

TUBE WORKS

MosValve™

REAL TUBE

3300 SERIES & 3175 BASS AMPS

OWNER'S MANUAL

Congratulations on purchasing the most innovative, unique and best-performing bass amp in existence.

With world-renowned and patented MosValve Circuitry for power coupled with an extremely versatile bass pre-amp, your new bass amp is truly a major advance in the art of bass amplification. Please take some time to fully familiarize yourself with the many design features of your new amp. It far exceeds the performance level and design features of any similarly priced alternative equipment.

IMPORTANT FEATURES

Conservatively rated 160-Watt or 300-Watt MosValve power output at 2 ohms. A 2 ohm rating was selected by the designer, BK Butler to be the most versatile choice for bassists, enabling a vast array of cabinet combinations to be used.

F.E.T. or TUBE preamp operation. For those perfectionists who savor the warmth of tubes, this amp will satisfy you fully. For the ultimate in clean, punchy and accurate bass sound production, the alternative F. E.T. preamp stage is also available.

Simplicity of layout and design provides the most reliability possible. For the example, the MosValve power amplifier section contains up to 60% fewer parts than conventional amplifiers, but has vastly improved performance and sound. Fewer parts means increased reliability, and a more direct, noise-free tone.

Completely original and unique "dynamic response" limiter. You will notice that this limiter is not the "brick wall" type that you may have experienced in the past. Much more like the old classic tube limiters used in studios for years, your amp will give you great dynamic punch and response even with high setting of limiting. Much time and input from bassists has resulted in perhaps the best single-knob limiter ever designed.

5-control E.Q. section — The ranges and frequencies of these controls have been carefully selected to be the most useful available. The E.Q. section is a combination of active and passive designs.

2 Direct balanced outputs — One is a buffered true-balanced Direct Out from the guitar without any gain or E.Q. added. The other is selectable to include the preamp F.E.T. or tube plus input volume setting, or the entire preamp plus E.Q. and Effects Loop.

Front-panel variable mixing of effects return. This feature greatly enhances the versatility of the tonality available with effects.

Variable send-receive effects loop. Easily adjusts to virtually any signal level of floor or rack-mount device on the market regardless of input/output level or impedance.

Standard rugged ozite covered all-plywood enclosures for exceptionally long life and good acoustical isolation properties.

Take a few moments more and read the rest of the information. Again, please accept our thanks and appreciation for your purchase.

FRONT PANEL FEATURES

(Combos and Heads: Left to Right, Rackmount is mirror image, or Right to Left)

TUBE/ F.E.T. SWITCH — Selects either TUBE or F.E.T. preamp. Generally speaking, TUBE will give a slightly fatter, more colored tone with slightly more distortion and decreased headroom at high volume settings. F.E.T. offers the quietest, most accurate and tightest response. Personal taste is the key ... it's your amp and your ears!

INPUTS — Input 1: +6dB. Most sensitive input. Input 2: 0dB. Less sensitive input for high-output pickups, steel guitars, some keyboards, etc. NOTE: Inputs are summing, allowing two instruments of similar outputs to be successfully summed.

VOLUME — Controls gain through the input preamp (either TUBE or F.E.T.)

LIMITER — Averages input signal levels to increase headroom and help prevent excessive speaker bottoming due to large signal transients. During "popping" or "slapping" this control becomes very useful. The unique quality of this type of limiter is that it still retains dynamic response even at high (numerical) settings. Limiting will increase as the control is moved towards "10". The associated red LED will indicate limiter activity on a continuous basis. NOTE: It is very common for bassists who are unfamiliar with this type of limiter to overuse it or expect certain operation that may be unreasonable. The limiter cannot guarantee that speaker "bottoming" is eliminated, but with increased familiarity, it becomes a most useful tool in obtaining "your" preferred response. Experiment with various combinations of guitar output volume, Volume setting on the amp as well as Master in conjunction with your playing styles. Limiter is cancelable via rear-panel footswitch jack, or by setting the control to "0".

CONTOUR — Forms a gentle over-all bass-response slope across the most active bass frequencies. Very useful in compensating for stage size and room acoustics.

LO — Controls and shelves frequencies in the extreme low-end of the spectrum. 150HZ and less.

LO, MID — Controls frequencies between 100HZ and 400HZ.

MID — Extremely wide-range control of frequencies between 400HZ and 1500HZ.

HI — Shelves and controls frequencies 1500HZ and higher. NOTE: The E.Q. controls are interactive. There is mild reaction between the controls including some phase shifting. This results in a continuously variable coloration of your tone including aural enhancement. Your ears are the key to good tone. This amp is most capable of delivering it.

MASTER — Controls input gain to the power amp section. For best S/N ratio: Set the input volume relatively high and use relatively low settings of the Master control. The limiter is more active with higher input Volume settings as well. Feel free to experiment, for your playing style and equipment will determine what works best for you. There is obviously no "one best" setting for everyone.

EFFECTS MIX — This control mixes the signal present at the "Effects In" jack on the rear panel. Rotating the control towards "EFX" mixes more and more of the effect's sound while "DRY" mixes more and more of the pre-effect signal to the power amp output.

POWER — Controls AC main power. The green LED is the power indicator.

REAR PANEL CONTROLS

(Combos and Heads: Left to Right, Rackmount is mirror image, or Right to Left)

FUSE — Use fast-blo 8 Amp for 120 Volt operation. Use fast-blo 4 Amp for 240 Volt operation. NOTE: Your amp is factory-wired for either 100-120 VAC or 230-240 operation at 50/60HZ. If it becomes necessary to change the wiring, please contact the factory.

LINE OUT — Useful for "slaving" amps or for getting the entire sound of amp including the power section to a mixing board, etc. This output is isolated from the chassis ground to help prevent ground loops.

SPEAKERS — Output to speakers. Any combination of cabinets with a combined impedance of not less than 2 ohms is acceptable. The extremely powerful and versatile MosValve power section will provide ample power with an abundance of headroom. You will find that the MosValve power section will produce approximately 2 times the expected acoustic volume over similarly rated solid-state amps. The RT-3300 amp truly rivals the old standard 300 watt monster tube amp we all know and love (but roadies hate ...)

NOTE: RMS power: **3175:** 2 Ohms 160 Watts
4 Ohms 125 Watts
8 Ohms 100 Watts
3300: 2 Ohms 300 Watts
4 Ohms 260 Watts
9 Ohms 180 Watts

WARNING

USE SPEAKERS WITH AN AMPLE AMOUNT OF POWER HANDLING CAPABILITY.

Please read and be aware of the necessity of safety whenever operating or servicing your amp. Leave all servicing work to qualified personnel.

LIMITER CANCEL — Jack provides for simple shorting-type footswitch operation of limiter. A standard LED may be directly wired across the switch to indicate operation of limiter. Operation is positive to ground for electronic midi switchers.

EFFECTS LOOP — This system provides ultimate flexibility and control for your effects, regardless of type. See the following section entitled "How to properly use the Effects Loop" for further description.

PRE EQ/POST LOOP SWITCH — Selects the output node of the "Preamp Out" balanced connector. "Pre EQ" setting will send the amplified preamp output -Volume control output - directly to this connector. The F.E.T. of TUBE will be included in this setting, but no EQ or effects. "Post EQ" setting will include all front-panel controls including the Effects Loop setting.

DIRECT OUT — True Balanced output of guitar signal useful for sending direct to board signals through long snakes, etc. The impedance on both this and the previous output is less than 200 ohms and completely balanced. NOTE: The preamp tube is contained inside the chassis for protection and shielding. It is most unlikely that it will require servicing for several years due to the conservative voltage and load with which it is used. Please feel free to contact us if you have any questions about tube operation or replacement.

HOW TO PROPERLY USE THE EFFECTS LOOP

Much confusion exists among musicians as to the proper use of the variable send/receive effects loop. Following the simple procedure will help you to set the levels for the best operation of your particular effects chain.

- Set both "Send" and "Receive" controls at "5."
- Insert your effect and activate it. If your effect has input/output levels, set them at "unity gain" - same level activated as bypassed. Use "instrument" level on rack effects.
- While in the clean channel, play a few chords at normal volume, and increase or decrease the "Send" level to a point where there is no distortion noticeable through the effect. If your device has clipping indicators, set the "send" level just below the clipping level. NOTE: For best S/N (Signal to Noise) ratio, it is important to have as "hot" a drive level as possible. The most common mistake made by musicians is to "send" too low a level to effects, and then "receive" with too "hot" a level. All the noise present in the output circuitry of the effect and the connecting chords are then amplified, and the noise level is increased. Of course, nobody wants more noise than is absolutely necessary.
- Set the receive level to match unity gain. (Effects device activated level = bypassed level). Of course, if you want, it is permissible to increase receive gain above unity, but noise will be the result as well as less headroom for the power amp section.
- A final check for effects loop matching vs. normal levels in your amp is to play a chord then quickly remove the "Effects In" plug and see if there is an increase or decrease in volume. Then further adjust the receive gain to match the normal level within the amp to keep over-all headroom and power at optimum.
- The use of multiple effects complicates the procedure greatly, but the following rule also applies. Simply think of the output of each effect as the "send" for the following unit. GENERAL RULE OF THUMB: "Send" with as much level as you can without distorting the effect. "Receive" with the minimum level possible to reach unity gain with or without the effect activated.

NOTE: When using some types of effects such as distortion or overdrives, it may be useful to increase the "send" level above normal to cause more drive within the device. It is unlikely that damage either to your amp or effects devices would ever occur within the range of levels possible in the effects loop, but the settings affect headroom, distortion level and S/N ratio.

***And, when all else seems to make no sense, USE YOUR EARS!! (That's what designers and engineers ultimately rely on.)

OPERATION NOTES

- This amplifier was designed primarily for musical instrument amplification. It will add warmth and definition to your sound.
- Use with speakers or cabinets capable of at least 125% of rated RMS continuous power.
- Manufacturer is not responsible for any speaker failure while using this equipment. This includes the OEM Speaker supplied with the Bass Combo Amp. Since Tube Works is not the manufacturer of this speaker, the OEM manufacturer's warranty applies. Burned voice coils are not covered under any warranty.

- A certain amount of heat during operation is normal. The MosValve amplifier is biased in a manner that even when idling, there is some heat present. It is best to keep the amplifier away from obstructions which might restrict normal air flow through the cabinet. Never block the vents on either the bottom or back of the chassis.
- Never load the speaker outputs with less than 2 ohm loads. These can be a single speaker cabinet or a combination of two or more cabinets.
Combinations: One 2 Ohm
Two 4 Ohm (or higher)
Four 8 Ohm (or higher)

NOTE: Combo Amp Speaker supplied with your amp is 260 Watt at 8 Ohm.

WARRANTY

Your TUBE WORKS product is warranted for a period of one year against defects in workmanship or materials in the electronic components.

The speaker(s), reverb tank and cabinet (if applicable) are warranted for a period of ninety (90) days. This warranty applies only to the original registered owner provided he/she has returned a completely filled-out OWNER'S REGISTRATION CARD within fifteen (15) days of purchase.

This warranty covers parts and labor only; shipping charges remain the sole responsibility of the owner. Damage due to misuse, modification or abuse is excluded from this warranty.

If service is required, you must contact Genz Benz Enclosures/Tube Works for a **RETURN MERCHANDISE AUTHORIZATION NUMBER (RMA)** by calling 480-941-0705. Whenever possible please use original packaging material for all returns, this will insure that the units are not further damaged in transit.

TUBE WORKS

a division of Genz Benz Enclosures, Inc.
7811 E. Pierce St. ■ Scottsdale, AZ 85257
Ph: 480-941-0705 ■ Fax: 480-946-2412
www.genzbenz.com