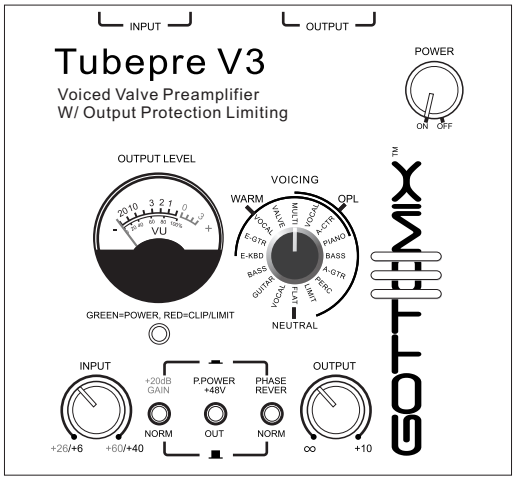
GOTTOMIX™

Tubepre V3

Voiced Valve Preamplifier
W/ Output Protection Limiting



OWNER'S MANUAL

GOTTOMIX™

Tubepre V3

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INTRODUCTIONS

Thank you for purchasing the GOTTOMIX™ Tubepre V3 and congratulations that you now own one of the most versatile preamplifiers available. Offering a superb level of sound quality, the Tubepre V3 hybrid solid state and tube circuit design combined with a straightforward user interface quickly and easily gives you access to all of its features.

The Tubepre V3 extends the range of applications by adding variable valve voicing technology with an output protection limiter to precisely control output peaks, and analog VU metering to aid in setting and maintaining proper signal levels.

The Tubepre V3 can be used in a wide variety of applications including recording, project and home studios, where its metering functionality and output protection limiter circuitry really shines. It also functions as a direct box, with impedance matching and preamplification for instrument or line-level sources.

FEATURES

- Built-in analog VU metering
- Variable Valve Voicing with output protection limiter
- Up to 70 dB of gain
- Hand selected 12 A X 7 A dual triode tube
- Balanced XLR input and output
- 1/4" High impedance Instrument input and 1/4" line level output
- Switchable +48V Phantom power
- Phase Reverse Switch
- +20 dB Gain Switch
- Input Gain Control
- Output Level Control
- Multifunction, dual color LED Power/Clip/Limit indicator
- Fully shielded all steel chassis

INSTALLATIONS

The Tubepre V3 may be used in a wide variety of applications and environments. Self-contained in an all-steel enclosure, the Tubepre V3 is designed for continuous professional use. Because the unit is compact and lightweight, mounting location is not critical. However, for greater reliability we recommend that you not place the Tubepre V3 on top of power amps or other sources of heat. The tube circuitry needs about a minute to “warm up” from a cold power up.

AC power hookup

The Tubepre V3 has an external power supply designed to operate at 230VAC. Only use the adapter that came with the Tubepre V3. If the adapter becomes lost or damaged, just make sure that you specify 9 Volt AC(not DC), at 800 mA when purchasing one for replacement.

AUDIO CONNECTIONS

Audio connections to and from the Tubepre V3 are balanced XLR (Pin 2 = Hot (+), Pin 3 = Cold (-), Pin 1 = Ground) and unbalanced 1/4” (Tip = Hot (+), Sleeve = Ground). We recommend that you switch off the +48V Phantom Power whenever changing connections to the XLR input.

SAFETY PRECAUTIONS

Warning: To avoid the risk of shock or fire, do not expose this unit to moisture. Refer all servicing to qualified personnel. Do not remove the metal cover; there are no user-serviceable parts inside. Only use the power adapter that came with this unit or one with correct specifications.

CONTROLS & INDICATORS

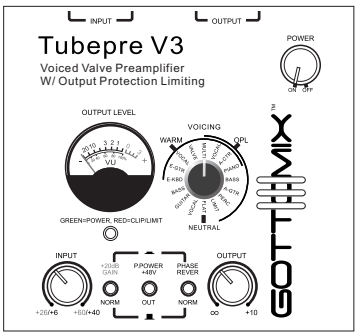

Figure 1 Top panel

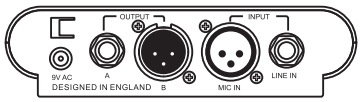

Figure 2 Rear panel

POWER SWITCH

The Power Switch is used to switch on or off the Tubepre V3. When the Tubepre V3 is switched on, the Power/Clip/Limit LED indicator will illuminate green.

INPUT CONTROL

The Input Control sets the amount of input gain of the Tubepre V3. Turn the control clockwise to increase gain and counterclockwise to decrease gain. You may control two ranges of gain with this control, +26 to +60 dB and +6 to +40 dB. Selection of the gain range is made with the +20dB gain switch.

+20DB GAIN SWITCH

Use the +20dB Gain Switch to set the gain range of the input control. When the switch is out, the Tubepre V3 operates in Normal mode. Depressing the switch adds 20dB of gain. This mode is indicated by the labeling in red and corresponds directly to the input control’s red gain range labeling. For microphone applications, where more gain is needed, push the switch in. For hot line level inputs, set the switch in the out position.

+48V PHANTOM POWER SWITCH

The Tubepre V3 can power any microphone needing +48 volts DC Phantom power. Phantom power is supplied to pins 2 and 3 of the XLR Input jack when this switch is depressed. The Tubepre V3 slowly applies and removes the +48 volts, to prevent damage to microphones.

Be sure to turn down or mute the output of the Tubepre V3 when engaging or disengaging Phantom power. Additionally, when disengaging, allow 30 to 45 seconds for the power to completely discharge. Most microphones will make a sound like air leaking from a tire when Phantom power is disconnected, but some can make some very nasty low rumbles and whines as well.

Dynamic microphones should not be affected or damaged if they are plugged into a line where Phantom power is present. However, if the mic doesn't need it, do not use it. Some things are best left untested!

PHASE REVERSE SWITCH

The Phase Reverse switch is provided to reverse the phase of the signal. This switch works on Pins 2 and 3 of the XLR output jack and also reverses the polarity of the 1/4” output jack. In the Normal position, the signal is in-phase. In the Reverse (or “in”) position, Pins 2 and 3 are reversed and the signal is changed to 180 degrees out of phase.

In multiple microphone applications, mic placement can affect the phase of the signals. If two microphones pick up the same signal from different locations, the result can be a hollow or frequency “shifted” sound. In some cases it may sound as if an instrument disappears if it happens to be 180 degrees out of phase. Depressing the Phase switch can remedy this. In general, if your sound is “thin” or “out of position”, try reversing the phase to correct the problem.

VARIABLE VALVE VOICING CONTROL

This Tubepre V3 features Variable Valve Voicing Technology, provides optimized reference points to begin the recording process for guitars, bass guitars, synths, acoustic instruments, percussion and more.

For example, if you are recording an acoustic guitar, Variable Valve Voicing Control has a preset that has been optimized for that instrument. Once the preset is chosen, the user can even fine tune the signal – which shows the true power of Variable Valve Voicing technology…it’s tweakable. Variable Valve Voicing even features a multi setting, which is useful for a wide variety of applications – like overhead micing, broadcast and field recording.

This means that it is now quicker and easier than ever to make great recordings! Musicians want to play, not spend hours adjusting knobs. No other microphone preamp is as user-friendly as the Tubepre V3.

POWER/CLIP/LIMIT LED

The dual-color Power/Clip/Limit LED lights green after Tubepre V3 is switched on and with lower level signals. If Output Protection Limiter is not being used, then the LED will serve as a signal clip indicator. It will light red whenever the signal at the tube's output is about to clip. If the LED is constantly lit, reduce the signal level with the Input gain control, or Activate the Output Protection Limiter circuitry.

When the Output Protection Limiter circuit is engaged, the LED will turn red whenever the output signal peaks exceed the limiter's threshold, at which point the limiter will reduce gain automatically, to prevent output clipping.

VU METER

The VU Meter gives an analog representation of the Tubepre V3's output signal level. "0 dB" on the meter represents +6 dBu at the 1/4" output jack and +12 dBu at the XLR output jack. Besides showing the average analog level, it is sensitive to attack transients. When not using Output Protection Limiter, the VU Meter is a great indicator of how hard you are running the tube. It also helps in setting a consistent level as you change mics and instrument sources.

The VU Meter also reflects the impact of the Output Protection Limiter circuitry on the signal. For example, if the signal is "in the red" on the meter, the meter will reflect the attenuation of the signal when the Output Protection Limiter is activated, and the signal is brought out of the "red".

OUTPUT CONTROL

The Output Control sets the output level of the Tubepre V3. When the control is fully counterclockwise, there is no output. Turning the control clockwise increases the level of the output signal. When setting the Output level control, refer to the VU Meter for an accurate level leaving the Tubepre V3.

CONNECTIONS

Despite the Tubepre V3's sophistication, it is easy to interface the unit with a wide variety of equipment. All inputs and outputs, are located on the rear panel. Standard 1/4" and XLR inputs and outputs make patching simple.

1/4" INPUT JACK

The 1/4" Input jack is for instrument and line level inputs. It has a high input impedance to minimize any loading effects on instrument pickups. It can also handle up to +22 dBu signals for line level signals.

Though not normally suggested, both input jacks can be used simultaneously, in a pinch, to sum two signals. The signal present at the XLR jack will tend to attenuate the signal of the 1/4" input.

XLR INPUT JACK

The XLR Input jack is primarily intended for microphone input, and as such can furnish Phantom Power when needed. It can handle up to +14 dBu signals, which is the hottest signal you would get out of any microphone. For even hotter input signals, you should use the 1/4” input jack. The XLR Input jacks medium input impedance is extremely flat over a wide frequency range, which allows it to be musically neutral to virtually any microphone (one of the Tubepre V3's lesser known secrets).

XLR OUTPUT JACK

The XLR Output jack of the Tubepre V3 is active balanced. You may use it in an unbalanced configuration without harm to the output circuitry. The XLR output can provide a hefty signal level (+28 dBu) at a low impedance, so make sure that you do not overdrive equipment with sensitive inputs. When using it on the front end of a mixer, go into the mixer’s line in or insert inputs and not necessarily into the mixer’s microphone input, unless the mixer can pad that input’s level.

1/4" OUTPUT JACK

The 1/4” Output jack is unbalanced and should be used for sending signals to amps, processors, or other unbalanced configurations.

Both balanced and unbalanced output connections may be used simultaneously. This is particularly useful when using the Tubepre V3 as a direct box for instruments or line level signals. Make sure that both pieces of equipment connected to the Tubepre V3’s outputs are connected to the same earth ground, beforehand, to avoid electrical shock.

If you experience a grounding hum when using both output connectors (one to a console, one to an instrument amp) simultaneously, a ground loop may be the problem. To remedy this problem, disconnect the ground wire (pin 1) from the XLR cable plugged into the Tubepre V3’s output. This interrupts the ground path and therefore breaks the loop.

POWER JACK

An external 9 Volt AC adapter powers the Tubepre V3. Plug the adapter into the PWR jack and then into a power outlet. Only use the adapter that came with the Tubepre V3. If the adapter ever becomes damaged, immediately discontinue use. They can be purchased locally, just make sure that you specify 9 Volt AC (not DC), at 800 mA.

OPERATION

The main application of the Tubepre V3 is a microphone preamplifier. Plug any microphone directly into either input and set the input and output controls to provide an appropriate level into the next stage of your system.

Use the Tubepre V3 as an acoustic or piezo pickup preamplifier to run directly into a console, amp, processor, recorder, or sound card.

The Tubepre V3 is ideal for use as a DI box. Plug the instrument into either input and use the XLR or 1/4” (or both) outputs to connect to your recorder, board or PA system.

Because of its low noise and excellent tonal qualities, the Tubepre V3 is ideal for running mixes through before recording to DAT or cassette. Used as a mastering device, the Tubepre V3 is capable of adding warmth and gentle tube compression to the signal. Variable Input and Output level controls make the Tubepre V3 ideal for level matching material in postproduction situations.

VARIABLE VALVE VOICING SETTINGS AND APPLICATIONS

When observing the Variable Valve Voicing dial from a clockwise perspective, the following settings are:

Neutral Settings:
These are useful for uncolored, natural reproduction of sound.
6:00 – Neutral Flat
6:45 – Neutral Vocal (Microphone)
7:30 – Neutral Guitar Amplifier
8:15 – Neutral Bass Guitar

Warm Settings:
These are useful when warming a signal is desired.
9:00 – Warm Electronic Keyboard
9:45 – Warm Electric Guitar
10:30 – Warm Vocal Microphone
11:15 – Warm Valve

Warm Settings with Output Protection Limiter:
These are useful with high sound pressure levels, close proximity micing, and spiky transients, as well as warming the signal.
12:00 – Warm Output Protection Limiter Multiple Applications
12:45 – Warm Output Protection Limiter Vocal
1:30 – Warm Output Protection Limiter Acoustic Guitar
2:15 – Warm Output Protection Limiter Piano

Neutral Settings with Output Protection Limiter:
These are useful with high spl’s, close micing and spiky transients, as well as maintaining clarity.
3:00 – Neutral Output Protection Limiter Bass Guitar
3:45 – Neutral Output Protection Limiter Acoustic Guitar
4:30 – Neutral Output Protection Limiter Percussion
5:15 – Neutral Output Protection Limiter Limit

SPECIFICATIONS

Input Connections: Balanced XLR, Unbalanced 1/4”TS
Output Connections: Balanced XLR, Unbalanced 1/4”TS
XLR Input Impedance: 2K ohms
1/4” Input Impedance: 840k ohms
XLR Output Impedance: 600 ohms
1/4” Output Impedance: 300ohms
XLR Maximum Input Level: +14 dBu
1/4” Maximum Input Level: +22 dBu
XLR Maximum Output Level: +28 dBu
1/4” Maximum Output Level: +22 dBu
CMRR: >75 dB (typical @ 1k Hz)
Frequency Response: 10 Hz to 30k Hz, +/-.5dB
Dynamic Range: >100 dB (20-20kHz) typical
Total Harmonic Distortion (THD): <0.1% (typical)
Maximum Gain:
XLR to XLR: 70 dB (typical)
1/4” to 1/4”: 54 dB (typical)
XLR to 1/4”: 64 dB (typical)
1/4” to XLR: 60 dB (typical)
Equivalent Input Noise (EIN):
XLR to XLR: -129 dBu (A weighted)
1/4” to 1/4”: -105 dBu (A weighted)
Tube Type: 12 A x 7 A, Dual Triode, Hand Selected
Power Requirements: 9 VAC @ 0.8 A (typ.)