speaker cabinets) can produce more true fundamental tone than just about anything else. Its bottom end response is "truly profound" and yet it avoids boominess and mud. The Middle control is the most subtle of the three. Its purpose is filling in the gap between treble and bass frequencies. Spice according to your liking.

MASTER

The Master control comes after the Effects Loop and after the optional Graphic Equalizer. So its best use is as a sensitivity control for the Effects Return and/or the power amplifier section. Full undistorted power is developed at settings above 5. There is rarely any reason to run the Master above 6 or 7, as higher settings merely increase noise without improving power or tone.

EFFECTS LOOP

Two pairs of Send and Return jacks are provided; one on the front and one on the rear of your BASS 400™. So whether you use effect devices on the floor or in a rack, patching with your BASS 400™ is clean and professional. A unique Blend control located on the upper rear amplifier chassis (where it won't get broken or damaged) enables you to mix "dry" and effected signals. With the Blend knob at 10, all signal will pass through the accessory effects. Set at 0, the Effects Loop is fully by passea ...

as it should be when no effects are used. Most players find an ideal setting between 2 and 5.

The Effects Return jack can also be used to plug directly into the 400's power section. Sensitivity can be regulated by the Master and the Graphic Eq, if available, will be functional. If you wish to use the pre-amp section only of your BASS 400™, then be sure to plug into the Effects Send jack, set the Blend at 10 and turn the Master to 0. This will prevent signal from driving the power section, so running it without a speaker or load resistor will then be all right.

SPEAKER JACKS Two 4 ohm and two 8 ohm jacks are provided. Unlike transistor amplifiers, the BASS 400™ will produce its full power at 4 and 8 ohms. Furthermore, speaker impedance mis-matching is not critical and perceived loss of power will be minimal. When using more than one speaker cabinet, remember that the total load impedance goes down as more cabinets are hooked up. For example, if you use one 8 ohm speaker cabinet, use one of the 8 ohm jacks. But if you use two 8 ohm cabinets, they will be operating in parallel and the total load will be 4 ohms. Therefore, plug each cabinet into a 4 ohm jack.

If you want to use two 2x15 cabinets where each individual speaker is rated at 8 ohms, the best results will be achieved by wiring the speakers inside each box in series. Then each cabinet will become 16 ohms and together they should be plugged into 8 ohm jacks. But if this seems too complex, do not despair! Some of the heaviest players of the BASS 400™ (Michael Anthony, Juan Cruzier) use pairs of our standard wired 2x15 cabs, each plugged into a 4 ohm jack.

SLAVE LEVEL / SLAVE OUTPUT The Slave system is an adjustable Direct output which can be used to feed a mixing board or another power amplifier. Signal is taken right from the speaker output jack where the tone is best and loading problems are avoided. When using the Slave, be sure to first get your desired sound with the BASS 400™ keeping the Slave Level at zero. Then turn up the Level until proper balance is achieved.

600 OHM BALANCED OUTPUT A three-pin male XLR is provided for connecting to the balanced 600 ohm transformer. Again, signal is taken from the speaker jack for best results. This output is a fixed level at about 2 volts peak-to-peak at clipping of the BASS 400™ power. It is therefore suitable for either mic or line level inputs to the mixer, although line level would be preferable. When using either the Slave or the Balanced XLR, it is important that a speaker (or suitable resistive load) be used.

GROUND SWITCHES A three position ground switch is provided to help in reducing buzzes which originate in the AC power. It is advisable to leave this toggle switch in the center OFF position unless selecting position A or B reduces buzz. With the Ground Switch in its center position, any residual shock between the BASS 400™ and other equipment (microphones, guitar amps, etc.) cannot possibly be originating in the BASS 400™. Another type ground switch is located at the extreme right end of the upper chassis rear. This switch floats the internal signal ground from the metal of the chassis. It may be helpful in complex rack installations. Otherwise, leave the switch in its grounded position. A safety wire ground (connecting to the ground pin on the AC mains plug) is internally wired and remains connected at all times.

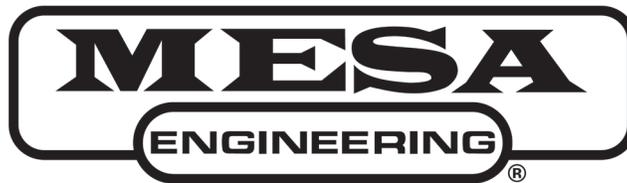
FAN SWITCH Normally the fan should operate in its LOW speed because cooling will be adequate and dust build-up is minimized. If fan noise is objectionable in a recording studio for example--turning OFF the fan will not cause overheating unless the BASS 400™ enclosure is in a confined space. Use the fan HIGH speed setting when the BASS 400™ is in an equipment rack with other units and free air circulation is reduced.

POWER TUBES The BASS 400™ uses special MESA STR 418 type 6550 power tubes. These are extremely rugged, powerful, high performance units available only from us. You will notice how cool they run ... you can expect one or two years outstanding performance from each set. Do not replace these tubes with the larger metal base type 6550 such as Groove Tubes sell! First, they will not properly fit into the hold down clamps; second, they are considerably more expensive; third and most important, they will fail constantly in normal use and will invalidate your warranty for the BASS 400™ Amplifier bias has been permanently set by us and should never need adjustment.

MESA/BOOGIE[®]

The Spirit of Art in Technology[™]

Thank you for trusting MESA/Boogie[®] to be your amplifier company and we wish you many years of toneful enjoyment from this handcrafted instrument.



The Spirit of Art in Technology™



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