

MESA/BOOGIE

BASS 400 PLUS

OPERATING INSTRUCTIONS

MESA/BOOGIE
The Spirit of Art in Technology

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.

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 Plus includes two separate (and slightly different) bass preamps, plus a versatile tone control network, an adjustable Effects Loop, a seven-band Graphic Equalizer, and special driver and buffer circuits feeding a highly dynamic, twelve-tube 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 Plus will offer superior tone and more usable power 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 is very different than 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 Plus will demonstrate the big difference: you'll hear knockout 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 that you might find preferable for active type basses. The gain is slightly lower than Channel 2 and the tonal personality is slightly 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 very usable with very interesting differences. It is even possible to preset the two channels and footswitch between them using our separate A-B Footswitch Box.

TONE CONTROLS

The Bass 400 Plus 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 2 and 5 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 using the Pull Shift can boost its power. Your Bass 400 Plus (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 muddiness. The Middle control is the subtlest of the three. Its purpose is filling the gap between the treble and bass frequencies. Spice according to your liking.

MASTER

The Master control comes after the Effects Loops and after the 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 around 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 Plus. So whether you use effects 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 control at 10, all signals will pass through the accessory effects. Set at 0, the Effects Loop is fully bypassed, 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. The Master can regulate sensitivity, and the Graphic EQ will be functional. If you wish to use only the preamp section of your Bass 400, you can use the Effects Send jack as a preamp output; be sure to set the Effects Blend at 10 and the Master to 0. This will prevent signal from driving the power section, so running the amp without a speaker or load resistor will be OK.

SPEAKER JACKS

Two 8-ohm, two 4-ohm and 2-ohm speaker jacks are provided on the Bass 400 Plus. The amp will produce its full power at all of these impedances, provided that the total impedance of your speaker cabinets is matched to the output(s) used. (Slight mismatches are not a major problem, but they will cause slightly lower output and may shorten tube life.) When using more than one speaker cabinet, remember that the total load impedance goes down as more cabinets are connected. 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 cabinet is rated at 4 ohms (which is how Boogie 2X15's are wired), connect both cabinets to the 2-ohm Jacks provided.

SLAVE LEVEL, SLAVE OUTPUT

The Slave system is an adjustable Direct Output that can be used to feed a mixing board or another power amplifier. The signal is taken right from the output transformer where the tone is best and loading problems are avoided. When using the Slave, be sure to first get the desired sound on the Bass 400 with the Slave Level at zero. Then turn up the Slave Level until the proper output level is achieved.

600-OHM BALANCED OUTPUT

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

GROUND SWITCHES

A three-position ground switch is provided to help in reducing buzz originating in the AC power. It is advisable to leave this toggle switch in the center "OFF" position unless position A or B reduces buss. With the ground switch in its center position, any residual shock between the 400 and other equipment (microphones, guitar amps, etc.) cannot possibly be originating in the Bass 400. Another type of ground switch is located at the extreme right end of the upper chassis rear. This switch "floats" or isolates the internal signal ground from the metal chassis. It may be helpful in rack installation, where ground loops and ground hum might otherwise be caused by contact with rack rails. 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 at 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 - you can turn the fan off without causing overheating unless the Bass 400 enclosure is in a confined space. Use the fan's HIGH speed when the 400 is in an equipment rack with other units and free air circulation is reduced.

POWER TUBES

The Bass 400 Plus uses twelve MESA 5881 STR-425 power tubes. This massive power section places very little strain on any individual tube, which allows for tremendous headroom and greater tube reliability (you'll notice how cool they run). You can expect about two years of outstanding performance from the tubes; when replacements are needed, be sure to use only genuine MESA 5881's (available from MESA/Boogie Pro Centers and Tube Dealers, and from MESA/Boogie directly). The use of other tube brands will invalidate your Bass 400 Plus warranty! Amplifier bias has been permanently set at the factory and should never need adjustment.

SPARES KIT

We offer an economical "spare tire set" for the touring professional; it includes a complete set of replacement tubes, plus spare fuses, knobs, resistors and the like. The whole package sells for less than the normal price of the tubes alone. Should any problems occur in your Bass 400 Plus, it is likely that a simple repair using the Spares Kit will have you up and running in minutes. (Compare that with trying to fix a transistor monster!)

ENJOY!

Most of all, enjoy your music. Your band mates will really appreciate the way your Bass 400 Plus improves the band's overall sound. And you too will enjoy a renewed - and lasting - burst of playing pleasure. The Bass 400 Plus will give your sound so much more "punch" and clarity of pitch – especially in conjunction with MESA/Boogie Bass Speaker Cabinets - that your playing will have far more dramatic impact than ever before!